



2023 KPS Fall Meeting

2023년 가을 학술논문발표회 및 임시총회

일시 : 10월 24일(화) ~ 27일(금)

장소 : 창원컨벤션센터(CECO)

- 2023.10 제41권 제2호
- Bulletin of the Korean Physical Society
- 한국물리학회 회보

후원



경상남도
GYEONGNAM



창원시

GNT

경남관광재단
GYEONGNAM TOURISM ORGANIZATION

세계 최고 수준의 장치, 가장 연구하기 좋은 연구소,
새로운 아이디어로 충만한

포항가속기연구소

PLS-II & PAL-XFEL



포항가속기연구소

경북 포항시 남구 지곡로 127번길 80 (지곡동) 포항가속기연구소 | TEL 054-279-1050~2 054-279-1500



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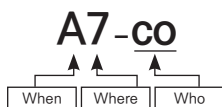


창원시



경남관광재단
GYEONGNAM TOURISM ORGANIZATION

세션코드 읽는 법 (How to Read Session Code?)



(1) The capital letter : when

T: Tuesday	16:00-17:48	E: Thursday	13:00-13:48
TT: Wednesday	11:00-12:48	F: Thursday	14:00-15:48
A: Wednesday	13:00-13:48	G: Thursday	16:00-17:48
B: Wednesday	14:00-15:48	WW: Thursday	19:00-21:00
C: Wednesday	16:00-17:48	H: Friday	08:30-10:18
W: Wednesday	19:00-21:00	I: Friday	10:30-12:18
D: Thursday	08:30-10:18	J: Friday	13:00-14:48
Y: Thursday	10:30-11:18		

(2) The number : where

1: the first room. 2: the second room. But, they are not physical room numbers, 101, 102 etc. (Exception - P1, P2: poster sessions)

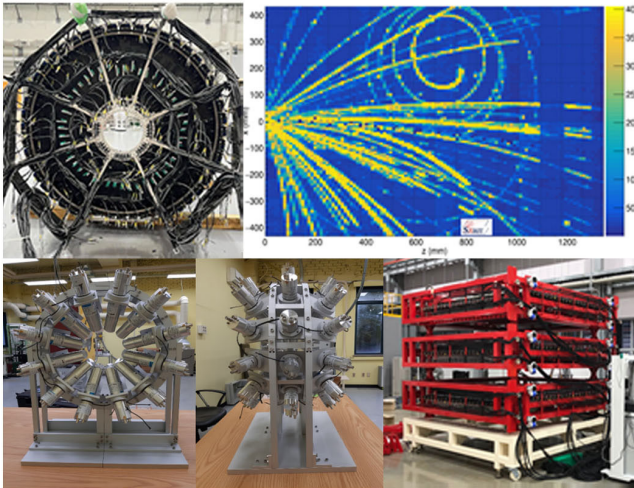
(3) The last two letters : who should attend the session (who or which division organizes the session)

- | | |
|---|---|
| <ul style="list-style-type: none"> • ap : applied physics • as : astrophysics • at : atomic and molecular physics • bp : biological physics • co : condensed matter physics • nu : nuclear physics • op : optics and quantum electronics | <ul style="list-style-type: none"> • or : KPS • pa : particles and fields • pl : plasma physics • se : semiconductor physics • st : statistical physics • te : physics teaching • in : institution |
|---|---|

우주 탄생과 진화의 비밀을 해독하다.

극한핵물질연구센터

극한핵물질연구센터(SRC)는 초기 우주물질과
중성자별의 내부 핵물질을 이해하기 위해
중이온 충돌실험을 수행하고 첨단 검출기 개발에 앞장서고 있습니다.



주요 연구 내용

- 희귀 중이온 빔을 이용한 충돌실험으로 중성자별의 내부 물질을 실험실에서 생성하여 압축 핵물질의 상태를 연구합니다.
- 고에너지 중이온 충돌로 고온의 쿼크-글루온 플라즈마 (QGP)를 생성시킨 후 초기 우주물질의 진화를 연구합니다.
- 정밀한 핵 데이터 획득을 위해 고분해능, 고효율의 최첨단 입자 검출기를 개발합니다.

대표적 핵심 보유 기술

- 중성자 검출기술 : LAMPS 검출기 시스템을 통한 중성자 정밀 검출 기술 확보
- 감마선 검출기술 : LaBr₃(Ce) 감마선 검출기 시스템 KHALA 구축 완료
- 3차원 입자궤도 추적기술 : 능동형 시간투영검출기 (AT-TPC)와 초전도전자석으로 입자의 반응지점 재건 및 경로 추적

<https://cenum.korea.ac.kr>

* 행정실-고려대학교 02-3290-4583 * 홍병식 센터장실 02-3290-3105

Contents

03	등록 및 발표장 안내
06	Program at a glance
07	2023년 가을학술논문발표회 및 임시총회 구두발표 일정표
08	2023년 가을학술논문발표회 및 임시총회 포스터발표 일정표
08	발표장 안내도
09	구두발표논문 시간표
173	포스터발표논문 시간표
259	발표자 색인

이번 호의 표지는 이준영 (KAIST, 제1저자), 심흥선(KAIST, 교신저자) 회원의 최근 논문 'Partitioning of diluted anyons reveals their braiding statistics', Nature 617, 277-281 (2023)에서 모티브를 채택했다. 이 논문은 기존의 입자 분류 체계(보존/페르미온)를 따르지 않는 새로운 준입자인 애니온(anyon)을 다루고 있다. 이 논문에서는 애니온의 특이 현상(braiding)을 비교적 간단한 실험 장치에서 관측하는 방법을 제시하고, 이 방법을 바탕으로 가환 애니온(Abelian anyon)의 존재를 나타내는 신호를 관측하였다. 이번 가을 학술논문발표회 F10-co 세션에서 심흥선 회원이 관련 주제에 대해서 발표할 예정이다.



등록 및 발표장 안내(Registration & Conference Room)

1. Epitome

Any KPS members can download the pdf files on the KPS homepage.(<http://www.kps.or.kr>)

2. Membership & Registration Fee

	Annual membership (KRW)	Pre-registration (KRW)	Onsite-registration (KRW)
Student member	20,000	70,000	90,000
Regular member	70,000	150,000	170,000
Fellowship member	120,000	150,000	170,000
Non-member (general)	-	320,000	320,000
Non-member (student)	-	150,000	150,000
Non-member (invited speaker)	-	170,000	170,000

3. Conference Rooms

Division	Oral sessions	Poster sessions	Special sessions
Particle and Field Physics	602, 603	Exhibition Hall I (3F) Author Presentation (mandatory) for P1: Oct. 25, 18:00-19:30 Author Presentation (mandatory) for P2: Oct. 26, 11:30-13:00	<ul style="list-style-type: none"> • Plenary Lecture: Convention Hall III • 임시총회: Convention Hall III • 새물리 세션: 601 • 여성위원회 세션: 601 • Open KIAS특강: 601 • Open KIAS대중강연: Convention Hall II • 기관특별세션: 604 • 정책세션: 601 • 학과장토론회: 601 • APCTP 과학도서: Convention Hall II • 출연연 세션: Convention Hall I
Nuclear Physics	606, 607		
Condensed Matter Physics	700A, 700B, Convention Hall III		
Applied Physics	301, 600A, 604, Convention Hall II		
Statistical Physics	600B		
Physics Teaching	601, 603		
Plasma Physics	606		
Optics and Quantum Electronics	605		
Atomic and Molecular Physics	600A, 605		
Semiconductor Physics	302, 600B, Convention Hall I		
Astrophysics	604		
Biological Physics	600B, 700A		

4. Official Languages

- Presentations are expected to be either in Korean or in English.
- Sessions may be designated as English only or as Korean only, as indicated by **E** or by **K** respectively in the session title.
- Please inquire the relevant divisions or session organizers for further detail.

5. Oral Presentations

- Oral presentations, in general, will be conducted in real time in the designated meeting rooms and a few invited sessions such as pioneer symposia will be proceeded in hybrid sessions allowing online presentations via Zoom.
- A laptop computer installed with MS PowerPoint and Adobe Acrobat Reader is provided in each session room and all presentation files should be uploaded during the break between the sessions. Therefore, the speakers should bring their PowerPoint or pdf presentation files on USB flash drives.
- Presentation using personal laptop or other device is not allowed.
- The aspect ratio of 4:3 is recommended for your presentation files.
- Please adhere to the time limit for your presentation, which includes setup, presentation, and Q&A: 12 minutes for a contributed talk and 24 (or 36, 48) minutes for an invited talk.

6. Poster Presentations

- The recommended size of a poster is 100cm (width) x 100cm (height) [Maximum: 120cm x 180cm]
- Place: Exhibition Hall 1 (3F)
- Schedule

Session	P1 (Oct. 25, Wed.)	P2 (Oct. 26, Thu.)
Post	11:00 - 12:00	08:00 - 09:00
Author Presentations(mandatory)	18:00 - 19:30	11:30 - 13:00
Attendee Viewing(Registered Attendees and Judges)	12:00 - 19:30	09:00 - 17:00
Take-Down	19:30 - 20:00	17:00 - 18:00

- (i) Poster presenters are recommended to post the presentation materials on the poster board in Exhibition Hall 1 (3F) during post time.
- (ii) If you are a poster presenter, you must make a presentation and answer the questions from other participants or judges during 'Author Presentation' time. For those who don't make a presentation during the time, their names and affiliations will be put on the no-show list.

7. Best Presentation Awards

- The Best Presentation Awards recognize outstanding presentations made by student members and are awarded by the KPS in order to encourage students to carry out excellent research.
- The Best Poster Presentation Awardee will be selected based on scientific significance and excellence of presentation and answers.
- Every awardee will be posted in the KPS homepage for recognition just after the Conference and a certificate PDF file will be sent to the presenter and the corresponding author via email.

8. No-Show Policy

- Oral Presentation: Absence of the presenter without notification 2 hours before presentation time (contact info: abstracts@kps.or.kr, 02-556-4737(ext. 3)) will be taken as “No-Show” by the Session Chair or Judges.
- Poster Presentation: 'No-Show' posters will be identified by KPS staff during the 'Author Presentations' time. In order to avoid the no-show, the presenter should cancel the presentation (contact info: abstracts@kps.or.kr, 02-556-4737(ext. 3)) 6 hours before 'Author presentations' time.
- In case of No-Show, the corresponding abstract will be eliminated from the program list. Presenters who No-Show may see limitations to present at the KPS meetings in the future.



Program at a glance

Date	Time	Program	Special Sessions & KPS Events
Oct. 24 (Tue)	16:00~17:48	Session T:Tutorial 1	
Oct. 25 (Wed)	11:00~13:48	Session TT:Tutorial 2	
	13:00-13:48	Session A	새물리 특별세션
	14:00-15:48	Session B	여성위원회 특별세션
	16:00-17:48	Session C	Open KIAS 특강
	18:00~19:30	Poster Presentation I	임시총회 & 평의원회 (18:15-19:00)
	19:00~21:00	Session W	Open KIAS 대중강연 (19:00-21:00)
Oct. 26 (Thu)	08:30-10:18	Session D	Institutional Special Session (포항가속기)
	10:30-11:18	Session Y: Plenary Lecture	
	11:30~13:00	Poster Presentation II	
	13:00-13:48	Session E	
	14:00-15:48	Session F	정책위원회 특별세션
	16:00-17:48	Session G	전국 물리학과 학과(부)장 토론회
	18:00-19:00	Division Meetings	
	19:00-21:00	Session WW	APCTP 과학도서 특별세션
Oct. 27 (Fri)	08:30-10:18	Session H	
	10:30-12:18	Session I	출연연 특별세션 -차세대 컴퓨팅/반도체 연구 1
	13:00-14:48	Session J	출연연 특별세션 -차세대 컴퓨팅/반도체 연구 2

Oral Program for 2023 KPS Fall Meeting

CECO (Oct. 24-27, 2023)

Room Number		601	602	603	604	605	606	607	600A	600B	700A	700B	301	302	Convention Hall I	Convention Hall II	Convention Hall III
10.24 Tue	16:00-17:48 (Session T)								K T8-ap [T] Energy Materials	K T9-se [T] Quantum Dot							
10.25 Wed	11:00-12:48 (Session TT)		TT2-pa [T] Collider Pheno							TT9-bp [T] AlphaFold2							
	13:00-13:48 Session A	K A1-or 새물리세션	A2-pa Non-accelerator I	A3-pa Field and String Theory I			A6-nu Hadron physics	A7-nu Nuclear Structure	E A8-at [P] Superradiance I	A9-bp Cellular BioPhysics	A10-co Surface/Interf/ Nanomater		A12-ap Energy and Spin	A13-se Devices and Applications	A14-se Energy Materials and Devices	A15-ap 2D and Nano I	A16-co Computational I
	14:00-15:48 Session B	K B1-or 여성특별세션	B2-pa [F] Korean Underground Physics	B3-pa Accelerator I	B4-ap [F] Light-Matter Interaction I	B5-at AMP I	B6-nu Nuclear Astrophysics	B7-nu Method & Instrumentation	E B8-at [P] Superradiance II	B9-bp [F] Chromatin Dynamics	B10-co Magnetism I	B11-co Strongly Correlated I	B12-ap [F] DFT and Machine Learning I	B13-se [F] Low Dimensional Quantum Materials	B14-se [F] Advanced Energy Materials	B15-ap 2D and Nano II	B16-co [F] Kagome and Flat Bands I
	16:00-17:48 Session C	E C1-or Open KIAS 특강	C2-pa Non-accelerator II	C3-pa Accelerator II	C4-ap [F] Light-Matter Interaction II	C5-at AMP II	C6-pl [F] 2023년 핵융합선도기술개발사업 심포지엄	C7-nu Method & Instrumentation	E C8-at [P] Superradiance III	C9-bp Theoretical & Computational	C10-co Superconductivity	C11-co Dielectric/ Functional	C12-ap [F] DFT and Machine Learning II	C13-se [F] Terahertz Near-field Spectroscopy	E C14-se [P] Optical Microscopy I	C15-ap [F] Organic and Perovskite	C16-co [F] Kagome and Flat Bands II
	18:00-19:30 P1	Poster P1 (3F Exhibition hall 1)															General Assembly (18:15-19:00)
	19:00-21:00 Session W															W15-or Open KIAS 대중강연	
10.26 Thu	08:30-10:18 Session D		D2-pa Accelerator III	D3-pa Particle Phenomenology I	D4-in PAL-XFEL	D5-at AMP III	D6-pl [F] Young Plasma Scientists and New Faculty	D7-nu Relativistic Heavy Ion Collisions	E D8-at [F] Atoms in Tweezers I	D9-bp Molecular Biophysics	D10-co [T] Time-resolved Spectroscopy	D11-co Strongly Correlated II	D12-ap [F] Correlated electron	D13-se Emerging 2D Materials and Devices I	D14-se Growth and Characterization I	D15-ap [F] Functional Oxide I	D16-co Computational II
	10:30-11:18 Session Y	E Y1-or Plenary (Conventional Hall III)															
	11:30-13:00 P2	Poster P2 (3F Exhibition hall 1)															
	13:00-13:48 Session E		E2-pa Particle Phenomenology II	E3-pa Field and String Theory II	E4-as High Energy Astro		E6-pl Laser Plasmas	E7-nu Nuclear Structure	E E8-at [F] Atoms in Tweezers II		E10-co Nano Meso	E11-co Computational III	E12-ap Surface and Interface	E13-se Emerging 2D Materials and Devices II	E14-se Growth and Characterization II	E15-ap [F] Functional Oxide II	E16-co Other/ Instru Big Facilities
	14:00-15:48 Session F	K F1-or 정책세션	E F2-pa [P] LHC-CERN I	F3-pa Field and String Theory II	E F4-as [P] GWB-PTA I	F5-op Nanophotonics I	E F6-pl [P] Novel Ideas in Laser-Plasma Physics I	E F7-nu [B] EIC physics	E F8-at [F] Atoms in Tweezers III	F9-st Chaos & Nonlinear Dynamics	F10-co [F] Topo Meso Phys	E F11-co [B] APS Extreme Mater I	E F12-ap [P] Spin-Related Phenomena I	F13-se [F] Advanced Analytical Techniques	F14-se [F] Intelligent Low D Semiconductor	F15-ap [F] vdW Materials I	F16-co [F] Exotic Phase Quant Mater I
	16:00-17:48 Session G	K G1-or 학과장토론회	E G2-pa [P] LHC-CERN II	K G3-te Phys. Teach. I	E G4-as [P] GWB-PTA II	G5-op Fiber and Solid State Lasers	E G6-pl [P] Novel Ideas in Laser-Plasma Physics II	E G7-nu [B] EIC physics	E G8-at [F] Atoms in Tweezers IV	G9-st Complex Systems I	G10-bp [F] Bio-inspired	E G11-co [B] APS Extreme Mater II	E G12-ap [P] Spin-Related Phenomena II	G13-se [F] Emerging Materials and Device	E G14-se [P] Optical Microscopy II	G15-ap [F] vdW Materials II	G16-co [F] Exotic Phase Quant Mater II
	19:00-21:00 Session WW															WW15-or APCTP 과학도서 특별세션	
10.27 Fri	08:30-10:18 Session H	K H1-te Phys. Teach. II	H2-pa Accelerator IV	H3-pa Non-accelerator III		H5-op Terahertz Photonics	H6-pl Accelerator; Fusion; Plasma Applications	H7-nu HI & Method & Instrumentation	H8-at [F] Quantum Computing I	H9-st Nonequilibrium Systems	H10-co [F] Low-dimensional Oxides I	H11-co [F] Supercond Quant Dev I	H12-ap [F] Magnon Spintronics I	H13-se Low-Dimensional Materials	H14-se Next-generation Semiconductors and Devices	H15-ap Photonics and Organic Electronics I	H16-co [F] Altermagnetism
	10:30-12:18 Session I	E I1-te [F] Einstein-First Project	I2-pa Accelerator V	I3-pa Non-accelerator IV	I4-as GravCos	I5-op Nanophotonics II	I6-pl [F] Toward Next-generation Accelerator IV(I)	I7-nu Reaction and Hadron physics	I8-at [F] Quantum Computing II	I9-st Complex Systems II	I10-co [F] Low-dimensional Oxides II	I11-co [F] Supercond Quant Dev II	I12-ap [F] Magnon Spintronics II	I13-se [F] Industry	I14-or 출연연세션 I	I15-ap Photonics and Organic Electronics II	E I16-co [T] Microfluidics Rheology
	13:00-14:48 Session J	K J1-te [F] Physics Education Course	J2-pa Accelerator VI	J3-pa Particle Phenomenology III	J4-as GravWaves		J6-pl [F] Toward Next-generation Accelerator IV(II)	J7-nu Method & Instrumentation	J8-at [F] Quantum Computing III	J9-st Critical Phenomena & Soft Matter	J10-co Magnetism II	J11-co Strongly Correlated III	J12-ap Quantum and Bio		J14-or 출연연세션 II	J15-ap Oxide and Computational	J16-co Computational IV

Particles and Fields Nuclear Physics Condensed Matter Physics Applied Physics Statistical Physics Physics Teaching Plasma Physics
Optics and Quantum Electronics Atomic & Molecular Physics Semiconductor Physics Astrophysics Biological Physics Institutional Special Session Special Session

Poster Program for 2023 KPS Fall Meeting

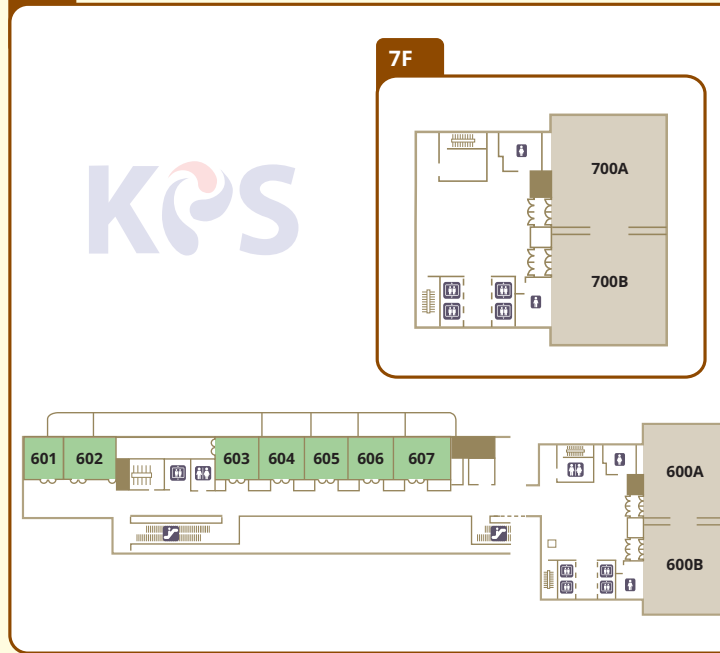
CECO (Oct. 24-27, 2023)

Session P1		Session P2	
<ul style="list-style-type: none"> Poster Exposure Period : October 25, 12:00 ~ October 25, 19:30 Presentation (mandatory): October 25, 18:00-19:30 		<ul style="list-style-type: none"> Poster Exposure Period : October 26, 9:00 ~ October 26, 17:00 Presentation (mandatory): October 26, 11:30-13:00 	
P1-pa Particle Physics: Non Accelerator-based Particle Physics	P1-se.1 Semiconductor Physics: Semiconductor Growth, Structure, Characterization/ Devices	P2-pa Particle Physics: Accelerator-based Particle Physics & Theory	P2-pl.1 Plasma Physics: Laser Plasma; Plasma Applications; Basic Plasmas
P1-nu Nuclear Physics	P1-se.2 Semiconductor Physics: Low-dimensional Materials and Novel Quantum Phenomena	P2-co.1 Condensed-Matter Physics: Nano and Mesoscopic Physics & Surface/Interface/ Nanomaterials	P2-pl.2 Plasma Physics: Nuclear Fusion; Accelerator & Beam
P1-co.1 Condensed-Matter Physics: Magnetism/Superconductivity	P1-bp.1 Biological Physics I	P2-co.2 Condensed-Matter Physics: Computational Physics	P2-op Optics and Quantum Electronics
P1-co.2 Condensed-Matter Physics: Strongly Correlated/ Dielectrics/Functional Oxides	P1-bp.2 Biological Physics II	P2-ap.1 Applied Physics: Oxide and Energy Materials	P2-at Atomic and Molecular Physics II
P1-co.3 Condensed-Matter Physics: Other Condensed Materials/ Instrumentation and Big Facilities		P2-ap.2 Applied Physics: Spin and Magnetism & Computational Applied Physics	P2-se Semiconductor Physics: Next-generation Semiconductors & Devices/ Emerging 2D/Sensors
P1-ap.1 Applied Physics: 2D Materials		P2-ap.3 Applied Physics: Photonics/Quantum/Organic/ Bio	P2-as Astrophysics
P1-ap.2 Applied Physics: Nano Materials & Surface and Interface		P2-st Statistical Physics	
P1-at Atomic and Molecular Physics I		P2-te Physics Teaching	

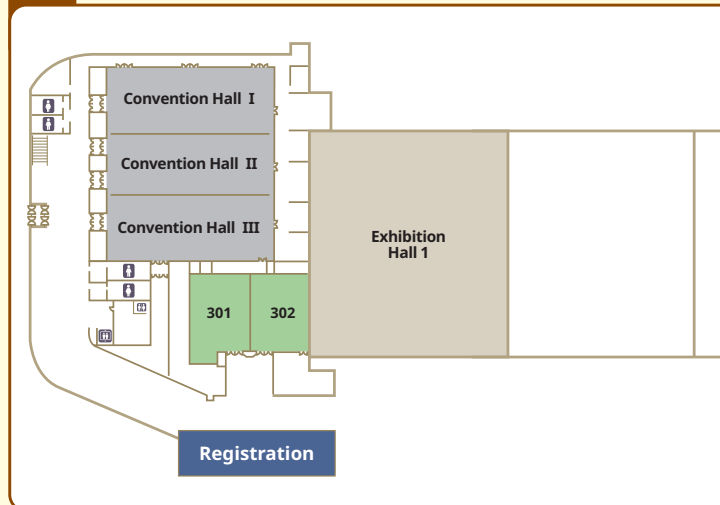
Particles and Fields	Nuclear Physics	Condensed Matter Physics
Applied Physics	Statistical Physics	Physics Teaching
Plasma Physics	Optics and Quantum Electronics	Atomic & Molecular Physics
Semiconductor Physics	Astrophysics	Biological Physics
Special Session	Institutional Special Session	

창원컨벤션센터 발표장 안내도

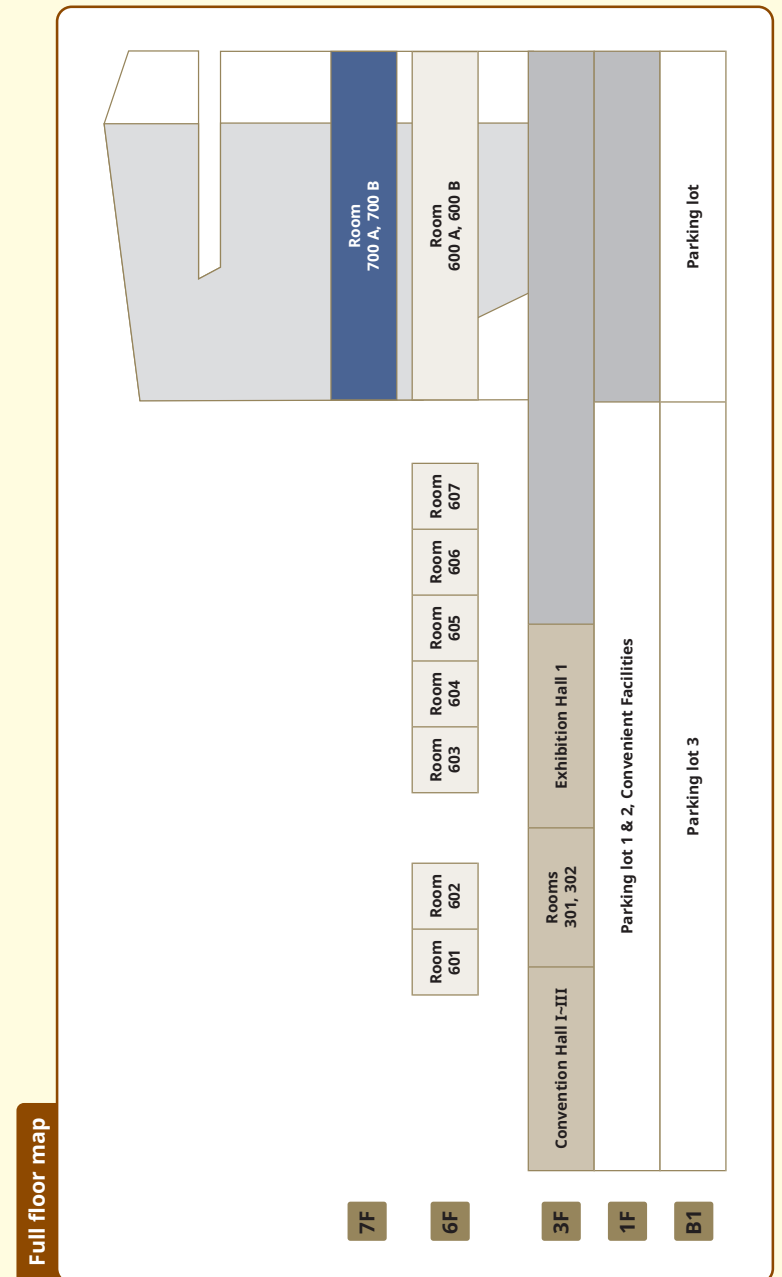
6F



3F



Guide map for conference rooms



Plenary Lecture

©[Y1-or]	Plenary Lecture: Black Hole Thermodynamics: Then and Now	19
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Tutorial Sessions

[D10-co]	Tutorial: Time-resolved Spectroscopy on Quantum Materials	20
©[I16-co]	Tutorial: Microfluidics & Rheology : Principle and Application	20
©[T8-ap]	Tutorial: Energy Materials Experiment-based Analysis	21
©[T9-se]	Tutorial: Quantum Dot: Physics and application to quantum light sources	22
[TT2-pa]	Tutorial: Collider Phenomenology	22
[TT9-bp]	Tutorial: Fundamentals and Applications of AlphaFold2	23

Sessions Organized by KPS Committees

©[A1-or]	새물리(New Physics: Sae Mulli) 발전을 위한 방안 탐색	25
©[B1-or]	여성특별세션: 그녀의 호기심, 그의 궁금증	25
©[C1-or]	Open KIAS 특강: 현대 우주론의 연구 동향	26
©[F1-or]	정책위원회 특별세션	26
©[G1-or]	전국 물리관련 학과 학과장 토론회	26
[I14-or]	정부출연연구기관의 차세대 컴퓨팅/반도체 연구 (Next-Generation Computing/Electronics Research at National Research Institutes in Korea I)	27
[J14-or]	정부출연연구기관의 차세대 컴퓨팅/반도체 연구II (Next-Generation Computing/Electronics Research at National Research Institutes in Korea II)	27
[W15-or]	Open KIAS 대중강연 :물리학의 최전선	28
[WW15-or]	APCTP 선정, 올해의 과학도서 저자 강연	28

Institutional Special Session

[D4-in]	Performance and Challenge of PAL-XFEL	29
---------	---------------------------------------	----

List of Award Winners' Presentations

C4.02	[2023 New Physicist Award] Ultra-thin 2D semiconductor waveguide	30
J11.08	[2023 Condensed Matter Physics MSM Award] Emergent inductance from spin fluctuations in strongly correlated magnets	30

A: October 25(Wed) 13:00-13:48

©[A1-or]	새물리(New Physics: Sae Mulli) 발전을 위한 방안 탐색	31
[A2-pa]	Non-accelerator I	31

[A3-pa]	Field and String Theory I	32
[A4-A5]	No session	32
[A6-nu]	Hadron physics	33
[A7-nu]	Nuclear Structure	33
©[A8-at]	Pioneer: Quantum Effects of Superradiance and Their Applications I	34
[A9-bp]	Cellular Biological Physics	34
[A10-co]	Surface/Interface/Nanomaterials	35
[A11]	No session	36
[A12-ap]	Energy and Spin Materials	36
[A13-se]	Devices and Applications – Electronic, Photonic, Optoelectronic, Plasmonic, Organic, and Flexible	37
[A14-se]	Energy Materials and Devices – Harvesting, Storage, Conversion	38
[A15-ap]	2D and Nano Materials I	39
[A16-co]	Condensed-matter Computational Physics I	39

B: October 25(Wed) 14:00-15:48

Ⓚ[B1-or]	여성특별세션: 그녀의 호기심, 그의 궁금증	41
[B2-pa]	Focus: History and future of Korean Underground Physics Experiments	41
[B3-pa]	Accelerator I	42
[B4-ap]	Focus: Light-Matter Interaction in Low Dimensional Materials I	43
[B5-at]	Atomic and Molecular Physics I	44
[B6-nu]	Nuclear Astrophysics	44
[B7-nu]	Nuclear Experimental Method and Instrumentation	46
©[B8-at]	Pioneer: Quantum Effects of Superradiance and Their Applications II	47
[B9-bp]	Focus: Biophysical Perspectives in Chromatin Dynamics	48
[B10-co]	Magnetism I	49
[B11-co]	Strongly Correlated Systems I	50
[B12-ap]	Focus: Computational Physics – from DFT to Machine Learning I	51
[B13-se]	Focus: Low Dimensional Quantum Materials	52
[B14-se]	Focus: Advanced Energy Materials and Optoelectronic Applications	52
[B15-ap]	2D and Nano Materials II	53
[B16-co]	Focus: Physics of Kagome Lattices and Flat Bands I	54

C: October 25(Wed) 16:00-17:48

©[C1-or]	Open KIAS 특강: 현대 우주론의 연구 동향	55
[C2-pa]	Non-accelerator II	55
[C3-pa]	Accelerator II	56
[C4-ap]	Focus: Light-Matter Interaction in Low Dimensional Materials II	58
[C5-at]	Atomic and Molecular Physics II	58
[C6-pl]	Focus: 2023년 핵융합선도기술개발사업 심포지엄	59
[C7-nu]	Nuclear Experimental Method and Instrumentation	60
©[C8-at]	Pioneer: Quantum Effects of Superradiance and Their Applications III	62
[C9-bp]	Theoretical & Computational Biological Physics	62

[C10-co]	Superconductivity	63
[C11-co]	Dielectrics/Functional Oxides	65
[C12-ap]	Focus: Computational Physics - from DFT to Machine Learning II	66
[C13-se]	Focus: Terahertz Near-field Spectroscopy	66
©[C14-se]	Pioneer: Optical Microscopy of Ultrafast Light-exciton Interaction I	67
[C15-ap]	Focus: Recent advances in Organic and Perovskite Electronics	68
[C16-co]	Focus: Physics of Kagome Lattices and Flat Bands II	68

D: October 26(Thu) 08:30-10:18

[D1]	No session	70
[D2-pa]	Accelerator III	70
[D3-pa]	Particle Phenomenology I	71
[D4-in]	Performance and Challenge of PAL-XFEL	72
[D5-at]	Atomic and Molecular Physics III	73
[D6-pl]	Focus: Young Plasma Scientists and New Faculty Session	74
[D7-nu]	Relativistic Heavy Ion Collisions	75
©[D8-at]	Focus: Neutral Atoms Trapped with Optical Tweezers I	76
[D9-bp]	Molecular Biological Physics	77
[D10-co]	Tutorial: Time-resolved Spectroscopy on Quantum Materials	78
[D11-co]	Strongly Correlated Systems II	78
[D12-ap]	Focus: Insulating Phases of Correlated Electron	80
[D13-se]	Emerging 2D Materials and Devices I	81
[D14-se]	Semiconductor Growth, Structural Properties, and Characterization I	82
[D15-ap]	Focus: Functional Oxide Materials for Advanced Applications I	83
[D16-co]	Condensed-matter Computational Physics II	84

E: October 26(Thu) 13:00-13:48

[E1]	No session	86
[E2-pa]	Particle Phenomenology II	86
[E3-pa]	Field and String Theory II	87
[E4-as]	High Energy Astrophysics/Compact Objects	87
[E5]	No session	88
[E6-pl]	Laser Plasmas	88
[E7-nu]	Nuclear Structure	89
©[E8-at]	Focus: Neutral Atoms Trapped with Optical Tweezers II	89
[E9]	No session	90
[E10-co]	Nano and Mesoscopic Physics	90
[E11-co]	Condensed-matter Computational Physics III	91
[E12-ap]	Surface and Interface	91
[E13-se]	Emerging 2D Materials and Devices II	92
[E14-se]	Semiconductor Growth, Structural Properties, and Characterization II	93
[E15-ap]	Focus: Functional Oxide Materials for Advanced Applications II	94
[E16-co]	Other Condensed Materials/ Instrumentation and Big Facilities	94

F: October 26(Thu) 14:00-15:48

Ⓚ[F1-or]	정책위원회 특별세션	96
Ⓜ[F2-pa]	Pioneer: Present and Future of the LHC Program at CERN I	96
[F3-pa]	Field and String Theory III	97
Ⓜ[F4-as]	Pioneer: Gravitational Wave Background and Pulsar Timing Array I	98
[F5-op]	Nanophotonics I	99
Ⓜ[F6-pl]	Pioneer: Novel Ideas in Laser-Plasma Physics I	100
Ⓜ[F7-nu]	Bilateral: The KPS-JPS Joint symposium on Electron-Ion Collider physics	101
Ⓜ[F8-at]	Focus: Neutral Atoms Trapped with Optical Tweezers III	101
[F9-st]	Chaos & Nonlinear Dynamics	102
[F10-co]	Focus: Topological Phenomena in Mesoscopic Physics	103
Ⓜ[F11-co]	Bilateral: Upgrade of Advanced Photon Source and Studies of Extreme Materials I	104
Ⓜ[F12-ap]	Pioneer: Emergent Spin-Related Phenomena at Different Dimensionalities I	104
[F13-se]	Focus: Advanced Analytical Techniques for Emerging Materials and Devices	105
[F14-se]	Focus: Functionalization of Intelligent Low Dimensional Semiconductor and Its Applications	106
[F15-ap]	Focus: Status and Prospective of van der Waals Materials Research I	107
[F16-co]	Focus: Exploring Exotic Phases of Quantum Materials I	107

G: October 26(Thu) 16:00-17:48

Ⓚ[G1-or]	전국 물리관련 학과 학과장 토론회	109
Ⓜ[G2-pa]	Pioneer: Present and Future of the LHC Program at CERN II	109
Ⓚ[G3-te]	Physics Teaching I	110
Ⓜ[G4-as]	Pioneer: Gravitational Wave Background and Pulsar Timing Array II	110
[G5-op]	Fiber and Solid State Lasers	111
Ⓜ[G6-pl]	Pioneer: Novel Ideas in Laser-Plasma Physics II	112
Ⓜ[G7-nu]	Bilateral: The KPS-JPS Joint symposium on Electron-Ion Collider physics	112
Ⓜ[G8-at]	Focus: Neutral Atoms Trapped with Optical Tweezers IV	113
[G9-st]	Complex Systems I	113
[G10-bp]	Focus: Bio-Inspired Physics	115
Ⓜ[G11-co]	Bilateral: Upgrade of Advanced Photon Source and Studies of Extreme Materials II	115
Ⓜ[G12-ap]	Pioneer: Emergent Spin-Related Phenomena at Different Dimensionalities II	116
[G13-se]	Focus: Emerging Materials and Device Applications	117
Ⓜ[G14-se]	Pioneer: Optical Microscopy of Ultrafast Light-exciton Interaction II	117
[G15-ap]	Focus: Status and Prospective of van der Waals Materials Research II	118
[G16-co]	Focus: Exploring Exotic Phases of Quantum Materials II	118

H: October 27(Fri) 08:30-10:18

Ⓚ[H1-te]	Physics Teaching II	120
[H2-pa]	Accelerator IV	121
[H3-pa]	Non-accelerator III	124
[H4]	No session	125

[H5-op]	Terahertz Photonics	126
[H6-pl]	Accelerator & Beam; Fusion; Plasma Applications	126
[H7-nu]	Relativistic Heavy Ion Collisions and Nuclear Experimental Method and Instrumentation	127
[H8-at]	Focus: Quantum Computing I	129
[H9-st]	Nonequilibrium Systems	129
[H10-co]	Focus: Recent Trend in Physics of Low-dimensional Oxides I	130
[H11-co]	Focus: Superconducting Quantum Devices I	131
[H12-ap]	Focus: Magnon Spintronics I	131
[H13-se]	Low-dimensional (0D, 1D, 2D) Materials, and Novel Quantum Phenomena	132
[H14-se]	Next-generation Semiconductors and Devices – Memory, AI, Neuromorphic, MOSFET, Wide Bandgap Semiconductor	134
[H15-ap]	Photonics, Optoelectronics, and Organic Electronics I	135
[H16-co]	Focus: Current Progress of Altermagnetism	136

I: October 27(Fri) 10:30-12:18

©[I1-te]	Focus: Einstein–First Project in Australia	137
[I2-pa]	Accelerator V	137
[I3-pa]	Non-accelerator IV	139
[I4-as]	Gravity/Cosmology	140
[I5-op]	Nanophotonics II	141
[I6-pl]	Focus: Toward Next-generation Accelerator IV: Trends of R&Ds in Accelerators and Issues toward Scientific Leap I	142
[I7-nu]	Nuclear reaction and Hadron physics	143
[I8-at]	Focus: Quantum Computing II	144
[I9-st]	Complex Systems II	145
[I10-co]	Focus: Recent Trend in Physics of Low-dimensional Oxides II	146
[I11-co]	Focus: Superconducting Quantum Devices II	146
[I12-ap]	Focus: Magnon Spintronics II	147
[I13-se]	Focus: Recent Semiconductor Technologies and Devices in Industry	148
[I14-or]	정부출연연구기관의 차세대 컴퓨팅/반도체 연구 (Next-Generation Computing/Electronics Research at National Research Institutes in Korea I)	149
[I15-ap]	Photonics, Optoelectronics, and Organic Electronics II	149
©[I16-co]	Tutorial: Microfluidics & Rheology : Principle and Application	150

J: October 27(Fri) 13:00-14:48

Ⓢ[J1-te]	Focus: Discussion on the Improvement of ‘Physics Education’ Course	152
[J2-pa]	Accelerator VI	152
[J3-pa]	Particle Phenomenology III	153
[J4-as]	Gravitational Waves/Multi-Messenger Astrophysics	154
[J5]	No session	155
[J6-pl]	Focus: Toward Next-generation Accelerator IV: Trends of R&Ds in Accelerators and Issues toward Scientific Leap II	155

[J7-nu]	Nuclear Experimental Method and Instrumentation	156
[J8-at]	Focus: Quantum Computing III	157
[J9-st]	Critical Phenomena & Soft Matter	158
[J10-co]	Magnetism II	159
[J11-co]	Strongly Correlated Systems III	160
[J12-ap]	Quantum Information and Processing & Biophysics and Bioengineering	161
[J13]	No session	162
[J14-or]	정부출연연구기관의 차세대 컴퓨팅/반도체 연구II (Next-Generation Computing/Electronics Research at National Research Institutes in Korea II)	162
[J15-ap]	Oxide Materials and Computational Applied Physics	163
[J16-co]	Condensed-matter Computational Physics IV	164

T: October 24(Tue) 16:00-17:48

[T1-T7]	No session	166
Ⓢ[T8-ap]	Tutorial: Energy Materials Experiment-based Analysis	166
Ⓢ[T9-se]	Tutorial: Quantum Dot: Physics and application to quantum light sources	166
[T10-T16]	No session	166

TT: October 25(Wed) 11:00-12:48

[TT1]	No session	167
[TT2-pa]	Tutorial: Collider Phenomenology	167
[TT3-TT8]	No session	167
[TT9-bp]	Tutorial: Fundamentals and Applications of AlphaFold2	168
[TT10-TT16]	No session	168

W: October 25(Wed) 19:00-21:00

[W15-or]	Open KIAS 대중강연: 물리학의 최전선	169
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WW: October 26(Thu) 19:00-21:00

[WW15-or]	APCTP 선정, 올해의 과학도서 저자 강연	170
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Y: October 26(Thu) 10:30-11:18

©[Y1-or]	Plenary Lecture	171
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Poster Session P1

Poster Exposure Period: October 25(Wed), 12:00-19:30

Presentation (mandatory): October 25(Wed), 18:00-19:30

[P1-ap.1]	Applied Physics: 2D Materials	175
[P1-ap.2]	Applied Physics: Nano materials & Surface and Interface	178
[P1-at]	Atomic and Molecular Physics I	182
[P1-bp.1]	Biological Physics I	185
[P1-bp.2]	Biological Physics II	189
[P1-co.1]	Condensed Matter Physics: Magnetism/Superconductivity	191
[P1-co.2]	Condensed Matter Physics: Strongly Correlated/Dielectrics/Functional Oxides	196
[P1-co.3]	Condensed Matter Physics: Other Condensed Materials/ Instrumentation and Big Facilities	201
[P1-nu]	Nuclear Physics	203
[P1-pa]	Particles and Fields: Non Accelerator-based Particle Physics	206
[P1-se.1]	Semiconductor Physics: Semiconductor Growth, Structure, Characterization/Devices	209
[P1-se.2]	Semiconductor Physics: Low-dimensional Materials and Novel Quantum Phenomena	213

Poster Session P2

Poster Exposure Period: October 26(Thu), 09:00 -17:00

Presentation (mandatory): October 26(Thu), 11:30-13:00

[P2-ap.1]	Applied Physics: Oxide and Energy Materials	217
[P2-ap.2]	Applied Physics: Spin and Magnetism & Computational Applied Physics	220
[P2-ap.3]	Photonics/Quantum/Organic/Bio	223
[P2-as]	Astrophysics	228
[P2-at]	Atomic and Molecular Physics II	230
[P2-co.1]	Condensed Matter Physics: Nano and Mesoscopic Physics & Surface/Interface/Nanomaterials	233
[P2-co.2]	Condensed Matter Physics: Computational Physics	236
[P2-op]	Optics and Quantum Electronics	239
[P2-pa]	Particles and Fields: Accelerator-based Particle Physics & Theory	242
[P2-pl.1]	Plasma Physics: Laser Plasma, Plasma Applications & Basic Plasmas	245
[P2-pl.2]	Plasma Physics: Nuclear Fusion, Accelerator & Beam	248
[P2-se]	Semiconductor Physics: Wide Bandgap/Next-generation/Energy/Emerging 2D/Sensors	251
[P2-st]	Statistical Physics	255
[P2-te]	Physics Teaching	258

구두발표논문 시간표

Oral Session Schedule

기조강연 Plenary Lecture

㉔[Y1-or] Plenary Lecture

2023. 10. 26 Thursday 10:30~11:18

Room: Convention Hall III

좌장 : 박성찬 연세대학교

Chair : PARK Seongchan (Yonsei University)

Y1.01 [10:30 - 11:18]

Black Hole Thermodynamics: Then and Now / WITTEN Edward^{*1} (*The Institute for Advanced Study, School of Natural Sciences, Princeton University, USA)



ABSTRACT:

Black hole thermodynamics started with the work of Bekenstein and Hawking in the early 1970's, interpreting the area of a black hole horizon as a form of entropy. This is a thermodynamic entropy which obeys a generalized second law of thermodynamics. In modern developments, a microscopic or fine-grained von Neumann entropy is increasingly important. Under unitary evolution, it is constant even though thermodynamic entropy may increase. A fundamental step in understanding fine-grained entropy in gravity was the Ryu-Takayanagi formula, discovered in 2006. In this lecture, I will review some of the old and new developments.

This talk is hosted jointly by the Korean Physical Society and Asia Pacific Center for Theoretical Physics (APCTP).

Tutorial Sessions

[D10-co] Tutorial: Time-resolved Spectroscopy on Quantum Materials

2023. 10. 26 Thursday 08:30~10:06

Room: 700A

좌장 : 김준성 포항공과대학교

Chair : KIM Jun Sung (POSTECH)

[SCOPE]

시분해 분광법은 극고속 광원을 활용해 전하, 스핀, 격자, 오비탈의 동역학 특성을 높은 시간분해능으로 관측하는 연구방법론이다. 양자물질의 복잡한 상호작용에 기인한 특이 물성을 이해하고 숨겨진 기저상태(hidden phase)를 발견 또는 유도하기 위해 그동안 다양한 시분해 분광법이 전 세계적으로 활용되어 왔다. 본 튜토리얼 강의에서는 광학 레이저와 X선 자유전자 레이저를 이용한 시분해 분광연구의 기초 원리와 연구 사례를 소개하고 앞으로의 전망에 대해 논의하고자 한다.

D10.01 [08:30 - 09:18]

Ultrafast dynamics of correlated materials and coherent oscillations / KIM Kyungwan*[†] ([†]Chungbuk National University)

D10.02 [09:18 - 10:06]

Ultrafast X-ray spectroscopy and scattering using X-ray Free Electron Laser / JANG Hoyoung*[†] ([†]PAL-XFEL, Pohang Accelerator Laboratory)

©[I16-co] Tutorial: Microfluidics & Rheology : Principle and Application

2023. 10. 27 Friday 10:30~12:06

Room: Convention Hall III

좌장 : 제원호 서울대학교

Chair : JHE Wonho (Seoul National University)

[SCOPE]

‘연성물질(soft matter)’은 자연과 일상에 편만한 액체, 이물질, 콜로이드, 생체물질과 같은 기존의 ‘단단한’ 고체물질과 대비되는 물질을 통칭함. 일상에서 흔히 경험하고 자연과학과 산업에서도 많이 연구 응용됨에도 불구하고 이러한 연성물질은 오랜 기간 공학의 연구 대상으로 여겨져 왔고 많은 응용을 보였음에도 불구하고, 연성물질에 대한 근본적인 이해, 특히 물리학 연구자들을 위한 연구분야 소개는 상대적으로 부족한 점이 있었다고 여겨지고 있다. 연성물질의 두 가지 플랫폼(마이크로플루이드스와 유변학)의 세계적인 석학 두 분의 튜토리얼 강연을 통해 물리학의 지경을 넓히고 새로운 연구 및 응용 가능성을 제공하는 자리가 될 수 있을 것으로 보인다.

‘Soft Matter’ refers to materials that are present in contrast to ‘hard’ solid materials, such as liquids, emulsions, colloids, and biomaterials that are common in nature and daily life.

Despite being commonly experienced in everyday life and widely applied in natural science and industry, these soft materials have been considered as subjects mostly of engineering research for a long time and have shown. In particular, introduction of such areas to physics community has been rather slow. Through two tutorials by two world-renowned scholars of the two platforms on soft matter (microfluidics and rheology), it can be a chance to expand the boundaries of physics and provide new research and application possibilities.

I16.01 [10:30 - 11:18]

Time-Resolved Rheometry of Complex Fluids / MCKINLEY Gareth H^{*1} (¹Dept. of Mechanical Engineering, MIT, USA)

I16.02 [11:18 - 12:06]

Drop-based microfluidics / WEITZ David A^{*1} (¹Dept. of Physics and SEAS, Harvard University, USA)

Ⓚ[T8-ap] Tutorial: Energy Materials Experiment-based Analysis

2023. 10. 24 Tuesday 16:00~16:48

Room: 600A

좌장 : 김지영 한국과학기술연구원

Chair : KIM Gee Yeong (Korea Institute of Science and Technology)

[SCOPE]

에너지 응용 소자인 태양전지, 연료전지, 이차 전지와 같은 소재에서는 흥미로운 물리적 특성 및 새로운 현상들이 나타난다. 새로운 소재로의 응용을 위해 물리적 지식을 기반으로 새로운 현상을 관찰하고 발견하는 것이 중요하다. 이를 위한 에너지 소재를 실험기반으로 분석하는 기술의 기초적인 원리에 대해서 논의하고, 현재의 최신 연구 동향에 대해서도 발표하고자 한다.

The Department of Energy of a Physics Society has organized a session spotlighting the emerging physical properties and novel phenomena exhibited by materials used in energy applications, including solar cells, fuel cells, and battery cells. Emphasizing the critical role of recognizing these new phenomena through a foundation of physical understanding for their application in innovative devices, the session will discuss the fundamental principles of energy material analysis techniques via hands-on experiments. Furthermore, it will present the most recent trends in the research field.

T8.01 [16:00 - 16:48]

박막 태양전지의 실험 기반 분석 기술 - Cu(In,Ga)Se₂ 박막 태양전지를 중심으로 / CHUNG Yong-Duck^{*1} (¹Emerging Materials Research Section, ETRI)

Ⓚ[T9-se] Tutorial: Quantum Dot; Physics and application to quantum light sources

2023. 10. 24 Tuesday 16:00~16:48

Room: 600B

좌장 : 유영준 충남대학교

Chair : YU Young-Jun (Chungnam National University)

[SCOPE]

반도체 양자점은 10 nm 정도 크기의 영차원 반도체로 다른 차원의 반도체에서는 볼 수 없는 특별한 특성을 보여준다. 본 발표에서는 양자점의 기본적인 물리현상을 살펴보고 이를 바탕으로 한 새로운 기능의 소자를 소개한다. 고체 원자로서 불연속적인 에너지 준위를 가지고 위치적으로 고립되어 있는 특성을 이용하여 양자점군을 이용한 새로운 특성의 소자와 월등한 성능을 보여주는 확정적 단일광자 광원을 소개한다.

Semiconductor quantum dot is a zero-dimensional system and exhibits many novel properties not possible in finite dimensional semiconductors. In this tutorial, we introduce fundamental properties of quantum dot and novel devices utilizing those properties. As a solid state atom, the quantum dot has discrete energy levels and the complete spatial isolation, which make possible to realize novel ensemble based optical devices, as well as high quality deterministic single photon sources.

T9.01 [16:00 - 16:48]

Semiconductor quantum dot: physics and applications to quantum light sources / LEE Donghan^{*1} (^{*1}Department of Physics, Chungnam National University)

[TT2-pa] Tutorial: Collider Phenomenology

2023. 10. 25 Wednesday 11:00~12:48

Room: 602

좌장 : 신서동 전북대학교

Chair : SHIN Seodong (Jeonbuk National University)

[SCOPE]

입자물리학에서는 유럽핵입자물리연구소(CERN)에서 가동 중인 거대 강입자 충돌기(LHC)를 비롯한 가속기를 통해 다양한 기본입자를 발견하고 우주의 근본 법칙을 이해하였다. 이에 따라 표준모형을 넘어서는 새로운 이론을 탐색하는 데 있어 가속기 현상론 연구가 필수적으로 동반되어야 하는 상황이다. 더구나 가속기 현상론에서 다루는 통계적인 데이터 처리 방법은 해당 분야를 넘어 중성미자 물리학이나 암흑물질 물리학 등 다양한 입자물리학 연구 주제에 적용될 수 있는 등 활용범위가 넓은 상황이다. 이에 따라 입자물리학의 학생 연구자 및 신진 연구자를 위해 가속기 현상론에 대한 튜토리얼 세션을 기획하였다.

Particle physicists have discovered elementary particles and understood the fundamental laws of universe through accelerators such as the Large Hadron Collider (LHC) at CERN. Hence it is inevitable to include the study on collider phenomenology in probing New Physics beyond the Standard Model. Moreover, the statistical data processing methods in collider phenomenology are widely applicable to other fields of particle physics such as neutrino physics and dark matter physics. We hence propose a tutorial session of collider phenomenology for the graduate students and junior researchers in particle physics.

TT2.01 [11:00 - 11:48]

Basics of collider physics / PARK Chan Beom^{*1} (¹Department of Physics, Chonnam National University)

TT2.02 [11:48-12:36]

Deep Neural Networks in the Search for New Physics from Terrestrial to Cosmological Colliders / KIM Jeong Han^{*1} (¹Department of Physics, Chungbuk National University)

TT2.03 [12:36 - 12:48]

Collider Phenomenology Tutorial – Hands-on / KANG Dong Woo^{*1,2}, SHIN Se-odong², PARK Chan Beom³ (¹School of Physics, KIAS, ²Department of Physics, Jeonbuk National University, ³Department of Physics, Chonnam National University)

[TT9-bp] Tutorial: Fundamentals and Applications of AlphaFold2

2023. 10. 25 Wednesday 11:00~11:48

Room: 600B

좌장 : 김하진 울산과학기술원

Chair : KIM Hajin (UNIST)

[SCOPE]

최근 기계 학습 기술의 발전은 우리의 일상적인 과학 연구에 혁명을 일으키고 있습니다. 생물물리학 분야의 대표적인 예로 알파폴드2가 있는데, 알파폴드2는 다른 프로그램에 비해 상당히 높은 정확도로 단백질의 3차원 구조를 예측한다. 알파폴드2는 알려지지 않은 실험 구조 없이 단백질에 대한 구조적 통찰을 제공할 수 있기 때문에 이론 및 실험 생물 물리학자 모두에게 유용할 수 있다. 이번 실습 튜토리얼 세션에서는 AlphaFold2의 기본 원리를 실용적인 관점에서 학습할 예정이다. 또한 AlphaFold2의 잠재적 응용 및 단점에 대해 알아볼 예정이다.

Recent developments in machine learning technology are revolutionizing our everyday scientific research. A representative example in the field of biophysics is AlphaFold2, which predicts the three-dimensional structure of proteins with significantly higher accuracy compared to other programs. AlphaFold2 can be useful for both theoretical and experimental biophysicists because it can provide them with structural insight into proteins

without known experimental structures. In this hands-on tutorial session, we will learn the fundamentals of AlphaFold2 from a practical point of view. Further, we will learn about the potential applications and shortcomings of AlphaFold2.

T9.01 [11:00 - 11:48]

Fundamentals and Applications of AlphaFold 2 / YOO Jejoong^{*1} (¹Sungkyunkwan University)

학회주관세션 Sessions Organized by KPS Committees

㉠[A1-or] 새물리(New Physics: Sae Mulli) 발전을 위한 방안 탐색

2023. 10. 25 Wednesday 13:00~13:48

Room: 601

좌장 : 이재광 부산대학교

Chair : LEE Jaekwang (Pusan National University)

한국물리학회 발행 Scopus학술지인 새물리(New Physics: Sae Mulli)는 1961년 5월 창간 이래 오랜 전통을 이어오고 있습니다. 새물리는 국문으로 발행되어 물리학 전 분야의 최근 학문적 동향 파악과 학문 분야의 발전에 기여해 왔습니다. 본 세션에서는 2023년 과학기술우수논문상 수상자의 초청강연과 함께 새물리가 나아갈 방향을 함께 모색하고 발전 방안을 고민해 보고자 합니다.

[프로그램]

- 사회 이재광(새물리 실무이사, 부산대)
- 13:00~13:08 인사말 및 Session 소개: 부상돈(새물리 편집위원장, 전북대)
- 13:08~13:28 2023년 과학기술우수논문상 수상자 초청강연
- 나의 새물리 연구와 기대 방향: 조연정(경북대)
- 13:28~13:38 새물리 발전방안 1: 제송근(새물리 부실무이사, 전남대)
- 13:38~13:48 새물리 발전방안 2: 지영래(새물리 부실무이사, 순천대)

㉠[B1-or] 여성특별세션: 그녀의 호기심, 그의 궁금증

2023. 10. 25 Wednesday 14:00~15:48

Room: 601

좌장 : 공수현 고려대학교

Chair : GONG Su-Hyun (Korea University)

물리학을 연구하는 우리는 왜 이 길을 선택하고 계속 추구하고 있을까요? 우주의 경이로운 진실을 밝히겠다는 거창한 포부에서 출발했을 수도 있지만, 대부분은 단순히 궁금증 때문에 시작했고, 그 궁금증이 아직 풀리지 않아 계속하는 것입니다. 우리는 자연 현상의 근본적인 메커니즘에 대해 지속적으로 질문하고, 실험과 이론적 모델을 통해 궁금증에 대한 해답을 찾아갑니다. 하지만 우리는 좁은 연구 영역에 집중하며 고도로 전문화되는 과정에서 물리학의 다른 분야를 이해하는 데 어려움을 겪고 있습니다. 이번 여성특별세션에서는 각 분야의 핵심적인 질문에 대한 흥미로운 이야기를 듣고자 합니다. 이는 장벽을 허물고 다양하고 상호 연결된 물리학의 특성에 대한 전반적인 이해를 증진하자는 거창한 목표가 아니라, 우리의 동료들이 왜 그 일을 열정적으로 하는지에 대한 원초적인 호기심을 나누는 자리가 되기를 희망합니다

[프로그램]

- 인사말 임혜인(여성위원회 위원장, 숙명여대)
- 강연자 이성빈(KAIST), 채은미(고려대)

㉔[C1-or] Open KIAS 특강: 현대 우주론의 연구 동향

2023. 10. 25 Wednesday 16:00~16:48

Room: 601

좌장 : 고병원 고등과학원

Chair: KO Pyungwon (KIAS)

C1.01 [16:00 - 16:48]

Primordial density perturbations as a tool to probe new physics / YAMAGUCHI Masahide^{*1} (*CTPU-CGA, IBS)

㉕[F1-or] 정책위원회 특별세션

2023. 10. 26 Thursday 14:00~15:48

Room: 601

좌장 : 정문석 한양대학교

Chair: JEONG Mun Seok (Hanyang University)

[프로그램]

- 인사말 김창영 (정책위 위원장, 서울대 교수)
- 연구재단 과제 현황 안태규 (한국연구재단 자연과학단 단장)
- 질의응답 및 토론

㉖[G1-or] 전국 물리관련 학과 학과장 토론회

2023. 10. 26 Thursday 16:00~17:48

Room: 601

좌장 : 김근영 광주과학기술원

Chair: KIM Keun Young (GIST)

학령인구 감소에 따른 대학 구조조정, 물리학에 대한 선호도 약화, 연구비 감축 예고 등으로 물리학 및 관련 학과의 운영이 녹록치 않고 있습니다. 학회에서는 경험과 정보를 공유하고, 지혜를 모으며 해법을 논의하는 자리를 지속적으로 마련하려 하며, 이번 가을 학술대회 기간에 학회 주관 '전국 물리학 분야 학과(부)장 토론회'를 기획합니다.

[프로그램]

- 내년 연구비 상황 김창영(서울대, 정책위원장)
- 고교 교육과정, 수능, 대학의 일반물리 교육현황 정중훈(인하대, 교육위원장)
- 교육부의 대학구조 조정 방향성과 물리학과의 대처 엄중화(세종대 부총장)
- 대학별 물리학과 운영 사례1 이현복(강원대)
- 대학별 물리학과 운영 사례2 강병원(충북대)
- 자유 발언
- 자유 토론

[I14-or] 정부출연연구기관의 차세대 컴퓨팅/반도체 연구I (Next-Generation Computing/Electronics Research at National Research Institutes in Korea I)

2023. 10. 27 Friday 10:30~12:18

Room: Convention Hall I

좌장 : 최준우 한국과학기술연구원

Chair: CHOI Jun Woo (KIST)

I14.01 [10:30 - 11:06]

Neuromorphic Devices based on 2D Materials for SNN / KWAK Joon Young^{*1}
(¹KIST)

I14.02 [11:06 - 11:42]

Next Generation Spintronic Device / HWANG Chan Yong^{*1} (¹Institute of Quantum Technology, KRISS)

I14.03 [11:42 - 12:18]

Probabilistic computing based on random MTJs for invertible logics / LEE Ouk-Jae^{*1}, HONG Seokmin¹ (¹KIST)

[J14-or] 정부출연연구기관의 차세대 컴퓨팅/반도체 연구II(Next-Generation Computing/Electronics Research at National Research Institutes in Korea II)

2023. 10. 27 Friday 13:00~14:12

Room: Convention Hall I

좌장 : 최준우 한국과학기술연구원

Chair: CHOI Jun Woo (KIST)

J14.01 [13:00 - 13:36]

All Solid-State Synapse Device Arrays Using 2D Channel/LiSiO_x Electrolyte for Next-Generation Neuromorphic Edge Computing / KIM Yonghun^{*1} (¹Surface & Nano Materials Division, KIMS)

J14.02 [13:36 - 14:12]

Quantum optical quantum computerors and simulators / KIM Yong-Su^{*1} (¹Center for Quantum Information, KIST)

[W15-or] Open KIAS 대중강연: 물리학의 최전선

2023. 10. 25 Wednesday 19:00~21:00

Room: Convention Hall II

좌장 : 이재성 고등과학원

Chair: LEE Jae Sung (KIAS)

W15.01 [19:00 - 20:00]

우주의 비밀을 캐고자 하는 물리학자들이 지하로 가는 이유 / 이현수^{*1} (¹기초과학연구원 지하실험연구단 부연구단장)

W15.02 [20:00 - 21:00]

물리학자의 청각, AI 그리고 스타트업 / 안강현^{*1,2} (¹충남대학교 물리학과, ²주식회사 딥히어링 대표이사)

[WW15-or] APCTP 선정, 올해의 과학도서 저자 강연

2023. 10. 26 Thursday 19:00~21:00

Room: Convention Hall II

좌장 : 손승우 한양대학교

Chair: SON Seung-Woo (Hanyang University)

아시아태평양이론물리센터에서는 매년 과학도서 10권을 선정하고 저자 강연을 진행하고 있습니다. 이번 세션에서는 2022 올해의 과학도서 중 민태기 연구소장(에스엔에이치)의 저서 <판타 레이>를 주제로 소통의 장을 마련하고자 합니다. 저자 강연 후 APCTP 과학문화위원과의 대담시간 및 강연 도서 관련된 질의응답 시간도 준비되어 있습니다.

[프로그램]

- 강연도서 <판타 레이> 민태기 저
- 사회자 손승우 (APCTP 과학문화위원장, 한양대학교 응용물리학과 교수)
- 강연자 민태기 (에스엔에이치)
- 패널 이은희(APCTP 과학문화위원, 과학커뮤니케이터)
- 이성빈(APCTP 과학문화위원, KAIST 물리학과 교수)
- 황정아(APCTP 과학문화위원, KASI 책임연구원)

[D4-in] Performance and Challenge of PAL-XFEL

2023. 10. 26 Thursday 08:30~10:30

Room: 604

좌장 : 구태영 포항가속기연구소

Chair: KOO Tae-Yeong (Pohang Accelerator Laboratory)

D4.01 [08:30 - 08:54]

PAL-XFEL status and plan / EOM Intae^{*1} (¹XFEL Beamline division, Pohang Accelerator Laboratory)

D4.02 [08:54 - 09:18]

Hard X-ray instrument at PAL-XFEL for the study of energy and quantum materials / CHUN SAE HWAN^{*1} (¹XFEL Division, Pohang Accelerator Laboratory)

D4.03 [09:18 - 09:42]

Evidence for fractional quasiparticles in frustrated square-lattice iridates / KIM Bumjoon^{*1,2}, KIM Jin-Kwang^{1,2}, KIM Hoon^{1,2,3}, KWON Junyoung¹ (¹Department of Physics, POSTECH, ²Center for Artificial Low Dimensional Electronic Systems, IBS, ³Department of Physics, CALTECH, USA)

D4.04 [09:42 - 10:06]

Ultrafast and nanoscale imaging with XFELs / SONG Changyong^{*1} (¹Department of Physics, POSTECH)

D4.05 [10:06 - 10:30]

HX-2 FEL line construction plan / NAM Inhyuk^{*1} (¹PAL-XFEL, Pohang Accelerator Laboratory)

LIST of Award Winners' Presentations

[2023 신진물리학자상 수상자 발표 (2023 New Physicist Award)]

C4.02 2023. 10. 25 Wednesday 16:24 - 16:48

Room: 604

C4.02 [16:24 - 16:48]

Ultra-thin 2D semiconductor waveguide / GONG Su-Hyun^{*1} (¹Department of Physics, Korea University)

[2023 응집물질물리학 MSM상 수상자 발표

(2023 Condensed Matter Physics MSM Award)]

J11.08 2023. 10. 27 Friday 14:24 - 14:36

Room: 700B

J11.08 [14:24 - 14:36]

Emergent inductance from spin fluctuations in strongly correlated magnets / OH Taekoo^{*1}, NAGAOSA Naoto¹ (¹Center for Emergent Matter Science, RIKEN)

2023 October 25(Wed) 13:00-13:48

Ⓚ [A1-or] 새물리(New Physics: Sae Mulli) 발전을 위한 방안 탐색

2023. 10. 25 Wednesday 13:00~13:48

Room: 601

좌장 : 이재광 부산대학교

Chair: LEE Jaekwang (Pusan National University)

A1.01 [13:00 - 13:28]나의 새물리 연구와 기대 방향 / 조연정^{*1} (*경북대학교 물리학과)**A1.02** [13:28 - 13:38]새물리 발전방안 1 / 제승근^{*1} (*Department of Physics, Chonnam National University)**A1.03** [13:38 - 13:48]새물리 발전방안2 / 지영래^{*1} (*순천대학교 물리교육과)**[A2-pa] Non-accelerator I**

2023. 10. 25 Wednesday 13:00~13:48

Room: 602

좌장 : 양병수 서울대학교

Chair: YANG Byeongsu (Seoul National University)

A2.01 [13:00 - 13:12]

슈퍼카미오칸데실험의 현황 / CHOI Koun³, JANG Jee Seung², JUNNG Seunghyun⁴, KWON Eunhyang⁵, MOON Dongho¹, YANG Byeongsu^{*4}, YANG Jeongyeol⁴, YOO Jong-hee⁴, YU Intae⁵, IOVINE Nadege³, LEE Seonghak¹, JANG Mincheol¹, LEE Minwoo⁵, SEO Jiwoong⁵, PARK RyeongGyoon¹ (*¹Department of Physics, Chonnam National University, ²Department of Physics and Photon Scienc, GIST, ³Center of Underground Physics, IBS, ⁴Department of Physics and Astronomy, Seoul National University, ⁵Department of Physics, Sungkyunkwan University)

A2.02 [13:12 - 13:24]

Search for proton decay via $p \rightarrow e^+ \pi^0 \pi^0$ and $p \rightarrow \mu^+ \pi^0 \pi^0$ in Super-Kamiokande I-IV / KWON Eun Hyang^{*1}, SEO Jiwoong¹ (*¹Department of Physics, Sungkyunkwan University)

A2.03* [13:24 - 13:36]

Search for rare interactions of Dark Matter with high-energy neutrinos from distant point sources with the IceCube Neutrino Telescope / KANG Woosik^{*1} (¹Department of Physics, Sungkyunkwan University)

A2.04* [13:36 - 13:48]

Characterization of large-diameter photomultiplier tube / LEE Yuno¹, KIM Hong Joo^{*1}, LEE Jik¹, PARK Jungsic¹, JOO Kyung Kwang², YOO Jonghee³, JANG Jee-Seung⁴ (¹Department of Physics, Kyungpook National University, ²Department of Physics, Chonnam National University, ³Department of Physics, Seoul National University, ⁴Department of Physics and Photon Science, GIST)

[A3-pa] Field and String Theory I

2023. 10. 25 Wednesday 13:00~13:48

Room: 603

좌장 : 송재원 한국과학기술원

Chair: SONG Jaewon (KAIST)

A3.01 [13:00 - 13:12]

Edge mode in supersymmetric Jackiw-Teitelboim gravity / YOON Junggi^{*1,2,3}, LEE Kyungsun^{3,4}, SIVAKUMAR Akhil¹ (¹Junior Research Group, APCTP, ²Department of Physics, POSTECH, ³School of Physics, KIAS, ⁴School of Physics and Chemistry, GIST)

A3.02 [13:12 - 13:24]

BF description of the gravitational edge mode in N=1 super Jackiw-Teitelboim gravity / LEE Kyung-Sun², YOON Junggi^{*1}, SIVAKUMAR Akhil¹ (¹Junior Research Group, APCTP, ²School of Physics, KIAS)

A3.03 [13:24 - 13:36]

End of the World Perspective to BCFT / LEE Jung-Hun^{*1}, KIM Kyung Kiu¹, KIM Se-Jin¹, PARK Chanyong², SEO Yunseok¹ (¹Kookmin University, ²Department of Physics and Photon Science, GIST)

A3.04 [13:36 - 13:48]

End of the world perspective to BCFT / KIM Kyung Kiu^{*1}, SEO Yunseok¹, KIM Se-Jin¹, LEE Junghun¹, PARK Chanyong² (¹College of General Education, Kookmin University, ²물리광학과, GIST)

[A4-A5] No Session

[A6-nu] Hadron Physics

2023. 10. 25 Wednesday 13:00~13:36

Room: 606

좌장 : 남승일 부경대학교

Chair: NAM Seung-il (Pukyong National University)

A6.01 [13:00 - 13:12]

Effect of quark degrees of freedom on nuclear matter properties / MIYATSU Tsuyoshi^{*1}, CHEOUN Myung Ki¹, SAITO Koichi² (¹Department of Physics and OMEG Institute, Soongsil University, ²Department of Physics and Astronomy, Faculty of Science and Technology, Tokyo University of Science, Japan)

A6.02* [13:12 - 13:24]

Measurement of $K^*(892)$ production in the $^{12}\text{C}(K^-, p)$ reaction at 1.8 GeV/c / CHOI Sungwook¹, AHN Jung Keun^{*1} (¹Department of Physics, Korea University)

A6.03* [13:24 - 13:36]

Production of S=-2 systems near the threshold in the $^{12}\text{C}(K, K^+)X$ reaction at 1.8 GeV/c / JUNG WooSeung¹, AHN Jung Keun^{*1}, FOR THE E42 Collaboration^{1,2,3} (¹Department of Physics, Korea University, ²ASRC, JAEA, Japan, ³Department of Physics, Tohoku University, Japan)

[A7-nu] Nuclear Structure

2023. 10. 25 Wednesday 13:00~13:48

Room: 607

좌장 : 임연환 연세대학교

Chair: LIM Yeunhwan (Yonsei University)

A7.01 [13:00 - 13:12]

Odd-even staggering and kink structure of charge radii of Hg isotopes by the deformed relativistic Hartree-Bogoliubov theory in continuum / MUN Myeong-Hwan^{*1}, KIM Seonghyun¹, CHEOUN Myung-Ki¹ (¹Department of Physics/Origin of Matter and Evolution of Galaxies (OMEG) Institute, Soongsil University)

A7.02 [13:12 - 13:24]

Unitary Fermi System in Lattice EFT / KIM Myungkuk¹, SONG Young-Ho^{*2}, KIM Youngman¹ (¹CENS, IBS, ²Rare Isotope Science Project, IBS)

A7.03 [13:24 - 13:36]

Shell-Model Description of the Mirror Asymmetry in Gamow-Teller Transition Rates / XAYAVONG Latsamy¹, LIM Yeunhwan¹, SMIRNOVA Nadezda² (¹Department of Physics, Yonsei University, ²Department of Physics, University of Bordeaux, France)

A7.04 [13:36 - 13:48]

Improvement of sd-shell effective interactions from Daejeon16 / SHIN Ik Jae^{*1}, SMIRNOVA Nadezda A.², SHIROKOV Andrey M.³, YANG Zuxing^{4,5}, BARRETT Bruce R.⁶, LI Zhen², KIM Youngman⁷, MARIS Pieter⁸, VARY James P.⁸ (¹Institute for Rare-Isotope Science, IBS, ²LP2IB, CNRS/IN2P3, France, ³Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Russia, ⁴Institute of Modern Physics, Chinese Academy of Science, China, ⁵Nishina Center, RIKEN, Japan, ⁶Department of Physics, University of Arizona, USA, ⁷Center for Exotic Nuclear Studies, IBS, ⁸Department of Physics and Astronomy, Iowa State University, USA)

ⓔ [A8-at] Pioneer: Quantum Effects of Superradiance and Their Applications I

2023. 10. 25 Wednesday 13:00~14:00

Room: 600A

좌장 : 안경원 서울대학교

Chair: AN Kyungwon (Seoul National University)

A8.01 [13:00 - 13:30]

Experimental investigation of a quantum heat engine coupled to superradiant reservoirs / KIM Jinuk¹, AN Kyungwon² (¹Department of Physics, Yale University, USA, ²Department of Physics and Astronomy & Institute of Applied Physics, Seoul National University)

A8.02 [13:30 - 14:00]

Photon statistics in thresholdless superradiant lasing / OH Seung-hoon¹, KIM Jinuk², HA Junseo¹, SON Gibeom¹, AN Kyungwon¹ (¹Department of Physics and Astronomy, Seoul National University, ²Department of Physics, Yale University, USA)

[A9-bp] Cellular Biological Physics

2023. 10. 25 Wednesday 13:00~13:48

Room: 600B

좌장 : 김병철 인천대학교

Chair: KIM Byoung Choul (Incheon National University)

A9.01 [13:00 - 13:12]

Locked nucleic acid (LNA)-based tension sensor for measuring strong integrin tension / KIM Byoung Choul^{*1} (¹Major of Nano-Bioengineering, Incheon National University)

A9.02 [13:12 - 13:24]

Non-invasive Assessment of Reduced Stemness in Induced Pluripotent Stem Cells through Holotomography / KIM Geon¹, PARK Hoewon², SHIN Jeongwon², YOON Ki-Jun², PARK YongKeun^{*1} (¹Department of Physics, KAIST, ²Department of Biological Sciences, KAIST)

A9.03* [13:24 - 13:36]

Direct Measurement of the Strength of Protein-Protein Interactions Within Living Bacterial Cells by Accurate FRET Imaging / YI Soojung¹, LEE Nam Ki^{*1} (¹Seoul National University)

A9.04 [13:36 - 13:48]

ER-associated organelle dynamics across microtubular and ER networks / PARK Jin-Sung¹, JEON Hyeonjun^{1,2}, LEE Il-Buem¹, MOON Hyeon-Min¹, LEE MinHyeong³, KIM Chungho³, HONG Seok-Cheol^{*1,2}, CHO Minhaeng^{1,4} (¹Center for Molecular Spectroscopy and Dynamics, IBS, ²Department of Physics, Korea University, ³Department of Life Sciences, Korea University, ⁴Department of Chemistry, Korea University)

[A10-co] Surface/Interface/Nanomaterials

2023. 10. 25 Wednesday 13:00~14:00

Room: 700A

좌장 : 전상준 중앙대학교

Chair: JEON Sangjun (Chung-Ang University)

A10.01 [13:00 - 13:12]

Study on physical characteristics of single and nano polycrystalline structure of Ti₆Al₄V under indentation using molecular dynamics simulations / YI Taeil^{*1}, JUNG Yeri¹, KIM Jinho¹, KIM Woojong² (¹School of Mechanical Engineering, Kyungnam University, ²R&D Team, Daegun Tech)

A10.02 [13:12 - 13:24]

Comparison of Fourier-transformed and Wavelet-transformed EXAFS / HAN Sang-Wook^{*1}, JEONG Eun-Suk¹ (¹Department of Physics Education, Jeonbuk National University)

A10.03 [13:24 - 13:36]

Defect identification of nitrogen-doped graphene on Pt (111) via atomic force microscopy and scanning tunneling microscopy / KANG Hyunmin², SEO Jeong Ah³, YOON TaeGeun², SHIN Bong Gyu², CHA Yongtae², PARK Jiwon⁴, HEINRICH Andreas⁶, KIM Hyo Won^{3,5}, CHAE Jungseok³, SONG Young Jae^{*1,2,7} (¹Department of Nano Engineering and Department of Physics, Sungkyunkwan University, ²SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University, ³Center for Quantum Nanoscience, Ewha Womans University, ⁴Department of Chemistry, Sungkyunkwan University, ⁵Quantum Computing Research, Samsung Advanced Institute of Technology, ⁶Department of Physics, Ewha Womans University, ⁷Department of Nano Science and Technology, Sungkyunkwan University)

A10.04 [13:36 - 13:48]

The effect of bilayer graphene substrate on epitaxially grown monolayer TaSe₂ film / HWANG Jinwoong^{*1} (¹Department of Physics, Kangwon National University)

A10.05 [13:48 - 14:00]

Robust Monolayers of Endohedral Fullerenes: Towards Highly Ordered Arrays of Single Molecule Magnets and Spin Qubits / SPREE Lukas Emanuel^{*1}, HOMMEL Caroline¹, COLAZZO Luciano Colazzo¹, CHOI Dasom¹, POPOV Alexey², HEINRICH Andreas¹ (¹Center for Quantum Nanoscience, Ewha Womans University, ²Fullerenes, Leibniz Institute for Solid State and Materials Research, Germany)

[A11] No Session**[A12-ap] Energy and Spin Materials**

2023. 10. 25 Wednesday 13:00~13:48

Room: 301

좌장 : 서동석 이화여자대학교

Chair: SUH Dongseok (Ewha Womans University)

A12.01* [13:00 - 13:12]

Interface defect passivation through LiF post deposition treatment in Cu₂Zn-Sn(S,Se)₄ solar cells / LIM Geumha¹, PARK Ha Kyung¹, KIM Wook Hyun², KIM Seung-Hyun³, YANG Kee-Jeong², KANG Jin-Kyu², KIM Dae-Hwan², JO William^{*1} (¹Department of Physics, Ewha Womans University, ²Division of Energy Technology, DGIST, ³Research Institute, YKSintering Co.,Ltd.)

A12.02* [13:12 - 13:24]

Exploring Laser-Patterned Hybrid Perovskite Modules through Optical Spectroscopy / KIM Yejin¹, JEONG Yujin^{2,3}, KO Seoyeon¹, KIM Gee Young², YOON Seokhyun^{*1}

(¹Department of Physics, Ewha Womans University, ²Advanced Photovoltaic Research Center, KIST, ³Department of Material Science and Engineering, Korea University)

A12.03* [13:24 - 13:36]

Myth and Truth in the Exploration of Dzyaloshinskii-Moriya Interaction based on Hysteresis Loop Shift Measurement / KIM Minhwan^{1,2}, CHOE Sug Bong^{*1}, KIM Duck-Ho^{*2}

(¹Department of Physics and Astronomy, Seoul National University, ²Center for Spintronics, KIST)

A12.04 [13:36 - 13:48]

Circuit Model Analysis of Negative Refraction in a Photon-Magnon Hybrid System / KIM Junyoung¹, KIM Bojong¹, KIM Bosung¹, KIM Sang-Koog¹ (¹Seoul National University)

[A13-se] Devices and Applications - Electronic, Photonic, Optoelectronic, Plasmonic, Organic, and Flexible

2023. 10. 25 Wednesday 13:00~13:48

Room: 302

좌장 : 주민규 숙명여자대학교

Chair: JOO Min-Kyu (Sookmyung Women's University)

A13.01 [13:00 - 13:12]

Electric-Field-Driven Trion Drift in a Suspended Monolayer of MoSe₂ / LEE Seong Won¹, CHOI Woo Hun¹, GONG Su-Hyun^{*1} (¹Department of Physics, Korea University)

A13.02 [13:12 - 13:24]

Photoreflectance Study of InAsPSb/InGaAs Multi-Quantum Well LED Structures With Different Quantum Well/barrier Numbers / ZEINALVAND FARZIN Behnam¹,

KIM Jong Su^{*1}, LEE DongKun², KANG Tae In¹, LEE Sang Jun³ (¹Yeungnam University,

²Institute of Photonic & Nano Technology, Yeungnam University, ³KRISS)

A13.03 [13:24 - 13:36]

콜로이드 분석을 위한 광학계 구성 및 시뮬레이션 / LEE Manhee^{*1}, JU Gyeongbin¹ (¹Department of Physics, Chungbuk National University)

A13.04 [13:36 - 13:48]

Influence of Luttinger Parameters on the First Transition Energy of InAs/GaSb Superlattice Structures / SEYEDEINARDEBILI Seyedehbahareh¹, KIM Jong Su^{*1} (¹Yeungnam University)

[A14-se] Energy Materials and Devices - Harvesting, Storage, Conversion

2023. 10. 25 Wednesday 13:00~13:48

Room: Convention Hall I

좌장 : 김용수 울산대학교

Chair: KIM Yong Soo (University of Ulsan)

A14.01* [13:00 - 13:12]

에너지 하베스팅 응용을 위한 $\text{Ba}_2\text{NaNb}_5\text{O}_{15}$ 물질의 합성 및 특성 분석 / VENKATA Siva Kavarthapu², SONTYANA Adonijah Graham², MANCHI Punnarao², MANDAR VASANT PARANJAP Mandar², KURAKULLA Anand², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

A14.02* [13:12 - 13:24]

전기촉매 응용을 위한 코발트-황화물 나노 아키텍처 합성 및 특성 분석 / AYYALURI Ramakrishna Reddy², MOHIT Kumar², BHIMANABOINA Ramulu², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

A14.03* [13:24 - 13:36]

전기방사를 이용한 니켈 세륨 셀레나이드 나노섬유 전극기반 준고체 슈퍼커패시터 제작 / EDUGULLA Girija Shankar², PARANJAP Mandar Vasant², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

A14.04 [13:36 - 13:48]

Enhancement of Thermoelectric Property by Magnetic Impurity in Half-Metallic Ferromagnet / SHIM Ji Hoon^{*1}, KIM Dongwook¹ (¹Department of Chemistry, POS-TECH)

[A15-ap] 2D and Nano Materials I

2023. 10. 25 Wednesday 13:00~13:48

Room: Convention Hall II

좌장 : 이재웅 아주대학교

Chair: LEE Jae-Ung (Ajou University)

A15.01* [13:00 - 13:12]

Effect of mass position on the resonance mode of graphene nano-electromechanical drum / JE Yugyeong¹, SHIN Donghoon², JEONG hyunjeong¹, LEE Sang-Wook¹ (¹Department of Physics, Ewha Womans University, ²Kavli Institute of Nanoscience, Delft University of Technology, Netherlands)

A15.02* [13:12 - 13:24]

Array of One-dimensional Atomic Crystals for Emerging Electronic Platform / YOO GunWoo^{1,2}, CHOI Min-Yeong^{1,2}, AHN HeonSu^{1,3}, JUNG Ju-Hyun^{1,2}, JO Moon-Ho^{1,3}, KIM Cheol-Joo^{*1,2} (¹Center for van der Waals Quantum Solids, IBS, ²Department of Chemical Engineering, POSTECH, ³Department of Materials Science and Engineering, POSTECH)

A15.03* [13:24 - 13:36]

Ferroelectric domain wall dynamics in trilayer transition metal dichalcogenides / PARK Daesung¹, JEONG Siwon¹, YOO Hyobin^{*1} (¹Department of Physics, Sogang University)

A15.04 [13:36 - 13:48]

Electrical response of a flexible MoS₂ monolayer-based electronic device under a controllable mechanical deformation / LEE Sang-Wook^{*1}, JEONG Hyunjeong¹, TRAN Hue Thi¹, JE Yugyeong¹ (¹Department of Physics, Ewha Womans University)

[A16-co] Condensed-matter Computational Physics I

2023. 10. 25 Wednesday 13:00~13:48

Room: Convention Hall III

좌장 : 권영균 경희대학교

Chair: KWON Young-Kyun (Kyung Hee University)

A16.01 [13:00 - 13:12]

Study of Non-Equilibrium Energetics in Van der Waals Ferroelectric Tunnel Junctions using Multi-Space Density Functional Theory / RAJPUT Kaptansinh Suryabaisinh¹, LEE Ryoung Gyu¹, KIM Tae Hyung¹, KIM Yong-Hoon^{*1} (¹School of Electrical Engineering, KAIST)

A16.02* [13:12 - 13:24]

Multiscale non-equilibrium first-principles calculation based on electrostatic quantum embedding / YU Seunghyun¹, KIM Tae Hyung¹, KIM Yong-Hoon*¹ (¹School of Electrical Engineering, KAIST)

A16.03* [13:24 - 13:36]

Realization of Hofstadter butterfly in quantum computer / BARK Chan Bin¹, KIM Youngseok², PARK Moon Jip*¹ (¹Department of Physics, Hanyang University, ²IBM Research, IBM)

A16.04 [13:36 - 13:48]

Moiré flat bands and interfacial charge polarization in lattice relaxed twisted bilayer hexagonal boron nitride under perpendicular electric fields / JUNG Jeil*^{1,2}, LI Fengping¹, LEE Dongkyu^{1,2}, NICOLAS Leconte¹, AN Jiaqi¹, SRIVANI Javvaji¹ (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul)

Sessions B

2023 October 25(Wed) 14:00-15:48

B

Ⓚ [B1-or] 그녀의 호기심, 그의 궁금증

2023. 10. 25 Wednesday 14:00~15:48

Room: 601

좌장 : 공수현 고려대학교

Chair: GONG Su-Hyun (Korea University)

- 인사말 임혜인(여성위원회 위원장, 숙명여대)
- 강연자 이성빈(KAIST), 채은미(고려대)

[B2-pa] Focus: History and future of Korean Underground Physics Experiments

2023. 10. 25 Wednesday 14:00~15:12

Room: 602

좌장 : 이현수 기초과학연구원

Chair: LEE Hyun Su (IBS)

B2.01 [14:00 - 14:24]

국내 지하 실험의 시작과 암흑물질 탐색 / KIM Sun Kee^{*1} (^{*1}Department of Physics and Astronomy, Seoul National University)

B2.02 [14:24 - 14:48]

이중베타붕괴 실험의 시작과 AMoRE / KIM Hong Joo^{*1} (^{*1}Department of Physics, Kyung-pook National University)

B2.03 [14:48 - 15:12]

예미랩 건설과 앞으로의 지하실험 / KIM Yeongduk^{*1} (^{*1}IBS Center for Underground Physics, IBS)

[B3-pa] Accelerator I

2023. 10. 25 Wednesday 14:00~15:48

Room: 603

좌장 : 박인규 서울시립대학교

Chair: PARK Inkyu (University of Seoul)

B3.01* [14:00 - 14:12]

Search for excited leptons in lly final states at 13 TeV / KIM Bobae^{*1}, HA Seungkyu², KIM Jihun³, KIM Minsuk⁴, LEE Sehwook¹, YOO Hwidong² (¹Kyungpook National University, ²Department of Physics, Yonsei University, ³Department of Physics, Seoul National University, ⁴Department of Physics, Gangneung Wonju National University)

B3.02* [14:12 - 14:24]

Search for a heavy neutral boson decaying into a pair of boosted dileptons / KO Sanghyun¹, YOO Hwidong^{*2} (¹Department of Physics and Astronomy, Seoul National University, ²Department of Physics, Yonsei University)

B3.03* [14:24 - 14:36]

Inclusive search for new physics with razor variables and boosted objects in hadronic and leptonic final states using CMS Run 2 data / HUH Changgi^{*1}, SEKMEN Sezen¹, LEE Sehwook¹, LEE Junghyun¹, BORAN Fatma², TOK Ufuk Guney², MARTON Krisztina³ (¹Department of Physics, Kyungpook National University, ²Department of Physics, Cukurova University, Turkey, ³Department of Physics, Wigner Institute of Physics, Hungary)

B3.04* [14:36 - 14:48]

RPV SUSY search in the single-lepton final state in CMS / YOO Jae Hyeok^{*1}, HONG Byeong Jin¹ (¹Department of Physics, Korea University)

B3.05* [14:48 - 15:00]

Search for light charged Higgs boson decaying into W boson and CP-odd Higgs boson in top pair production using CMS full Run2 dataset / CHOI Jin^{*1}, BHYUN Ji Hwan¹, YANG Un-ki¹ (¹Department of Physics and Astronomy, Seoul National University)

B3.06 [15:00 - 15:12]

Search for new physics with Monophoton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV with CMS detector at LHC / LEE Hakseong¹, MOON Chang-Seong^{*1}, DOGRA Sunil Manohar¹ (¹Department of Physics, Kyungpook National University)

B3.07 [15:12 - 15:24]

Search for long-lived particles with delayed photon signature from CMS experiment using 2017 & 2018 data / TAE Bongho¹, MOON Chang-Seong^{*1}, DOGRA Sunil Manohar¹, XIE Si² (¹Department of Physics, Kyungpook National University, ²Department of Physics, California Institute of Technology, USA)

B3.08* [15:24 - 15:36]

Search for Right-Handed W Bosons Decaying Into Heavy Neutral Leptons / YANG Un-ki^{*1}, KIM Youngwan¹ (¹Department of Physics and Astronomy, Seoul National University)

B3.09* [15:36 - 15:48]

A phenomenological study of light Z' boson using non-isolated muons in the CMS experiment / YANG Un-ki^{*1}, KIM Taehee¹, LEE Joon-Bin¹, OH Minseok¹ (¹Department of Physics and Astronomy, Seoul National University)

[B4-ap] Focus: Light-Matter Interaction in Low Dimensional Materials I

2023. 10. 25 Wednesday 14:00~15:12

Room: 604

좌장 : 김지완 군산대학교

Chair: KIM Jiwan (Kunsan National University)

B4.01 [14:00 - 14:24]

Unique functionalities of organic nanoantennas / KANG Evan S Hyunkoo^{*1} (¹Department of Physics, Chungbuk National University)

B4.02 [14:24 - 14:48]

Surface Photovoltage Characterizations of TMD-Based Nanostructures using Kelvin Probe Force Microscopy / KIM Dong-Wook^{*1} (¹Department of Physics, Ewha Womans University)

B4.03 [14:48 - 15:12]

Mid-infrared plasmonics in nanostructures / KIM Kyoung-Ho^{*1} (¹Department of Physics, Chungbuk National University)

[B5-at] Atomic and Molecular Physics I

2023. 10. 25 Wednesday 14:00~15:48

Room: 605

좌장 : 문한섭 부산대학교

Chair: MOON Han Seb (Pusan National University)

B5.01 [14:00 - 14:36]

Controlled-NOT gate with neutral atoms in a 1D optical lattice / LEE Hyun Gyeong¹, ROH Seung Hwan², LEE Wonseok², HAN Hyok Sang³, CHO Dong Hyun² (¹Division of Physical Metrology, KRISS, ²Department of Physics, Korea University, ³Department of Physics, Joint Quantum Institute, USA)

B5.02 [14:36 - 15:12]

Hybrid quantum computation using cat code against photon loss / LEE Jaehak^{1,2}, KANG Nuri^{1,3}, LEE Seung-Woo¹ (¹Center for Quantum Information, KIST, ²Department of Physics and Astronomy, Seoul National University, ³Department of Physics, Korea University)

B5.03* [15:12 - 15:24]

Training Parametrized Quantum Circuits for Optimal Measurements / YUN Sung Won¹, BAE Joonwoo^{*1} (¹School of Electrical Engineering, KAIST)

B5.04* [15:24 - 15:36]

Towards exact ultrashort quantum gates / AHN Seongjin^{*1}, CHUCHALIN Andrei¹, MOSKALENKO Andrey S.¹ (¹Department of Physics, KAIST)

B5.05* [15:36 - 15:48]

Coherent control of an optical trapped-ion qubit / KIM Keumhyun^{*1}, LEE Hyegoo¹, JEONG Noa¹, SHIN Yongha¹, KIM Myunghun¹, CHO Junhee¹, LEE Moonjoo¹ (¹Department of Electrical Engineering, POSTECH)

[B6-nu] Nuclear Astrophysics

2023. 10. 25 Wednesday 14:00~15:48

Room: 606

좌장 : 홍병식 고려대학교

Chair: HONG Byungsik (Korea University)

B6.01* [14:00 - 14:12]

Evaluation of Astrophysically Important Nuclear Structure in ¹⁹Ne / KIM Sohyun¹, CHAE Kyung Yuk^{*1}, SMITH Michael S² (¹Department of Physics, Sungkyunkwan University, ²Physics Division, Oak Ridge National Laboratory, USA)

B6.02 [14:12 - 14:24]

Magnetic Effect on the Potential Barrier for Nucleosynthesis in Astrophysics / PARK Kiwan^{*1} (¹Department of Physics, Soongsil University)

B6.03* [14:24 - 14:36]

Equation of state for neutron stars including fermionic dark matter / LEE Gwangjun¹, CHEOUN Myung Ki^{*1}, MIYATSU Tsuyoshi¹, PARK Jubin¹ (¹Department of Physics and OMEG Institute, Soongsil University)

B6.04* [14:36 - 14:48]

Study of the $^{14}\text{O}(\alpha, p)^{17}\text{F}$ Cross Section for Type I X-ray burst light curve / AHN Sunghoon(Tony)^{*2}, PARK Chaeyeon^{1,2}, AVILA Melina L¹⁷, BAE Sunghan², BARBUI Marina⁴, BARDAYAN Daniel W⁷, BISHOP Jack⁴, CHA Soomi², CHAE Kyungyuk¹⁰, CHEN Alan⁸, CHILLERY Thomas William³, COGNATA Marco La¹³, DO Seungkyung⁹, GU Gyuongmo¹⁰, HAHN Kevin Insik², HAYAKAWA Seiya³, HONG Byungsik⁹, IMAI Nobuaki³, IWASA Nao-hito¹¹, KIM Dahee², KIM Yunghee², KIM Minju¹⁰, KIM Sohyun¹⁰, KIM Chanhee¹⁰, KIM Aram⁹, KITAMURA Noritaka³, KOSHCHIY Yevgen⁴, KUBONO Shigeru¹⁵, LEE Hyeji¹², MOON Byul², NAKAMURA Takashi¹², NGUYEN Duy Ngoc¹⁴, OKAWA Kodai³, PARKER Cody Cody⁴, PSALTIS Athanasios¹⁶, ROGACHEV Grigory V^{4,5}, ROOSA Michael^{4,5}, SANO Masaki¹⁵, SFERRAZZA Michele⁶, YAMAGUCHI Hidetoshi³, ZHANG Qian³, LEE Jungwoo², PEREIRA LÓPEZ Xesus² (¹Department of Physics, Ewha Womans University, ²Center for Exotic Nuclear Studies, IBS, ³Center for Nuclear Study, University of Tokyo, Japan, ⁴Cyclotron Institute, Texas A&M University, USA, ⁵Department of Physics & Astronomy, Texas A&M University, USA, ⁶Département de Physique, Université Libre de Bruxelles, Belgium, ⁷Department of Physics & Astronomy, University of Notre Dame, USA, ⁸Department of Physics and Astronomy, McMaster University, Canada, ⁹Department of Physics, Korea University, ¹⁰Department of Physics, Sungkyunkwan University, ¹¹Department of Physics, Tohoku University, Japan, ¹²Department of Physics, Tokyo Institute of Technology, Japan, ¹³Istituto Nazionale di Fisica Nucleare, Italy, ¹⁴Institute of Postgraduate Program, Van Lang University, Vietnam, ¹⁵Nishina Center, RIKEN, Japan, ¹⁶Triangle Universities Nuclear Laboratory, Duke University, USA, ¹⁷Argonne National Laboratory, USA)

B6.05 [14:48 - 15:00]

The thermal history of the dark ages in the early universe with Kompaneets equation / LEE Minkyu¹, PARK Jubin¹, CHEOUN Myung Ki^{*1} (¹Department of Physics, Soongsil University)

B6.06 [15:00 - 15:12]

Simulation studies for a $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$ reaction experiment near stellar energies / KIM Shin Hyung¹, AHN Jung Keun^{*1} (¹Department of Physics, Korea University)

B6.07 [15:12 - 15:24]

Dark matter effect on the neutron star equation of state / CHEOUN Myung Ki^{*1,2}, PARK Jubin^{*1,2} (¹Department of Physics, Soongsil University, ²Origin of Matter and Evolution of Galaxies (OMEG) Institute, Soongsil University)

B6.08 [15:24 - 15:36]

Resonance Strength Measurement of the $^{27}\text{Al}(p, \gamma)^{28}\text{Si}$ Reaction near $E_p=2.05$ MeV / AHN Jung Keun^{*1} (¹Department of Physics, Korea University)

B6.09 [15:36 - 15:48]

Radiative decay of the sub-threshold 1_1^- and 2_1^+ states of ^{16}O in cluster effective field theory / ANDO Shung-Ichi^{*1} (¹Department of Information Display, Sun Moon University)

[B7-nu] Nuclear Experimental Method and Instrumentation

2023. 10. 25 Wednesday 14:00~15:36

Room: 607

좌장 : 정광주 삼성서울병원

Chair: CHUNG Kwangzoo (Samsung Medical Center)

B7.01 [14:00 - 14:12]

The Study of 230 MeV Proton Beam monitoring system using a Faraday Cup for Flash Proton Therapy / LEE Se Byeong^{*1}, PAK Sang-il¹, AN Seohyeon^{1,2}, JEONG Sanghoon⁴, KIM Chae-Eon^{1,3} (¹Proton Therapy Center, National Cancer Center, ²Department of Physics, Hanyang University, ³Department of Nuclear Engineering, Hanyang University, ⁴Department of Neurosurgery, Ilsan Baik Hospital)

B7.02 [14:12 - 14:24]

Energy Deposition of C14 and Protons in Body Phantoms: A Geant4 Simulation Study / KO Jew U.^{*1}, WOO Jong-Kwan¹ (¹Jeju National University)

B7.03 [14:24 - 14:36]

As an application of Nuclear Physics, Available Medical Physics Study in JNU / WOO Jong-Kwan^{*1}, KO Jae U.¹, KO YoungJoon¹, HWANG JongSeok¹, LIU Dong², PARK SoHyun³ (¹Department of Physics, Jeju National University, ²Medical Physics Lab., Jeju National University, ³Hospital, Jeju National University)

B7.04 [14:36 - 14:48]

Effect of Ionizing Radiation on the 28nm MOSFETs / PARK Tae Yong^{*1}, HAN Young-hoon^{*1}, KWON Youngil^{*1} (¹Department of Physics, Yonsei University)

B7.05 [14:48 - 15:00]

Searching for an optimized selection of Monte Carlo dose calculation parameters for line-scanning proton beam therapy / CHUNG Kwangzoo^{*1} (¹Department of Radiation Oncology, Samsung Medical Center)

B7.06 [15:00 - 15:12]

Results of a 9-year Investigation into Workload in Two Treatment Vaults at a High-capacity Cancer Center / KIM Dong Wook^{*1,2}, AHN So Hyun³, KIM Jin Sung^{1,2} (¹Radiation Oncology, Yonsei University Health System, ²College of Medicine, Yonsei University, ³School of Medicine, Ewha Womans University)

B7.07 [15:12 - 15:24]

Overview of R&D activities of ALICE-ITS3 upgrade project in Korea / KIM Jiy-oung^{*1,2} (¹Department of Physics, Korea University, ²Department of Physics, Inha University)

B7.08 [15:24 - 15:36]

Current status of the Active Target TPC development in CENS / CHA Soomi^{*1}, HAHN Kevin Insik¹, AHN Sunghoon¹, BAE Sunghan¹, DO Seungkyung³, GU Gyoungmo^{1,2}, KIM Chanhee², KIM Minju^{1,2}, KIM Sohyun², KIM Yunghee¹, LEE Jungwoo¹, PEREIRA-LOPEZ Xesus¹, PARK Chaeyeon¹ (¹Center for Exotic Nuclear Studies, IBS, ²Department of Physics, Sungkyunkwan University, ³Department of Physics, Korea University)

© [B8-at] Pioneer: Quantum Effects of Superradiance and Their Applications II

2023. 10. 25 Wednesday 14:00~15:48

Room: 600A

Chair: HARRIES James (QST, Japan)

B8.01 [14:00 - 14:36]

Generation and applications of superradiant FEL pulses / HAJIMA Ryoichi^{*1} (¹Kansai Institute for Photon Science, National Institutes for Quantum Science and Technology, Japan)

B8.02 [14:36 - 15:12]

Superabsorption: Enhanced cooperative absorption as a time-reversal counterpart of superradiance / YANG Daeho^{*1} (¹Department of Physics, Gachon University)

B8.03 [15:12 - 15:48]

DNA grabbers and steerers of quantum emitter for superradiance / LEE Seung-woo^{*1} (¹Graduate School of Converging Sci & Tech & Department of Integrative Energy Engineering, Korea University)

[B9-bp] Focus: Biophysical Perspectives in Chromatin Dynamics

2023. 10. 25 Wednesday 14:00~15:36

Room: 600B

좌장 : 김유리 대구경북과학기술원

Chair: KIM Yoori (DGIST)

B9.01 [14:00 - 14:24]

Single-molecule studies of RNA polymerase II transcription / BAEK Inwha^{*1} (¹College of Pharmacy, Kyung Hee University)

B9.02 [14:24 - 14:48]

Initiation of Parental Genome Reprogramming in Fertilized Oocyte by Splicing Kinase SRPK1-Catalyzed Protamine Phosphorylation / LIM Do-Hwan^{*1} (¹School of Systems Biomedical Science, Soongsil University)

B9.03 [14:48 - 15:12]

Alterations in Chromatin Dynamics in Living Cells due to Transcription-Dependent Physical Disturbances / KU Hyeyeong^{1,2}, PARK Gunhee³, CHO Won-Ki^{*3,4}, JEONG Cherlhyun^{*1,5} (¹Chemical and Biological Integrative Research Center, KIST, ²KHU-KIST Department of Converging Science and Technology, Kyung Hee University, ³Department of Biological Sciences, KAIST, ⁴KI for Health Science and Technology, KAIST, ⁵Division of Bio-Medical Science and Technology, KIST School, UST)

B9.04 [15:12 - 15:36]

Revisiting DNA with Single Molecule Methods / KIM Hajin^{*1} (¹Department of Bio-medical Engineering, UNIST)

[B10-co] Magnetism I

2023. 10. 25 Wednesday 14:00~15:24

Room: 700A

좌장 : 최광용 성균관대학교

Chair: CHOI Kwang Yong (Sungkyunkwan University)

B

B10.01* [14:00 - 14:12]

Emergence of chaos in magnetic skyrmions driven by magnetic fields via quasi-periodic route to chaos / PARK Gyuyoung¹, KIM Sang-Koog^{*1} (¹Seoul National University)

B10.02 [14:12 - 14:24]

Noncollinear magnetic order, in-plane anisotropy, and magnetoelectric coupling in a pyroelectric honeycomb antiferromagnet $\text{Ni}_2\text{Mo}_3\text{O}_8$ / YADAV Poonam¹, CHOI Sungkyun^{*1} (¹IBS-CINAP, Sungkyunkwan University)

B10.03 [14:24 - 14:36]

Single-crystal synthesis of 3-dimensional quantum spin liquid candidate $\text{Yb}_3\text{Sc}_2\text{Ga}_3\text{O}_{12}$ / LEE Jungmin¹, JI Sungdae¹, LEE Sengsu¹, KIM Jaewook^{*1} (¹Advanced Quantum Materials Research Center, KAERI)

B10.04* [14:36 - 14:48]

Rare earth free Fe_3MnC_2 alloy permanent magnet: First principle and Atomistic Simulation / SIRAJ Haq¹, HONG Ji Sang^{*1} (¹Department of Physics, Pukyong National University)

B10.05* [14:48 - 15:00]

Possible unconventional superconductivity in altermagnetism / HONG Seung-Beom¹, PARK Moon Jip^{*1} (¹Department of Physics, Hanyang University)

B10.06* [15:00 - 15:12]

Large anomalous Hall effect and intrinsic Berry curvature in magnetic Weyl semimetal NdAlGe / CHO Keunki^{1,2}, CHO Beong Ki¹, SHON Wonhyuk³, YOON Seung-ha², HAN Song hee⁵, RHYEE Jongsoo^{*4} (¹School of Materials Science and Engineering, GIST, ²Green Energy and Nano Technology R&D Group, KITECH, ³Advanced Quantum Materials Research Center, KAERI, ⁴Institute of Natural Sciences, Kyung Hee University, ⁵3Division of Navigation Science, Mokpo National Maritime University)

B10.07 [15:12 - 15:24]

Unexplored magnetic anomaly inside a noncollinear magnetic order in a buckled honeycomb lattice of magnetoelectric $\text{Co}_4\text{Ta}_2\text{O}_9$ / CHOI Sungkyun^{*1} (¹IBS-CINAP, Sungkyunkwan University)

[B11-co] Strongly Correlated Systems I

2023. 10. 25 Wednesday 14:00~15:36

Room: 700B

좌장 : 신동빈 광주과학기술원

Chair: SHIN Dong Bin (GIST)

B11.01* [14:00 - 14:12]

Potential Spin Liquids of Anion-Centered David Star in 1T-Transition Metal Dichalcogenides / AHN Chunggeun^{1,2}, JIN Kyung-Hwan², PARK Jae Whan², YEOM Han Woong^{1,2}, GO Ara³, KIM Yong Baek⁴, CHO Gil Young^{*1,2} (¹Department of Physics, POS-TECH, ²Center for Artificial Low Dimensional Electronic Systems, IBS, ³Department of Physics, Chonnam National University, ⁴Department of Physics, University of Toronto, Canada)

B11.02* [14:12 - 14:24]

Emergent Excitations with Non-trivial Configurations of Visions in the Kitaev Quantum Spin Liquid / PARK Seongjun¹, MOON Eun-Gook^{*1} (¹Department of Physics, KAIST)

B11.03* [14:24 - 14:36]

Dynamics of exceptional points in non-Hermitian toric code / YEOM Cheolhun¹, PARK Moon Jip^{*2} (¹Department of Physics, Hanyang University, ²Department of Physics, Konkuk University)

B11.04* [14:36 - 14:48]

Control of trigonal crystal field and critical temperature in cobalt-based Kitaev quantum spin liquid candidates $A_3\text{Co}_2\text{SbO}_6$ ($A=\text{Cu, Na}$) / SOHN Changhee^{*1}, PARK Miju¹, KIM Gyeheon¹ (¹Department of Physics, UNIST)

B11.05* [14:48 - 15:00]

The Effects of the Strain on Kitaev Quantum Spin Liquids / NOH Pureum¹, MOON Eun-Gook^{*1} (¹Department of Physics, KAIST)

B11.06 [15:00 - 15:12]

Point-gap topology and skin effect of non-reciprocal many-body systems / KIM Beom Hyun^{*1}, HAN Jae Ho¹, PARK Moo Jip² (¹Center for Theoretical Physics of Complex Systems, IBS, ²Department of Physics, Hanyang University)

B11.07* [15:12 - 15:24]

The Influence of UV/IR Mixing on Topological Entanglement Entropy in Two-Dimensional Lattice Models / KIM Jintae^{*1}, OH Yun-Tak², HAN Jung Hoon¹ (¹Department of Physics, Sungkyunkwan University, ²Division of Display and Semiconductor Physics, Korea University, Sejong)

B11.08* [15:24 - 15:36]**Geometric aspects of the multipartite entanglement via modular commutator**/ PARK Sung-Min¹, KIM Isaac H², MOON Eun-Gook^{*1} (¹Department of Physics, KAIST,²Computer Science, University of California, Davis, USA)**[B12-ap] Focus: Computational Physics – from DFT to Machine Learning I**

2023. 10. 25 Wednesday 14:00~15:36

Room: 301

좌장 : 임성현 울산대학교

Chair: RHIM Sonny (University of Ulsan)

B12.01 [14:00 - 14:24]**Voltage control of magnetism in Fe_{3-x}GeTe₂/In₂Se₃ van der Waals heterostructures /**EOM Jaeun^{1,2}, LEE Inhak¹, KEE Jung Yun^{1,3}, CHO Minhyun⁴, SEO Jeongdae⁵, SUH Hoyoung⁶, CHOI Hyung-Jin⁷, SIM Yumin⁸, CHEN Shuzhang^{9,10}, CHANG Hye Jung⁶, BAEK Seung-Hyub⁷, PETROVIC Cedimir^{9,10}, RYU Hyejin¹, JANG Chaun¹, KIM Young Duck⁴, YANG Chan-Ho⁵, SEONG Maeng-Je⁸, LEE Jin Hong¹, PARK Se Young^{*3,11}, CHOI Jun Woo^{*1} (¹Center for Spintronics, KIST, ²Department of Physics and Astronomy, Seoul National University, ³Department of Physics, Soongsil University, ⁴Department of Physics and Department of Information Display, Kyung Hee University, ⁵Department of Physics, KAIST, ⁶Advanced Analysis Center, KIST, ⁷Electronic Materials Research Center, KIST, ⁸Department of Physics, Chung-Ang University, ⁹Condensed Matter Physics and Materials Science Department, Brookhaven National Lab, USA, ¹⁰Department of Physics and Astronomy, Stony Brook University, USA, ¹¹Origin of Matter and Evolution of Galaxies (OMEG) Institute, Soongsil University)**B12.02** [14:24 - 14:48]**Accelerated Variational Eigensolver in combination with Quantum annealer /**LEE Hunpyo^{*1}, PARK Hayun¹ (¹School of Liberal Studies, Kangwon National University)**B12.03** [14:48 - 15:12]**Screening of semiconductor materials using hybrid density functional theory /**PARK Ji-Sang^{*1} (¹SKKU Advanced Institute of Nanotechnology (SAINT) and Department of Nano Engineering, Sungkyunkwan University)**B12.04** [15:12 - 15:36]**Machine learning assisted design of the color of copper/copper oxide /**LEE Dongik¹, OH Ju Hyun¹, PARK Jihun², KIM Su Jae³, TAKEUCHI Ichiro², JEONG Se Young⁴, LEE Seunghun^{*1} (¹Department of Physics, Pukyong National University, ²Department of Materials Science and Engineering, University of Maryland, USA, ³Crystal Bank Research Institute, Pusan National University, ⁴Department of Optics and Mechatronics Engineering, Pusan National University)

[B13-se] Focus: Low Dimensional Quantum Materials

2023. 10. 25 Wednesday 14:00~15:36

Room: 302

좌장 : 양희준 한국과학기술원

Chair: YANG Heejun (KAIST)

B13.01 [14:00 - 14:24]

Highly conducting delafossite thin films for high-performance interconnects /
OK Jong Mok^{*1} (¹Department of Physics, Pusan National University)

B13.02 [14:24 - 14:48]

Two-dimensional pure electron liquid and hetero-surface / KIM Sunghun^{*1} (¹Department of Physics, Ajou University)

B13.03 [14:48 - 15:12]

Bose-Einstein Condensation of Composite Fermions in Twisted Bilayer Graphene / KIM Youngwook^{*1} (¹Department of Physics and Chemistry, DGIST)

B13.04 [15:12 - 15:36]

Single electron manipulations / KIM Min-Sik^{1,2}, KIM Bum-Kyu¹, GHEE Young-Seok¹,
BAE Myung-Ho^{*1} (¹KRISS, ²Department of Physics, Jeonbuk National University)

[B14-se] Focus: Advanced Energy Materials and Optoelectronic Applications

2023. 10. 25 Wednesday 14:00~15:36

Room: Convention Hall I

좌장 : 손정인 동국대학교

Chair: SOHN Jung Inn (Donguk University)

B14.01 [14:00 - 14:24]

Quantum acoustics: a surface-acoustic wave assisted single-photon emission /
SON Seok-Kyun^{*1} (¹Department of Physics, Kyung Hee University)

B14.02 [14:24 - 14:48]

Functionalized graphene for chemical sensor applications with improved stability and selectivity / JANG A-Rang^{*1} (¹Division of Electrical, Electronic and Control Engineering, Kongju National University)

B14.03 [14:48 - 15:12]

Strategies to enable the reliable electronic devices based on two dimensional layered materials / CHO Byungjin^{*1} (¹Department of Advanced Material Engineering, Chungbuk National University)

B14.04 [15:12 - 15:36]

Copper Sulfide Electrodes for Electronic and Optoelectronic Applications / PAK Sangyeon^{*1} (¹School of Electronic and Electrical Engineering, Hongik University)

[B15-ap] 2D and Nano Materials II

2023. 10. 25 Wednesday 14:00~15:36

Room: Convention Hall II

좌장 : 유효빈 서강대학교

Chair: YOO Hyobin (Sogang University)

B15.01* [14:00 - 14:12]

Fabrication of 2D Heterostructure by Lithography-free Method and their Characterization / JEONG Hyeonhui¹, JEONG Hyunjeong¹, JE Yugyeong¹, LEE Sang-Wook^{*1} (¹Department of Physics, Ewha Womans University)

B15.02* [14:12 - 14:24]

Full spectrum photothermal catalytic effect in narrow bandgap SnFe₂O₄ quantum dots / LIU Chun Li^{*1}, LIU Lei² (¹Department of Physics, Hankuk University of Foreign Studies, ²Department of Physics, Hankuk University of Foreign Studies)

B15.03* [14:24 - 14:36]

In-situ Parameter-Driven Exploration of Stacked 2D Material Characteristics / JEONG Hyunjeong¹, JE Yugyeong¹, LEE Sang-Wook^{*1} (¹Department of Physics, Ewha Womans University)

B15.04* [14:36 - 14:48]

Laser Induced Phase Transition of Encapsulated γ -GeSe / KIM Kwanpyo^{*1,2}, KIM Joonho¹, LEE Kihyun^{1,2}, JUNG Joong-Eon¹, LEE Sol^{1,2}, LEE Han Joo¹, IM Seong Il¹ (¹Department of Physics, Yonsei University, ²Center for Nanomedicine, IBS)

B15.05* [14:48 - 15:00]

Imaging disorders in moiré superlattice at a mesoscopic scale / HEO Yoon Seong^{1,2}, LEE Jae-Ung^{*1,2} (¹Department of Physics, Ajou University, ²Department of Energy Systems Research, Ajou University)

B15.06* [15:00 - 15:12]

Growth mechanism of γ -GeSe: template growth on graphene and h-BN with Au catalyst / JUNG Joong-Eon¹, LEE Sol¹, YOON Hoon Hahn², KANG Hani¹, JANG MyeongJin¹, PARK Jinsub¹, KIM Kwanpyo^{*1} (¹Department of Physics, Yonsei University, ²Department of Electronics and Nanoengineering, Aalto University, Finland)

B15.07* [15:12 - 15:24]

Investigation of vibrational and thermal properties of γ -GeSe / PARK Jinsub¹, JE Yugyeong², KIM Joonho¹, JUNG Joong-Eon¹, PARK Je Myoung³, CHEONG Hyeonsik³, LEE SangWook², KIM Kwanpyo^{*1} (¹Department of Physics, Yonsei University, ²Department of Physics, Ewha Womans University, ³Department of Physics, Sogang University)

B15.08 [15:24 - 15:36]

Chemical reaction mechanism in metal-free defective carbon-based materials / CHOI Keunsu^{*1}, KIM Seungchul² (¹Department of Physics, UNIST, ²Computational Science Research Center, KIST)

[B16-co] Focus: Physics of Kagome Lattices and Flat Bands I

2023. 10. 25 Wednesday 14:00~15:36

Room: Convention Hall III

좌장 : 김봉재 경북대학교

Chair: KIM Bongjae (Kyungpook National University)

B16.01 [14:00 - 14:24]

Electronic correlation effect in the Kagome lattice system AV_3Sb_5 ($A = K, Rb, Cs$) / KANG Chang-Jong^{*1} (¹Department of Physics, Chungnam National University)

B16.02 [14:24 - 14:48]

Condensation of preformed charge density waves in kagome metals / PARK Changwon¹, SON Young-Woo^{*1} (¹School of Computational Sciences, KIAS)

B16.03 [14:48 - 15:12]

Charge Density Wave and Magnetism in a Magnetic Kagome Metal FeGe / OH Ji Seop^{*1,2} (¹Department of Physics, UC Berkeley, USA, ²Department of Physics and Astronomy, Rice University, USA)

B16.04 [15:12 - 15:36]

In-plane electronic correlations vs incoherent scattering processes in the charge-density-wave phase of Kagome metals / WULFERDING Dirk^{*1}, LEE Seungyeol², CHOI Youngsu³, CHO Soohyun⁴, LEI Hechang⁵, YOUSUF Saqlain³, SONG Jaegu³, LEE Hanoh³, PARK Tuson³, CHOI Kwang Yong³ (¹IBS Center for Correlated Electron Systems, Seoul National University, ²Department of Physics, Chung-Ang University, ³Department of Physics, Sungkyunkwan University, ⁴Center for Excellence in Superconducting Electronics, Shanghai Institute of Microsystem and Information Technology, China, ⁵Department of Physics, Renmin University, China)

Sessions C

2023 October 25(Wed) 16:00-17:48

C

㉔ [C1-or] Open KIAS 특강: 현대 우주론의 연구 동향

2023. 10. 25 Wednesday 16:00~16:48

Room: 601

좌장 : 고병원 고등과학원

Chair: KO Pyungwon (KIAS)

C1.01 [16:00 - 16:48]

Primordial density perturbations as a tool to probe new physics / YAMAGUCHI Masahide^{*1} (¹CTPU-CGA, IBS)

[C2-pa] Non-accelerator II

2023. 10. 25 Wednesday 16:00~17:48

Room: 602

좌장 : 소중호 기초과학연구원

Chair: SO Jung Ho (IBS)

C2.01* [16:00 - 16:12]

Dark matter search using NaI(Tl) at the COSINE-100 experiment / YU Gyunho^{*1}
(¹Department of Physics, Sungkyunkwan University)

C2.02* [16:12 - 16:24]

COSINE-100 upgrade at Yemilab / LEE Doohyeok^{*1} (¹Department of Physics, Kyungpook National University)

C2.03* [16:24 - 16:36]

Measurements of quenching factors for NaI(Tl) scintillating crystal / LEE Seo Hyun^{*1}, KIM Kyungwon², LEE Hyun Su^{*1,2} (¹Basic Science, UST, ²Center for Underground Physics, IBS)

C2.04* [16:36 - 16:48]

Neutrino Elastic-scattering Observation with NaI(Tl)(NEON) / CHOI Jaejin^{1,2}, LEE Hyun Su² (¹Department of Physics & Astronomy, Seoul National University, ²Center for Underground Physics, IBS)

C2.05 [16:48 - 17:00]

XMASS 전 데이터를 사용한 암흑 물질 직접 탐색 / YANG Byeongsu^{*1} (¹Department of Physics and Astronomy, Seoul National University)

C2.06* [17:00 - 17:12]

Result of AMoRE-I Experiment Analysis / KIM Han Beom^{1,2}, KIM Yong-Hamb^{*1}, ON Behalf of AMoRE Collaboration¹ (¹Center for Underground Physics, IBS, ²Department of Physics and Astronomy, Seoul National University)

C2.07 [17:12 - 17:24]

A search for ⁷Li solar axions with Li₂MoO₄ detectors in the AMoRE-I / SEO Jee-won^{*1}, SO Jung Ho^{*1} (¹CUP, IBS)

C2.08 [17:24 - 17:36]

Multi-crystal-hit study of $2\nu\beta\beta$ decay of ¹⁰⁰Mo to the excited states of ¹⁰⁰Ru at AMoRE / KIM Hong Joo^{*1}, HA Daehoon¹, ON Behalf of AMoRE Collaboration² (¹Department of Physics, Kyungpook National University, ²CUP, IBS)

C2.09 [17:36 - 17:48]

Status of AMoRE-II preparation at Yemilab / KIM Go Woon^{*1} (¹CUP, IBS)

[C3-pa] Accelerator II

2023. 10. 25 Wednesday 16:00~17:48

Room: 603

좌장 : 양운기 서울대학교

Chair: YANG Un-ki (Seoul National University)

C3.01* [16:00 - 16:12]

Measurement of noise term in JER using random cone method at CMS detector with Run2 data and the asymmetry study of CP violating top quark in dilepton channel / YOO Hwidong^{*1}, CHO Guk¹, HA Seungkyu¹, KIM Minsuk² (¹Department of Physics, Yonsei University, ²Department of Physics, Gangneung Wonju National University)

C3.02* [16:12 - 16:24]

Performance of the local reconstruction algorithms for the CMS hadron calorimeter with Run 2 data / YOO Jae Hyeok^{*1}, PADMANABAN Jayashri¹ (¹Department of Physics, Korea University)

C3.03* [16:24 - 16:36]

Reinterpreting Studies with ADL/CutLang / LEE Junghyun^{*1}, HUH Changgi¹, SEK-MEN Sezen¹ (¹Department of Physics, Kyungpook National University)

C3.04 [16:36 - 16:48]

Transformer-based Deep Regression Model for Estimating Missing Transverse Momentum / GOH Junghwan¹, KIM Jiwoong², MOON Chang-Seong², TAE Bong-ho², YANG Seungjin^{*1} (¹Department of Physics, Kyung Hee University, ²Department of Physics, Kyungpook National University)

C

C3.05* [16:48 - 17:00]

Test of the Endcap Timing Readout Chip 2 for CMS MIP Timing Detector Project / KIM Taiwoo¹, MOON Chang-Seong^{*1} (¹Department of Physics, Kyungpook National University)

C3.06* [17:00 - 17:12]

Assembling Mockup Modules with Robotic Gantry for CMS Endcap MIP Timing Detector / MOON Chang-Seong^{*1}, LEE DongYub¹, LEE Hakseong¹ (¹Department of Physics, Kyungpook National University)

C3.07 [17:12 - 17:24]

Preproduction and quality assurance of improved RPCs for Phase-2 upgrade of the CMS Muon System / LEE Kyong Sei^{*1,2}, KANG Minho^{1,2}, JO Youngmin^{1,2}, KIM Tae-jeong^{1,2} (¹Center for Extreme Nuclear Matters, Korea University, ²Department of Physics, Hanyang University)

C3.08* [17:24 - 17:36]

Efficiency study using Tag and Probe method for the GEM Detector in the CMS Experiment / CHO Baek Sun¹, WATSON Ian James^{*1}, LEE Jason Sang Hun¹ (¹University of Seoul)

C3.09 [17:36 - 17:48]

R&D status of the compact TPC for a high-precision 3D beam diagnostic system / RYU Min Sang^{*1}, LEE Sehwook² (¹Center for High Energy Physics, Kyungpook National University, ²Department of Physics, Kyungpook National University)

[C4-ap] Focus: Light-Matter Interaction in Low Dimensional Materials II

2023. 10. 25 Wednesday 16:00~17:12

Room: 604

좌장 : 김경호 충북대학교

Chair: KIM Kyoung-Ho (Chungbuk National University)

C4.01 [16:00 - 16:24]

The study of single-photon emitters formed in two-dimensional materials and their coupling to optical structures / JEONG Kwang-yong^{*1} (¹Department of Physics, Chungnam National University)

C4.02 [16:24 - 16:48]

Ultra-thin 2D semiconductor waveguide / GONG Su-Hyun^{*1} (¹Department of Physics, Korea University)

C4.03 [16:48 - 17:12]

High-conductivity nanometer-thick transition metals and their applications / KIM Sun Kyung^{*1} (¹Department of Applied Physics, Kyung Hee University)

[C5-at] Atomic and Molecular Physics II

2023. 10. 25 Wednesday 16:00~17:24

Room: 605

좌장 : 이선경 한국표준과학연구원

Chair: LEE Sun Kyung (KRISS)

C5.01* [16:00 - 16:12]

이온 트랩 진동자의 카오스 운동 / KIM Myunghun^{*1}, CHO Junhee¹, GWON Sehyeon¹, KIM Keumhyun¹, LEE Hyegoo¹, LEE Moonjoo¹ (¹Department of Electrical Engineering, POSTECH)

C5.02 [16:12 - 16:24]

Pushing single atoms into an optical resonator / LEE Dowon^{*1}, HA Taegyul¹, KIM Donggeon¹, KIM Keumhyun¹, PARK Byung-Tak¹, LEE Ki-Se¹, LEE Moonjoo¹ (¹Department of Electrical Engineering, POSTECH)

C5.03* [16:24 - 16:36]

Investigating velocity distribution effects on temporal correlation of photon-pair generated in atomic vapor cell / KIM Heewoo¹, JEONG Hansol¹, MOON Han Seb^{*1} (¹Pusan National University)

C5.04 [16:36 - 17:12]

Generation, Dynamics, and Interaction of Dipolar Excitations in a Bose-Hubbard System / KIM Sooshin^{*1}, KANG Byungmin², SEGURA Perrin¹, LI Yanfei¹, KWAN Joyce¹, LAKE Ethan², BAKKALI-HASSANI Brice¹, GREINER Markus¹ (¹Department of Physics, Harvard University, USA, ²Department of Physics, MIT, USA)

C5.05* [17:12 - 17:24]

Observation on hydrodynamic behavior of a Bose-Einstein condensate with disordered spin texture / SHIN Yong-il^{*1}, LEE Junghoon¹, KIM Jongmin¹, JUNG Jong Heum¹ (¹Department of Physics and Astronomy, Seoul National University)

[C6-pl] Focus: 2023년 핵융합선도기술개발사업 심포지엄

2023. 10. 25 Wednesday 16:00~17:12

Room: 606

좌장 : 윤건수 포항공과대학교

Chair: YUN Gunsu (POSTECH)

C6.01 [16:00 - 16:12]

물리·공학통합을 통한 실증로급 디버터 시스템 기반기술 선도연구: 1-2차년도 연구결과 / GHIM Young Chul^{*1}, CHOE Wonho¹, SUNG Choongki¹, YOON Eisung², CHO Jung-Wook³, CHAI Kil-Byoung⁴, JO HangJin³ (¹KAIST, ²UNIST, ³POSTECH, ⁴KAERI)

C6.02 [16:12 - 16:24]

Development of new core technologies of heating and current drive for the extreme high temperature and stable sustainment of fusion plasmas / KIM S. H.^{*1}, CHOI E. M.², LEE J. P.³, NA Y. S.⁴ (¹KAERI, ²UNIST, ³Hanyang University, ⁴Seoul National University)

C6.03 [16:24 - 16:36]

Advancement of an accelerator-based ion beam irradiation facility for testing and assessment of fusion reactor materials / LEE Seunghyun^{*1}, LEE Dong-won¹, CHANG Dae-sik¹, LEE Kihyun¹, LEE Sangbeen¹, CHUN Young-bum¹, NOH Sanghoon², LEE Jung-gu³, JEON Eun-chae³, NAM Ho-seok⁴, KIM Sangtae⁵ (¹Nuclear Physics Application Research Division, KAERI, ²Department of Materials Science and Engineering, Pukyong National University, ³Department of Material Engineering, University of Ulsan, ⁴Department of Engineering, Kookmin University, ⁵Department of Engineering, Hanyang University)

C6.04 [16:36 - 16:48]

Development of plasma dynamic characteristics representation and analysis techniques for nuclear fusion digital twin / KIM Sun-Jeong^{*1}, SEO Jaemin² (¹School of Software, Hallym University, ²Department of Physics, Chung-Ang University)

C6.05 [16:48 - 17:00]

Permeation and retention of hydrogen isotopes in metal interfaces by experiment and computer simulation / ODA Takuji^{*1}, KIM Gon-Ho¹, KIM Dong Min², NOH Seung Jeong³, KIM Gibum¹, ROH Ki-Baek¹, LEE Myeong-Geon¹, SEO Hyun Woo² (¹Department of Nuclear Engineering, Seoul National University, ²Department of Materials Science and Engineering, Hongik University, ³NIFTEP, Seoul National University)

C6.06 [17:00 - 17:12]

Development of Li-M-O-based ceramic pebble for tritium breeding containing high-concentration Li using LiOH precursor / YOON Young Soo^{*1}, Yi-hyun Park^{*2} (¹Department of Materials Science and Engineering, Gachon University, ²Blanket Research Team, KFE)

[C7-nu] Nuclear Experimental Method and Instrumentation

2023. 10. 25 Wednesday 16:00~17:48

Room: 607

좌장 : 안성훈 기초과학연구원

Chair: AHN Sunghoon(Tony) (IBS)

C7.01 [16:00 - 16:12]

Simulation Study of Neutron Production for NDPS at RAON / KIM Jaesung^{1,2}, TSHOO Kyoungho^{*1}, HAM Cheolmin¹, LEE Sangjin¹, LEE Young-Ouk^{1,3}, LEE CheongSoo¹, PYEUN Seong Jae¹, LEE Kwangbok¹, AKERS Charles¹, KIM Mijung¹, KIM Jae Cheon¹, KWAG Minsik¹, KWAK Donghyun^{1,4}, KIM Dong Geon^{1,5}, SHIN Taeksu¹, SHIM Hyung-Jin² (¹IBS, ²Department of Nuclear Engineering, Seoul National University, ³Nuclear Physics Application Research Division, KAERI, ⁴Department of Physics, UNIST, ⁵Department of Nuclear Engineering, Hanyang University)

C7.02* [16:12 - 16:24]

Effect of Richardson-Lucy deblurring algorithm to the collective flow parameters in heavy-ion collisions / PARK Jeonghyeok^{*1}, HONG Byungsik^{*1} (¹Department of Physics, Korea University)

C7.03 [16:24 - 16:36]

Preparation of the STARK Silicon Detector Array for the Commissioning / BAE Sunghan^{*1}, AHN Deuk Soon¹, AHN Sunghoon¹, CHA Soomi¹, CHAE Kyung Yuk², GU

Gyoungmo^{1,2}, HAHN Kevin Insik¹, KIM Dahee¹, KIM Minju^{1,2}, LEE Hyeyoung¹, MOON Byul¹, PARK Chaeyeon^{1,3}, PEREIRA-LOPEZ Xesus¹ (¹Center for Exotic Nuclear Studies, IBS, ²Department of Physics, Sungkyunkwan University, ³Department of Physics, Ewha Womans University)

C7.04 [16:36 - 16:48]

Deep learning to classify and restore particle signals from experiments / KIM Chanhee¹, CHAE Kyung Yuk¹ (¹Department of Physics, Sungkyunkwan University)

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C7.05* [16:48 - 17:00]

Development of Beam Aerogel Cherenkov Detector for J-PARC E72 / LEE Haein¹, AHN Jung Keun¹, YANG Seongbae¹ (¹Department of Physics, Korea University)

C7.06 [17:00 - 17:12]

⁴⁰Ar Beam Commissioning of KoBRA for Rare Isotope Production at RAON / KIM Dong Geon^{1,2}, TSHOO Kyoungho¹, AHN Deuk Soon³, AHN Sunghoon³, AKERS Charles¹, BAE Sunghan³, CHA Soom³, CHO Youngju^{3,4}, GU Gyoungmo^{3,5}, HAHN Kevin Insik³, HAM Cheolmin¹, HONG Seung-Woo¹, HWANG Jongwon³, JANG Youngseub^{3,6}, JO Seong Gi¹, KWAK Donghyun^{1,7}, KIM Chanhee⁵, KIM Jae Cheon¹, KIM Jaesung^{1,8}, KIM Mijung¹, KIM Minju⁵, KIM Sohyun⁵, KIM Sunji³, KIM Yong Kyun², KIM Yunghee³, KORKULU Zeren³, KWAG Minsik¹, LEE Cheong Soo¹, LEE Jaehwan^{3,6}, LEE Kwang-Bok¹, LEE Sangjin¹, LEE Young-Ouk⁹, LIM Chaeyoung¹⁰, MOON Byul³, PARK Joochun³, PEREIRA-LOPEZ Xesus³, PYEUN Seong Jae¹, SHIN Taeksu¹, SON Yong Hyun^{3,4}, STUHL Laszlo³ (¹Institute for Rare Isotope Science, IBS, ²Nuclear Engineering, Hanyang University, ³Center for Exotic Nuclear Studies, IBS, ⁴Department of Physics and Astronomy, Seoul National University, ⁵Department of Physics, Sungkyunkwan University, ⁶Department of Physics, Korea University, ⁷Department of Physics, UNIST, ⁸Department of Nuclear Engineering, Seoul National University, ⁹Nuclear Physics Application Research Division, KAERI, ¹⁰Department of Accelerator Science, Korea University)

C7.07* [17:12 - 17:24]

Development of Low-pressure Gas TPC for Stellar Nucleosynthesis Reactions / LEE Haein¹, AHN Jung Keun¹ (¹Department of Physics, Korea University)

C7.08 [17:24 - 17:36]

Improvement of the analysis of the performance of the prototype Beam Drift Chamber (pBDC) for the LAMPS experiment with the beam from HIMAC / MOON Dong Ho¹, HEO Cheong¹, BAE Yunseul¹, SEO Junhu¹, KIM Hyunchul¹, HWANG Jaein², HONG Byungsik², KIM Youngjin³, LEE Hyosang³, LEE Cheongsoo³ (¹Department of Physics, Chonnam National University, ²Department of Physics, Korea University, ³Rare Isotope Science Project, IBS)

C7.09* [17:36 - 17:48]

Development of a LaBr₃ detector array for high-energy gamma-ray measurement / AHN Jung Keun^{*1}, LEE Sungjune¹, YU Byung Yong², LIM Weon Cheol² (¹Department of Physics, Korea University, ²Advanced Analysis Center, KIST)

㉔ [C8-at] Pioneer: Quantum Effects of Superradiance and Their Applications III

2023. 10. 25 Wednesday 16:00~17:48

Room: 600A

Chair: KUMA Susumu (RIKEN, Japan)

C8.01 [16:00 - 16:36]

Extreme-ultraviolet superradiance from helium atoms / HARRIES James R¹, IG-UCHI Arisa^{*2,3}, KUMA Susumu^{*3}, IWAYAMA Hiroshi^{*4} (¹Synchrotron Radiation Research Centre, QST, Japan, ²Department of Physics, Tokyo Metropolitan University, Japan, ³Azuma AMO Laboratory, RIKEN, Japan, ⁴UVSOR, Institute of Molecular Science, Japan)

C8.02 [16:36 - 17:12]

Coherent driving of superfluorescence by a continuous-wave laser / KITANO Kenta^{*1}, MAEDA Haruka¹ (¹Department of Physical Sciences, Aoyama Gakuin University, Japan)

C8.03 [17:12 - 17:48]

Super-radiance and fundamental physics / HARA Hideaki^{*1}, MIYAMOTO Yuki¹, HAN Junseok^{1,2}, IMAI Yasutaka¹, SASAO Noboru¹, YOSHIMI Akihiro¹, YOSHIMURA Koji¹, YOSHIMURA Motohiko¹ (¹Research Institute for Interdisciplinary Science, Okayama University, Japan, ²Department of Physics and Astronomy & Institute of Applied Physics, Seoul National University)

[C9-bp] Theoretical & Computational Biological Physics

2023. 10. 25 Wednesday 16:00~17:12

Room: 600B

좌장 : 송태근 공주대학교

Chair: SONG Taegeun (Kongju National University)

C9.01 [16:00 - 16:12]

Dynamic switching of neural oscillations in the prefrontal-amygdala circuit for naturalistic freeze-or-flight / HAN Hio-Been¹, SHIN Hee-Sup², JEONG Yong³, KIM Jisoo⁴, CHOI Jee Hyun^{*1,5} (¹KIST, ²Center for Cognition and Sociality, IBS, ³Department of Bio and Brain Engineering, KAIST, ⁴Department of Neuroscience, University of Cambridge, UK, ⁵Department of Physics, Seoul National University)

C9.02 [16:12 - 16:24]

Human Brain Fluctuates between Internal and External Modes of Dynamics / MOON Joon-Young^{*2,1} (¹Center for Neuroscience Imaging Research, Sungkyunkwan University, ²Center for Neuroscience Imaging Research, IBS)

C9.03 [16:24 - 16:36]

Geant4 simulation of Single and Double Strand Breaks in a Human Fibroblast Cell due to Irradiation from Therapeutic Radiopharmaceuticals / SCHAAR-SCHMIDT Thomas¹, NA Wonkyung Teresa², KIM Jung Young¹, CHO II Sung^{*1} (¹RI Translational Research Team, KIRAMS, ²International Cooperation Team, KIRAMS)

C9.04 [16:36 - 16:48]

General Kinetic Model for GPCR-based Olfactory Sensing: Elucidation of Odorant Mixture Effects and Agonist-Synergist Threshold / KIM Won Kyu^{*1}, CHOI Kiri¹, HYEON Changbong¹, JANG Seogjoo J.² (¹School of Computational Sciences, KIAS, ²Department of Chemistry and Biochemistry, City University of New York, USA)

C9.05* [16:48 - 17:00]

Bend-induced Phase Coexistence and Hysteresis of Heterogeneous Ring Polymers / LIM Chan¹, JEON Jae-Hyung^{*1,2} (¹Department of Physics, POSTECH, ²APCTP)

C9.06* [17:00 - 17:12]

Modeling facilitated diffusion of DNA-binding proteins using Markov chains and Hi-C matrix with applications to E. coli DNA / PARK Seongyu¹, LEE ChangJoo¹, JEON Jae-Hyung^{*1,2} (¹Department of Physics, POSTECH, ²APCTP)

[C10-co] Superconductivity

2023. 10. 25 Wednesday 16:00~17:48

Room: 700A

좌장 : 조두희 연세대학교

Chair: CHO Doohee (Yonsei University)

C10.01 [16:00 - 16:12]

First-principles study of electronic structures and magnetic properties of Pb-₉Cu(PO₄)₆O / CHOI Hyoung Joon^{*1} (¹Department of Physics, Yonsei University)

C10.02 [16:12 - 16:24]

First-principles study of atomic and electronic structures of nickelates / CHOI Hyoung Joon^{*1}, JEONG Doo sub¹ (¹Department of Physics, Yonsei University)

C10.03 [16:24 - 16:36]

Three-dimensional flat bands in pyrochlore metal CaNi_2 / OH Dongjin^{*1}, KANG Mingu¹, WAKEFIELD Joshua¹, NEVES Paul¹, FANG Shiang¹, JOZWIAK Chris², BOSTWICK Aaron², ROTENBERG Eli², CHECKELSKY Joseph¹, COMIN Riccardo¹ (¹Department of Physics, MIT, USA, ²Advanced Light Source, Lawrence Berkeley National Lab, USA)

C10.04* [16:36 - 16:48]

Higher-Order Topological Superconductivity for $1\text{T}'\text{-MoTe}_2$ / KANG Myungjun^{1,6}, LEE Sangyun^{2,3}, KIM Duk Y.⁴, KIM Jihyun², CHO Suyeon⁵, CHEON Sang Mo^{*1,6}, PARK Tuson² (¹Department of Physics, Hanyang University, ²Center for Quantum Materials and Superconductivity, Sungkyunkwan University, ³Los Alamos National Laboratory, USA, ⁴Agency for Defense Development, ⁵Division of Chemical Engineering and Material Science, Ewha Womans University, ⁶Research Institute for Natural Science and High Pressure, Hanyang University)

C10.05 [16:48 - 17:00]

Reversible hydrogenic control of the superconducting state in $\text{La}_{2-x}\text{Ce}_x\text{CuO}_4$ thin films / LEE Jaehyun¹, YANG Chan-Ho^{*1} (¹Department of Physics, KAIST)

C10.06 [17:00 - 17:12]

Electron-phonon coupling of Nb-doped SrTiO_3 by ab initio calculations using jellium model / CHUNG Suk Bum^{*1,2}, PARK Minwoo² (¹Department of Physics, University of Seoul, ²Natural Science Research Institute, University of Seoul)

C10.07 [17:12 - 17:24]

Current-driven motion of magnetic topological defects in ferromagnetic superconductors / CHUNG Suk Bum^{*1,2,3}, KIM Se Kwon^{*4} (¹Department of Physics, University of Seoul, ²Natural Science Research Institute, University of Seoul, ³School of Physics, KIAS, ⁴Department of Physics, KAIST)

C10.08 [17:24 - 17:36]

Understanding Unconventional High Temperature Superconductivity in the Three-Band Hubbard Model for Cuprate Ladders: A Density Matrix Renormalization Group Study / SONG Jeong-Pil^{1,2}, PARK Inkyu^{*1,2}, BAK Dongsu^{*1,2} (¹University of Seoul, Natural Science Research Institute, University of Seoul, Natural Science Research Institute, ²Department of Physics, University of Seoul)

C10.09 [17:36 - 17:48]

Collective mode across the BCS-BEC crossover in Holstein model / PARK Tae-Ho^{*1}, CHOI Han Yong¹ (¹Department of Physics, Sungkyunkwan University)

[C11-co] Dielectrics/Functional Oxides

2023. 10. 25 Wednesday 16:00~17:24

Room: 700B

좌장 : 이두용 경북대학교

Chair: LEE Dooyong (Kyungpook National University)

C11.01* [16:00 - 16:12]

Engineering the Phonon Transport through Phase Discontinuity in Oxide Superlattices / CHOI In Hyeok¹, JEONG Seung Gyo², CHOI Woo Seok², LEE Jong Seok^{*1} (¹Department of Physics and Photon Science, GIST, ²Department of Physics, Sungkyunkwan University)

C11.02* [16:12 - 16:24]

Epitaxial Growth and Electron Doping of WO₃ Thin Films by Hydrogen Annealing / KANG Min Ho¹, YANG Chan-Ho^{*1} (¹Department of Physics, KAIST)

C11.03* [16:24 - 16:36]

Observation of hidden domain and polar structures in Bi₂WO₆ thin films and their electric properties / KWON Yong-Jun^{1,3}, YEO Youngki^{1,3}, KIM Min-Su², KIM Yong-Jin^{1,3}, PARK Heung-Sik^{1,3}, KIM Jaegyu^{1,3}, CHOI Si-Young^{2,4,5}, YANG Chan-Ho^{*1,3} (¹Department of Physics, KAIST, ²Center for Lattice Defectronics, KAIST, ³Materials Science and Engineering, POSTECH, ⁴Semiconductor Engineering, POSTECH, ⁵Center of Van der Waals Quantum Solids, IBS)

C11.04 [16:36 - 16:48]

Real-time measurement of structural and electrical properties of PrBaCo₂O_{5+x} as a function of oxygen contents / MUN Yeongdeuk¹, HEO Yunseok¹, LEE Joon Hyuk¹, JEEN Hyoung Jeen^{*1,2} (¹Department of Physics, Pusan National University, ²Research Center for Dielectric and Advanced Matter Physics, Pusan National University)

C11.05* [16:48 - 17:00]

Understanding oxygen defect transport in Ca-doped bismuth ferrite thin films / SUH Jeonghun^{1,2}, PARK Heung-Sik^{1,2}, KIM Boram¹, LIM Ji Soo^{1,2}, CHO Sungjae¹, YANG Chan-Ho^{*1,2,3} (¹Department of Physics, KAIST, ²Center for Lattice Defectronics, KAIST, ³KAIST Institute for the NanoCentury, KAIST)

C11.06* [17:00 - 17:12]

Optimization of voltage pulse train for conductance modulation through polarization switching control in a ferroelectric transistor for a neuromorphic computing / KIM Cheol Jun¹, LEE Jae Yeob¹, KU Minkyung¹, KIM Tae Hoon¹, NOH Taehee¹, LEE Seung Won², AHN Ji-Hoon², KANG Bo Soo^{*1} (¹Department of Applied Physics, Hanyang University, ²Department of Materials Science and Chemical Engineering, Hanyang University)

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C11.07 [17:12 - 17:24]

Temperature dependence of S=1 EMR centers in a neutron irradiated diamond / CHOH Sung Ho^{*1}, KIM Yong Moo², PARK Il-Woo³ (¹Department of Physics, Korea University, ²The State University of New York, USA, ³Department of Science Education, Seoul National University of Education)

[C12-ap] Focus: Computational Physics – from DFT to Machine Learning II

2023. 10. 25 Wednesday 16:00~17:36

Room: 301

좌장 : 이준희 울산과학기술원

Chair: LEE Jun Hee (UNIST)

C12.01 [16:00 - 16:24]

Accelerating materials discovery through machine learning approaches / LEE Joo-Hyoung^{*1} (¹School of Materials Science and Engineering, GIST)

C12.02 [16:24 - 16:48]

Material design of indium iodine compounds / KANG Chang-Jong^{*1} (¹Department of Physics, Chungnam National University)

C12.03 [16:48 - 17:12]

Machine learning for dynamical mean-field theory / GO Ara^{*1} (¹Department of Physics, Chonnam National University)

C12.04 [17:12 - 17:36]

Machine-Learning-Guided Prediction Models and Materials Design: from Cuprates to Photovoltaic applications / KIM Sooran^{*1} (¹Department of Physics Education, Kyungpook National University)

[C13-se] Focus: Terahertz Near-field Spectroscopy

2023. 10. 25 Wednesday 16:00~18:00

Room: 302

좌장 : 윤석준 울산대학교

Chair: YUN SeokJoon (University of Ulsan)

C13.01 [16:00 - 16:24]

Subwavelength Terahertz Resonance Imaging (STRING) for Molecular Fingerprinting / KIM Teun-Teun^{*1} (¹Department of Physics, University of Ulsan)

C13.02 [16:24 - 16:48]

Visualization of solitary spin wave localized in a canted antiferromagnet YFeO_3 /
HA Taewoo^{*1} (¹CINAP, Sungkyunkwan University)

C13.03 [16:48 - 17:12]

Terahertz field-driven hydrodynamic electron fluids in topological states /
PARK Byung Cheol^{*1} (¹Center for Integrated Nanostructure Physics, Sungkyunkwan University)

C13.04 [17:12 - 17:36]

Nonlinear photocarrier transport by THz field enhancement /
LEE Sang-Hun^{*1}
(¹Department of Optical Engineering, Kumoh National Institute of Technology)

C13.05 [17:36 - 18:00]

Design of Nanophotonic Structures with Binary optimization: Machine learning-Quantum Annealing Enhanced Approach /
LEE Eungkyu^{*1} (¹Department of Electronic Engineering, Kyung Hee University)

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③ [C14-se] Pioneer: Optical Microscopy of Ultrafast Light-exciton Interaction I

2023. 10. 25 Wednesday 16:00~17:36

Room: Convention Hall I

좌장 : 김광석 부산대학교

Chair: KYHM Kwangseuk (Pusan National University)

C14.01 [16:00 - 16:24]

Tip-enhanced cavity-spectroscopy to control excitonic behaviors at the nanoscale /
PARK Kyoung-Duck^{*1} (¹Department of Physics, POSTECH)

C14.02 [16:24 - 16:48]

Quantum Interference in Optical Möbius-Strip Microcavities: Experiment vs Theory /
FOMIN Vladimir M.^{*1} (¹Institute for Integrated Nanoscience (IIN), Leibniz Institute for Solid State and Materials research Dresden (IFW), Germany)

C14.03 [16:48 - 17:12]

Ballistic diffusion of hot carriers in van der Waals layered materials /
KIM Ji-Hee^{*1}
(¹Department of Physics, Pusan National University)

C14.04 [17:12 - 17:36]

Cavity effects in perovskite nanostructures /
TAYLOR Robert Andrew^{*1} (¹Department of Physics, University of Oxford, UK)

[C15-ap] Focus: Recent advances in Organic and Perovskite Electronics

2023. 10. 25 Wednesday 16:00~17:36

Room: Convention Hall II

좌장 : 서정화 서울시립대학교

Chair: SEO Jung Hwa (University of Seoul)

C15.01 [16:00 - 16:24]

Organic-based artificial synapses for artificial neural networks / PARK Hea-Lim^{*1}

(¹Department of Material Science and Engineering, Seoul National University of Science and Technology)

C15.02 [16:24 - 16:48]

Investigation of hole transfer dynamic during charge separation in non-fullerene organic solar cells / CHO Shinuk^{*1} (¹University of Ulsan)

C15.03 [16:48 - 17:12]

Interface Tailoring of Perovskite via Mesoporous Structured MoS₂ for Efficient and Photostable Perovskite Solar Cells / PARK Hyesung^{*1} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University)

C15.04 [17:12 - 17:36]

Electronic structure of metal halide perovskite and their interface study for optoelectronic device application / SHIN Dongguen^{*1} (¹Department of Physics, Chonnam National University)

[C16-co] Focus: Physics of Kagome Lattices and Flat Bands II

2023. 10. 25 Wednesday 16:00~17:12

Room: Convention Hall III

좌장 : 정재일 서울시립대학교

Chair: JUNG Jeil (University of Seoul)

C16.01 [16:00 - 16:24]

Orbital fluctuation and superconductivity in Kagome metal / LEE SungBin^{*1} (¹Department of Physics, KAIST)

C16.02 [16:24 - 16:48]

Emergence of flat bands via orbital-selective electron correlations in Mn-based kagome metal / SAMANTA Subhasis¹, HWANG Jungseek², CHOI Kwang Yong², KIM Heung-Sik^{*1} (¹Department of Physics, Kangwon National University, ²Department of Physics, Sungkyunkwan University)

C16.03 [16:48 - 17:12]

Engineering flat bands in 1T-TaS₂ via atomic adsorption / JIN Kyung-hwan^{*1} (¹Center for Artificial Low Dimensional Electronic Systems, IBS)

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Sessions D

2023 October 26(Thu) 08:30-10:18

[D1] No Session

[D2-pa] Accelerator III

2023. 10. 26 Thursday 08:30~10:06

Room: 602

좌장 : 김현수 세종대학교

Chair: KIM HyunSoo (Sejong University)

D2.01* [08:30 - 08:42]

Status of differential Drell-Yan cross section measurement with the CMS detector / YOO Hwidong^{*1}, HWANG Kyuyeong¹, LEE Kyeongpil² (¹Department of Physics, Yonsei University, ²Department of Physics, Université Libre de Bruxelles, Belgium)

D2.02 [08:42 - 08:54]

Direct measurement of Top quark width in tt Dilpeton decay channel in pp collisions / LEE Seungjun^{*1}, KIM HyunSoo^{*1} (¹Sejong University)

D2.03* [08:54 - 09:06]

Study for measuring the CKM matrix component $|V_{ts}|$ directly in dilepton channel of top pair production at 13 TeV with the CMS detector / WATSON Ian James^{*1}, LEE Jason Sang Hun¹, ROH Youn Jung¹, PARK Inkyu¹, JANG Woojin¹ (¹University of Seoul)

D2.04* [09:06 - 09:18]

A study of V_{cb} measurement in semi-leptonic decay channel of top pair events at the LHC / YANG Un-ki^{*1}, CHOI Suyong², YOON Inseok¹, OH Byeong Hun¹, SHIN Ji-hoon¹, KIM Yeonjoon¹ (¹Department of Physics and Astronomy, Seoul National University, ²Department of Physics, Korea University)

D2.05 [09:18 - 09:30]

Measurement of the charge asymmetry in top pair production using lepton+jets final state in CMS experiment / PARK Inkyu^{*1}, KANG Yechan¹, LEE Jason Sang Hun¹, ROH Youn Jung¹, WATSON Ian James¹, KIM Hyunsoo² (¹University of Seoul, ²Department of Physics and Astronomy, Sejong University)

D2.06 [09:30 - 09:42]

Search for Lepton Flavour Violation in the Top Quark Sector in events with single muon and tau at $\sqrt{s}=13$ TeV / ASILAR Ece^{*1}, CHOI Jieun¹, CHOI Su Yong¹, KIM Tae Jeong¹, LIM Jongwon¹, PARK Jiwon¹, RYOU Yeonsu¹, SONG Juhee¹, YOON Soohyun¹ (¹Department of Physics, Hanyang University)

D2.07* [09:42 - 09:54]

Identification of tqg FCNC process using machine learning techniques / PARK Inkyu^{*1}, LEE Jason Sang Hun¹, ROH Youn Jung¹, YANG Seungjin¹, KO Byeong Hak¹, HEO Jeewon¹ (¹University of Seoul)

D2.08* [09:54 - 10:06]

Search for the Rare Top Process $t \rightarrow sW$ in Dileptonic Top Pair Events Using Deep Learning / HEO Jeewon¹, JANG Woojin¹, LEE Jason Sang Hun¹, PARK Inkyu¹, ROH Youn Jung¹, WATSON Ian James^{*1}, YANG Seungjin² (¹University of Seoul, ²Department of Physics, Hanyang University)

[D3-pa] Particle Phenomenology I

2023. 10. 26 Thursday 08:30~10:18

Room: 603

좌장 : 박종철 충남대학교

Chair: PARK Jong-Chul (Chungnam National University)

D3.01 [08:30 - 08:42]

Probing Non-Standard Neutrino Interactions with Interference: Insights from Dark Matter and Neutrino Experiments / PARK Jong-Chul^{*1} (¹Department of Physics, Chungnam National University)

D3.02 [08:42 - 08:54]

Search for axion dark matter in the laboratory and in the cosmos / HONG Deog Ki^{*1} (¹Department of Physics, Pusan National University)

D3.03 [08:54 - 09:06]

Regurgitated Dark Matter / LU Philip^{*1,2}, TAKHISTOV Volodymyr², KIM Taehun¹, MAR-FATIA Danny³ (¹Department of Physics, Seoul National University, ²QUP, High Energy Accelerator Research Organization, KEK, Japan, ³Physics, University of Hawaii, USA)

D3.04* [09:06 - 09:18]

Structure formation of a multi-component dark matter / LIM SeHwan^{*1}, KIM JeongHan¹, KONG KyoungChul³, PARK JongChul² (¹Department of Physics, Chungbuk National University, ²Department of Physics, Chungnam National University, ³Department of Physics, University of Kansas, USA)

D3.05* [09:18 - 09:30]

Capture of Inelastic Dark Matter in white dwarves / SCOPEL Stefano^{*1}, VELASCO-SEVILLA Liliana¹, KAR Arpan¹, BISWAS Anirban², KIM Hyomin¹ (¹Department of Physics, Sogang University, ²Department of Physics, Yonsei University)

D3.06 [09:30 - 09:42]

Characterizing the hypercharge anapole dark matter particle / CHOI Seong Youl^{*1}, JEONG Ingu¹, JEONG Jaehoon², KANG Dong Woo³, SHIN Seodong¹ (¹Department of Physics, Jeonbuk National University, ²Quantum Universe Center (QUC), KIAS, ³Department of Physics, KIAS)

D3.07* [09:42 - 09:54]

Non-thermal WIMPy Baryogenesis with Primordial Black Hole / LKHAGVADORJ Erdenebulgan^{*1}, CHOI Ki-Young^{*1}, KIM Jongkuk² (¹Department of Physics, Sungkyunkwan University, ²School of Physics, KIAS)

D3.08* [09:54 - 10:06]

Positivity bounds on Higgs-portal dark matter: Freeze-out vs Freeze-in / LEE Hyun Min^{*1}, YAMASHITA Kimiko², KIM Seongsik¹ (¹Department of Physics, Chung-Ang University, ²Department of Physics, Ibaraki University, Japan)

D3.09* [10:06 - 10:18]

Dirac-Majorana neutrino type oscillation induced by a wave dark matter / CHOEJO Yeollin¹, LEE Hye-Sung^{*1}, KIM Yechan¹ (¹Department of Physics, KAIST)

[D4-in] Performance and Challenge of PAL-XFEL

2023. 10. 26 Thursday 08:30~10:30

Room: 604

좌장 : 구태영 포항가속기연구소

Chair: KOO Tae-Yeong (Pohang Accelerator Laboratory)

D4.01 [08:30 - 08:54]

PAL-XFEL status and plan / EOM Intae^{*1} (¹XFEL Beamline Division, Pohang Accelerator Laboratory)

D4.02 [08:54 - 09:18]

Hard X-ray instrument at PAL-XFEL for the study of energy and quantum materials / CHUN Sae Hwan^{*1} (¹XFEL Division, Pohang Accelerator Laboratory)

D4.03 [09:18 - 09:42]

Evidence for fractional quasiparticles in frustrated square-lattice iridates / KIM Bumjoon^{*1,2}, KIM Jin-Kwang^{1,2}, KIM Hoon^{1,2,3}, KWON Junyoung¹ (¹Department of Physics, POSTECH, ²Center for Artificial Low Dimensional Electronic Systems, IBS, ³Department of Physics, CALTECH, USA)

D4.04 [09:42 - 10:06]

Ultrafast and nanoscale imaging with XFELs / SONG Changyong^{*1} (¹Department of Physics, POSTECH)

D4.05 [10:06 - 10:30]

HX-2 FEL line construction plan / NAM Inhyuk^{*1} (¹PAL-XFEL, Pohang Accelerator Laboratory)

D

[D5-at] Atomic and Molecular Physics III

2023. 10. 26 Thursday 08:30~10:06

Room: 605

좌장 : 채은미 고려대학교

Chair: CHAE Eunmi (Korea University)

D5.01 [08:30 - 09:06]

Quantum mechanical methods for the reliable absorption spectra / PARK Young Choon^{*1}, PERERA Ajith², BARTLETT Rodney J.² (¹Division of Convergence Technology, KFE, ²Quantum Theory Project, University of Florida, USA)

D5.02* [09:06 - 09:18]

Manifestation of Laser Resonance Chromatography on Lu⁺ ions / KIM Eunkang^{*1,2,4}, BLOCK Michael^{1,2,3}, JANA Biswajit^{1,2}, RAEDER Sebastian^{2,3}, RAMANANTOANINA Harry¹, RICKERT Elisabeth^{1,2,3}, ROMERO Elisa Romero^{1,2,3}, LAATIAOUI Mustapha^{1,2} (¹Department of Chemistry, Johannes Gutenberg University of Mainz, Germany, ²SHE, Helmholtz-Institut Mainz, Germany, ³Schwerionenforschung, GSI Helmholtzzentrum, Germany, ⁴Department of Chemistry, UNIST)

D5.03* [09:18 - 09:30]

Test of atomic charge-exchange cell for the collinear laser spectroscopy at RAON / LIM Chaeyoung^{1,2}, PARK Sung Jong¹, JO Seong Gi¹, SHIN Taeksu¹, LASSEN Jens³, KIM Eun-San², TSHOO Kyoungho^{*1} (¹IBS, ²Department of Accelerator Science, Korea University, ³Laser Applications, TRIUMF, Canada)

D5.04 [09:30 - 09:42]

Development of the collinear laser spectroscopy system for the study of unstable nuclei at RAON / PARK Sung Jong¹, JO Seong Gi¹, LIM Chaeyoung^{1,2}, SHIN Taeksu¹, LASSEN Jens³, TSHOO Kyoungho^{*1} (¹IBS, ²Department of Accelerator Science, Korea University, ³Laser Applications Group, TRIUMF, Canada)

D5.05* [09:42 - 09:54]

The isotope shift measurement in $6s^2\ ^1S_0 - 5d6p\ ^3D_1$ transition of barium / KIM Jun-ki^{*1,2,3}, LEE Eunhwi^{1,2}, YUM Dahyun⁴, WI Jiwon³ (¹SAINT, Sungkyunkwan University, ²Department of Nano Science and Technology, Sungkyunkwan University, ³Department of Nano Engineering, Sungkyunkwan University, ⁴Department of Physics, Ewha Womans University)

D5.06* [09:54 - 10:06]

Spectroscopy of a slow MgF buffer-gas beam / KWON Kikyong¹, CHO Young Ju¹, ROH Seunghwan¹, LIM Dongkyu¹, LEE Giseok¹, LEE Yongwoong¹, JANG Hyunjun¹, CHAE Eunmi^{*1} (¹Department of Physics, Korea University)

[D6-pl] Focus: Young Plasma Scientists and New Faculty Session

2023. 10. 26 Thursday 08:30~10:06

Room: 606

좌장 : 이해준 부산대학교

Chair: LEE Hae June (Pusan National University)

D6.01 [08:30 - 08:54]

Development Progress of Proton Beam Diagnostics Using Tomography Technology at KOMAC / DANG Jeongjeung^{*1}, LEE Seunghyun² (¹KENTECH, ²KOMAC, KAERI)

D6.02 [08:54 - 09:18]

Surface Wave Plasma 기반 저손상 고효율 반도체 제조 공정 적용에 관한 연구 / 차주홍^{*1} (¹경상국립대학교 반도체공학과)

D6.03 [09:18 - 09:42]

Leveraging physics-informed neural computing for plasma transport / SEO Jae-min^{*1} (¹Department of Physics, Chung-Ang University)

D6.04 [09:42 - 10:06]

Supervised Machine learning development of parallel closures for a high-collisionality deuterium-carbon plasma / LEE Min Uk^{1,2}, JI Jeong-Young², LEE Hae June^{1,3} (¹Semiconductor Process and Equipment Contract Department, Pusan National University, ²Utah State University, USA, ³Department of Electrical Engineering, Pusan National University)

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[D7-nu] Relativistic Heavy Ion Collisions

2023. 10. 26 Thursday 08:30~10:18

Room: 607

좌장 : 문동호 전남대학교

Chair: MOON Dong Ho (Chonnam National University)

D7.01 [08:30 - 08:42]

Pseudorapidity densities of charged particles with ALICE / BOK Jeongsu¹ (¹Pusan National University)

D7.02 [08:42 - 08:54]

Multiplicity dependence of Ξ + baryon production in pp collisions at $\sqrt{s} = 13$ TeV with ALICE / CHO JaeYoon¹ (¹Department of Physics, Inha University)

D7.03* [08:54 - 09:06]

Observation of $\Upsilon(3S)$ in PbPb collisions at 5.02 TeV in CMS and sequential suppression of bottomonia / LEE Junseok¹, HONG Byungsik¹, LEE Soohwan¹ (¹Department of Physics, Korea University)

D7.04* [09:06 - 09:18]

Diquarks and the production of charmed baryons / LEE Su Houn¹, YUN Hyeo-ngock¹, NOH Sungsik¹, LIM Sanghoon², SONG Taesoo³, HONG Juhee¹, PARK Aaron¹, DöNIGUS Benjamin⁴ (¹Yonsei University, ²Department of Physics, Pusan National University, ³Theory Division, GSI Helmholtzzentrum, Germany, ⁴Institut für Kernphysik, Johann Wolfgang Goethe-Universität, Germany)

D7.05* [09:18 - 09:30]

Heavy flavor jet tagging in ALICE using Run3 framework / KIM Beom Kyu¹, LEE Hyunjun¹ (¹Department of Physics, Sungkyunkwan University)

D7.06 [09:30 - 09:42]

Performance of the CMS muon reconstruction software for p+p, p+Pb, and Pb+Pb collisions / PUTRA Bayu Adi Nugraha¹, LEE Soohwan¹, HONG Byungsik¹ (¹Department of Physics, Korea University)

D7.07 [09:42 - 09:54]

Transverse single spin asymmetry for forward neutron production in polarized p+p collisions at $\sqrt{s} = 510$ GeV / KIM Minho^{*1} (¹RIKEN BNL Research Center, RIKEN, Japan)

D7.08* [09:54 - 10:06]

Femtoscopy with Bose-Einstein correlation at CMS / MOON Dong Ho^{*1}, SEO Jun-hu¹, DOGRA Sunil Manohar², MOON Changseong² (¹Department of Physics, Chonnam National University, ²Department of Physics, Kyungpook National University)

D7.09* [10:06 - 10:18]

The First Look at Charged-Particle Jet Production in pp Collisions at $\sqrt{s_{NN}} = 13.6$ TeV with ALICE Run 3 Data at the LHC / BAE Joonsuk¹, KIM Beom Kyu^{*1} (¹Department of Physics, Sungkyunkwan University)

ⓔ [D8-at] Focus: Neutral Atoms Trapped with Optical Tweezers I

2023. 10. 26 Thursday 08:30~10:18

Room: 600A

좌장 : 문종철 한국표준과학연구원

Chair: MUN Jongchul (KRISS)

D8.01 [08:30 - 09:06]

Towards generation of an atomic array with optical tweezers / LEE Moonjoo^{*1} (¹Department of Electrical Engineering, POSTECH)

D8.02 [09:06 - 09:42]

Interlayer coupling of Rydberg atom arrays / AHN Jaewook^{*1}, KIM Minhyuk² (¹Department of Physics, KAIST, ²Department of Physics, Korea University)

D8.03 [09:42 - 10:18]

Towards Cs-atom arrays for quantum computing and simulation / WANG Tsai-Ni^{1,2}, HSIAO Ya-Fen², LEE Fang-Yu^{1,2}, HUANG I-Chia^{1,2}, LIN Yu-Ju², CHAN Yang-Hai², JEN Hsiang-Hua², CHEN Ying-Cheng^{*1,2} (¹Department of Physics, National Taiwan University, Taiwan, ²Institute of Atomic Molecular Sciences, Academia Sinica, Taiwan)

[D9-bp] Molecular Biological Physics

2023. 10. 26 Thursday 08:30~10:06

Room: 600B

좌장 : 손민주 포항공과대학교

Chair: SHON Min Ju (POSTECH)

D9.01 [08:30 - 08:42]

Fluorescence-based structural profiling for single-molecule protein sequencing / JOSHI Bhagyashree S¹, DE LANNOY Carlos¹, KIM Sung Hyun^{*1,2}, JOO Chirlmin^{1,2} (¹Department of Bionanoscience, Delft University of Technology, Netherlands, ²Department of Physics, Ewha Womans University)

D9.02* [08:42 - 08:54]

Conformational Dynamics of Human DNA Polymerase θ during Microhomology-Medicated End Joining / KIM Hajin^{*1,3}, SUNG Yubin², TAKATA Kei-ichi^{2,3}, KIM Chanwoo¹ (¹UNIST, ²Center for Genomic Integrity, IBS, ³Department of Biological Sciences, UNIST)

D9.03* [08:54 - 09:06]

Estimating the folding ‘speed limit’ of helical membrane proteins / KIM Seoyoon¹, LEE Daehyo¹, WIJESINGHE Wijesinghelage Chandima Bhashini¹, MIN Duyoung^{*1} (¹School of Natural Science, UNIST)

D9.04 [09:06 - 09:18]

Mitochondrial Transcription Dynamics Revealed by Single Molecule FRET Measurement / KIM Hajin^{*1}, LEE SeungWon¹, SOHN Byeong-Kwon¹, BASU Urmimala², SHEN Jiayu², PATEL Smita² (¹UNIST, ²Department of Biochemistry and Molecular Biology, Rutgers University, USA)

D9.05* [09:18 - 09:30]

Single-molecule analysis of RNA-dependent RNA polymerase (RdRp) associated nsp13 helicase / SONG Eunho^{1,2}, OH Gyeong-Seok³, KIM Sungchul³, HOHNG Sungchul^{*1,2} (¹Department of Physics and Astronomy, Seoul National University, ²Institute of Applied Physics, Seoul National University, ³Center for RNA Research, IBS)

D9.06 [09:30 - 09:42]

Single molecule counting: Towards determination of the absolute number concentration of free protein molecules in solution / LEE Il-Buem³, PARK Jin-Sung³, HONG Seok-Cheol^{*1,3}, CHO Minhaeng^{2,3} (¹Department of Physics, Korea University, ²Department of Chemistry, Korea University, ³Center for Molecular Spectroscopy and Dynamics, IBS)

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D9.07* [09:42 - 09:54]

A hidden route of protein aging / KIM Seoyoon¹, KIM Eojin¹, PARK Mingyu¹, KIM Seong ho¹, SADONGO Victor Wedia¹, WIJESINGHE Wijesinghelage Chandima Bhashini¹, LEE Chaiheon¹, CHOI Jeong-Mo², KIM Byung gyu³, KWON Tae Hyuk^{1,4}, MIN Seung kyu¹, MIN Duyoung^{*1,4} (¹School of Natural Science, UNIST, ²Department of Chemistry and Chemistry Institute for Fundamental Materials, Pusan National University, ³Center for Genomic Integrity, IBS, ⁴Center for Wave Energy Material, UNIST)

D9.08 [09:54 - 10:06]

RNA polymerase alone senses DNA double-strand breaks during transcription and generates R-loops for repair / LIM Gunhyoung¹, HWANG Seungha², YU Kilwon², KANG Jin Young², KANG Changwon³, HOHNG Sungchul^{*1} (¹Department of Physics and Astronomy, Seoul National University, ²Department of Chemistry, KAIST, ³Department of Biological Sciences, KAIST)

[D10-co] Tutorial: Time-resolved Spectroscopy on Quantum Materials

2023. 10. 26 Thursday 08:30~10:06

Room: 700A

작장 : 김준성 포항공과대학교

Chair: KIM Jun Sung (POSTECH)

D10.01 [08:30 - 09:18]

Ultrafast dynamics of correlated materials and coherent oscillations / KIM Kyungwan^{*1} (¹Chungbuk National University)

D10.02 [09:18 - 10:06]

Ultrafast X-ray spectroscopy and scattering using X-ray Free Electron Laser / JANG Hoyoung^{*1} (¹PAL-XFEL, Pohang Accelerator Laboratory)

[D11-co] Strongly Correlated Systems II

2023. 10. 26 Thursday 08:30~10:06

Room: 700B

작장 : 황정식 성균관대학교

Chair: HWANG Jungseek (Sungkyunkwan University)

D11.01 [08:30 - 08:42]

Tuning the phase transition of VO₂ thin films / KUMAR Manish^{*1}, RANI Sunita¹, LEE Hyun Hwi¹ (¹Energy Environment Material Research, Pohang Accelerator Laboratory, POSTECH)

D11.02 [08:42 - 08:54]

Strain-driven magnetic anisotropy in $\text{La}_{0.88}\text{Sr}_{0.12}\text{MnO}_3$ thin films on (110) NdGaO_3 / RYU Sangkyun¹, CHO Jin Hyung², PARK Jucheol³, NAM Sang-Yeol³, PARK S.-Y.⁴, KIM Younghak⁴, JEEN Hyoung Jeen^{*1,5} (¹Department of Physics, Pusan National University, ²Department of Physics Education, Pusan National University, ³Gyeongbuk Science & Technology Promotion Center, GERI, ⁴Pohang Accelerator Laboratory, POSTECH, ⁵Research Center for Dielectric and Advanced Matter Physics, Pusan National University)

D11.03* [08:54 - 09:06]

Structural disorder in mixed hybrid lead halide perovskites: Impact of anion and cation modifications / NAQVI Syed Furqan UI Hassan¹, JUNAID Syed Bilal¹, KO Jae-hyeon^{*1}, HONG Jungehy², SHON Wonhyuk³, LEE Seongsu³, JUNG Jong Hoon² (¹School of Nano Convergence, Hallym University, ²Department of Physics, Inha University, ³Advanced Quantum Material Research Section, KAERI)

D11.04* [09:06 - 09:18]

Clean realization of Hund physics near the Mott transition: NiS_2 under pressure / PARK Ina¹, JANG Bo Gyu², KIM Dongwook¹, SHIM Ji Hoon^{*1}, KOTLIAR Gabriel^{3,4} (¹Department of Chemistry, POSTECH, ²Theoretical Division, Los Alamos National Laboratory, USA, ³Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, USA, ⁴Physics and Astronomy Department, Rutgers University, USA)

D11.05 [09:18 - 09:30]

Role of non-local Coulomb interactions in SrMO_3 ($M = 3d$) perovskites: A DFT+U+V study / INDUKURU Ramesh Reddy^{1,2}, KIM Bongjae^{*1,2} (¹Department of Physics, Kunsan National University, ²Department of Physics, Kyungpook National University)

D11.06 [09:30 - 09:42]

Orbital anisotropy of heavy fermion Ce_2IrIn_8 under crystalline electric field and its energy scale / CHOI Hongchul^{*1,2}, SHIM Ji Hoon² (¹Theory Group, Max Planck POSTECH Korea Research Initiative, ²Department of Chemistry, POSTECH)

D11.07 [09:42 - 09:54]

Hall effect in quantum critical superconductor CeCoIn_5 / SEO Soonbeom^{*1}, KIM Jihyun², KIM Sungil², LEE Sangyun³, PARK Tuson^{*2} (¹Department of Physics, Changwon National University, ²Center for Quantum Materials and Superconductivity (CQMS), Department of Physics, Sungkyunkwan University, ³MPA-Quantum, Los Alamos National Laboratory, USA)

D11.08 [09:54 - 10:06]

Orbital Selective Electronic Correlations and Topological Superconductivity of Iron Chalcogenide: A Dynamical Mean Field Theory Perspective / KIM Minjae^{*1}, CHOI Sangkook¹, BRITO Walber Hugo², KOTLIAR Gabriel^{3,4} (¹School of Computational Sciences, KIAS, ²Departamento de Física, Universidade Federal de Minas Gerais, Brazil, ³Department of Physics and Astronomy, Rutgers University, USA, ⁴Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, USA)

[D12-ap] Focus: Insulating Phases of Correlated Electron

2023. 10. 26 Thursday 08:30~10:06

Room: 301

좌장 : 서정필 대구경북과학기술원

Chair: SEO Jungpil (DGIST)

D12.01 [08:30 - 08:54]

Multiple charge density wave phases of monolayer VSe₂ on graphene substrates / KIM Jungdae^{*1}, KIM Ki Seok², CHANG Young Jun³ (¹Department of Physics, University of Ulsan, ²Department of Physics, POSTECH, ³Department of Physics, University of Seoul)

D12.02 [08:54 - 09:18]

Multiple insulating phases in a van der Waals material 1T-TaS₂ / CHO Doohee^{*1} (¹Department of Physics, Yonsei University)

D12.03 [09:18 - 09:42]

Multiband charge density waves in NbTe₂ / JEON Sangjun^{*1} (¹Department of Physics, Chung-Ang University)

D12.04 [09:42 - 10:06]

Distinguishing ground state wavefunction of correlated insulator in twisted bilayer graphene / OH Myungchul^{*1} (¹Department of Semiconductor Engineering, POSTECH)

[D13-se] Emerging 2D Materials and Devices I

2023. 10. 26 Thursday 08:30~10:06

Room: 302

좌장 : 임성주 성균관대학교

Chair: LIM Seong Chu (Sungkyunkwan University)

D13.01 [08:30 - 08:42]

Bottom-up synthesis of 2D materials for future electronics / YUN SeokJoon^{*1}

(¹Department of Semiconductors, University of Ulsan)

D13.02* [08:42 - 08:54]

Negative Differential Interlayer Resistance Originating from Vertical Channel Migration of Multilayer WSe₂ / HAN Yeongseo¹, CHAE Minji¹, JOO Min-Kyu^{*1} (¹Department of Applied Physics, Sookmyung Women's University)

D13.03* [08:54 - 09:06]

P-Type Controllable Growth of Large Area MoS₂ with Vanadium Doping using Confined Space CVD / SEO Yongho^{*1}, MUHAMMAD Suleman¹, PARK Hyun Min¹, KIM Minwook¹ (¹Sejong University)

D13.04* [09:06 - 09:18]

Gate dependent magnetoresistance and Hall resistance of polar semimetal WTe₂ / HWANG Eunji¹, YANG Heejun^{*1} (¹Department of Physics, KAIST)

D13.05* [09:18 - 09:30]

Multi-level magnetoresistance in multi-phase CrPS₄ tunneling device / YANG Heejun¹, YOO Ho yeon¹, JOO Yanggeun¹, HONG Heemyoung¹, PANDEY Juhi¹ (¹Department of Physics, KAIST)

D13.06* [09:30 - 09:42]

Spin-selective memtransistors with magnetized graphene / JEONG Juyeong¹, KIEM Do Hoon¹, WATANABE Kenji⁴, TANIGUCHI Takashi⁴, HAN Myung Joon¹, ZHENG Shoujun², YANG Heejun^{*1} (¹Department of Physics, KAIST, ²School of Physics, Beijing Institute of Technology, China, ³School of Materials Science and Engineering, Nanyang Technological University, Singapore, ⁴Material Science, National Institute for Materials Science, Japan)

D13.07* [09:42 - 09:54]

Investigating Temperature-Dependent Ferroelectric Behavior in Stacked Multilayered MoS₂ / JOO Yanggeun¹, YANG Heejun^{*1} (¹Department of Physics, KAIST)

D13.08 [09:54 - 10:06]

Atomic-scale thermopower in TaS₂ / KIM Dohyun¹, SHIN Eui-cheol¹, LEE Yongjoon¹, LEE Young Hee², ZHAO Mali³, KIM Yong-Hyun¹, YANG Heejun¹ (¹Department of Physics, KAIST, ²Department of Energy Science, Sungkyunkwan University, ³College of Materials Science and Engineering, Tongji University, China)

[D14-se] Semiconductor Growth, Structural Properties, and Characterization I

2023. 10. 26 Thursday 08:30~10:06

Room: Convention Hall I

좌장 : 이응규 경희대학교

Chair: LEE Eungkyu (Kyung Hee University)

D14.01 [08:30 - 08:42]

Hydrothermal Synthesis of Round-Shaped Wet-Ceria in the 2-100 nm Scale for High-Performance, Scratch-Less CMP / JIN Hyungjoo^{1,2}, PARK Jeagun^{*1,2,3}, KIM Pil-Su^{1,2}, JEON Min-Uk^{1,2}, AHN Ho-Jun^{1,2}, KIM Ju-Yeon^{1,2} (¹Hanyang University, ²Department of Nanoscale Semiconductor Engineering, Hanyang University, Hanyang University, ³Department of Electronic Engineering, Hanyang University)

D14.02* [08:42 - 08:54]

Thermal analysis simulation of LEC/VGF method for the fabrication of a modular typed InP single crystal growth apparatus / KIM Donggeurami^{1,2}, CHO Hyung Hee², LIM Hak Jun³, CHOI In Soo³, JOO Kyung³, LEE Jun Ho¹, ROH Cheong Hyun^{*1} (¹IT Materials & Components R&D Division, Korea Electronics Technology Institute, ²Department of Mechanical Engineering, Yonsei University, ³R&D Department, Samyangceratech)

D14.03 [08:54 - 09:06]

Structure and optical properties of InAs/GaAs_{1-x}Sb_x sub-monolayer quantum dots / JO Hyun Jun¹, HA Jae Du¹, CHA Jong Won¹, KIM Jong Su^{*1} (¹Yeungnam University)

D14.04* [09:06 - 09:18]

Expanding Graphene Field-Effect Transistor (FET) Applications with Single-Layer Oxidized Graphene (SOG) / HAIDARI Mohd Musaib¹, CHOI Jin Sik^{*1}, 장동진¹, KIM Jin Hong¹, KO Jin-yong¹ (¹Department of Physics, Konkuk University)

D14.05* [09:18 - 09:30]

LED efficiency according to the composition of the InAsP cladding layer / KIM Jong Su^{*1}, GO Jiseong¹, KANG Taein¹, HA Jae Du¹, CHA Jong Won¹, PARK Gyoung Du¹, LEE Sang Jun² (¹Yeungnam University, ²Interdisciplinary Materials Measurement Institute, KRISS)

D14.06 [09:30 - 09:42]

Characterization of Ion Implantation-Induced Modifications in Hexagonal Boron Nitride via Raman and Photoluminescence Spectroscopy / LEE Seong-Yeon¹, KIM Sung-Ha¹, SOHN Tae-Hun¹, YEO Sunmog², YEE Ki Ju^{*1} (¹Department of Physics, Chungnam National University, ²Korea Multi-Purpose Accelerator Complex, KAERI)

D14.07* [09:42 - 09:54]

Study of InGaAs/InAlAs digital alloy using HRXRD and photoluminescence measurements / CHA Jong Won¹, KIM Jong Su^{*1}, KANG Taein¹, HA Jae Du¹, RYU Mee-Yi², SONG Jin Dong³ (¹Department of Physics, Yeungnam University, ²Department of Physics, Kangwon National University, ³Center for Opto-Electronic Materials and Devices Research, KIST)

D14.08 [09:54 - 10:06]

Transient photocurrent decay studies of p-i-n and nBn photodetector structures / KIM Jong Su^{*1}, KANG Taein¹, GO Jiseong¹, HA Jaedu¹, LEE Sangjun² (¹Yeungnam University, ²Interdisciplinary Materials Measurement Institute, KRISS)

D

[D15-ap] Focus: Functional Oxide Materials for Advanced Applications I

2023. 10. 26 Thursday 08:30~10:06

Room: Convention Hall II

좌장 : 손창희 울산과학기술원

Chair: SOHN Changhee (UNIST)

D15.01 [08:30 - 08:54]

Experimental Observation of Three-Dimensional Vortex Ordering in Ferroelectric Nanoparticles / YANG Yongsoo^{*1} (¹Department of Physics, KAIST)

D15.02 [08:54 - 09:18]

Mechanical strain-driven room temperature redox reactions in freestanding oxide membrane / KIM Woo Jin^{*1,2}, HARBOLA Varun^{1,3}, LEE Yonghun^{1,2}, CRUST Kevin J.^{1,3}, XU Ruijuan^{1,2}, WANG Bai Yang^{1,3}, YU Yijun^{1,2}, LI Jiarui^{1,2}, HWANG Harold Y.^{1,2} (¹Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA, ²Department of Applied Physics, Stanford University, USA, ³Department of Physics, Stanford University, USA)

D15.03 [09:18 - 09:42]

Light-induced enhancement of piezoelectricity in BiFeO₃ / HEO Yooun^{*1} (¹Department of Physics, Inha University)

D15.04 [09:42 - 10:06]

Engineering electronic structures on oxide interfaces / SOHN Byungmin^{*1} (¹Department of Physics, Sungkyunkwan University)

[D16-co] Condensed-matter Computational Physics II

2023. 10. 26 Thursday 08:30~09:54

Room: Convention Hall III

좌장 : 김용훈 한국과학기술원

Chair: KIM Yong-Hoon (KAIST)

D16.01* [08:30 - 08:42]

First-principles Study of the Atomistic Mechanism of Ferrocene-based Molecular Rectifier / KIM Jaeun¹, YEO Hyeonwoo¹, KIM Yong-Hoon^{*1} (¹School of Electrical Engineering, KAIST)

D16.02* [08:42 - 08:54]

Low-temperature behavior of quantum hybridization negative differential resistance from one-dimensional halide perovskite / LEE Jeongwon¹, KIM Tae Hyung¹, LEE Juho¹, KIM Yong-Hoon^{*1} (¹School of Electrical Engineering, KAIST)

D16.03* [08:54 - 09:06]

Carbon Substitutional Defects in Monolayer hBN and their Effects on Graphene/hBN Heterostructure / PARK Sunho¹, KWON Young-Kyun^{*1} (¹Department of Physics, Kyung Hee University)

D16.04* [09:06 - 09:18]

First-principles study of gating-based modulation defect energy levels in hexagonal boron nitride on MoS₂ / SONG Ji-Yoon¹, LEE Ryong-Gyu¹, KIM Yong-Hoon^{*1} (¹School of Electrical Engineering, KAIST)

D16.05 [09:18 - 09:30]

First-principles study of the sliding ferroelectricity in cellulose nanocrystals / LEE Minki¹, LEE Byeoksong¹, KANG Joongoo^{*1} (¹Department of Emerging Materials Science, DGIST)

D16.06 [09:30 - 09:42]

First-principles analysis of curvature and strain energies of carbon nanotubes / LEE Jeeyong¹, CHOI Hyoung Joon^{*1} (¹Department of Physics, Yonsei University)

D16.07* [09:42 - 09:54]

Exploring Tunable Magnetic Properties in Multilayered Co/Pt Superlattices using DFT Analysis / KWON Young-Kyun^{*1,2}, PARK Sohee² (¹Department of Physics, Kyung Hee University, ²Department of Information Display, Kyung Hee University)

Sessions E

2023 October 26(Thu) 13:00-13:48

[E1] No Session

[E2-pa] Particle Phenomenology II

2023. 10. 26 Thursday 13:00~13:48

Room: 602

좌장 : 박찬범 전남대학교

Chair: PARK Chan Beom (Chonnam National University)

E2.01 [13:00 - 13:12]

Search for Very Light Fermiophobic Higgs boson in the type-I two-Higgs-doublet mode / KIM Jinheung^{*1} (¹Department of Physics, Konkuk University)

E2.02 [13:12 - 13:24]

Exploring local and global feature integration in Multi-Modal Deep Neural Networks / BAN Kayoung¹, PARK Myeonghun², PARK Seongchan^{*1} (¹Department of Physics, Yonsei University, ²School of Natural Sciences, Seoul National University of Science and Technology)

E2.03 [13:24 - 13:36]

A new decorrelation algorithm for high energy physics / CHO Won Sang^{*1}, HAN Subin¹, KIM Hyung-do^{*1} (¹Department of Physics and Astronomy, Seoul National University)

E2.04* [13:36 - 13:48]

Exploring lepton flavor violation phenomena of the Z and Higgs bosons at electron-proton colliders / LEE SooJin^{*1}, SONG Jeonghyeon¹, KIM Jinheung¹, JUEID Adil², WANG Daohan¹ (¹Department of Physics, Konkuk University, ²Center for Theoretical Physics of the Universe, IBS)

[E3-pa] Field and String Theory II

2023. 10. 26 Thursday 13:00~13:48

Room: 603

좌장 : 신상진 한양대학교

Chair: SIN Sang Jin (Hanyang University)

E3.01 [13:00 - 13:12]

Emergence of new scaling symmetry in holographic superconductor / SEO Yun-seok^{*1}, KIM Kyung Kiu¹, KIM Sejin¹ (¹College of General Education, Kookmin University)

E3.02 [13:12 - 13:24]

Prediction of Holographic Superconductor Dome / KIM Sejin¹, SEO Yunseok^{*1}, KIM Kyung Kiu^{*1} (¹College of General Education, Kookmin University)

E3.03 [13:24 - 13:36]

Order parameter and spectral function in holographic superconductors / GHO-RAI Debabrata^{*1}, SIN Sang Jin^{*1}, YUK Taewon¹ (¹Department of Physics, Hanyang University)

E3.04 [13:36 - 13:48]

When the Analytic Fermions Spectral Function in Probe Limit Can Be Trusted? / SUKRAKARN Supalert^{*1}, SIN Sang Jin^{*1}, YUK Taewon¹ (¹Department of Physics, Hanyang University)

[E4-as] High Energy Astrophysics/Compact Objects

2023. 10. 26 Thursday 13:00~13:48

Room: 604

좌장 : 김진호 한국천문연구원

Chair: KIM Jinho (KASI)

E4.01 [13:00 - 13:12]

Deep Learning for the HAWC Gamma Ray Observatory / WATSON Ian James^{*1} (¹University of Seoul)

E4.02* [13:12 - 13:24]

Analysis of the Very High Energy Gamma-ray Source eHWC J1850+001 Using Updated HAWC Data / SON Youngwan¹, RHO Chang Dong², WATSON Ian James^{*1}, LEE Jason Sang Hun¹ (¹University of Seoul, ²Department of Physics, Sungkyunkwan University)

E4.03 [13:24 - 13:36]

In-ice measurements and sensitivities of the IceCube Upgrade Camera System / RODAN Steven Thomas^{*1}, TOENNIS Christoph^{1,2}, LEE Jiwoong¹, SEO Minyeong¹, CHOI Seowon¹, ROTT Carsten^{1,2} (¹Department of Physics, Sungkyunkwan University, ²Department of Physics, University of Utah, USA)

E4.04* [13:36 - 13:48]

Searches for dark matter signals with high-energy neutrinos in the IceCube Neutrino Telescope / KANG Woosik^{*1}, ROTT Carsten^{1,2}, JEONG Minjin¹, TOENNIS Christoph¹ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics and Astronomy, University of Utah, USA)

[E5] No Session

[E6-pl] Laser Plasmas

2023. 10. 26 Thursday 13:00~13:48

Room: 606

좌장 : 남인혁 포항가속기연구소

Chair: NAM Inhyuk (Pohang Accelerator Laboratory)

E6.01* [13:00 - 13:12]

A theoretical and numerical approach into high-efficiency plasma oscillator for next-generation THz-driven electron linear acceleration / LEE Jaeho¹, 박도현¹, KUMAR Manoj¹, HUR Min Sup^{*1} (¹Department of Physics, UNIST)

E6.02 [13:12 - 13:24]

Intense narrow-band THz emission from a density gradient plasma / KUMAR Manoj^{*1}, HUR Min Sup¹ (¹Department of Physics, UNIST)

E6.03* [13:24 - 13:36]

Heat transfer within non-equilibrium dense aluminum heated by a heavy ion beam / SONG Chiwan¹, LEE Seongmin¹, BANG Woosuk^{*1} (¹Department of Physics and Photon Science, GIST)

E6.04* [13:36 - 13:48]

Characterization of strongly coupled plasma produced in helium fluids / LEE Juho¹, YUN Gunsu^{*1,2,3} (¹Department of Physics, POSTECH, ²Division of Advanced Nuclear Engineering, POSTECH, ³Max Planck POSTECH/Korea Research Initiative, POSTECH)

[E7-nu] Nuclear Structure

2023. 10. 26 Thursday 13:00~13:48

Room: 607

좌장 : 김윙희 기초과학연구원

Chair: KIM Yung Hee (IBS)

E7.01 [13:00 - 13:12]

Collectivity in ^{86}Mo and ^{84}Mo : an implication of a sudden shape change / HA Jeong-su^{1,2,3,4}, RECCHIA Francesco^{1,2} (¹Department of Physics and Astronomy, University of Padua, Italy, ²Sezione di Padova, INFN, Italy, ³Instituut voor Kern- en Stralingsfysica, KU Leuven, Belgium, ⁴Center for Exotic Nuclear Studies, IBS)

E7.02 [13:12 - 13:24]

독일 마인츠 대학에서 수행한 Fe 원자의 광이온화 과정과 Dy 원자의 optical pumping 연구 / KIM Jung Bog^{1,2}, WENDT Klaus², BUDKER Dmitry², NIEMEYER Thorben², CHAKRAVARTHY Rohan² (¹Department of Physics Education, Korea National University of Education, ²Department of Physics, Mainz University, Germany)

E7.03* [13:24 - 13:36]

Exploring the nuclear structure towards around the N = 126 shell closure / CHO Youngju^{1,2}, KIM Yung Hee^{*1} (¹Center for Exotic Nuclear Studies, IBS, ²Department of Physics and Astronomy, Seoul National University)

E7.04 [13:36 - 13:48]

Lifetime measurements of low-lying excited states in ^{110}Sn and ^{206}Pb / PARK Joo-chun^{*1} (¹Center for Exotic Nuclear Studies, IBS)

ⓔ [E8-at] Focus: Neutral Atoms Trapped with Optical Tweezers II

2023. 10. 26 Thursday 13:00~13:48

Room: 600A

좌장 : 안재욱 한국과학기술원

Chair: AHN Jaewook (KAIST)

E8.01 [13:00 - 13:36]

Probing magnon bound states and Hilbert space fragmentation in Rydberg atom arrays / YANG Fan¹, KIM Kanghuen², AHN Jaewook^{*2}, YARLOO Hadi³, NIELSEN A.E.B³, MØLMER Klaus¹ (¹Niels Bohr Institute, University of Copenhagen, Denmark, ²Department of Physics, KAIST, ³Department of Physics and Astronomy, Aarhus University, Denmark)

E8.02* [13:36 - 13:48]

Quantum Computation of Maximum Independent Set Problem on King's Graph of over Hundred Rydberg Atoms / KIM Kangheun¹, KIM Minhyuk², PARK JuYoung¹, AHN Jaewook^{*1} (¹Department of Physics, KAIST, ²Department of Physics, Korea University)

[E9] No Session

[E10-co] Nano and Mesoscopic Physics

2023. 10. 26 Thursday 13:00~14:00

Room: 700A

작장 : 김도헌 서울대학교

Chair: KIM Dohun (Seoul National University)

E10.01 [13:00 - 13:24]

Aharonov-Bohm effect mediated by “massive” photons confined between conducting plates / KANG Kicheon^{*1} (¹Department of Physics, Chonnam National University)

E10.02 [13:24 - 13:48]

Measuring statistics-induced entanglement-entropy with an electronic Hong-Ou-Mandel interferometer / HONG Changki^{*1}, ALKALAY Tomer¹, ZHANG Gu^{2,3}, UMANSKY Vladimir¹, GORNYI Igor³, HEIBLUM Moty¹, GEFEN Yuval¹ (¹Department of Condensed matter Physics, Weizmann Institute of Science, Israel, ²Division of Quantum Computation, Beijing Academy of Quantum Information Sciences, China, ³Institute for Quantum Materials and Technologies, Karlsruhe Institute of Technology, Germany)

E10.03* [13:48 - 14:00]

PT-symmetric Non-Hermitian Hopf bundle matter / PAK Seik¹, YEOM Cheolheon², VERMA Sonu³, PARK Moon Jip^{*1} (¹Department of Physics, Hanyang University, ²Department of Physics, Konkuk University, ³Center for Theoretical Physics of Complex Systems, IBS)

[E11-co] Condensed-matter Computational Physics III

2023. 10. 26 Thursday 13:00~13:48

Room: 700B

좌장 : 박세영 송실대학교

Chair: PARK Se Young (Soongsil University)

E11.01 [13:00 - 13:12]

Towards Physically Reliable Molecular Representation Learning / YI Seunghoon¹, CHO Youngwoo², SUL Jinhwan¹, KO Seung Woo¹, KIM Soo Kyung³, CHOO Jaegul², YOON HongKee⁵, LEE Joonseok^{1,4} (¹Seoul National University, ²KAIST, ³Palo Alto Research Center, Stanford Research Institute, USA, ⁴Google Research, USA, ⁵Department of Physics, Kangwon National University)

E11.02* [13:12 - 13:24]

First-principles study on electronic structure changes in MA₃Sb₂I₉ during annealing, cooling, and reannealing / KWON Young-Kyun¹, YOO Seungwoo¹ (¹Department of Physics, Kyung Hee University)

E11.03* [13:24 - 13:36]

Theory of Electric Enthalpy in Electrified Interfaces / LEE Ryong-Gyu¹, LEE Juho¹, YEO Hyeonwoo¹, KIM Yong-Hoon¹ (¹School of Electrical Engineering, KAIST)

E11.04* [13:36 - 13:48]

Finite-bias molecular dynamics simulations of water at the electrified graphene surface / YEO Hyeonwoo¹, LEE Juho¹, LEE Ryong Gyu¹, KIM Jaeeun¹, KIM Yong-Hoon¹ (¹School of Electrical Engineering, KAIST)

[E12-ap] Surface and Interface

2023. 10. 26 Thursday 13:00~13:48

Room: 301

좌장 : 김정대 울산대학교

Chair: KIM Jungdae (University of Ulsan)

E12.01* [13:00 - 13:12]

단일 물분자 제어를 통한 물-이온 상호작용 연구 / HAN Huijun¹, PARK Yunjae², KIM Yo-han¹, DING Feng^{1,3}, SHIN Hyung-Joon^{1,2} (¹Materials Science and Engineering, UNIST, ²Center for Multidimensional Carbon Materials, IBS, ³Institute of Technology for Carbon Neutrality, Shenzhen Institute of Advanced Technology, China)

E12.02* [13:12 - 13:24]

$\text{Al}_2\text{O}_3/\text{ZnO}$ 계면의 전자상태와 이차원 전자기체(2DEG) 형성에 관한 밀도범함수 연구 / JEON Jun Oh¹, JEONG Sukmin¹, CHO Deok-Yong¹ (¹Department of Physics, Jeonbuk National University)

E12.03* [13:24 - 13:36]

물 삼합체의 협력성을 통한 양성자 터널링 제어 / KIM Yohan¹, HAN Huijun¹, SHIN Hyung-Joon¹ (¹Materials Science and Engineering, UNIST)

E12.04* [13:36 - 13:48]

Unraveling in-depth recombination mechanisms in flexible kesterite thin film solar cells / PARK Ha Kyung¹, SON Dae-Ho², SUNG Shi-Joon², HWANG Dae-Kyu², LEE Jaebaek², JEON Dong-Hwan², CHO Yuna¹, KIM Dae-Hwan², KANG Jin-Kyu², YANG Kee-Jeong², JO William¹ (¹Department of Physics, Ewha Womans University, ²Division of Energy Technology, DGIST)

[E13-se] Emerging 2D Materials and Devices II

2023. 10. 26 Thursday 13:00~13:48

Room: 302

좌장 : 유재수 경희대학교

Chair: YU Jae Su (Kyung Hee University)

E13.01 [13:00 - 13:12]

Realization of non-layered 2D transition metal nitride films via chemical vapor deposition / KIM Jiha², SEO Jihyung³, SON Eunbin³, PARK Hyesung^{*1} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Graduate School of Semiconductor Materials and Devices Engineering, UNIST, ³Materials Science and Engineering, UNIST)

E13.02* [13:12 - 13:24]

Realizing High-Concentration Coalesced Vanadium Doping in Monolayer MoS_2 : Toward High-Performance Hydrogen Evolution Catalysis / SON Eunbin², SEO Jihyung², PARK Hyesung^{*1} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Materials Science and Engineering, UNIST)

E13.03 [13:24 - 13:36]

Defects-Mediated Valley Polarization in Vertical Heterobilayer WS_2/MoS_2 : From Vulnerable Edge to Mild Healed Interior / LE Chinh Tam¹, JANG Joon Ik³, SEONG Maeng-Je², KIM Yong Soo^{*1} (¹Department of Semiconductor Physics, University of Ulsan, ²Department of Physics, Chung-Ang University, ³Department of Physics, Sogang University, ⁴Faculty of Chemical and Food Technology, Ho Chi Minh City University of Technology and Education, Vietnam)

E13.04* [13:36 - 13:48]

Visualization of local mechanical properties in Moiré graphene / YANG Heejun^{*1}, SANGSU Yer¹, KIM Dohyun¹ (¹Department of Physics, KAIST)

[E14-se] Semiconductor Growth, Structural Properties, and Characterization II

2023. 10. 26 Thursday 13:00~13:48

Room: Convention Hall I

좌장 : 노희석 전북대학교

Chair: RHO Heesuk (Jeonbuk National University)

E

E14.01 [13:00 - 13:12]

Plasmon expedited response time and enhanced response in gold nanoparticles-decorated zinc oxide nanowire-based nitrogen dioxide gas sensor at room temperature / KIM Do Wan¹, FàBREGA Cristian², PRADES Juan Daniel², JANG Jae-Won^{*1} (¹Division of Physics and Semiconductor Science, Dongguk University, ²MIND, Department of Electronics and Biomedical Engineering, University of Barcelona, Spain)

E14.02* [13:12 - 13:24]

The optical properties study of varied thickness for InGaAs/AlInAs superlattice structures / HA Jae Du¹, KANG Taein¹, JO Hyun-Jun¹, PARK Gyoung Du¹, KIM Jong Su^{*1}, LEE Seunghyun², KRISHNA Sanjay² (¹Yeungnam University, ²Department of Electrical and Computer Engineering, Ohio State University, USA)

E14.03* [13:24 - 13:36]

희토류 없는 적색/적주황색 발광 페로브스카이트기반 형광체의 합성 및 특성 / 이준규², HUA Yongbin², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

E14.04 [13:36 - 13:48]

A study on the optical transition in InAs_xP_{1-x} metamorphic buffers structure by photoreflectance spectroscopy / PARK Gyoung Du¹, KIM Jong Su^{*1}, HA Jae Du¹, KANG Taein¹, LEE Sang Jun² (¹Department of Physics, Yeungnam University, ²Division of Interdisciplinary Materials Measurement Institute, KRISS)

[E15-ap] Focus: Functional Oxide Materials for Advanced Applications II

2023. 10. 26 Thursday 13:00~13:48

Room: Convention Hall II

좌장 : 이형우 아주대학교

Chair: LEE Hyungwoo (Ajou University)

E15.01 [13:00 - 13:24]

Unveiling potential of metallic delafossite oxide PdCoO₂ as a hyperbolic plasmonic medium / YOON Sangmoon^{*1} (¹Department of Physics, Gachon University)

E15.02 [13:24 - 13:48]

Multiferroic freestanding oxide membrane of heterogeneous integration / KANG Kyeong Tae^{*1} (¹Department of Physics, Kyungpook National University)

[E16-co] Other Condensed Materials/ Instrumentation and Big Facilities

2023. 10. 26 Thursday 13:00~14:00

Room: Convention Hall III

좌장 : 장서형 중앙대학교

Chair: CHANG Seo Hyoung (Chung-Ang University)

E16.01 [13:00 - 13:12]

Capillary Force Microscopy Non-Contact Imaging Method / CHOI Hyoju¹, LEE Manhee^{*1} (¹Department of Physics, Chungbuk National University)

E16.02 [13:12 - 13:24]

Linearization of atomic force microscope scans acquired using dual-stage lateral scanners / JUMA Oyoo Michael¹, OTIENO Luke Oduor¹, NGUYEN Thi Thu¹, NGUYEN Thi Ngoc¹, LEE Yong Joong^{*1} (¹School of Mechanical Engineering, Kyungpook National University)

E16.03 [13:24 - 13:36]

Wide-area piezoelectric scanner using mechanical amplification for applications in high-speed atomic force microscopy / NGUYEN Thi Thu¹, OTIENO Luke Oduor¹, JUMA Oyoo Michael¹, NGUYEN Thi Ngoc¹, LEE Yong Joong^{*1} (¹School of Mechanical Engineering, Kyungpook National University)

E16.04 [13:36 - 13:48]

Interaction of in-plane Drude carrier with c-axis phonon in PdCoO₂ / CHOI E. J.^{*1}, SEO Dongmin^{1,7}, AHN Gihyeon², RIMAL Gaurab³, KHIM Seunghyun⁴, CHUNG S. B.^{1,5}, MACKENZIE A. P.⁶, OH Seongshik³, MOON S. J.² (¹Department of Physics, University of Seoul, ²Department of Physics, Hanyang University, ³Department of Physics and Astronomy, Rutgers University, USA, ⁴Physics of Quantum Materials, Max Planck Institute for Chemical Physics of Solids, Germany, ⁵School of Physics, KIAS, ⁶School of Physics and Astronomy, University of St Andrews, Scottish Universities Physics Alliance, UK, ⁷Department of Smart Cities, University of Seoul)

E16.05 [13:48 - 14:00]

Controlling Fe stoichiometry in Epitaxial FeTe Thin Films / LEE June Hyuk^{*1}, VAN QUANG Nguyen¹, TRAN Van Tam², CHOI Won Mook² (¹Neutron Science Division, KAERI, ²School of Chemical Engineering, University of Ulsan)

E

Sessions F

2023 October 26(Thu) 14:00-15:48

Ⓚ [F1-or] 정책위원회 특별세션

2023. 10. 26 Thursday 14:00~15:48

Room: 601

좌장 : 정문석 한양대학교

Chair: JEONG Mun Seok (Hanyang University)

- 인사말
- 연구재단 과제 현황
- 질의응답 및 토론

김창영 (정책위 위원장, 서울대 교수)

안태규 (한국연구재단 자연과학단 단장)

ⓔ [F2-pa] Pioneer: Present and Future of the LHC Program at CERN I

2023. 10. 26 Thursday 14:00~15:36

Room: 602

좌장 : 김태정 한양대학교

Chair: KIM Tae Jeong (Hanyang University)

F2.01 [14:00 - 14:24]

The Path Towards the Future Circular Collider at CERN / TSESMEIS Emmanuel^{*1}
(*1 CERN, Switzerland)

F2.02 [14:24 - 14:48]

Introduction to CMS experiment / ADAM Wolfgang^{*1} (*1 Austrian Academy of Sciences, Austria)

F2.03 [14:48 - 15:12]

Precision timing with the CMS MIP Timing Detector (MTD) for High-Luminosity LHC (HL-LHC) / TABARELLI Tommaso^{*1} (*1 University of Milano-Bicocca, Italy)

F2.04 [15:12 - 15:36]

Beyond Collider Physics / KIM Hyung-do^{*1} (*1 Department of Physics and Astronomy, Seoul National University)

[F3-pa] Field and String Theory III

2023. 10. 26 Thursday 14:00~15:48

Room: 603

좌장 : 김희철 포항공과대학교

Chair: KIM Hee-Cheol (POSTECH)

F3.01* [14:00 - 14:12]

Supersymmetric Cardy Formula and the Weak Gravity Conjecture in AdS/CFT / CHO Minseok^{*1}, CHOI Sunjin^{*2}, LEE Ki-Hong^{*1}, SONG Jaewon^{*1} (^{*1}Department of Physics, KAIST, ^{*2}School of Physics, KIAS)

F3.02* [14:12 - 14:24]

Large N=1 Universality of 4d N=1 Superconformal Index and AdS Black Holes / CHOI Sunjin^{*2}, KIM Seungkyu^{*1}, SONG Jaewon^{*1} (^{*1}Department of Physics, KAIST, ^{*2}Department of Physics, KIAS)

F3.03* [14:24 - 14:36]

Strongly correlated Weyl semi metal in Holography / SIN Sang Jin^{*1}, SEO Jeong-Won^{*1} (^{*1}Department of Physics, Hanyang University)

F3.04* [14:36 - 14:48]

Pole-Skipping in Rotating BTZ Black Holes / JEONG Hyun-Sik^{2,3}, JI Chang-Woo^{*1}, KIM Keun-Young^{*1,4} (^{*1}Department of Physics and Photon Science, GIST, ^{*2}Department of Physics, Instituto de Fisica Teorica UAM, Spain, ^{*3}Departamento de Fisica Teorica, Universidad Autonoma de Madrid, Spain, ^{*4}Research Center for Photon Science Technology, GIST)

F3.05* [14:48 - 15:00]

Embedding a lattice into the Holography II : Kane-Mele model / YUK Taewon^{*1}, SIN Sang Jin^{*1} (^{*1}Department of Physics, Hanyang University)

F3.06 [15:00 - 15:12]

Modeling of Physical Space and Time in Complex Domain / LEE Narm Hee^{*1} (^{*1}Kyungpook National University)

F3.07 [15:12 - 15:24]

Poincaré invariance of binary dynamics in the post-Minkowskian Hamiltonian approach / LEE Hojin^{*1}, LEE Sangmin^{*1}, LEE Kanghoon^{*2} (^{*1}Seoul National University, ^{*2}APCTP)

F

F3.08 [15:24 - 15:36]

W-algebras from non-Abelian Quiver Gauge Theories / SHIM Myungbo^{*1,2,3}, CO-MAN Ioana², YAMAZAKI Masahito^{2,4}, ZHOU Yehao² (¹Yau Mathematical Sciences Center, Tsinghua University, China, ²Kavli IPMU, The University of Tokyo, Japan, ³Department of Physics, Kyung Hee University, ⁴Trans-Scale Quantum Science Institute, The University of Tokyo, Japan)

F3.09 [15:36 - 15:48]

Mean-field and holographic models of the Kondo lattice / HAN Young-Kwon¹, YUK Tae-won¹, SIN Sang Jin^{*1} (¹Department of Physics, Hanyang University)

㉔ [F4-as] Pioneer: Gravitational Wave Background and Pulsar Timing Array I

2023. 10. 26 Thursday 14:00~15:48

Room: 604

좌장 : 박찬 기초과학연구원

Chair: PARK Chan (IBS)

F4.01 [14:00 - 14:36]

Updates from the Parkes Pulsar Timing Array Project and towards the SKA / HOBBS George^{*1} (¹Commonwealth Scientific and Industrial Research Organization, Australia)

F4.02 [14:36 - 15:12]

Pulsar Timing Array Experiments: Detection of low-frequency gravitational waves and some auxiliary sciences / BAGCHI Manjari^{*1} (¹InPTA Faculty Member, The Institute of Mathematical Sciences, India)

F4.03 [15:12 - 15:48]

Cosmological Gravitational Wave Background — with a focus on secondary gravitational waves — / INOMATA Keisuke¹, KOHRI Kazunori^{2,3,4}, TERADA Takahiro^{*5} (¹Kavli Institute for Cosmological Physics, The University of Chicago, USA, ²Division of Science, National Astronomical Observatory of Japan and SOKENDAI, Japan, ³Theory Center, IPNS, and QUP (WPI), KEK, Japan, ⁴Kavli IPMU (WPI), UTIAS, The University of Tokyo, Japan, ⁵Center for Theoretical Physics of the Universe, IBS)

[F5-op] Nanophotonics I

2023. 10. 26 Thursday 14:00~15:48

Room: 605

좌장 : 백현준 서강대학교

Chair: BAEK Hyeonjun (Sogang University)

F5.01 [14:00 - 14:24]

Unlocking Multicolor and 3D Holography with Single-Cell Metasurfaces through Inverse Design / SO Sunae^{*1} (¹Department of Electro-Mechanical Systems Engineering, Korea University, Sejong)

F5.02 [14:24 - 14:48]

육각형 마이크로 공진기에서 시공간 대칭성을 위한 새로운 엑시톤 폴라리톤의 커플링 / SONG Hyun Gyu², CHO Yong Hoon^{*1} (¹KAIST, ²Sensor System Research Center, KIST)

F5.03 [14:48 - 15:12]

Strain balanced quantum cascade laser at 4700 nm wavelength / KANG Joon-Hyun^{*1}, LEE Won Jun¹, SHIN Jae Cheol², HAN Il Ki¹ (¹Nanophotonics Research Center, KIST, ²Division of Electronics and Electrical Engineering, Dongguk University)

F5.04* [15:12 - 15:24]

Electrically tunable single plexcitonic emitter at room temperature / LEE Hy-eonwoo¹, WHETTEN Benjamin G.², KIM Byong Jae³, WOO Ju Young⁴, KOO Yeon-jeong¹, BAE Jinhyuk¹, KANG Mingu¹, MOON Taeyoung¹, JOO Huitae¹, JEONG Sohee³, LIM Jaehoon³, EFROS Alexander L.⁵, RASCHKE Markus B.², PELTON Matthew⁶, PARK Kyoung-Duck^{*1} (¹Department of Physics, POSTECH, ²Department of Physics and JILA, University of Colorado at Boulder, USA, ³Department of Energy Science, Sungkyunkwan University, ⁴Digital Transformation R&D Department, KITECH, ⁵Naval Research Laboratory, USA, ⁶Department of Physics, University of Maryland, Baltimore County (UMBC), USA)

F5.05* [15:24 - 15:36]

Cavity magnonics with easy-axis ferromagnet: critically enhanced magnon squeezing and light-matter interaction / LEE Jongjun M.¹, LEE Hyun-Woo^{*1}, HWANG Myung-Joong^{*2,3} (¹Department of Physics, POSTECH, ²Division of Natural and Applied Sciences, Duke Kunshan University, China, ³Zu Chongzhi Center for Mathematics and Computational Science, Duke Kunshan University, China)

F5.06 [15:36 - 15:48]

Sampling a Laser Field near Nanostructures Using Tunneling / KIM Kyungseung¹, HWANG SungIn¹, CHO Wosik¹, NAM Chang Hee^{1,2}, KIM Kyung Taec^{*1,2} (¹Center for Relativistic Laser Science, IBS, ²Department of Physics and Photon Science, GIST)

ⓔ [F6-pl] Pioneer: Novel Ideas in Laser-Plasma Physics I

2023. 10. 26 Thursday 14:00~15:48

Room: 606

좌장 : 석희용 광주과학기술원

Chair: SUK Hyyong (GIST)

F6.01 [14:00 - 14:36]

Frontiers in Ultrafast Laser Plasmas: Challenges and Opportunities / CHO Byoung Ick¹ (¹GIST)

F6.02 [14:36 - 15:12]

X-ray Imaging and Ionization dynamics in ultra-relativistic laser plasmas using X-ray free electron lasers / MISHCHENKO Mikhail¹, NAKATSUTSUMI Motoaki¹, BRAMBRINK Erik¹, TONCIAN Toma², KRAUS Dominik⁷, PRENCIPE Irene², KLUGE Thomas², COWAN Thomas E², HUANG Lingen², SMID Michal², GARCIA Alejandro Laso², HOEPPNER Hauke², NEUMAYER Paul B⁵, HUMPHRIES Oliver^{1,2}, KROUPP Eyal³, STAMBULCHIK Evgeny³, USCHMANN Ingo⁴, LOETZSCH Robert⁴, CHO Byoung-ick⁶, LEE Gysang⁶, SOHN Jang Hyeob⁶, QU ChongBing⁷, ZASTRAU Ulf¹ (¹HED Group, European X-ray Free Electron laser, Germany, ²Institute for Radiation Physics, Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Germany, ³Weizmann Institute of Science, Israel, ⁴X-ray Optics Group, Friedrich Schiller University Jena, Germany, ⁵GSI Helmholtzzentrum fuer Schwerionenforschung, Germany, ⁶Department of Physics and Photon Science, GIST, ⁷Institute of Physics, University of Rostock, Germany)

F6.03 [15:12 - 15:48]

Current and future opportunities for high energy density laboratory plasma and dynamic compression science at LCLS / DYER Gilliss McNaughton¹, FRY Alan², GALTIER Eric¹, CUNNINGHAM Eric Flint², CURRY Chandra Brienne², FLETCHER Luke³, LEE Hae Ja¹, NAGLER Bob¹, HEIMANN Philip¹, GLENZER Siegfried³, GLEASON Ari-anna³, MO Mianzen³, MARTINEZ Mikael², HARDIN Corey², YANG Steven², SANDBERG Richard⁴, SPINKA Thomas⁵, HILL Elizabeth⁶ (¹Matter in Extreme Conditions Science, Research and Development Department of LCLS, SLAC National Accelerator Laboratory, USA, ²The MEC-U project, SLAC National Accelerator Laboratory, USA, ³High Energy Density Sciences Division of Fundamental Physics Directorate, SLAC National Accelerator Laboratory, USA, ⁴Physics and Astronomy, Brigham Young University, USA, ⁵Advanced Photon Technologies Group, NIF and Photon Sciences, Lawrence Livermore National Laboratory, USA, ⁶Laser Development Projects, Laser and Materials Technology, Laboratory for Laser Energetics, USA)

ⓔ [F7-nu] Bilateral: The KPS-JPS Joint symposium on Electron-Ion Collider physics

2023. 10. 26 Thursday 14:00~15:36

Room: 607

좌장 : 문준영 기초과학연구원

Chair: MOON Jun Young (IBS)

F7.01 [14:00 - 14:24]

EIC and LHC forward physics; complementary and similarity on QCD study /
CHUJO Tatsuya^{*1} (¹Institute of Pure and Applied Sciences, University of Tsukuba, Japan)

F7.02 [14:24 - 14:48]

Exclusive electroproduction of vector mesons with a Regge model / **KIM Sangho**^{*1}
(¹Department of Physics, Soongsil University)

F7.03 [14:48 - 15:12]

Perturbative QCD approach to the nucleon structure at EIC / **YOSHIDA Shinsuke**^{*1}
(¹Institute of Quantum Matter, South China Normal University, China)

F7.04 [15:12 - 15:36]

Electroproduction of phi meson at EIC / **SHIM Sang-In**^{*1}, **KIM Yongsun**², **NAM Seung-II**³ (¹Center for Extreme Nuclear Matters (CENuM), Korea University, ²Department of Physics and Astronomy, Sejong University, ³Department of Physics, Pukyong National University)

F

ⓔ [F8-at] Focus: Neutral Atoms Trapped with Optical Tweezers III

2023. 10. 26 Thursday 14:00~15:48

Room: 600A

좌장 : 송윤흥 한국표준과학연구원

Chair: SONG Yunheung (KRISS)

F8.01 [14:00 - 14:36]

Quantum feature maps for graph machine learning on a neutral atom quantum processor / **HENRIET Loïc**^{*1} (¹PASQAL, France)

F8.02* [14:36 - 14:48]

Rydberg-atom implementation of quadratic unconstrained binary optimization problems / **BYUN Andrew**¹, **JEONG Junwoo**¹, **KIM Kangheun**¹, **KIM Minhyuk**², **JEONG Seokho**¹, **JEONG Heejeong**³, **AHN Jaewook**^{*1} (¹Department of Physics, KAIST, ²Department of Physics, Korea University, ³Research Institute, Qunova Computing Inc.)

F8.03 [14:48 - 15:00]

Computational complexity of integer factorization by Rydberg atoms / PARK JuYoung¹, KIM Minhyuk², JEONG Seok Ho¹, KIM Kangheun¹, AHN Jaewook^{*1} (¹Department of Physics, KAIST, ²Department of Physics, Korea University)

F8.04 [15:00 - 15:36]

Floquet-tailored Rydberg interactions / LOH Huangqian^{*1} (¹Centre for Quantum Technologies, National University of Singapore, Singapore)

F8.05 [15:36 - 15:48]

Raman driving of atomic hyperfine qubits with an electro-optic modulator / WANG Tsai-Ni^{1,2}, HUANG I-Chia^{1,2}, LIN Yu-Ju², CHEN Ying-Cheng^{1,2} (¹Department of Physics, National Taiwan University, Taiwan, ²Institute of Atomic Molecular Sciences, Academia Sinica, Taiwan)

[F9-st] Chaos & Nonlinear Dynamics

2023. 10. 26 Thursday 14:00~15:36

Room: 600B

좌장 : 손승우 한양대학교

Chair: SON Seung-Woo (Hanyang University)

F9.01 [14:00 - 14:24]

Discrimination of fast-time scale temporal sequences based on a Pavlovian-conditioned spiking neural network / LEE Kyoung Jin^{*1}, JEONG In Hoi¹, PARK Woojun¹, KIM Jongmu² (¹Korea University, ²Mech. Engineering, Korea University)

F9.02 [14:24 - 14:48]

Unveiling the Odor Representation in the Inner Brain of Drosophila through Compressed Sensing / HYEON Changbong^{*1} (¹School of Computational Sciences, KIAS)

F9.03 [14:48 - 15:12]

Decoding neural connections from activity data / JO Junghyo^{*1} (¹Department of Physics Education, Seoul National University)

F9.04 [15:12 - 15:24]

Relationship between Phase Dynamics Patterns of Human Brain Waves and the Level of Consciousness / PARK Youngjai¹, MOON Joon-Young^{*1} (¹Center for Neuroscience Imaging Research, IBS)

F9.05 [15:24 - 15:36]

Effect of Adult-Born Immature Granule Cells on Pattern Separation in A Biological Network of The Hippocampal Dentate Gyrus / KIM Sang-Yoon¹, LIM Woo-chang^{*1} (¹Daegu National University of Education)

[F10-co] Focus: Topological Phenomena in Mesoscopic Physics

2023. 10. 26 Thursday 14:00~15:48

Room: 700A

좌장 : 명노준 조선대학교

Chair: MYOUNG Nojoon (Chosun University)

F

F10.01 [14:00 - 14:24]

Braiding of anyons at a quantum point contact / SIM Heung-Sun^{*1} (¹Department of Physics, KAIST)

F10.02 [14:24 - 14:48]

Topological edge modes and band-crossings from compact localized states / RHIM Jun Won^{*1} (¹Department of Physics, Ajou University)

F10.03 [14:48 - 15:12]

Topological Magnonics: Hall, Spin Hall, and Orbital Hall Effects of Magnons / KIM Se Kwon¹, GO Gyungchoon¹ (¹Department of Physics, KAIST)

F10.04 [15:12 - 15:36]

Strong interlayer coupling and stable topological flat bands in twisted bilayer photonic Moiré superlattices / YI Chang-Hwan^{*1} (¹Center for Theoretical Physics of Complex Systems, IBS)

F10.05* [15:36 - 15:48]

Revealing inverted chirality of hidden domain wall states in multiband systems without topological transition / CHEON Sang Mo^{*1,3}, KIM Tae-Hwan², HAN Sang-Hoon^{1,3}, JEONG Seung-Gyo² (¹Department of Physics, Hanyang University, ²Department of Physics, POSTECH, ³Research Institute for Natural Science and High Pressure, Hanyang University)

⑤ [F11-co] Bilateral: pgrade of Advanced Photon Source and Studies of Extreme Materials I

2023. 10. 26 Thursday 14:00~15:48

Room: 700B

좌장 : 이성근 서울대학교

Chair: LEE Sung Keun (Seoul National University)

F11.01 [14:00 - 14:36]

Breakthroughs in material synthesis and characterization at extreme conditions / PRAKAPENKA Vitali B.*¹ (¹Center for Advanced Radiation Sources, The University of Chicago, USA)

F11.02 [14:36 - 15:12]

Current studies on the discovery of low-pressure-based superconductors / KIM Jae Yong*¹, LEI Sun¹, LI Bin¹, WU Tianyu¹, RYU Youngjay², PRANKAPENKA Vitali² (¹Department of Physics, Hanyang University, ²GSECARS, Advanced Photon Source, Argonne National Laboratory, USA)

F11.03 [15:12 - 15:48]

The Wondrous World of Carbon Under High Pressure / WANG Yanbin*¹ (¹Center for Advanced Radiation Sources, The University of Chicago, USA)

⑤ [F12-ap] Pioneer: Emergent Spin-Related Phenomena at Different Dimensionalities I

2023. 10. 26 Thursday 14:00~15:36

Room: 301

좌장 : 김상훈 울산대학교

Chair: KIM Sanghoon (University of Ulsan)

F12.01 [14:00 - 14:24]

Probing resonating valence bond states in artificial quantum magnets using ESR-STM / YANG Kai*^{1,2} (¹Institute of Physics, Chinese Academy of Sciences, China, ²School of Physical Sciences, University of Chinese Academy of Sciences, China)

F12.02 [14:24 - 14:48]

Molecular quantum sensor on a scanning probe tip for sensing electric and magnetic fields with single-atom sensitivity / ESAT Taner*^{1,2}, BORODIN Dmitriy^{3,4}, OH Jeongmin^{3,4}, BAE Yujeong*^{3,4}, TAUZ Frank Stefan^{1,2,5}, HEINRICH Andreas*^{3,4}, TEMIROV Ruslan^{1,2,6} (¹Peter Grünberg Institute (PGI-3), Forschungszentrum Jülich, Germany, ²Jülich Aachen Research Alliance (JARA), Fundamentals of Future Information

Technology, Forschungszentrum Jülich, Germany, ³Center for Quantum Nanoscience (QNS), IBS, ⁴Department of Physics, Ewha Womans University, ⁵Experimentalphysik IV A, RWTH Aachen University, Germany, ⁶Faculty of Mathematics and Natural Sciences, Institute of Physics II, University of Cologne, Germany)

F12.03 [14:48 - 15:12]

Superconductivity in atom-by-atom crafted quantum corrals / SCHNEIDER Lucas^{*1}, THAT TON Khai¹, IOANNIDIS Ioannis^{2,3}, NEUHAUS-STEINMETZ Jannis¹, POSSKE Thore^{2,3}, WIESENDANGER Roland¹, WIEBE Jens¹ (¹Department of Physics, University of Hamburg, Germany, ²I. Institute for Theoretical Physics, University of Hamburg, Germany, ³Centre for Ultrafast Imaging, CUI, Germany)

F12.04 [15:12 - 15:36]

Exploring topological superconductors and emergent quantum states / CHOI Deung-Jang^{*1,2,3} (¹Centro de Fisica de Materiales, CFM/MPC (CSIC-UPV/EHU), Spain, ²Donostia International Physics Center (DIPC), Spain, ³Ikerbasque, Basque Foundation for Science, Spain)

F

[F13-se] Focus: Advanced Analytical Techniques for Emerging Materials and Devices

2023. 10. 26 Thursday 14:00~15:36

Room: 302

좌장 : 김성현 전북대학교

Chair: KIM Seong Heon (Jeonbuk National University)

F13.01 [14:00 - 14:24]

Exploration of interlayer stacking configurations and new polymorphs in van der Waals crystals using transmission electron microscopy / KIM Kwanpyo^{*1} (¹Department of Physics, Yonsei University)

F13.02 [14:24 - 14:48]

방사광 기반 광전자분광현미경 기법의 활용 및 응용 / BAIK Jaeyoon^{*1} (¹Beamline Division, Pohang Accelerator Laboratory)

F13.03 [14:48 - 15:12]

Operando Surface Techniques to Detect Photon and Chemically Excited Hot Electrons / PARK Jeong Young^{*1} (¹Department of Chemistry, KAIST)

F13.04 [15:12 - 15:36]

Atomic force microscope-based analysis of the low-dimensional materials and their applications / AN Sangmin^{*1} (¹Department of Physics, Institute of Photonics and Information Technology, Jeonbuk National University)

[F14-se] Focus: Functionalization of Intelligent Low Dimensional Semiconductor and Its Applications

2023. 10. 26 Thursday 14:00~15:36

Room: Convention Hall I

좌장 : 임종철 충남대학교

Chair: LIM Jongchul (Chungnam National University)

F14.01 [14:00 - 14:24]

High-Performance Polymer Field-Effect Transistors Enabled by Self-Aligned Nanopatterning / KIM Chae Won¹, PARK Keon Joo¹, CHUN Young Tea^{*1} (¹Division of Electronics and Electrical Information Engineering, Korea Maritime and Ocean University)

F14.02 [14:24 - 14:48]

Vertical Organic Transistors: Overcoming Limitation of Next Generation Semiconductor Devices / LIM Kyung-Geun^{*1,2,3} (¹OMM, KRISS, ²YU-KRISS Graduate University, Yonsei University, ³Applied Measurement Science, University of Science and Technology)

F14.03 [14:48 - 15:12]

A Distinctive Persistent Photocurrent Effect in MoS₂-LaAlO₃ Heterostructure / NA Junhong^{*1} (¹Department of Physics, Kangwon National University)

F14.04 [15:12 - 15:36]

Electrode Design of Aqueous Zinc-ion Batteries for Low-cost Energy Storage Systems / AN Geon-Hyoung^{*1} (¹Department of Energy Engineering, Gyeongsang National University)

[F15-ap] Focus: Status and Prospective of van der Waals Materials Research I

2023. 10. 26 Thursday 14:00~15:36

Room: Convention Hall II

좌장 : 김근수 연세대학교

Chair: KIM Keun Su (Yonsei University)

F15.01 [14:00 - 14:24]

Negative Photo Responsive 2D Heterostack FETs and 220 GHz Schottky Diode with Graphene/MoSe₂/Pt Vertical Assembly / IM Seongil^{*1} (¹Department of Physics, Yonsei University)

F15.02 [14:24 - 14:48]

High-Performance & Low-Power 2D Heterojunction FETs / LEE Chul-Ho^{*1} (¹Department of Electrical and Computer Engineering, Seoul National University)

F15.03 [14:48 - 15:12]

Current status and challenges in hBN growth by chemical vapor deposition / SHIN Hyeon Suk^{*1} (¹Department of Chemistry, UNIST)

F15.04 [15:12 - 15:36]

New phosphorus polymorph: Wavy Packing of Twisted Pentagonal Tubes in Type-II Red Phosphorus / KIM Kwanpyo^{*1} (¹Department of Physics, Yonsei University)

F

[F16-co] Focus: Exploring Exotic Phases of Quantum Materials I

2023. 10. 26 Thursday 14:00~15:36

Room: Convention Hall III

좌장 : 박재훈 포항공과대학교

Chair: PARK Jae-Hoon (POSTECH)

F16.01 [14:00 - 14:24]

Visualizing quantum materials using hard x-ray techniques / CHANG Seo Hy-oung^{*1} (¹Department of Physics, Chung-Ang University)

F16.02 [14:24 - 14:48]

Resolving Surface and Electronic Ambiguities in Kagome Metal FeSn / KIM Tae-Hwan^{*1} (¹Department of Physics, POSTECH)

F16.03 [14:48 - 15:00]

Resonant elastic x-ray scattering(REXS) study on polar topological structures and their ultrafast dynamics / KIM Kooktae^{*1} (¹Department of Physics, Soongsil University)

F16.04* [15:00 - 15:12]

Exotic Z_N Generalizations of 3D Z_2 Stabilizer Models / LEE Chanbeen^{*1}, HU Yao-zong², CHO Gil Young¹, WATANABE Haruki² (¹Department of Physics, POSTECH, ²Department of Applied Physics, University of Tokyo, Japan)

F16.05 [15:12 - 15:24]

Flat bands and real-space topology in photonic honeycomb lattice made of circuit QED system with triple-leg stripline resonators / KIM Dongmin¹, RHIM Jun Won², MOON Kyungsun^{*1} (¹Department of Physics, Yonsei University, ²Department of Physics, Ajou University)

F16.06 [15:24 - 15:36]

External field induced metal-to-insulator transition in dissipative Hubbard model / SHIM Ji Hoon^{*1,3}, GOH Beomjoon², KIM Junwon³ (¹Department of Chemistry, POSTECH, ²Department of Physics and Astronomy, Seoul National University, ³Division of Advanced Materials Science, POSTECH)

Sessions G

2023 October 26(Thu) 16:00-17:48

Ⓚ [G1-or] 전국 물리관련 학과 학과장 토론회

2023. 10. 26 Thursday 16:00~17:48

Room: 601

좌장 : 김근영 광주과학기술원

Chair: KIM Keun Young (GIST)

- 내년 연구비 상황
- 고교 교육과정, 수능, 대학의 일반물리 교육현황
- 교육부의 대학구조 조정 방향성과 물리학과와의 대처
- 대학별 물리학과 운영 사례1
- 대학별 물리학과 운영 사례2
- 자유 발언
- 자유 토론

김창영(서울대, 정책위원장)

정종훈(인하대, 교육위원장)

엄종화(세종대 부총장)

이현복 (강원대)

강병원 (충북대)

G

ⓔ [G2-pa] Pioneer: Present and Future of the LHC Program at CERN II

2023. 10. 26 Thursday 16:00~17:36

Room: 602

좌장 : 문창성 경북대학교

Chair: MOON Chang-Seong (Kyungpook National University)

G2.01 [16:00 - 16:24]

Status of Korea CMS / KIM Tae Jeong^{*1} (¹Department of Physics, Hanyang University)

G2.02 [16:24 - 16:48]

The Future of ALICE / MUSA Luciano^{*1} (¹CERN, Switzerland)

G2.03 [16:48 - 17:12]

The footprint of the Korean ALICE experiment team / YOON Jin-Hee^{*1} (¹Department of Physics, Inha University)

G2.04 [17:12 - 17:36]

Physics at FCC / MANGANO Michelangelo^{*1} (¹CERN, Switzerland)

Ⓚ [G3-te] Physics Teaching I

2023. 10. 26 Thursday 16:00~17:12

Room: 603

좌장 : 지영래 순천대학교

Chair: Ji Young Rae (Sunchon National University)

G3.01 [16:00 - 16:12]

A study on the visitor's characteristic of space science by statistics analysis in the exhibition data / KIM Cheolhee^{*1}, KIM Hong Jeong¹ (¹Advanced Science and Technology Team, National Science Museum)

G3.02 [16:12 - 16:24]

담당 큐레이터가 바뀌는 과정에서 과학관 특별전시 준비 활동 사례 연구 / KIM Hong Jeong^{*1}, KIM Cheolhee¹ (¹Advanced Science and Technology Team, National Science Museum)

G3.03 [16:24 - 16:36]

미래형 교수학습모델 개발: 디지털시대 물리교사의 과학 실험 역량 / KANG Nam-Hwa^{*1} (¹Physics Education Department, Korea National University of Education)

G3.04 [16:36 - 16:48]

개념적 혼성 이론에 기초한 물리교육 연구 유형 / YOON Hye-Gyoung^{*1} (¹Science Education Department, Chuncheon National University of Education)

G3.05* [16:48 - 17:00]

물리 전공이 아닌 중학교 과학 교사가 물리 영역을 가르칠 때의 어려움과 대응 / BYUN Bokyoung^{*1}, SONG Jinwoong^{*1} (¹Seoul National University)

G3.06 [17:00 - 17:12]

물리교육 이론과 수업 실행간 연결을 위한 학교(교사)-대학(교사교육자)간 협업의 방향 / PARK Jong Won^{*1} (¹Chonnam National University)

Ⓔ [G4-as] Pioneer: Gravitational Wave Background and Pulsar Timing Array II

2023. 10. 26 Thursday 16:00~17:12

Room: 604

좌장 : 염동한 부산대학교

Chair: YEOM Dong-han (Pusan National University)

G4.01 [16:00 - 16:36]

Nano-Hz gravitational waves: first evidence and implications / SESANA Alberto^{*1} (¹University of Milano-Bicocca, Italy)

G4.02 [16:36 - 17:12]

New detection methods with PTA / PARK Chan^{*1} (¹Center for Theoretical Physics of the Universe, IBS)

[G5-op] Fiber and Solid State Lasers

2023. 10. 26 Thursday 16:00~17:48

Room: 605

좌장 : 양주희 한국전기연구원

Chair: YANG Juhee (KERI)

G5.01 [16:00 - 16:24]

The introduction of medical laser systems and related applications developed by LASEROPTEK / JEONG Jiho^{*1}, LEE Kyunggoo¹, JUNG Yong Hun¹, KIM Hyesung¹, JUNG Jee yeon², LEE Jooyeon³, LEE Chang Jin¹, CHU Hong¹ (¹R&D Center, LASEROP-TEK, ²Clinical Team, LASEROPTEK, ³M&D, LASEROPTEK)

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G5.02 [16:24 - 16:48]

고출력 Yb 첨가 광섬유 레이저 광원 개발 / PARK Jong Seon^{*1}, JUNG Min Wan¹, JUNG Ye Ji¹, KIM Tae Woo¹, KWON Soon Tae¹, KIM Tae Wan¹, YOO Jun Sang¹, PARK Seung Hyuk¹, KIM Sang In¹, LEE Yong Soo¹, JEONG Hoon², KIM Ji Won³ (¹Laser Technologies R&D Team, Hanwha Aerospace, ²Digital Health Care R&D, KITECH, ³Department of Photonics and Nanoelectronics, Hanyang University ERICA)

G5.03 [16:48 - 17:12]

Ultra-high-speed repetition of wavelength-swept fiber-optic laser / KIM Chang-Seok^{*1}, KIM GyeongHun¹ (¹Optics and Mechatronics Engineering, Pusan National University)

G5.04 [17:12 - 17:36]

Computational adaptive fluorescence microscopy based on the incoherent reflection matrix / YOON Seokchan^{*1}, LIM Su-Min², CHOI Wonshik² (¹Department of Biomedical Convergence Engineering, Pusan National University, ²Department of Physics, Korea University)

G5.05* [17:36 - 17:48]

고출력 방사형/방위형 레이저 빔 생성 / OH Ye Jin^{1,2}, PARK Eun Kyoung^{1,2}, PARK In Chul^{1,2}, KIM Ji Won^{*1,2}, MUZIK Jiri³, KOSHIBA Yuya³, SIKOCINSKI Pawel³, MOCEK Tomas³ (¹Hanyang University ERICA, ²BK21 Four ERICA-ACE center, Hanyang University, ³Thin Disk Lasers, HiLASE Centre, Institute of Physics of the Czech Academy of Sciences, Czech)

ⓔ [G6-pl] Pioneer: Novel Ideas in Laser-Plasma Physics II

2023. 10. 26 Thursday 16:00~17:48

Room: 606

좌장 : 조병익 광주과학기술원

Chair: CHO Byoung Ick (GIST)

G6.01 [16:00 – 16:36]

Theory and Simulations on Laser Pulse Compression in a Plasma / HUR Min Sup^{*1}
(¹Department of Physics, UNIST)

G6.02 [16:36 – 17:12]

Current status of the on-going experiment for laser pulse compression using a density-gradient plasma / SUK Hyyong^{*1}, LEE Hyojeong¹, KIM Sooho¹, YU Hyungyu¹, ROH Kyungmin¹, LEE Chunghwa¹ (¹Department of Physics and Photon Science, GIST)

G6.03 [17:12 – 17:48]

Plasma photonics at high intensities / JAROSZYNSKI Dino A^{*1} (¹Scottish Universities Physics Alliance, Department of Physics, University of Strathclyde, UK)

ⓔ [G7-nu] Bilateral: The KPS-JPS Joint symposium on Electron-Ion Collider physics

2023. 10. 26 Thursday 16:00~17:36

Room: 607

좌장 : 김용선 세종대학교

Chair: KIM Yongsun (Sejong University)

G7.01 [16:00 – 16:24]

Imaging Calorimeter for the Electron-Ion Collider / LIM SangHoon^{*1} (¹Department of Physics, Pusan National University)

G7.02 [16:24 – 16:48]

Electron-Ion Collider (EIC) and the ePIC experiment / GOTO Yuji^{*1} (¹Nishina Center, RIKEN, Japan)

G7.03 [16:48 – 17:12]

QCD relations for gravitational form factors / TANAKA Kazuhiro^{*1} (¹Department of Physics, Juntendo University, Japan)

G7.04 [17:12 – 17:36]

Exclusive electroproduction of J/psi off nuclei and the electron endcap tracker / KWON Youngil^{*1} (¹Yonsei University)

ⓔ [G8-at] Focus: Neutral Atoms Trapped with Optical Tweezers IV

2023. 10. 26 Thursday 16:00~17:48

Room: 600A

좌장 : 이문주 포항공과대학교

Chair: LEE Moonjoo (POSTECH)

G8.01 [16:00 - 16:36]

Progress of KRISS Yb-atom array / SONG Yunheung^{*1} (¹Ultracold Atom Quantum Research Team, KRISS)

G8.02 [16:36 - 16:48]

Controlling nuclear spin qubit of Ytterbium atoms in an optical tweezer array / NAKAMURA Yuma^{*1}, KUSANO Toshi¹, OKAMOTO Issei¹, OZAWA Naoya¹, TAKANO Tetsushi¹, TAKASU Yosuke¹, TAKAHASHI Yoshio¹ (¹Division of Physics and Astronomy, Graduate School of Science, Kyoto University, Japan)

G8.03 [16:48 - 17:24]

Motion of atoms in optical tweezers: from thermal to squeezing and entanglement / DE LÉSELEUC Sylvain^{*1} (¹Institute for Molecular Science, National Institutes of Natural Sciences, Japan)

G8.04* [17:24 - 17:36]

Rydberg atom collisions by optical tweezer accelerator / AHN Jaewook^{*1}, HWANG Han Sub¹, HWANG Sunhwa¹ (¹Department of Physics, KAIST)

G8.05 [17:36 - 17:48]

Slingshot throw and catch of single atoms by optical tweezers / AHN Jaewook^{*1}, HWANG Sunhwa¹, HWANG Han Sub¹, SOEGianto Maynardo Pratama² (¹Department of Physics, KAIST, ²Department of Physics, Bandung Institute of Technology, Indonesia)

[G9-st] Complex Systems I

2023. 10. 26 Thursday 16:00~18:00

Room: 600B

좌장 : 민병준 충북대학교

Chair: MIN Byungjoon (Chungbuk National University)

G9.01 [16:00 - 16:24]

A brief introduction to our research achievements in percolation and synchronization / CHO Young Sul^{*1} (¹Department of Physics, Jeonbuk National University)

G9.02 [16:24 - 16:36]

Oscillating synchronization order parameter of the Kuramoto model with inertia / SON Seung-Woo^{*1}, KIM Gugyoung¹, LEE Mi Jin¹ (¹Department of Applied Physics, Hanyang University)

G9.03 [16:36 - 16:48]

Revisiting small-world network models: Exploring technical realizations and the equivalence of the Newman-Watts and Harary models / SON Seora¹, CHOI Eun Ji¹, LEE Sang Hoon^{*1} (¹Department of Physics, Gyeongsang National University)

G9.04 [16:48 - 17:00]

Decomposition and Scaling of Complex Networks / JEONG Wonhee^{*1}, LEE Sang Hoon¹, YU Unjong² (¹Department of Physics, Gyeongsang National University, ²Department of Physics and Photon Science, GIST)

G9.05* [17:00 - 17:12]

Percolation transitions in spatial multiplex networks with long-range links / SON Gangmin¹, HA Meesoon², JEONG Hawoong^{*1,3} (¹Department of Physics, KAIST, ²Department of Physics Education, Chosun University, ³Center of Complex Systems, KAIST)

G9.06* [17:12 - 17:24]

Detecting breakdown nodes in power grids via Graph Neural Networks / PARK Sangjoon¹, KIM Cook Hyun¹, KAHNG Byungnam^{*1} (¹Department of Energy Engineering, KENTECH)

G9.07 [17:24 - 17:36]

Semi-supervised pruning optimization with modularity-based hierarchical clustering / KIM Young Jin^{*1}, LEE Jungwoo¹ (¹Center for Global R&D Data Analysis, KISTI)

G9.08* [17:36 - 17:48]

Searching for more effective CNN-based architecture with different preprocessed dataset in SER / KIM Byunggun¹, KWON Younghun^{*1} (¹Department of Applied Physics, Hanyang University ERICA)

G9.09 [17:48 - 18:00]

Knowledge Transfer and Innovation in Complex Systems / PARK A-Young², YOON JinJoo¹, OH Gab jin^{*1} (¹Chosun University, ²Institute of Knowledge Development, Chosun University)

[G10-bp] Focus: Bio-Inspired Physics

2023. 10. 26 Thursday 16:00~17:36

Room: 700A

좌장 : 이길용 세종대학교

Chair: LEE Keel Yong (Sejong University)

G10.01 [16:00 - 16:24]

Effect of mechanical boundary condition on actin-myosin network dynamics /
KANG Donyoung¹, LEE Hyungsuk^{*1} (¹School of Mechanical Engineering, Yonsei University)

G10.02 [16:24 - 16:48]

Engineering Microfluidic Vascularized Organ Systems for Clinical Utility /
KO Ji-hoon^{*1} (¹Department of BioNano Technology, Gachon University)

G10.03 [16:48 - 17:12]

Functional Color Materials with Bio-Inspired Structural Colorations /
LEE Seung-Jea^{*1} (¹Lighting Materials & Components Research Center, Korea Photonics Technology Institute)

G10.04 [17:12 - 17:36]

3D Printed Fiber-Infused Gel Scaffolds for Recapitulating Cardiac Muscle Anisotropy in Engineered Ventricle Models /
CHOI Sujin¹, LEE Keel Yong¹, KIM Sean L¹, MACQUEEN Luke A¹, CHANG Huibin¹, ZIMMERMAN John F¹, JIN Qianru¹, PETERS Michael M¹, ARDONA Herdeline Ann M.¹, LIU Xujie², HEILER Ann-Caroline³, GABARDI Rudy¹, RICHARDSON Colin¹, PU William T², BAUSCH Andreas R³, PARKER Kevin Kit¹
(¹John A. Paulson School of Engineering and Applied Sciences, Harvard University, USA, ²Department of Cardiology, Boston Children's Hospital, USA, ³Physik Department, Technische Universität München, Germany)

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⑤ [G11-co] Bilateral: Upgrade of Advanced Photon Source and Studies of Extreme Materials II

2023. 10. 26 Thursday 16:00~17:48

Room: 700B

좌장 : 옥종목 부산대학교

Chair: OK Jong Mok (Pusan National University)

G11.01 [16:00 - 16:36]

Large-Volume High-Pressure Research at GSECARS, Advanced Photon Source /
YU Tony^{*1}, RYU Young Jay¹, OFFICER Timothy¹, XU Man¹, PRAKAPENKA Vitali¹, CHARITON Stella¹, ENG Peter¹, STUBBS Joanne¹, RIVERS Mark¹, SUTTON Steve¹, WANG Yanbin¹ (¹Center for Advanced Radiation Sources, The University of Chicago, USA)

G11.02 [16:36 - 17:12]

Compositional Dependence of Silicate Melts: Towards Understanding the Amorphous Structural Modification in Extreme Conditions / RYU Young-Jay^{*1}, WANG Yanbin¹, YU Tony¹, PRAKAPENKA Vitali¹, GUIGNOT Nicolas², KING Andrew², HENRY Laura², CHARITON Stella¹, ENG Peter¹, STUBBS Joanne¹, RIVERS Mark L.¹ (¹Center for Advanced Radiation Sources, The University of Chicago, USA, ²Synchrotron Soleil, L'Orme des Merisiers, France)

G11.03 [17:12 - 17:48]

Glasses and Diamond above Multi-Megabar Pressures / LEE Sung Keun^{*1} (¹School of Earth and Environ. Sci., Seoul National University)

ⓔ [G12-ap] Pioneer: Emergent Spin-Related Phenomena at Different Dimensionalities II

2023. 10. 26 Thursday 16:00~17:36

Room: 301

좌장 : 도나티 파비오 이화여자대학교

Chair: DONATI Fabio (Ewha Womans University)

G12.01 [16:00 - 16:24]

Optical heterodyne imaging of spin dynamics at nanoscale / SHIOTA Yoichi^{*1,2} (¹Institute for Chemical Research, Kyoto University, Japan, ²Center for Spintronics Research Network, Kyoto University, Japan)

G12.02 [16:24 - 16:48]

Universal hopping motion of skyrmion bubbles / SONG Moojune¹, YOU Mujin¹, YANG Seungmo², JU Tae-Seong², MOON Kyoung-Woong², HWANG Chanyong^{*2}, KIM Kyoung-Whan^{*3}, PARK Albert Min Gyu^{*1}, KIM Kab-Jin^{*1} (¹Department of Physics, KAIST, ²Quantum Spin Team, KRISS, ³Center for Spintronics, KIST)

G12.03 [16:48 - 17:12]

Three-dimensional observation of magnetic microstructures by scanning X-ray magnetic tomography / SUZUKI Motohiro^{*1} (¹School of Engineering, Kwansei Gakuin University, Japan)

G12.04 [17:12 - 17:36]

Role of the 3D topological singularity in magnetization dynamics / LEE Ki-Suk^{*1}, HAN Hee-Sung^{2,3}, IM Mi-Young³ (¹Graduate School of Semiconductor Materials and Devices Engineering & Department of Materials Science and Engineering, UNIST, ²Department of Materials Science and Engineering, Korea National University of Transportation (KNUT), ³Center for X-ray Optics, Lawrence Berkeley National Laboratory, USA)

[G13-se] Focus: Emerging Materials and Device Applications

2023. 10. 26 Thursday 16:00~17:24

Room: 302

좌장 : 박혜성 고려대학교

Chair: PARK Hyesung (Korea University)

G13.01 [16:00 - 16:24]

Photonic neuromorphic devices in low dimensional materials / KIM Jungkil^{*1}

(¹Department of Physics, Jeju National University)

G13.02 [16:24 - 16:48]

Chiral charge transport properties in topological material GdBi and NdAlGe / SHON Won Hyuk^{*1}, CHO Keunki³, CHO Beongki³, KIM Heon-Jung⁴, KIM Kyoo¹, RHYEE

Jong-Soo² (¹Advanced Quantum Materials Research Center, KAERI, ²Department of Applied Physics, Kyung Hee University, ³School of Materials Science and Engineering, GIST, ⁴Department of Materials-Energy Science and Engineering, Daegu University)

G13.03 [16:48 - 17:24]

Low-dimensional materials, mixed-dimensional heterostructures, topological materials, and device applications / CHOI Suk-Ho^{*1} (¹Department of Applied Physics, Kyung Hee University)

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⑨ [G14-se] Pioneer: Optical Microscopy of Ultrafast Light-exciton Interaction II

2023. 10. 26 Thursday 16:00~17:36

Room: Convention Hall I

좌장 : 조창희 대구경북과학기술원

Chair: CHO Chang-Hee (DGIST)

G14.01 [16:00 - 16:24]

Ultrafast exciton transport in semiconductor thin films revealed via fs-microscopy / SUNG Jooyoung^{*1} (¹Department of Physics and Chemistry, DGIST)

G14.02 [16:24 - 16:48]

Electronically tunable exciton confinement probed with nonlinear spectroscopy / KASPRZAK Jacek^{*1} (¹Institut Néel, University of Grenoble Alpes, CNRS-Grenoble INP, France)

G14.03 [16:48 - 17:12]

Unprecedented exciton-polariton coupling in 6-folded microcavity for PT symmetry / SONG Hyun Gyu², CHO Yong Hoon^{*1} (¹KAIST, ²Sensor System Research Center, KIST)

G14.04 [17:12 - 17:36]

Bright ultranarrow-linewidth perovskite single-photon sources / FARROW Tristan^{*1}
(¹Department of Physics, University of Oxford, UK)

[G15-ap] Focus: Status and Prospective of van der Waals Materials Research II

2023. 10. 26 Thursday 16:00~17:12

Room: Convention Hall II

좌장 : 김관표 연세대학교

Chair: KIM Kwanpyo (Yonsei University)

G15.01 [16:00 - 16:24]

Spin dynamics of two-dimensional van der Waals ferromagnet CrI₃ / KIM Jae Hoon^{*1} (¹Department of Physics, Yonsei University)

G15.02 [16:24 - 16:48]

Room temperature valley polarization of the B-exciton in monolayer MoS₂ / LEE Je-Ho¹, LE Chinh Tam², YOON Young-Gui¹, KIM Yong Soo², KIM Kun Woo¹, SEONG Maeng-Je^{*1} (¹Department of Physics, Chung-Ang University, ²Department of Physics, University of Ulsan)

G15.03 [16:48 - 17:12]

Sublattice pseudospin in quantum materials / KIM Keun Su^{*1} (¹Department of Physics, Yonsei University)

[G16-co] Focus: Exploring Exotic Phases of Quantum Materials II

2023. 10. 26 Thursday 16:00~17:36

Room: Convention Hall III

좌장 : 송창용 포항공과대학교

Chair: SONG Changyong (POSTECH)

G16.01 [16:00 - 16:24]

Ultrafast generation of acoustic chiral phonons / CHOI In Hyeok¹, JEONG Seung Gyo², SONG Sehwan³, PARK Sungkyun³, SHIN Dong Bin^{1,4}, CHOI Woo Seok², LEE Jong Seok^{*1} (¹Department of Physics and Photon Science, GIST, ²Department of Physics, Sungkyunkwan University, ³Department of Physics, Pusan National University, ⁴Center for Free Electron Laser Science, Max Planck Institute for the Structure and Dynamics of Matter, Germany)

G16.02 [16:24 - 16:36]

Nonadiabatic quantum molecular dynamics study of the ultrafast laser melting of germanium / IHM Yungok^{*1}, AHN Je Young¹, SHIM Ji Hoon¹ (¹Department of Chemistry, POSTECH)

G16.03 [16:36 - 16:48]

4D visualization of a nonthermal coherent magnon in a laser heated lattice by an X-ray free electron laser / JANG Hoyoung^{1,2}, UEDA Hiroki^{3,4}, KIM Hyeong-Do¹, KIM Minseok¹, SHIN Kwang Woo⁵, KIM Kee Hoon⁵, PARK Sang-Youn¹, SHIN Hee Jun⁶, BORISOV Pavel^{7,8}, ROSSEINSKY Matthew J.⁸, JANG Dogeun¹, CHOI Hyeonggi¹, EOM Intae¹, STAUB Urs³, CHUN Sae Hwan^{*1,2} (¹XFEL Division, Pohang Accelerator Laboratory, ²Photon Science Center, POSTECH, ³Swiss Light Source, Paul Scherrer Institute, Switzerland, ⁴SwissFEL, Paul Scherrer Institute, Switzerland, ⁵Department of Physics and Astronomy, Seoul National University, ⁶PLS-II, Pohang Accelerator Laboratory, ⁷Department of Physics, Loughborough University, UK, ⁸Department of Chemistry, University of Liverpool, UK)

G16.04* [16:48 - 17:00]

Direct Observation of Acoustic Shape Deformation of Gold Nanorods via Localized Surface Plasmon Control / SONG Changyong^{*1,2,3}, PARK Eunyoung^{1,2,3}, HWANG Junha^{1,2,3}, YOUNG Shin Jae⁴, LEE Sung Yun^{1,2,3}, LEE Heemin^{1,2,3}, HEO Seungpil^{1,2,3}, NAM Daewoong⁴, KIM Sangsoo⁴, KIM Min Seok⁴, EOM In Tae⁴, NOH Do Young⁴ (¹POSTECH, ²Center for Ultrafast Science on Quantum Matter, Max Planck POSTECH Korea Research Initiative, ³Photon Science Center, POSTECH, ⁴Pohang Accelerator Laboratory, POSTECH)

G16.05* [17:00 - 17:12]

Probing the Role of A-site Cations to Charge Density Wave (CDW) Order in kagome metal AV₃Sb₅ (A = K, Rb, Cs) through X-ray Scattering / HEO Seung-Phil^{1,2}, LEE Heemin^{1,2}, LEE Byungjune^{1,2}, WON Choongjae², JANG Hoyoung^{2,3}, PARK Sang-Youn³, SHIN Dong-bin⁴, SONG Changyong^{*1,2} (¹POSTECH, ²Department of Physics, Max Planck POSTECH Korea Research Initiative, ³Department of Physics, Pohang Accelerator Laboratory, ⁴Department of Physics and Photon Science, GIST)

G16.06 [17:12 - 17:36]

Direct measurement of electron phonon coupling with 2D spectroscopy / KIM Heejae^{*1} (¹Department of Physics, POSTECH)

Sessions H

2023 October 27(Fri) 08:30-10:18

Ⓚ [H1-te] Physics Teaching II

2023. 10. 27 Friday 08:30~09:42

Room: 601

좌장 : 하상우 경북대학교

Chair: HA Sangwoo (Kyungpook National University)

H1.01 [08:30 - 08:42]

Exploratory research of the impact of the CHIPS and Science Act: Focusing on the organizational changes of NSF and OSTP / JANG Hyewon^{*1} (¹Creative Education Development Institute, Sejong University)

H1.02 [08:42 - 08:54]

과학교사들의 실험 개발 경험 공유 / KIM Jung Bog^{*1} (¹Department of Physics Education, Korea National University of Education)

H1.03 [08:54 - 09:06]

마이크로비트를 이용한 무선 데이터 자동기록 시스템 개발 및 물리탐구예의 활용 / CHEONG Yong Wook^{*1} (¹Department of Physics Education, Gyeongsang National University)

H1.04* [09:06 - 09:18]

물리학 기초학력 보장을 위한 진단도구 개발 및 타당화 / YOON HyunJu^{*1}, KANG Nam-Hwa¹ (¹Department of Physics Education, Korea National University of Education)

H1.05 [09:18 - 09:30]

과정 중심 실험 평가 방안 탐색 / JHUN Youngseok^{*1} (¹Department of Science Education, Seoul National University of Education)

H1.06 [09:30 - 09:42]

특수 상대성 이론에 대한 예비 물리교사의 개념 이해와 확산도 / IM Sungmin^{*1} (¹Department of Physics Education, Daegu University)

[H2-pa] Accelerator IV

2023. 10. 27 Friday 08:30~10:18

Room: 602

좌장 : 이강영 경상국립대학교

Chair: LEE Kang Young (Gyeongsang National University)

H2.01* [08:30 - 08:42]

기계학습 기반 미래 전자-양전자 충돌빔에서 암흑광자 탐색 연구 / PARK Kihong¹, KIM Kyungho², SYTOV Alexei^{2,3}, CHO Kihyeon¹ (¹UST, KISTI, ²Computational Science Team, KISTI, ³Division of Ferrara, INFN, Italy)

H2.02 [08:42 - 08:54]

Status and plan of dual-readout calorimeter R&D for future e^+e^- collider / HA Seungkyu¹, CHO Guk¹, EO Yun¹, HWANG Kyueong¹, JANG Haeun¹, JANG Seoyun¹, KIM Dongwoon¹, KIM Sungwon¹, KIM Tongil¹, PARK Hyesung¹, YOO Hwidong¹, DO Hyunsuk², HUH Changgi², KIM Bobae², LEE Junghyun², LEE Sehwook², RYU Min Sang³, KO Sanghyun⁴, KWON Hyejin⁴, KIM Doyeong⁵, LEE Hyupwoo⁵, LEE Jason⁵, LEE Yun-jae⁵, SON Youngwan⁵, KIM Dongwook⁶, KWON Nahye⁶, LEE Woochan⁶, KIM Yongjun⁷, LIM Sanghoon⁷, RYU Jaehyeok⁷, BAE Joonsuk⁸, KIM Beomkyu⁸, LEE Hyungjun⁸, JANG Yoonjun⁹, JEONG Jinryong⁹, KIM Minsuk⁹, CHOI Suyong¹⁰, CHEON Byunggu¹¹ (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³Center for High Energy Physics, Kyungpook National University, ⁴Department of Physics, Seoul National University, ⁵Department of Physics, University of Seoul, ⁶Severance, Yonsei University, ⁷Department of Physics, Pusan National University, ⁸Department of Physics, Sungkyunkwan University, ⁹Department of Physics, Gangneung Wonju National University, ¹⁰Department of Physics, Korea University, ¹¹Department of Physics, Hanyang University)

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H2.03* [08:54 - 09:06]

Module assembly and the plan for full-size module of the dual-readout calorimeter for the future e^+e^- colliders / YOO Hwidong¹, DO Hyunsuk², HUH Changgi², KIM Bobae², LEE Junghyun², LEE Sehwook², RYU Min Sang², KO Sanghyun³, KWON Hyejin³, KIM Doyeong⁴, LEE Hyupwoo⁴, LEE Jason⁴, LEE Yunjae⁴, SON Youngwan⁴, CHO Guk¹, EO Yun¹, HA Seungkyu¹, HWANG Kyueong¹, JANG Haeun¹, JANG Seoyun¹, KIM Dongwoon¹, KIM Sungwon¹, KIM Tongil¹, PARK Hyesung¹, KIM Dongwook⁵, KWON Nahye⁵, LEE Woochan⁵, KIM Yongjun⁶, LIM Sanghoon⁶, RYU Jaehyeok⁶, BAE Joonsuk⁷, KIM Beomkyu⁷, LEE Hyungjun⁷, JANG Yoonjun⁸, JEONG Jinryong⁸, KIM Minsuk⁸, CHOI Suyong⁹, CHEON Byunggu¹⁰ (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³Department of Physics, Seoul National University, ⁴Department of Physics, University of Seoul, ⁵Medical Physics and Biomedical Engineering Lab, Yonsei University Severance, ⁶Department of Physics, Pusan National University, ⁷Department of Physics, Sungkyunkwan University, ⁸Department of Physics, Gangneung Wonju National University, ⁹Department of Physics, Korea University, ¹⁰Department of Physics, Hanyang University)

H2.04* [09:06 – 09:18]

Readout bundling optimization of dual-readout calorimeter for particle identification using deep learning / PARK Inkyu^{*1}, LEE Yunjae¹, LEE Jason Sanghun¹, LEE Hyupwoo¹, SON Youngwan¹, KIM Doyeong¹, YOO Hwidong², HA Seungkyu², JO Guk², EO Yun², HWANG Kyuyeong², JANG Haeun², JANG Seoyun², KIM Dongwoon², KIM Sungwon², KIM Tongil², PARK Hyesung², LEE Sehwook³, RYU MinSang³, DO Hyunsuk³, HUH Changgi³, KIM Babae³, LEE Junghyun³, KO Sanghyun⁴, KWON Hyejin⁴, KIM Beomkyu⁵, BAE Joonsuk⁵, LEE Hyungjun⁵, PARK Hyebin⁵, KIM Minsuk⁶, JANG Yoonjun⁶, JEONG Jinryong⁶, RYU Jaehyeok⁷, KIM Yongjun⁷, LIM Sanghoon⁷, KIM Dongwook⁸, KWON Nahye⁸, CHOI Suyong⁹, CHEON Byunggu¹⁰ (¹University of Seoul, ²Department of Physics, Yonsei University, ³Department of Physics, Kyungpook National University, ⁴Department of Physics, Seoul National University, ⁵Department of Physics, Sungkyunkwan University, ⁶Department of Physics, Pusan National University, ⁷Department of Physics, Gangneung Wonju National University, ⁸Department of Radiation Oncology, Yonsei University Health System, ⁹Department of Physics, Korea University, ¹⁰Department of Physics, Hanyang University)

H2.05* [09:18 – 09:30]

Overview on the 2023 test beam with dual-readout calorimeter at CERN / YOO Hwidong^{*1}, KIM Sungwon¹, CHO Guk¹, EO Yun¹, HA Seungkyu¹, HWANG Kyuyeong¹, JANG Haeun¹, JANG Seoyun¹, KIM Dongwoon¹, KIM Tongil¹, PARK Hyesung¹, DO Hyunsuk², HUH Changgi², KIM Bobae², LEE Junghyun², LEE Sehwook², RYU Min Sang³, KO Sanghyun⁴, KWON Hyejin⁴, KIM Doyeong⁵, LEE Hyupwoo⁵, LEE Jason⁵, LEE Yunjae⁵, SON Youngwan⁵, KIM Dongwook⁶, KWON Nahye⁶, LEE Woochan⁶, KIM Yongjun⁷, LIM Sanghoon⁷, RYU Jaehyeok⁷, BAE Joonsuk⁸, KIM Beomkyu⁸, LEE Hyungjun⁸, JANG Yoonjun⁹, JEONG Jinryong⁹, KIM Minsuk⁹, CHOI Suyong¹⁰, CHEON Byunggu¹¹ (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³Center for High Energy Physics, Kyungpook National University, ⁴Department of Physics, Seoul National University, ⁵Department of Physics, University of Seoul, ⁶Severance Hospital, Yonsei University, ⁷Department of Physics, Pusan National University, ⁸Department of Physics, Sungkyunkwan University, ⁹Department of Physics, Gangneung Wonju National University, ¹⁰Department of Physics, Korea University, ¹¹Department of Physics, Hanyang University)

H2.06* [09:30 – 09:42]

Experimental setup of the Dual-Readout Calorimeter test beam (2023) at CERN / YOO Hwidong^{*1}, JANG Seoyun¹, CHO Guk¹, EO Yun¹, HA Seungkyu¹, HWANG Kyuyeong¹, JANG Haeun¹, KIM Dongwoon¹, KIM Sungwon¹, KIM Tongil¹, PARK Hyesung¹, LEE Sehwook³, HUH Changgi³, KIM Bobae³, LEE Junghyun³, DO Hyunsuk³, RYU Minsang³, KO Sanghyun⁴, KWON Hyejin⁴, KIM Doyeong⁵, LEE Hyupwoo⁵, LEE Jason⁵, LEE Yunjae⁵, SON Youngwan⁵, KIM Dongwook², KWON Nahye², LEE Woochan², KIM Yongjun⁶, LIM Sanghoon⁶, RYU Jaehyeok⁶, BAE Joonsuk⁷, KIM Beomkyu⁷, LEE Hyungjun⁷, JANG Yoonjun⁸, JEONG Jinryong⁸, KIM Minsuk⁸, CHOI Suyong⁹, CHEON Byunggu¹⁰ (¹Department of Physics, Yonsei University, ²Medical Physics and Biomedical Engineering Lab,

Yonsei University Severance, ³Department of Physics, Kyungpook National University, ⁴Department of Physics, Seoul National University, ⁵Department of Physics, University of Seoul, ⁶Department of Physics, Pusan National University, ⁷Department of Physics, Sungkyunkwan University, ⁸Department of Physics, Gangneung Wonju National University, ⁹Department of Physics, Korea University, ¹⁰Department of Physics, Hanyang University)

H2.07* [09:42 - 09:54]

The DAQ system of the dual-readout calorimeter for future e^+e^- colliders in 2023 test beam at CERN / YOO Hwidong^{*1}, JANG Haeun¹, CHO Guk¹, EO Yun¹, HA Seungkyu¹, HWANG Kyuyeong¹, JANG Seoyun¹, KIM Dongwoon¹, KIM Sungwon¹, KIM Tongil¹, PARK Hyesung¹, DO Hyunsuk², HUH Changgi², KIM Bobae², LEE Junghyun², LEE Sehwook², RYU Minsang³, KO Sanghyun⁴, KWON Hyejin⁴, KIM Doyeong⁵, LEE Hyupwoo⁵, LEE Jason⁵, LEE Yunjae⁵, SON Youngwan⁵, KIM Dongwook⁶, KWON Nahye⁶, LEE Woonchan⁶, KIM Yongjun⁷, LIM Sanghoon⁷, RYU Jaehyeok⁷, BAE Joonsuk⁸, KIM Beomkyu⁸, LEE Hyungjun⁸, JANG Yoonjun⁹, JEONG Jinryong⁹, KIM Minsuk⁹, CHOI Suyong¹⁰, CHEON Byunggu¹¹ (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³CHEP, Center for High Energy Physics, Kyungpook National University, ⁴Department of Physics, Seoul National University, ⁵Department of Physics, University of Seoul, ⁶Cancer Center, Yonsei Severance Hospital, ⁷Department of Physics, Pusan National University, ⁸Department of Physics, Sungkyunkwan University, ⁹Department of Physics, Gangneung-Wonju National University, ¹⁰Department of Physics, Korea University, ¹¹Department of Physics, Hanyang University)

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H2.08* [09:54 - 10:06]

R&D and 2023 test beam of wireless DAQ system of the dual-readout calorimeter for future e^+e^- colliders / YOO Hwidong^{*1}, KIM Dongwoon¹, CHO Guk¹, EO Yun¹, HA Seungkyu¹, HWANG Kyuyeong¹, JANG Haeun¹, JANG Seoyun¹, KIM Sungwon¹, KIM Tongil¹, PARK Hyesung¹, DO Hyunsuk², HUH Changgi², KIM Bobae², LEE Junghyun², LEE Sehwook², RYU MinSang³, KO Sanghyun⁴, KWON Hyejin⁴, KIM Doyeong⁵, LEE Hyupwoo⁵, LEE Jason⁵, LEE Yunjae⁵, SON Youngwan⁵, KIM Dongwook⁶, KWON Nahye⁶, LEE Woonchan⁶, KIM Yongjun⁷, LIM Sanghoon⁷, RYU Jaehyeok⁷, BAE Joonsuk⁸, KIM Beomkyu⁸, LEE Hyungjun⁸, JANG Yoonjun⁹, JEONG Jinryong⁹, KIM Minsuk⁹, CHOI Suyong¹⁰, CHEON Byunggu¹¹ (¹Department of Physics, Yonsei University, ² Department of Physics, Kyungpook National University, ³Department of Physics, CHEP(Center for High Energy Physics), ⁴ Department of Physics, Seoul National University, ⁵ Department of Physics, University of Seoul, ⁶Medical Physics, Yonsei Severance, ⁷Department of Physics, Pusan National University, ⁸Department of Physics, Sungkyunkwan University, ⁹Department of Physics, Gangneung Wonju National University, ¹⁰Department of Physics, Korea University, ¹¹Department of Physics, Hanyang University)

H2.09* [10:06 - 10:18]

Data quality monitoring procedure and analysis status of the Dual-Readout Calorimeter test beam (2023) at CERN / YOO Hwidong^{*1}, DO Hyunsuk², HUH Changgi², KIM Bobae², LEE Junghyun², LEE Sehwook², RYU Min Sang³, KO Sanghyun⁴, KWON Hyejin⁴, KIM Doyeong⁵, LEE Hyupwoo⁵, LEE Jason⁵, LEE Yunjae⁵, SON Youngwan⁵, CHO Guk¹, EO Yun¹, HA Seungkyu¹, HWANG Kyuyeong¹, JANG Haeun¹, JANG Seoyun¹, KIM Dongwoon¹, KIM Sungwon¹, KIM Tongil¹, PARK Hyesung¹, KIM Dongwook⁶, KWON Nahye⁶, LEE Woochan⁶, KIM Yongjun⁷, LIM Sanghoon⁷, RYU Jaehyeok⁷, BAE Joonsuk⁸, KIM Beomkyu⁸, LEE Hyungjun⁸, JANG Yoonjun⁹, JEONG Jinryong⁹, KIM Minsuk⁹, CHOI Suyong¹⁰, CHEON Byunggu¹¹ (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³The Center for High Energy Physics, Kyungpook National University, ⁴Department of Physics, Seoul National University, ⁵Department of Physics, University of Seoul, ⁶Severance, Yonsei University, ⁷Department of Physics, Pusan National University, ⁸Department of Physics, Sungkyunkwan University, ⁹Department of Physics, Gangneung Wonju National University, ¹⁰Department of Physics, Korea University, ¹¹Department of Physics, Hanyang University)

[H3-pa] Non-accelerator III

2023. 10. 27 Friday 08:30~10:18

Room: 603

좌장 : 정우현 기초과학연구원

Chair: CHUNG Woohyun (IBS)

H3.01 [08:30 - 08:42]

R&Ds in Axion Research at IBS-CAPP / CHUNG Woohyun^{*1} (¹Center for Axion and Precision Physics Research, IBS)

H3.02* [08:42 - 08:54]

High-Temperature Superconducting Cavities for CAPP's Main Axion eXperiment (MAX) / LEE Jiwon^{1,2}, AHN Danho², KWON Ohjoon^{*2}, BYUN HeeSu², PARK Seongtae², KIM Jinsu², CHUNG Woohyun², SEMERTZIDIS Yannis K.^{1,2} (¹Department of Physics, KAIST, ²CAPP, IBS)

H3.03 [08:54 - 09:06]

Data analysis for phase 2 of the CAPP-MAX experiment / AHN Saebyeok^{*1} (¹Center for Axion and Precision Physics Research, IBS)

H3.04 [09:06 - 09:18]

High-temperature superconducting cavities for axion dark matter search / AHN Danho^{*1}, BYUN Heesu¹, CHUNG Woohyun¹, KIM Jinsu¹, KWON Ohjoon¹, LEE Jiwon^{1,2}, PARK Seongtae¹, YOUM Dojun¹ (¹Center for Axion and Precision Physics Research, IBS, ²Department of Physics, KAIST)

H3.05 [09:18 - 09:30]

CAPP 12-Tesla experiment for axion dark matter search at 25-mK temperature / AHN Saebyeok¹, KIM Jinmyeong^{1,2}, IVANOV Boris^{*1}, UCHAIKIN Sergey V.^{*1}, BYUN HeeSu¹, YI Andrew Kunwoo¹, VAN LOO Arjan F^{3,4}, PARK SeongTae¹, KWON Ohjoon¹, NAKAMURA Yasunobu^{3,4}, LEE Soohyung¹, KIM Jinsu¹, LEE Kiwoong¹, OH Seonjeong¹, SEONG Taehyeon¹, MATLASHOV Andrei¹, CHUNG Woohyun¹, KO ByeongRok¹, YOUN SungWoo¹, SEMERTZIDIS Yannis K.¹ (¹Center for Axion and Precision Physics Research, IBS, ²Department of Physics, KAIST, ³Center for Quantum Computing (RQC), RIKEN, Japan, ⁴Department of Applied Physics, Graduate School of Engineering, The University of Tokyo, Japan)

H3.06* [09:30 - 09:42]

High-frequency cavity designs for the CAPP-12TB experiment / YOUN SungWoo¹, JEONG Junu¹, KIM Younggeun¹, BAE SungJae^{1,2} (¹Center for Axion and Precision Physics Research, IBS, ²Department of Physics, KAIST)

H3.07 [09:42 - 09:54]

Extended search for axion dark matter using 18T HTS haloscope / YOON Hojin¹, YANG Byeongsu^{2,3}, LEE Youngjae¹, AHN Moohyun², YOO Jonghee^{*1,2,3} (¹Department of Physics, KAIST, ²Department of Physics and Astronomy, Seoul National University, ³CAPP, IBS)

H3.08 [09:54 - 10:06]

New haloscope design with an array of horn antenna for volume-efficient broadband search for dark matter axions / JEONG Junu¹, YOUN SungWoo^{*1}, SEMERTZIDIS Yannis K.^{1,2} (¹Center for Axion and Precision Physics Research, IBS, ²Department of Physics, KAIST)

H3.09 [10:06 - 10:18]

Experimental test of axion cosmology around 22 μeV with a multi-cell cavity and a Josephson parametric amplifier / KIM Younggeun¹, YOUN SungWoo^{*1}, JEONG Junu¹, BAE SungJae^{1,2}, SEMERTZIDIS Yannis Kyriakos^{1,2} (¹Center for Axion and Precision Physics Research, IBS, ²Department of Physics, KAIST)

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[H4] No Session

[H5-op] Terahertz Photonics

2023. 10. 27 Friday 08:30~10:06

Room: 605

좌장 : 박영미 인천대학교

Chair: BAHK Young-Mi (Incheon National University)

H5.01 [08:30 - 08:54]

Exploring Superconductivity with Terahertz Time-Domain Spectroscopy / LEE Ji Eun¹, CHOI Joonyoung², SIM Kyung Ik³, JO Younjung², KIM Jae Hoon^{*1} (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³Center for Integrated Nanostructure Physics, Sungkyunkwan University)

H5.02 [08:54 - 09:18]

Graphene-based THz metasurfaces for electrical control of polarization states / KIM Teun-Teun^{*1} (¹Department of Physics, University of Ulsan)

H5.03 [09:18 - 09:42]

고속 시분해 테라헤르츠 분광법을 이용한 비파괴영상 및 센서 응용 / AHN Yeong Hwan^{*1} (¹Department of Physics and Department of Energy Systems Research, Ajou University)

H5.04 [09:42 - 09:54]

10-nm 이하의 금속 나노틈에 갇힌 물의 테라헤르츠 굴절률 연구 / GHIM Dai Sik^{*1}, YANG Hyosim¹, PARK Hyeong-Ryeol¹, JI Gangseon¹, JEONG Jeeyoon² (¹Department of Physics, UNIST, ²Department of Physics and Institute for Quantum Convergence Technology, Kangwon National University)

H5.05 [09:54 - 10:06]

Tunable Q-factor guided-mode resonance with quasi-bound states in the continuum / BARK Hyeon Sang^{*1}, KEE Chul Sik¹, KANG Chul¹ (¹Advanced Photonics Research Institute (APRI), GIST)

[H6-pl] Accelerator & Beam; Fusion; Plasma Applications

2023. 10. 27 Friday 08:30~09:30

Room: 606

좌장 : 신승환 고려대학교 세종캠퍼스

Chair: SHIN Seung Hwan (Korea University, Sejong)

H6.01* [08:30 - 08:42]

Microwave-driven miniature plasma plume for space propulsion / KIM Kyungtae¹, CHAI Kil-Byoung³, YUN Gunsu^{*1,2} (¹Division of Advanced Nuclear Engineering, POS-TECH, ²Department of Physics, POSTECH, ³Nuclear Physics Application Research Division, KAERI)

H6.02* [08:42 - 08:54]

Numerical Study on the Runaway Electron Mitigation Effect by the Plasma Inhomogeneity / KANG Hye Lin¹, YUN Gunsu^{*1}, YOON Young Dae² (¹Department of Physics, POSTECH, ²Magnetized Plasma Physics and Astrophysics, APCTP)

H6.03* [08:54 - 09:06]

Beam manipulations and measurements in the injectors of proton and ion linear accelerators / MOON Seok-Ho¹, KWAK Donghyun¹, CHUNG Moses^{*1}, KIM Gi Dong², KWON Jangwon², JANG Ji Ho², LEE Seunghyun³, KIM DongHwan³, KIM Han Sung³ (¹Department of Physics, UNIST, ²Institute for Rare Isotope Science, IBS, ³Korea Multi-purpose Accelerator Complex, KAERI)

H6.04 [09:06 - 09:18]

Beam Characteristics of RAON Injector using Ne Beams / JANG Ji Ho^{*1}, JEON Dong-O¹, HEO Jeong Il¹, PARK Bum Sik¹, KIM Hyung Jin¹ (¹IRIS, IBS)

H6.05 [09:18 - 09:30]

Two-color hard X-ray free-electron laser with flexible pulse duration at PAL-XFEL / SHIM Chi Hyun^{*1}, NAM Inhyuk¹, KIM GyuJin¹, YANG Haeryong¹, CHO Myung Hoon¹, KWON Seong-Hoon², MOON Kook-Jin¹, SUNG Chang-Kyu¹, HEO Hoon³ (¹Accelerator Control Team, Pohang Accelerator Laboratory, ²Linear Accelerator Team, Pohang Accelerator Laboratory, ³XFEL Accelerator Department, Pohang Accelerator Laboratory)

[H7-nu] Relativistic Heavy Ion Collisions and Nuclear Experimental Method and Instrumentation

2023. 10. 27 Friday 08:30~10:18

Room: 607

좌장 : 임상훈 부산대학교

Chair: LIM SangHoon (Pusan National University)

H7.01* [08:30 - 08:42]

Study of multiplicity-dependent $p_0(770)$ production in pp collisions with ALICE / LIM SangHoon^{*1}, LIM Hyunji¹, KIM Chong¹ (¹Department of Physics, Pusan National University)

H7.02* [08:42 - 08:54]

Status of the upgrade activities of FAZIA in Korea / KIM Giyeong^{*1}, KWEON Min Jung¹, HONG Byungsik², LEE Jongwon², KIM Jiyoung^{1,2}, PARK Jeonghyeok² (¹Department of Physics, Inha University, ²Department of Physics, Korea University)

H7.03* [08:54 - 09:06]

Study on the cluster size of the silicon pixel detector / CHOI Yongjun¹, WOO Kyun-grim¹, KWON Minjae², YOO In-Kwon^{*1} (¹Department of Physics, Pusan National University, ²Natural Science Research Institute, University of Seoul)

H7.04* [09:06 - 09:18]

Searching for medium-induced jet quenching effects in small collision systems with ALICE / LIM SangHoon^{*1}, RYU Jaehyeok¹ (¹Department of Physics, Pusan National University)

H7.05 [09:18 - 09:30]

Probing event-structure dependence of strange hadron production in small systems with ALICE at the LHC / NASSIRPOUR Adrian Fereydon^{*1} (¹Department of Physics and Astronomy, Sejong University)

H7.06* [09:30 - 09:42]

Handling of the underlying event in jet mass and di-jet mass measurements in heavy-ion collisions / KANG Jeongmyung¹, OH Saehanseul^{*1,2} (¹Department of Physics and Astronomy, Sejong University, ²Nuclear Science Division, Lawrence Berkeley National Laboratory, USA)

H7.07 [09:42 - 09:54]

Overview of recent CMS heavy ion results / KIM Yongsun^{*1} (¹Sejong University)

H7.08 [09:54 - 10:06]

Production of the X(6900) meson in heavy ion collisions / CHO Sung Tae^{*1} (¹Kangwon National University)

H7.09* [10:06 - 10:18]

Correlation study using RHICf and STAR detectors to understand the finite transverse single spin asymmetry for very forward neutral pion production / LEE Seunghwan¹, KIM Yongsun^{*1} (¹Sejong University)

[H8-at] Focus: Quantum Computing I

2023. 10. 27 Friday 08:30~10:18

Room: 600A

좌장 : 김준기 성균관대학교

Chair: KIM Junki (Sungkyunkwan University)

H8.01 [08:30 - 09:06]

Nonlinear Bosonic Control with Qubit-Oscillator Gates / PARK Kimin^{*1,2} (¹Department of Optics, Palacky University, Czech, ²Center for Macroscopic Quantum States (bigQ), Department of Physics, Technical University of Denmark, Denmark)

H8.02 [09:06 - 09:42]

T-depth-optimized Quantum Search with Quantum Data-access Machine / BANG Jeongho^{*1}, PARK Jung Jun², BAEK Kyunghyun¹, KIM M. S.³, NHA Hyunchul⁵, KIM Jaewan⁴ (¹Quantum Technology Research Department, ETRI, ²AI Lab, CTO Div., LG Electronics, ³QOLS, Blackett Laboratory, Imperial College London, UK, ⁴School of Computational Sciences, KIAS, ⁵Department of Physics, Texas A&M University at Qatar, USA)

H8.03 [09:42 - 10:18]

Quantum error correction in continuous time / KWON Hyukjoon^{*1} (¹School of Computational Sciences, KIAS)

H

[H9-st] Nonequilibrium Systems

2023. 10. 27 Friday 08:30~09:54

Room: 600B

좌장 : 백용주 서울대학교

Chair: BAEK Yongjoo (Seoul National University)

H9.01 [08:30 - 08:54]

How to apply entropy inequalities and extend to quantum entropy / LEE Sangyun¹, KWON Hyukjoon², LEE Jae Sung^{*1} (¹School of Physics, KIAS, ²School of Computer Science, KIAS)

H9.02* [08:54 - 09:06]

Active transport in a tilted periodic potential / KIM Yeongjin¹, KIM Won Kyu^{*2}, JEON Jae-Hyung^{*1,3} (¹Department of Physics, POSTECH, ²School of Computational Sciences, KIAS, ³APCTP)

H9.03* [09:06 – 09:18]

Nonequilibrium heterogeneous diffusion dynamics for active particles in disordered biopolymer network / JOO Sungmin¹, JEON Jae-Hyung^{*1,2} (¹Department of Physics, POSTECH, ²APCTP)

H9.04* [09:18 – 09:30]

Anomalous relaxation of a Brownian particle in active bath / BAHNG Sehoon¹, GHIM Cheol-Min^{*1} (¹Department of Physics, UNIST)

H9.05 [09:30 – 09:42]

A stochastic target search by active particle / GO Byeong Guk¹, JEON Euijin², KIM Yong Woon^{*1} (¹Department of Physics, KAIST, ²Department of Physics, Technion, Israel)

H9.06 [09:42 – 09:54]

The Jarzynski's equality for the microcanonical ensemble / KIM Yong Woon^{*1}, PARK Hyogeon¹, YI Ju Yeon² (¹Department of Physics, KAIST, ²Department of Physics, Pusan National University)

[H10-co] Focus: Recent Trend in Physics of Low-dimensional Oxides I

2023. 10. 27 Friday 08:30~10:06

Room: 700A

좌장 : 진형진 부산대학교

Chair: JEEN Hyoung Jeen (Pusan National University)

H10.01 [08:30 – 08:54]

Precise Stoichiometry Control of Complex Oxide Using Hybrid Molecular Beam Epitaxy / LEE Dooyong^{*1} (¹Department of Physics Education, Kyungpook National University)

H10.02 [08:54 – 09:18]

Oxide semiconductor BaSnO₃ as a new platform for perovskite oxide electronics / CHAR Kookrin^{*1} (¹Department of Physics and Astronomy, Seoul National University)

H10.03 [09:18 – 09:42]

High quality 2DEG in BaSnO₃ based system / KIM Bongju^{*1}, KIM Seonghyeon², GUN-KEL Felix^{3,4}, CHO Hyeongmin², LEE Jaehyeok², CHAR Kookrin² (¹Center for Correlated Electron Systems, Seoul National University, ²Institute of Applied Physics, Department of Physics and Astronomy, Seoul National University, ³PGI-7, Peter Gruenberg Institute, Germany, ⁴JARA-FIT, Juelich-Aachen Research Alliance, Germany)

H10.04 [09:42 - 10:06]

Oxide Superlattices and Hybrid Heterostructures / CHOI Woo Seok^{*1} (¹Department of Physics, Sungkyunkwan University)

[H11-co] Focus: Superconducting Quantum Devices I

2023. 10. 27 Friday 08:30~10:06

Room: 700B

좌장 : 도용주 광주과학기술원

Chair: DOH Yong-Joo (GIST)

H11.01 [08:30 - 09:06]

Andreev bands in three-terminal graphene Josephson junctions / LEE Gil-Ho^{*1}
(¹Department of Physics, POSTECH)

H11.02 [09:06 - 09:42]

Manipulation of topological superconductors: electron-doped topological superconductors and chiral magnet-superconductor heterostructure / CHO Changwoo^{*1} (¹POSTECH)

H11.03 [09:42 - 09:54]

Superconducting diode effects in vertical van der Waals heterostructures / KIM Nam-Hee¹, JUNG Suyong^{*1} (¹Interdisciplinary Materials Measurement Institute, KRISS)

H11.04 [09:54 - 10:06]

Tunable Josephson diode effects in Al/InAs SQUID / SHIN Junghyun¹, LEE Joon Sue², PARK Sunghun³, RYU Younghun⁴, CHA Jinwoong⁵, SHIM Seung-Bo⁵, SUH Junho^{*1}
(¹Department of Physics, POSTECH, ²Department of Physics and Astronomy, University of Tennessee, Knoxville, USA, ³Center for Theoretical Physics of Complex Systems, IBS, ⁴Department of Physics, KAIST, ⁵Quantum Technology Institute, KRISS)

[H12-ap] Focus: Magnon Spintronics I

2023. 10. 27 Friday 08:30~10:06

Room: 301

좌장 : 제송근 전남대학교

Chair: JE Soong-Geun (Chonnam National University)

H12.01 [08:30 - 08:54]

Spin-orbit torques by magnon dissipation / HAN Dong-Soo^{*1} (¹Center for Spintronics, KIST)

H12.02 [08:54 - 09:18]

Low-dissipation and ultrafast transport of antiferromagnetic magnons over nm-distances / LEE Kyusup^{*1} (¹Department of Physics, Pukyong National University)

H12.03 [09:18 - 09:42]

Intrinsic Orbital Hall Effect of Magnons / GO Gyungchoon¹, AN Daehyeon¹, LEE Hyun-Woo², KIM Se Kwon^{*1} (¹Department of Physics, KAIST, ²Department of Physics, POSTECH)

H12.04 [09:42 - 09:54]

Long-Distance Coherent Transmission and Highly Efficient Controllable Interference of Magnons using a Photon-Magnon Hybrid System / SONG Moojune^{1,2}, POLAKOVIC Tomas³, LIM Jinho⁴, CECIL Thomas W⁵, PEARSON John E¹, DIVAN Ralu⁶, KWOK Wai-Kwong¹, WELP Ulrich¹, HOFFMANN Axel⁴, KIM Kab-Jin^{*2}, NOVOSAD Valentine¹, LI Yi¹ (¹Materials Science Division, Argonne National Laboratory, USA, ²Department of Physics, KAIST, ³Physics Division, Argonne National Laboratory, USA, ⁴Department of Materials Science and Engineering and Materials Research Laboratory, University of Illinois, Urbana-Champaign, USA, ⁵High Energy Physics Division, Argonne National Laboratory, USA, ⁶Center for Nanoscale Materials, Argonne National Laboratory, USA)

H12.05 [09:54 - 10:06]

Nonlocal Relaxation of Magnons via Ballistic Acoustic Phonons / AN Kyongmo^{*1} (¹Institute of Quantum Technology, KRISS)

[H13-se] Low-dimensional (0D, 1D, 2D) Materials, and Novel Quantum Phenomena

2023. 10. 27 Friday 08:30~10:06

Room: 302

좌장 : 이현석 충북대학교

Chair: LEE Hyun Seok (Chungbuk National University)

H13.01* [08:30 - 08:42]

Channel length dependence of h-BN encapsulated WSe₂ field-effect transistors / KIM Sung Ha¹, LEE Seong Yeon¹, YEE Ki Ju^{*1} (¹Department of Physics, Chungnam National University)

H13.02* [08:42 - 08:54]

Novel quantum states by steering ultrafast mixing of exciton and Floquet states / PARK Hyosub¹, LEE JaeDong^{*1} (¹Department of Physics and Chemistry, DGIST)

H13.03* [08:54 - 09:06]

The Investigation of p-type Two-Dimensional Tellurium and Its Applications / CHOI In Cheol^{1,2}, PARK Dae Young², LEE Kang-nyeoung³, KIM Dong Hyeon^{2,3}, LEE Chae Won³, JEONG Hyung Mo^{1,4}, JEONG Mun Seok^{*2} (¹Department of Smart Fab. Technology, Sungkyunkwan University, ²Department of Physics, Hanyang University, ³Department of Energy Science, Sungkyunkwan University, ⁴School of Mechanical Engineering, Sungkyunkwan University)

H13.04* [09:06 - 09:18]

Chiral transport of valley-polarized exciton-polaritons in h-BN/WS₂/h-BN waveguide cavities / JUNG Jin-Woo¹, KIM Jiyeon¹, LEE Young-Jun¹, KANG Jan-Won², CHO Chang-Hee^{*1} (¹Department of Physics and Chemistry, DGIST, ²Department of Physics, Mokpo National University)

H13.05* [09:18 - 09:30]

Approach for reproducible and high-quality perovskites in workable temperature region / KIM Sung Hun¹, HEO Dong Gwon¹, LEE Hong Seok^{*1} (¹Department of Physics, Jeonbuk National University)

H13.06 [09:30 - 09:42]

Defect-related strain and doping characteristics in monolayer MoS₂ / LEE Tae-geon¹, LEE Seung Won², AHN Ji-Hoon², YOON Young-Gui³, RHO Heesuk^{*1} (¹Department of Physics, Jeonbuk National University, ²Department of Materials Science and Chemical Engineering, Hanyang University ERICA, ³Department of Physics, Chung-Ang University)

H13.07* [09:42 - 09:54]

Exciton-polariton condensation in perovskite microwire cavities / JEONG Hyeonjong¹, CHOI Hyeon-Seo¹, PARK Jung-Gue², KANG Jang-Won², CHO Chang-Hee^{*1} (¹Department of Physics and Chemistry, DGIST, ²Department of Physics, Mokpo National University)

H13.08 [09:54 - 10:06]

Manipulating Rashba Excitons in Ferroelectric Two-Dimensional Perovskites / LEE Taejin¹, CHOI Hyeon-Seo¹, JEONG Hyeonjong¹, LEE Young-Jun¹, JUNG Jin-woo¹, CHO Chang-Hee^{*1} (¹Department of Physics and Chemistry, DGIST)

[H14-se] Next-generation Semiconductors and Devices - Memory, AI, Neuromorphic, MOSFET, Wide Bandgap Semiconductor

2023. 10. 27 Friday 08:30~09:42

Room: Convention Hall I

좌장 : 조병진 충북대학교

Chair: CHO Byungjin (Chungbuk National University)

H14.01* [08:30 - 08:42]

Gate-tunable synaptic devices based on conductive bridges in two-dimensional CrPS₄ / HONG Heemyoung¹, YANG Heejun¹ (¹Department of Physics, KAIST)

H14.02* [08:42 - 08:54]

Ultrathin Skin-attachable TiO₂ Synaptic Array Integrated with an Organic Proximity Sensor for Real-time Finger Gesture Recognition / CHO Haein¹, LEE Inho², JANG Jingon¹, KIM Jae-hyun², LEE Hanbee³, PARK Sungjun^{2,3}, WANG Gunuk^{*1,4,5} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Department of Intelligence Semiconductor Engineering, Ajou University, ³Department of Electrical and Computer Engineering, Ajou University, ⁴Department of Integrative Energy Engineering, Korea University, ⁵Center for Neuromorphic Engineering, KIST)

H14.03* [08:54 - 09:06]

Vertical ZnO Nanotubes on Graphene Films for Applications in Flexible Photonic Synapses / JO Hyerin¹, ALI Asad², OH Wonsuk¹, AN Sungjin³, YI Gyu-Chul², OH Hongseok^{*1} (¹Department of Physics, Soongsil University, ²Department of Physics and Astronomy, Seoul National University, ³Department of Advanced Materials Science and Engineering, Kumoh National Institute of Technology)

H14.04 [09:06 - 09:18]

Three-terminal vertical HZO ferroelectric synapse for high-performance and energy-efficient pattern recognition / KIM Yongjun¹, JANG Seonghoon¹, JANG Jingon¹, HAM Seonggil¹, CHOI Sanghyeon¹, JEON Jihoon³, KIM Seong Keun³, WANG Gunuk^{*1,2,4} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Department of Integrative Energy Engineering, Korea University, ³Electronic Materials Research Center, KIST, ⁴Center for Neuromorphic Engineering, KIST)

H14.05 [09:18 - 09:30]

Artificial synaptic device utilizing 2D heterostructure of PtS₂ and CrSBr for neuromorphic applications / EOM Jonghwa¹, KHAN Muhammad Asghar¹, ASIM Muhammad¹, YIM Seongbin¹ (¹Department of Physics & Astronomy, Sejong University)

H14.06* [09:30 - 09:42]

Excitation Spot Size Dependence of Photonic and Exciton Polaritonic Modes in GaN Microwave / CHO Yong Hoon¹, KIM Gwang¹, SONG Hyun Gyu² (¹KAIST, ²Department of Physics, KIST)

[H15-ap] Photonics, Optoelectronics, and Organic Electronics I

2023. 10. 27 Friday 08:30~09:42

Room: Convention Hall II

좌장 : 정광용 충남대학교

Chair: JEONG Kwang-yong (Chungnam National University)

H15.01* [08:30 - 08:42]

Space Charge Redistribution of Modified FAPbI₃/SnO₂ Interface via Fermi Level Tuning in Highly Efficient Perovskite Solar Cells / KIM Jihyun¹, JO William^{1,2} (¹Department of Physics, Ewha Womans University, ²New and Renewable Energy Research Center, Ewha Womans University)

H15.02* [08:42 - 08:54]

Advanced Method for Scalable Fabrication of Sub-10 nm Nanogaps with High Yield / CHA Jongjin^{1,2,3}, KIM Sunghwan^{1,2}, GHIM Dai Sik^{1,2,3} (¹Department of Physics, UNIST, ²Quantum Photonics Institute (QPI), UNIST, ³Department of Physics and Astronomy, Seoul National University)

H15.03 [08:54 - 09:06]

Improved Hole Injection in Hybrid Light-Emitting Transistors Incorporating Lithium and Copper(II) Poly(Styrene Sulfonate) / PARK Yu Jung¹, LEE Jin Hee¹, PARK Yejoo², SONG Aeran³, CHUNG Kwun-Bum³, WALKER Bright², SEO Jung Hwa^{*1} (¹Department of Physics, University of Seoul, ²Department of Chemistry, Kyung Hee University, ³Division of Physics and Semiconductor Science, Dongguk University)

H15.04* [09:06 - 09:18]

Investigation of Interfacial Electronic Structure and Performance Enhancement of Optoelectronic Devices using Cytosine of Nucleobases / CHOI Seungsun^{1,2}, LEE Younjoo³, YOO Jisu³, SHIN Woojin^{1,2}, YI Yeonjin^{*3}, LEE Hyun Bok^{*1,2} (¹Department of Physics, Kangwon National University, ²Institute of Quantum Convergence Technology, Kangwon National University, ³Department of Physics, Yonsei University)

H15.05* [09:18 - 09:30]

Towards highly emissive, thermally stable and low threshold amplified spontaneous emission from halide perovskite thin films / LEE Gayoung¹, ROH Kwang-dong^{*1} (¹Department of Physics, Ewha Womans University)

H15.06 [09:30 - 09:42]

Practical issues on all-polymer passive daytime radiative cooling paint / HONG Dongpyo¹, LEE Yong Joon¹, LEE In-Sung¹, JEON Ok Sung¹, LEE Se Hun¹, PARK SangYoon², YOO Young Joon^{*1} (¹Advanced Institutes of Convergence Technology, ²School of Electronic Engineering, Kyonggi University)

[H16-co] Focus: Current Progress of Altermagnetism

2023. 10. 27 Friday 08:30~10:06

Room: Convention Hall III

좌장 : 이현우 포항공과대학교

Chair: LEE Hyun-Woo (POSTECH)

H16.01 [08:30 - 08:54]

The first reported altermagnet RuO_2 : Density functional theory study / LEE Kwan-Woo^{*1} (¹Division of Display and Semiconductor Physics, Korea University)

H16.02 [08:54 - 09:18]

Spin group and Space group: a necessary ingredient for altermagnetism / RHIM Sonny¹, PARK Minkyu^{1,2}, HAN GuiHyun¹ (¹Department of Physics, University of Ulsan, ²양자스핀팀 Quantum Spin Team, KRISS)

H16.03 [09:18 - 09:42]

Spin Coherence Length of Antiferromagnets / LEE Kyung-Jin^{*1} (¹Department of Physics, KAIST)

H16.04 [09:42 - 10:06]

Broken Kramers' Degeneracy in Altermagnetic MnTe / KIM Changyoung^{*1} (¹Department of Physics and Astronomy, Seoul National University)

Sessions I

2023 October 27(Fri) 10:30-12:18

ⓔ [I1-te] Focus: Einstein-First Project in Australia

2023. 10. 27 Friday 10:30~12:18

Room: 601

좌장 : 윤혜경 춘천교육대학교

Chair: YOON Hye-Gyoung (Chuncheon National University of Education)

I1.01 [10:30 - 11:06]

EinsteinFirst – A timely, theoretically-informed Years 3-10 curriculum initiative /
TREAGUST David Franklin^{*1} (¹Education, Curtin University, Australia)

I1.02 [11:06 - 11:42]

Evaluating secondary student conceptual understanding of light behaviour /
ADAMS Kyla Ann^{*1} (¹Department of Physics, Mathematics and Computing, The University of Western Australia, Australia)

I1.03 [11:42 - 12:18]

A Critical Consideration of Teaching Modern Physics in Primary and Middle Schools: Focus on Einstein-First project / LEE Gyoungho^{*1} (¹Department of Physics Education, Seoul National University)

[I2-pa] Accelerator V

2023. 10. 27 Friday 10:30~12:06

Room: 602

좌장 : 김영균 광주교육대학교

Chair: KIM Yeong Gyun (Gwangju National University of Education)

I2.01 [10:30 - 10:42]

Developing 1ton LAr Coherent Elastic Neutrino Nucleus Scattering detector /
JEONG Haemin^{*1} (¹Department of Physics and Astronomy, Seoul National University)

I2.02* [10:42 - 10:54]

SND@SHiP as tau neutrino short-baseline experiment / CHOI Ki-Young^{*1}, KIM Sung Hyun², KIM Yeong Gyun⁴, LEE Kang Young², LEE Kyong Sei³, PARK Byung Do², SOHN Jong Yoon², YOO Seong Moon^{*1}, YOON Chun Sil² (¹Department of Physics,

Sungkyunkwan University, ²Department of Physics Education and RINS, Gyeongsang National University, ³CENuM, Korea University, ⁴Department of Science Education, Gwangju National University of Education)

12.03 [10:54 - 11:06]

Observation of Collider Muon Neutrinos with the SND@LHC Experiment / KIM Yeong Gyun^{*1}, CHOI Ki-Young², KIM Sung Hyun³, LEE Kang Young³, LEE Kyong Sei⁴, PARK Byung Do³, SOHN Jong Yoon³, YOON Chun Sil³ (¹Gwangju National University of Education, ²Department of Physics, Sungkyunkwan University, ³Department of Physics Education & Research Institute of Natural Science, Gyeongsang National University, ⁴Department of Physics, Korea University)

12.04 [11:06 - 11:18]

Status of JSNS²-I & JSNS²-II experiment / JUNG Da Eun^{*1}, YU I.¹, JOO K.K.², KIM J.Y.², LIM I.T.², MOON D.H.², PARK R.G.², PARK H.W.², KIM E.J.³, CHOI J.H.⁴, PAC M.Y.⁴, YEO I.S.⁴, JANG J.S.⁵, PARK J.S.⁶, KIM W.⁶, GOH J.⁷, HWANG W.⁷, YOO C.⁷, JANG H.I.⁸, CHOI J.Y.⁸, KANG S.K.⁹, CHEOUN M.G.¹⁰, LEE C.Y.¹⁰ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics, Chonnam National University, ³Division of Science Education, Jeonbuk National University, ⁴Laboratory for High Energy Physics, Dongshin University, ⁵Department of Physics and Optical Science, GIST, ⁶Department of Physics, Kyungpook National University, ⁷Department of Physics, Kyung Hee University, ⁸Department of Fire Safety, Seoyeong University, ⁹School of Liberal Arts, Seoul National University of Science and Technology, ¹⁰Department of Physics, Soongsil University)

12.05 [11:18 - 11:30]

Status of SUB-Millicharge Experiment (SUBMET) / YOO Jae Hyeok^{*1}, WON Eunil¹, CHOI Suyong¹, CHO Sungwoong¹, MOON Hyunki¹, JEONG Hoyong¹, SEO Chang Hyun¹, HWANG Insung¹ (¹Department of Physics, Korea University)

12.06* [11:30 - 11:42]

Module construction and tests for SUBME / YOO Jae Hyeok^{*1}, WON Eunil¹, CHOI Suyong¹, CHO Sungwoong¹, MOON Hyunki¹, JEONG Hoyong¹, SEO Chang Hyun¹, HWANG Insung¹ (¹Department of Physics, Korea University)

12.07 [11:42 - 11:54]

Study of $B^0 \rightarrow l^+ \tau^-$ rare decay at Belle experiment / KIM Kyungho¹, CHO Kihyeon^{*1,2} (¹Computational Science Team, KISTI, ²UST, KISTI)

12.08 [11:54 - 12:06]

Status of BESIII experiment and Korean-BESIII group activities / CHOI Soo Kyung^{*1}, JANG Eunji², JEONG Ji Hyeok¹ (¹CAU-HEP, Chung-Ang University, ²Department of Physics, Gyeongsang National University)

[I3-pa] Non-accelerator IV

2023. 10. 27 Friday 10:30~12:06

Room: 603

좌장 : 이무현 기초과학연구원

Chair: LEE Moo Hyun (IBS)

I3.01 [10:30 - 10:42]

status of NEOS-II experiment / KIM JongGeon^{*1} (¹Department of Physics, Sungkyunkwan University)

I3.02 [10:42 - 10:54]

Measurement of Reactor Antineutrino Spectra from ^{235}U and ^{239}Pu Fission at RENO / YOO Jonghee^{*1}, KIM Dojin¹ (¹Department of Physics and Astronomy, Seoul National University)

I3.03 [10:54 - 11:06]

Combine measurement of θ_{13} using reactor antineutrino events rates with neutron capture on hydrogen and Gadolinium at RENO / KIM Sang yong^{*1}, JOO Kyung Kwang^{*1} (¹Department of Physics, Chonnam National University)

I3.04* [11:06 - 11:18]

Developing a prototype detector for the Reactor Experiment for Neutrinos and Exotics / LEE Wonjun^{*1} (¹Department of Physics & Astronomy, Seoul National University)

I3.05* [11:18 - 11:30]

Experimental Design for Korea Experiment on Magnetic Monopole (KAEM) in Low-mass, Low-magnetic Charge Region: GEANT4 Simulation Results of a Magnetic Bottle to Offset Reduced Generation Efficiency from a Thin Target / LEE Junghyun^{*1}, BYEON HeeJeong¹, DO HyeonSeok¹, HUH Changgi¹, KIM Bobae¹, LEE Sehwook¹, HAUPTMAN John M², RYU MinSang³ (¹Department of Physics, Kyungpook National University, ²The Center for High Energy Physics, Kyungpook National University, ³Department of Physics and Astronomy, Iowa State University, USA)

I3.06 [11:30 - 11:42]

A measurement of the properties of the tetrabutyltin-loaded liquid scintillator for the double beta decay experiment / LEE Jooyoung¹, KIM Hong Joo^{*1} (¹Department of Physics, Kyungpook National University)

I3.07* [11:42 - 11:54]

Efficiency analysis of GEM detector with boron converter / KIM WooJong¹, PARK Inkyu^{*1} (¹University of Seoul)

I3.08* [11:54 - 12:06]

Pulse Shape Discrimination of Organic Scintillation in a Phoswich Detector / LEE Yujin^{*1}, HA Chang Hyon¹, KIM Jinyoung¹ (¹Department of Physics, Chung-Ang University)

[I4-as] Gravity/Cosmology

2023. 10. 27 Friday 10:30~12:18

Room: 604

좌장 : **곽보근** 동국대학교

Chair: GWAK Bogeun (Dongguk University)

I4.01 [10:30 - 10:42]

Measuring the matter-radiation equality scale using eBOSS quasars / PARKIN-SON David^{*1} (¹Centre for Theoretical Astrophysics, KASI)

I4.02* [10:42 - 10:54]

Late-time Cosmology without Dark Sector but with Closed String Massless Sector / PARK Jeong-Hyuck^{*1,2}, LEE Hochoel^{1,2}, VELASCO-SEVILLA Liliana^{1,2}, YIN Lu³ (¹Sogang University, ²CQeST, Center for Quantum Spacetime, ³APCTP)

I4.03 [10:54 - 11:06]

Formation of the first supermassive black holes in ultralight dark matter halos / LEE Jae-Weon^{*1} (¹Department of Electrical and Electronic Engineering, Jungwon University)

I4.04* [11:06 - 11:18]

Final parsec problem of black hole mergings and ultralight dark matter / KOO Hyeonmo^{*1,2}, LEE Jae-Weon^{*3}, BAK Dongsu^{*1,2} (¹Department of Physics, University of Seoul, ²Department of Physics, University of Seoul, Natural Science Research Institute, ³Department of Electrical and Electronic Engineering, Jungwon University)

I4.05 [11:18 - 11:30]

Quantum radiation from the collapse of a dust cloud / EOM Hwajin^{*1} (¹College of General Education, Kookmin University)

I4.06 [11:30 - 11:42]

Cauchy horizon from numerical computations / YEOM Dong-han^{*1} (¹Department of Physics Education, Pusan National University)

I4.07* [11:42 - 11:54]

Effects of metric fluctuations on higher-dimensional black holes / HAN Hyewon^{*1}, GWAK Bogeun^{*1} (¹Dongguk University)

I4.08 [11:54 - 12:06]

Steady heat flow around a black hole / KIM Hyeong-Chan^{*1} (¹School of Liberal Arts and Sciences, Korea National University of Transportation)

I4.09 [12:06 - 12:18]

Properties of Maxwell field in a charged rotating wormhole spacetime / LEE Wonwoo^{*1}, KIM Hyeong-Chan³, KIM Sung-Won⁴, LEE Bum-Hoon^{1,2} (¹Center for Quantum Spacetime, Sogang University, ²Department of Physics, Sogang University, ³School of Liberal Arts and Sciences, Korea National University of Transportation, ⁴Department of Science Education, Ewha Womans University)

[I5-op] Nanophotonics II

2023. 10. 27 Friday 10:30~12:06

Room: 605

좌장 : 정지윤 강원대학교

Chair: JEONG Jeeyoon (Kangwon National University)

I5.01 [10:30 - 10:54]

Monolayer semiconductors with high luminescence efficiency / KIM Hyungjin^{*1} (¹Department of Materials Science and Engineering, Yonsei University)

I5.02* [10:54 - 11:06]

Terahertz field-induced transparency in graphene-integrated slot antennas / JI Gangseon¹, LEE Hyoung-Taek¹, KIM Hwanhee¹, KIM Dai-Sik¹, CHOI Geunchang^{*2}, PARK Hyeong-Ryeol^{*1} (¹Department of Physics, UNIST, ²School of Electrical and Electronics Engineering, Chung-Ang University)

I5.03* [11:06 - 11:18]

Plasmonic polymer nanoantenna arrays for electrically tunable and electrode-free metasurfaces / LEE Seunghyun¹, JEONG Daseul¹, KESARIMANGALAM Sriram², WESTERLUND Fredrik², KIM Kyoung-Ho¹, KANG Byeongwon¹, CHEN Shangzhi³, JONSSON Magnus³, KANG Evan S Hyunkoo^{*1} (¹Department of Physics, Chungbuk National University, ²Department of Life Sciences, Chalmers University of Technology, Sweden, ³Department of Science and Technology, Linköping University, Sweden)

I5.04* [11:18 - 11:30]

Inverse design of nano-photonic devices for high electric field enhancement in the terahertz frequency range / LEE Hyoung-Taek¹, KIM Jeonghoon¹, PARK Hyeong-Ryeol^{*1} (¹Department of Physics, UNIST)

I5.05* [11:30 - 11:42]

Electron-hole decoherence accessed by high harmonic generation in monolayer MoS₂ / BAE Gimin¹, LEE JaeDong^{*1} (¹Department of Physics and Chemistry, DGIST)

I5.06 [11:42 - 11:54]

Effective design of scattering-based reservoir computing for efficient real-time intelligence / KIM Geon¹, LEE KyeoReh¹, PARK YongKeun^{*1} (¹Department of Physics, KAIST)

I5.07* [11:54 - 12:06]

Terahertz Wave Applications via Electrically Tunable Graphene Metasurface / JEONG Sodam¹, PARK Hyunwoo¹, PARK Hyeonggi¹, BAEK Soojeong², KIM Teun-Teun^{*1} (¹Department of Physics, University of Ulsan, ²Mechanical Engineering, KAIST)

[I6-pl] Focus: Toward Next-generation Accelerator IV: Trends of R&Ds in Accelerators and Issues toward Scientific Leap I

2023. 10. 27 Friday 10:30~12:06

Room: 606

좌장 : 박성희 고려대학교

Chair: PARK Seong Hee (Korea University)

I6.01 [10:30 - 10:54]

Progress in Accelerator Research and Education at Korea University, Sejong / SHIN Seung Hwan^{*1} (¹Korea University, Sejong)

I6.02 [10:54 - 11:18]

KOMAC MeV-grade Accelerators and their Applications / KIM Han Sung^{*1} (¹KOMAC, KAERI)

I6.03 [11:18 - 11:42]

The status of PAL-eLABs and its opportunities for future R&D and user community / NAM Inhyuk^{*1} (¹PAL-XFEL, Pohang Accelerator Laboratory)

I6.04 [11:42 - 12:06]

Industrial applications using small-scale electron accelerators / CHAE Moon-sik^{*1}, LEE Jaehyun¹, PARK Jae Yeon¹, KIM Yujong¹ (¹Radiation Fusion Technology Research Division, KAERI)

[I7-nu] Nuclear reaction and Hadron physics

2023. 10. 27 Friday 10:30~12:18

Room: 607

좌장 : 천명기 | 송실대학교

Chair: CHEOUN Myung Ki (Soongsil University)

I7.01 [10:30 - 10:42]

Suppression of the elastic scattering cross section for $^{17}\text{Ne} + ^{208}\text{Pb}$ system / HEO Kyongsu¹, CHEOUN Myung Ki¹, SO Woon Young², CHOI Ki-Seok³, KIM Kyungsik³
(¹Department of Physics, Soongsil University, ²Department of Radiological Science, Kangwon National University, ³School of Liberal Arts and Science, Korea Aerospace University)

I7.02* [10:42 - 10:54]

Status of isospin dependency of collective flow in $^{129,124}\text{Xe} + ^{124,112}\text{Sn}$ collisions at 100AMeV / NAM Seon Ho¹, HONG Byungsik¹ (¹Department of Physics, Korea University)

I7.03 [10:54 - 11:06]

Cross sections for $^{nat}\text{Zr}(n,xn)^{88}\text{Zr}$ and $^{nat}\text{Zr}(n,xn)^{89}\text{Zr}$ reactions at neutron energies from 29 to 42 MeV / CHAVAN Vivek Raghunath², MOON Dalho², HAM Cheolmin¹, OH Seyong³, PARK Byunghyun⁴, BHORASKAR Vasant², HONG Seung Woo^{*1,2} (¹Rare Isotope Science Project, IBS, ²Department of Physics, Sungkyunkwan University, ³KIRAMS, The Korean Institute of Radiological and Medical Sciences, ⁴Cooperative Center for Research Facilities, Sungkyunkwan University)

I7.04* [11:06 - 11:18]

Performance test of CsI(Tl) crystals for the Subthreshold Pion Production Experiment at RAON (SUPER) / KIM YoungJun¹, AHN Jung Keun^{*1} (¹Department of Physics, Korea University)

I7.05 [11:18 - 11:30]

Probing multi-chance fission in proton induced fission of thorium / CHAVAN Vivek Raghunath², MOON Dalho², OH Seyong³, PARK Byunghyun⁴, BHORASKAR Vasant², HONG Seung Woo^{*1,2} (¹Rare Isotope Science Project, IBS, ²Department of Physics, Sungkyunkwan University, ³KIRAMS, The Korean Institute of Radiological and Medical Sciences, ⁴Cooperative Center for Research Facilities, Sungkyunkwan University)

I7.06 [11:30 - 11:42]

Excitation energy of primary fragment in projectile fragmentation / KIM Kyungil^{*1}
(¹Institute for Rare Isotope Science, IBS)

I7.07 [11:42 - 11:54]

Low-energy K^+N scattering experiment at J-PARC / KIM Shin Hyung¹, AHN Jung Keun^{*1} (¹Department of Physics, Korea University)

I7.08 [11:54 - 12:06]

Low-energy $K^+p \rightarrow \Lambda \eta$ reactions with the J-PARC E72 detector / YANG Seongbae^{*1}, TANIDA Kiyoshi², HAYAKAWA Shuhei³, AHN Jung Keun¹, LEE Haein¹ (¹Department of Physics, Korea University, ²Advanced Science Research Center, Japan Atomic Energy Agency, Japan, ³Department of Physics, Tohoku University, Japan)

I7.09* [12:06 - 12:18]

Cross-section Measurement for $K^+p \rightarrow K^+\Xi(1535)^-$ Reactions at $\sqrt{s} = 2.15 \text{ GeV}/c^2$ / AHN Jung Keun^{*1}, KANG Byungmin¹ (¹Department of Physics, Korea University)

[I8-at] Focus: Quantum Computing II

2023. 10. 27 Friday 10:30~12:18

Room: 600A

좌장 : **방정호** 한국전자통신연구원

Chair: BANG Jeongho (ETRI)

I8.01 [10:30 - 11:06]

Characterization of 20-qubit superconducting quantum system at KRISS / KU Jaseung^{*1} (¹Center for Superconducting Quantum Computing System, KRISS)

I8.02 [11:06 - 11:42]

Initial qubit operation runs performed in linear 5-qubit devices in $^{28}\text{Si}/\text{SiGe}$ / KIM Dohun^{*1} (¹Department of Physics and Astronomy, Seoul National University)

I8.03 [11:42 - 12:18]

Recent progress on building a trapped-ion quantum computer in SKKU / KIM Junki^{*1} (¹SAINT, Sungkyunkwan University)

[I9-st] Complex Systems II

2023. 10. 27 Friday 10:30~12:06

Room: 600B

좌장 : 박혜진 인하대학교

Chair: PARK Hye Jin (Inha University)

I9.01 [10:30 - 10:42]

Examining Social Connections of Black American College Students Pre and Peri-COVID-19 Pandemic: Social Network Analysis / LEE Eun^{*1}, KIM HeeJun², ES-ENER Yildiz², MCCALL Terika^{3,4} (¹Scientific Computing, Pukyong National University, ²Department of Information Science, University of North Texas, USA, ³Department of Biostatistics, Yale School of Public Health, USA, ⁴Section of Biomedical Informatics and Data Science, Yale School of Medicine, USA)

I9.02 [10:42 - 10:54]

Understanding the filoviral entry efficiency by an epidemic spreading model / LEE Mi Jin^{*1}, KIM JuSeong², KIM Kwangsu³, SON Seung-Woo^{1,2} (¹Department of Applied Physics, Hanyang University, ²Department of Applied Artificial Intelligence, Hanyang University, ³Department of Scientific Computing, Pukyong National University)

I9.03* [10:54 - 11:06]

Inter-country Relations Based on Content Consumption Trends in Netflix / LEE Nahyeon¹, LIM Jongsoo², JEONG Hyeong-Chai^{*1} (¹Department of Physics and Astronomy, Sejong University, ²Department of Media and Communication, Sejong University)

I9.04* [11:06 - 11:18]

The price of Stern Judging: segregation and slow relaxation / BAE Minwoo^{*1}, BAEK Seung Ki^{*2} (¹Department of Physics, Pukyong National University, ²Department of Scientific Computing, Pukyong National University)

I9.05* [11:18 - 11:30]

Population density reveals core-periphery structure in commuting mobility networks / OH Seongkyeong¹, EOM Young-Ho^{*1} (¹Department of Physics, University of Seoul)

I9.06* [11:30 - 11:42]

Percolation-based analysis of polycentric structure in real-time population distributions of metropolitan areas / NAM Yunwoo¹, JUNG Jung-Hoon¹, EOM Young-Ho^{*1} (¹Department of Physics, University of Seoul)

I9.07 [11:42 - 11:54]

Exploring the relationship between the spatial distribution of roads and universal pattern of travel-route efficiency in urban road networks / LEE Minjin², CHEON SangHyun³, SON Seung-Woo^{*1,5}, LEE Mi Jin^{*1}, LEE Sungmin⁴ (¹Department of Applied Physics, Hanyang University, ²Research Center for Small Businesses Ecosystem, Inha University, ³Department of Urban Planning and Design, Hongik University, ⁴R&D Center, PhamCADD Co., ⁵Department of Applied Artificial Intelligence, Hanyang University)

I9.08 [11:54 - 12:06]

Distinguishable Cash, Bosonic Bitcoin, and Fermionic Non-fungible Token / PARK Jeong-Hyuck^{*1}, KIM Zae Young^{*1} (¹Sogang University)

[I10-co] Focus: Recent Trend in Physics of Low-dimensional Oxides II

2023. 10. 27 Friday 10:30~11:42

Room: 700A

좌장 : 이재광 부산대학교

Chair: LEE Jaekwang (Pusan National University)

I10.01 [10:30 - 10:54]

Van der Waals integration of oxide thin film and 2D layered materials for hot carrier diffusion / KIM Ji-Hee^{*1} (¹Department of Physics, Pusan National University)

I10.02 [10:54 - 11:18]

Evolution of half-metallic ferromagnetism in (111)-oriented manganite superlattices / FABRIZIO Cossu¹, IGOR Di Marco², KIM Heung-Sik^{*1} (¹Department of Physics, Kangwon National University, ²Institute of Physics, Nicolaus Copernicus University, Poland)

I10.03 [11:18 - 11:42]

Quantification of local and nonlocal Coulomb interactions in transition metal oxides / KIM Bongjae^{*1} (¹Department of Physics, Kyungpook National University)

[I11-co] Focus: Superconducting Quantum Devices II

2023. 10. 27 Friday 10:30~12:18

Room: 700B

좌장 : 이길호 포항공과대학교

Chair: LEE Gil-Ho (POSTECH)

I11.01 [10:30 - 11:06]

A superconducting quantum simulator based on a photonic-bandgap metamaterial / KIM Eunjong^{*1} (¹Department of Physics and Astronomy, Seoul National University)

I11.02 [11:06 - 11:42]

Development of the 10+ Qubit Superconducting Quantum Processor in SKKU – Progress Report / CHONG Yonuk^{*1,2}, YEO Hwan-Seop^{1,2} (¹Department of Nano Engineering, Sungkyunkwan University, ²SAINT, Sungkyunkwan University)

I11.03 [11:42 - 11:54]

Solving Crosstalk Problem in Multi-JPA Amplifiers for Axion Search Experiments / UCHAIKIN Sergey V.^{*1}, KIM Jinmyeong², KO Minsu^{1,2}, IVANOV Boris I.¹, VAN LOO Arjan F.^{3,4}, NAKAMURA Yasunobu^{3,4}, OH Seonjeong¹, SEMERTZIDIS Yannis K.^{1,2} (¹Center for Axion and Precision Physics Research, IBS, ²Department of Physics, KAIST, ³Center for Quantum Computing (RQC), RIKEN, Japan, ⁴Department of Applied Physics, Graduate School of Engineering, The University of Tokyo, Japan)

I11.04* [11:54 - 12:06]

Magnetic proximity-induced superconducting diode effect and infinite magnetoresistance in a van der Waals heterostructure / YUN Jonginn¹, SON Suhan^{1,2}, SHIN Jeacheol¹, PARK Giung^{1,2}, ZHANG Kaixuan^{1,2}, SHIN Young Jae³, PARK Je-Geun^{*1,2}, KIM Dohun^{*1} (¹Department of Physics and Astronomy, Seoul National University, ²Center for Quantum Materials, Seoul National University, ³SC Devices, PsiQuantum, USA)

I11.05* [12:06 - 12:18]

Observation of bimodal switching current distributions in topological Josephson junctions made of Cd₃As₂ Dirac semimetal nanowire / KIM Rak-Hee¹, JANG Yeong-min¹, MAL Priyanath¹, CHOI Seungkyu¹, WANG Bob Minyu², YU Dong², DOH Yong-Joo^{*1} (¹Department of Physics and Photon Science, GIST, ²Department of Physics, UC Davis, USA)

[I12-ap] Focus: Magnon Spintronics II

2023. 10. 27 Friday 10:30~11:54

Room: 301

좌장 : 김경환 한국과학기술연구원

Chair: KIM Kyoung-Whan (KIST)

I12.01 [10:30 - 10:54]

Magnetic-Field Controllable Non-Reciprocal Negative Refraction in Photon-Magnon Coupling / KIM Sang-Koog^{*1} (¹Seoul National University)

I12.02 [10:54 - 11:18]

Magnonic Characteristics of Epitaxial Cr/Fe Bilayers / KIM Sanghoon^{*1} (¹Department of Physics, University of Ulsan)

I12.03* [11:18 - 11:30]

Magnon-mediated thermal phonon control in magnetic insulators / KIM Kab-Jin^{*1}, LEE Geun-Hee¹, VAN Phuoc Cao², JEONG Jong Ryeul² (¹Department of Physics, KAIST, ²Department of Material Science and Engineering, Chungnam National University)

I12.04 [11:30 - 11:42]

Detection of Nonlinear Acoustic-to-Optic Magnonic Interaction in a Synthetic Antiferromagnetic System / YOU Mujin¹, SONG Moojune¹, PARK Albert Min-Gyu¹, LEE Donghyeon², KIM Sanghoon², KIM Kab-Jin^{*1} (¹Department of Physics, KAIST, ²Department of Physics and Energy Harvest Storage Research Center, University of Ulsan)

I12.05* [11:42 - 11:54]

Control of photon-magnon coupling in physically separated dual hybrids by traveling waves / KIM Bojong¹, KIM Junyoung¹, JEON Haechan¹, KIM Sang-Koog^{*1} (¹Seoul National University)

[I13-se] Focus: Recent Semiconductor Technologies and Devices in Industry

2023. 10. 27 Friday 10:30~12:30

Room: 302

좌장 : 박연상 충남대학교

Chair: PARK Yeonsang (Chungnam National University)

I13.01 [10:30 - 10:54]

HMG Solar Energy Research for Future Mobility / KANG Rira^{*1} (¹Electronic Devices Research Team, Hyundai Motor Company)

I13.02 [10:54 - 11:18]

Fluidic-assisted self-alignment transfer (FAST) method of micro-chips and its application / HWANG Kyungwook^{*1}, HWANG Junsik¹, KIM Hyun-Joon¹, HONG Seog Woo¹, PARK Joon-Yong¹, KIM Dong Kyun¹, KIM Dongho¹, SONG Sanghoon¹, JEONG Jonghyun², KIM Yongchan³, YEOM Min Jae³, YU Min-Chul¹, KIM Joosung¹, PARK Younghwan¹, SHIN Dong-Chul¹, KANG Sungjin¹, SHIN Jai-Kwang¹, YOON Euijoon⁴, LEE Hojin³, YOO Geonwook³, JEONG Jaewook² (¹Device Research Center, Samsung Advanced Institute of Technology, ²School of Information and Communication Engineering, Chungbuk National University, ³School of Electronic Engineering, Soongsil University, ⁴Department of Materials Science and Engineering, Seoul National University)

I13.03 [11:18 - 11:42]

A Brief Introduction to EUV Lithography and Related Issues for DRAM HVM / YOU Daeho^{*1} (¹EUV TF, SK Hynix Inc.)

I13.04 [11:42 - 12:06]

Advanced novel optical stack technologies for high SNR in CMOS Image Sensor / LEE Yunki^{*1} (¹Pixel Development Team, Samsung System LSI)

I13.05 [12:06 - 12:30]

Artificial sensory system for personal care products / LEE Jeong Yu^{*1}, JEONG Seong Min¹, NAM Jin¹ (¹Basic Research & Innovation Division, Amorepacific R&I Center)

[I14-or] 정부출연연구기관의 차세대 컴퓨팅/반도체 연구 (Next-Generation Computing/Electronics Research at National Research Institutes in Korea I)

2023. 10. 27 Friday 10:30~12:18

Room: Convention Hall I

좌장 : 최준우 한국과학기술연구원

Chair: CHOI Jun Woo (KIST)

I14.01 [10:30 - 11:06]

Neuromorphic Devices based on 2D Materials for SNN / KWAK Joon Young^{*1} (¹KIST)

I14.02 [11:06 - 11:42]

Next Generation Spintronic Device / HWANG Chan Yong^{*1} (¹Institute of Quantum Technology, KRISS)

I14.03 [11:42 - 12:18]

Probabilistic computing based on random MTJs for invertible logics / LEE Ouk-Jae^{*1}, HONG Seokmin¹ (¹KIST)

[I15-ap] Photonics, Optoelectronics, and Organic Electronics II

2023. 10. 27 Friday 10:30~11:18

Room: Convention Hall II

좌장 : 이현복 강원대학교

Chair: LEE Hyun Bok (Kangwon National University)

I15.01* [10:30 - 10:42]

Reversible air-induced doping in two-dimensional tin halide perovskite transistors / WOO Jaeyong¹, KIM Yeeun¹, JUNG Young-Kwang², AHN Heebeom¹, KIM Inha¹, REO Youjin³, LIM Hyungbin¹, LEE Changjun¹, LEE Jonghoon¹, KIM Yongjin⁴, STRANKS Samuel D.^{2,5}, SIRRINGHAUS Henning⁵, NOH Yong-Young³, KANG Keehoon⁴, LEE Takhee^{*1} (¹Department of Physics and Astronomy, Seoul National University, ²Department of Chemical Engineering and Biotechnology, University of Cambridge, UK, ³Department of Chemical Engineering, POSTECH, ⁴Department of Materials Science and Engineering, Seoul National University, ⁵Cavendish Laboratory, University of Cambridge, UK)

I15.02* [10:42 - 10:54]

Photoinduced surface degradation mechanism of two-dimensional Ruddlesden-Popper perovskite and its passivation by charge extraction / KIM Kitae^{1,2,3}, PARK Chanhui³, CHA Eunseo³, KANG Donghee^{1,2}, PARK Jeehong^{1,2}, BLUM-STENGEL Sylke⁴, MORALES Nicolas Zorn⁴, LIST-KRATOCHVIL Emil J.W.⁴, CHO Sang Wan¹, LEE Hyunbok^{*5}, PARK Soohyung^{*3}, YI Yeonjin^{*1,2} (¹Department of Physics, Yonsei University, ²Van der Waals Materials Research Center, Yonsei University, ³Advanced Analysis and Data Center, KIST, ⁴Humboldt-Universität zu Berlin, Institute für Physik, Institute für Chemie & IRIS Adlershof, Germany, ⁵Department of Physics, Kangwon National University)

I15.03 [10:54 - 11:06]

A Graphene Neuron based Spiking Neural Network / KIM Chang-Hyun^{*1}, UDAYA MOHANAN Kannan¹ (¹School of Electronic Engineering, Gachon University)

I15.04 [11:06 - 11:18]

Compact Modeling of Organic Negative-Transconductance Transistors for Advancing Their Circuit Integration / JOSHI Saurabh Suredra¹, YOO Hocheon¹, KIM Chang-Hyun^{*1} (¹School of Electronic Engineering, Gachon University)

ⓔ [I16-co] Tutorial: Microfluidics & Rheology : Principle and Application

2023. 10. 27 Friday 10:30~12:06

Room: Convention Hall III

좌장 : 제원호 서울대학교

Chair: JHE Wonho (Seoul National University)

I16.01 [10:30 - 11:18]

Time-Resolved Rheometry of Complex Fluids / MCKINLEY Gareth H^{*1} (¹Department of Mechanical Engineering, MIT, USA)

I16.02 [11:18 - 12:06]

Drop-based microfluidics / WEITZ David A^{*1} (¹Department of Physics and SEAS, Harvard University, USA)

Sessions J

2023 October 27(Fri) 13:00-14:48

Ⓚ [J1-te] Focus: Discussion on the Improvement of 'Physics Education' Course

2023. 10. 27 Friday 13:00~14:48

Room: 601

좌장 : 박정우 제주대학교

Chair: PARK Jeongwoo (Jeju National University)

J1.01 [13:00 - 13:36]

좋은 과학(물리)교육론 수업을 위한 도전과 반성 / HA Sangwoo^{*1} (¹Department of Physics Education, Kyungpook National University)

J1.02 [13:36 - 14:12]

물리교육론 수업에 대한 반성과 개선방안 모색 / JI Young Rae^{*1} (¹Department of Physics Education, Sunchon National University)

J1.03 [14:12 - 14:48]

이론/연구와 수업 실행간 연결을 위한 물리교육 교과활동 / PARK Jong Won^{*1} (¹Chonnam National University)

[J2-pa] Accelerator VI

2023. 10. 27 Friday 13:00~14:00

Room: 602

좌장 : 이명재 성균관대학교

Chair: LEE Myeong Jae (Sungkyunkwan University)

J2.01 [13:00 - 13:12]

Review of Volume Free Electron Lasers / SYTOVA Svetlana³, BARYSHEVSKY Vladimir³, SYTOV Alexei^{*1,2} (¹Computational Science Team, KISTI, ²Ferrara Division, INFN, Italy, ³Laboratory of Analytical Research, Institute for Nuclear Problems, Belarusian State University, Belarus)

J2.02* [13:12 - 13:24]

Simulation study for measuring position and energy of few hundreds MeV carbon beam used in therapy / YOO Hwidong^{*1}, EO Yun¹, CHO Guk¹, HA Seungkyu¹, HWANG Kyueong¹, JANG Haeun¹, JANG Seoyun¹, KIM Dongwon¹, KIM Sungwon¹,

KIM Tongil¹, PARK Hyesung¹, DO Hyunsuk², HUH Changgi², KIM Bobae², LEE Junghyun², LEE Sehwook², RYU Min Sang³, KO Sanghyun⁴, KWON Hyejin⁴, KIM Doyeong⁵, LEE Hyupwoo⁵, LEE Jason⁵, LEE Yunjae⁵, SON Youngwan⁵, KIM Dongwook⁶, KWON Nahye⁶, LEE Woochan⁶, KIM Yongjun⁷, LIM Sanghoon⁷, RYU Jaehyeok⁷, BAE Joonsuk⁸, KIM Beomkyu⁸, LEE Hyungjun⁸, PARK Hyebin⁸, JANG Yoonjun⁹, JEONG JinYong⁹, KIM Minsuk⁹, CHOI Suyong¹⁰, CHEON Byunggu¹¹ (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³Center for High Energy Physics, Kyungpook National University, ⁴Department of Physics, Seoul National University, ⁵Department of Physics, University of Seoul, ⁶Severance, Yonsei University, ⁷Department of Physics, Pusan National University, ⁸Department of Physics, Sungkyunkwan University, ⁹Department of Physics, Gangneung Wonju National University, ¹⁰Department of Physics, Korea University, ¹¹Department of Physics, Hanyang University)

J2.03 [13:24 - 13:36]

New results of the Project TRILLION: Geant4 model of X- and gamma-rays production in oriented crystals / SYTOV Alexei^{2,3}, BANDIERA Laura², CHO Kihyeon^{*1} (¹UST, KISTI, ²Ferrara, INFN, Italy, ³Computational Science Team, KISTI)

J2.04* [13:36 - 13:48]

KOTO 실험의 표본형 열량계 전산모사 연구 / PARK Jeongwoo¹, KIM Eun Joo^{*1}, LIM Gei-Youb² (¹Division of Science Education, Jeonbuk National University, ²IPNS, KEK, Japan)

J2.05 [13:48 - 14:00]

Lineshape analysis of a new narrow peak structure near the $\Lambda\eta$ threshold in the pK^- system at Belle / YANG Seongbae^{*1}, TANIDA Kiyoshi², AHN Jung Keun¹ (¹Department of Physics, Korea University, ²Advanced Science Research Center, Japan Atomic Energy Agency, Japan)

J

[J3-pa] Particle Phenomenology III

2023. 10. 27 Friday 13:00~14:24

Room: 603

좌장 : 신서동 전북대학교

Chair: SHIN Seodong (Jeonbuk National University)

J3.01 [13:00 - 13:12]

Neutrino Cross Sections: Interface of shallow- and deep-inelastic scattering for collider neutrinos / JEONG Yu Seon^{*1}, RENO Mary Hall² (¹High Energy Physics Center, Chung-Ang University, ²Department of Physics and Astronomy, University of Iowa, USA)

J3.02* [13:12 - 13:24]

CP violation and mass hierarchy in the neutrino sector from T2HK and KNO /
PARK Jong-Chul^{*1}, KIM Taeyeong¹ (¹Department of Physics, Chungnam National University)

J3.03 [13:24 - 13:36]

Dark Z boson and the W boson mass anomaly / DAVOUDIASL Hooman¹, ENOMO-TO Kazuki², LEE Hye-Sung², LEE Jiheon², MARCIANO William Joseph¹ (¹Department of Physics, Brookhaven National Lab, USA, ²Department of Physics, KAIST)

J3.04 [13:36 - 13:48]

Uncovering doubly charged scalars with dominant three-body decays using machine learning / FLACKE Thomas^{*1} (¹Center for AI and Natural Sciences, KIAS)

J3.05 [13:48 - 14:00]

Surface code and 3-dimensional Z(2) gauge theory / KIM Se Yong^{*1} (¹Department of Physics, Sejong University)

J3.06* [14:00 - 14:12]

Dynamical Generation of Matter-Antimatter Asymmetry from a Large Scale Hierarchy / CHANG Jae Hyeok^{1,2}, JEONG Kwang Sik³, LEE Chang Hyeon⁴, SHIN Chang Sub^{*4} (¹Theory Division, Fermilab, USA, ²Department of Physics, University of Illinois at Chicago, USA, ³Department of Physics, Pusan National University, ⁴Department of Physics, Chungnam National University)

J3.07 [14:12 - 14:24]

Complete spectrum of Sp(4) gauge theory in the quenched approximation / LEE Jong-Wan^{*1} (¹Center for Theoretical Physics and Universe, IBS)

[J4-as] Gravitational Waves/Multi-Messenger Astrophysics

2023. 10. 27 Friday 13:00~14:24

Room: 604

좌장 : 김형찬 한국교통대학교

Chair: KIM Hyeong-Chan (Korea National University of Transportation)

J4.01 [13:00 - 13:12]

Gravitational Waves and the effective mass of wormholes in the Newtonian Approximation / KIM Sung Won^{*1} (¹Department of Science Education, Ewha Womans University)

J4.02 [13:12 - 13:24]

Gravitational waves from binary NS mergers with crossover EoSs / KIM Hee Il^{*1}
(¹CQeST, Sogang University)

J4.03* [13:24 - 13:36]

Atomic structure characterization of potential coating material of A+LIGO using ePDF and FEM / KIM Minhyo¹, LEE Kyung-ha^{*1} (¹Department of Physics, Sungkyunkwan University)

J4.04 [13:36 - 13:48]

Classification and Analysis of KAGRA Glitch / JUNG Kihyun^{*1}, KIM Young-Min², KWAK Kyujin¹ (¹College of Natural Science / Department of Physics, UNIST, ²이론천문센터, KASI)

J4.05 [13:48 - 14:00]

A LIGO detection at 5.5σ of the central engine of GRB170817A by multimessenger calorimetry and event timing / VAN PUTTEN Maurice H^{*1} (¹Department of Physics and Astronomy, Sejong University)

J4.06 [14:00 - 14:12]

LIGO-Virgo-KAGRA O4: Observing the restless Universe in Transient and Stochastic gravitational waves / VAN PUTTEN Maurice H^{*1}, AGHAEI ABCHOUYEH Maryam¹, KIM Seyong¹ (¹Department of Physics and Astronomy, Sejong University)

J4.07 [14:12 - 14:24]

Detecting Gravitational Wave Background by Electromagnetic Cavity / PARK Chan^{*1}, IM Sang Hui¹, AHN Danho² (¹Center for Theoretical Physics of the Universe, IBS, ²Center for Axion and Precision Physics Research, IBS)

J

[J5] No Session

[J6-pl] Focus: Toward Next-generation Accelerator IV: Trends of R&Ds in Accelerators and Issues toward Scientific Leap II

2023. 10. 27 Friday 13:00~14:36

Room: 606

좌장 : 강흥식 포항공과대학교

Chair: KANG Heung-Sik (POSTECH)

J6.01 [13:00 - 13:24]

4GSR Hard X-ray NanoProbe (HXNP) Beamline / LIM Jun^{*1}, SHIN Jaeyong¹ (¹Pohang Light Source, POSTECH)

J6.02 [13:24 - 13:48]

Real-Time XAFS beamline at Korea-4GSR and its applications / KWON Ik Seon^{*1} (¹Beamline Science Team/4GSR Project Headquarters, Pohang Accelerator Laboratory)

J6.03 [13:48 - 14:12]

결맞음 소각산란 빔라인 (Coherent Small Angle X-ray Scattering Beamline) / KIM Jehan^{*1} (¹4GSR Project headquarter/Beamline Science Team, Pohang Accelerator Laboratory)

J6.04 [14:12 - 14:36]

Thermal Analysis on X-ray Optics in Beamlines of Korea Fourth-generation Storage Ring / KO Jin joo¹, KIM Ki Jeong², SHIN Seung Hwan^{*1} (¹Korea University, Sejong, ²Pohang Accelerator Laboratory, POSTECH)

[J7-nu] Nuclear Experimental Method and Instrumentation

2023. 10. 27 Friday 13:00~14:36

Room: 607

좌장 : 김범규 성균관대학교

Chair: KIM Beom Kyu (Sungkyunkwan University)

J7.01 [13:00 - 13:12]

Nuclear spectroscopy projects at CENS / KIM Yung Hee^{*1} (¹Center for Exotic Nuclear Studies, IBS)

J7.02* [13:12 - 13:24]

Performance test of LAMPS ToF array with cosmic muons / AHN Jung Keun^{*1}, KANG Byungmin¹, KIM Young Jin², LEE Hyo Sang², LEE Chung Soo² (¹Department of Physics, Korea University, ²Rare Isotope Science Project, IBS)

J7.03* [13:24 - 13:36]

GEANT4 simulation study of the Start Counter for the LAMPS experiment at RAON / LIM SangHoon^{*1}, BOK Jeongsu¹, KIM Yongjun¹ (¹Department of Physics, Pusan National University)

J7.04 [13:36 - 13:48]

Module assembly of segmented sampling calorimeter for the KOTO experiment / LIM SangHoon¹, KIM MinJae¹, CHOI Changhwan¹, PARK Jinhyun¹, HONG Yoonha¹
(¹Department of Physics, Pusan National University)

J7.05* [13:48 - 14:00]

Early investigation of the MVTX commissioning / KIM Jaehyun¹, KWON Youngil¹
(¹Department of Physics, Yonsei University)

J7.06 [14:00 - 14:12]

Development of the Forward Tracker Prototype for the LAMPS experiment at RAON / KIM Chong^{1,2}, LIM SangHoon², OH JongHo², KIM Beomkyu³, LEE Hyungjoon³, BAE Joonsuk³ (¹Inha University, ²Department of Physics, Pusan National University, ³Department of Physics, Sungkyunkwan University)

J7.07* [14:12 - 14:24]

DPTS test beam analysis for ALICE ITS3 / LIM SangHoon¹, JANG Hangil¹ (¹Department of Physics, Pusan National University)

J7.08* [14:24 - 14:36]

Development tracking algorithm of AT-TPC at HIMAC / KIM Yongsun¹, CHEON Ye-
chan¹, LEE Seunghwan¹, HWANG Seonggeun¹ (¹Sejong University)

J

[J8-at] Focus: Quantum Computing III

2023. 10. 27 Friday 13:00~14:48

Room: 600A

좌장 : 최재윤 한국과학기술원

Chair: CHOI Jae Yoon (KAIST)

J8.01 [13:00 - 13:36]

Generation of three-dimensional continuous-variable cluster state / ROH Chan¹, GWAK Geunhee¹, YOON Young-Do¹, RA Young-Sik¹ (¹Department of Physics, KAIST)

J8.02 [13:36 - 14:12]

Quantum computation using Rydberg atom graphs / AHN Jaewook¹ (¹Department of Physics, KAIST)

J8.03 [14:12 - 14:48]

Progress of neutral atom quantum computing at KRISS / MUN Jongchul¹ (¹KRISS)

[J9-st] Critical Phenomena & Soft Matter

2023. 10. 27 Friday 13:00~14:24

Room: 600B

좌장 : 박수찬 가톨릭대학교

Chair: PARK Su-Chan (The Catholic University of Korea)

J9.01 [13:00 - 13:12]

Crossover phenomena of the Ising Spin model on scale-free network / KIM Cook¹, KAHNG Byungnam^{*1} (¹Department of Energy Engineering, KENTECH)

J9.02 [13:12 - 13:24]

Renormalization Group-Motivated Data Anaysis / JHO Yong Seok^{*1}, LEE YeongKyu¹ (¹Department of Physics, Gyeongsang National University)

J9.03* [13:24 - 13:36]

Divergence of Differential Capacitance at Electrodes: A Statistical Field Theory Approach with Coulomb and Yukawa Potential / LEE YeongKyu¹, JHO Yong Seok^{*1} (¹Department of Physics, Gyeongsang National University)

J9.04 [13:36 - 13:48]

Cargo velocity hauled by multiple kinesins in crowded environments / HUANG Ya-Ting¹, JUN Yonggun^{*1} (¹Department of Physics, National Central University, Taiwan)

J9.05 [13:48 - 14:00]

Poisson distribution in stochastic gene expression: What independent events do they count? / LEE Julian^{*1} (¹Department of Bioinformatics and Life Science, Soongsil University)

J9.06 [14:00 - 14:12]

Algorithmic Approach to the Optimal Computation of Chain Propagators in Polymer Field Theory Simulations / YONG Daeseong^{*1} (¹Center for AI and Natural Sciences, KIAS)

J9.07 [14:12 - 14:24]

Investigation of Fluctuation Effects in Diblock Copolymer and homopolymer mixture through Langevin Field Theoretic Simulation / JEONG Hyeon U¹, KIM Jaep^{*1} (¹Department of Physics, UNIST)

[J10-co] Magnetism II

2023. 10. 27 Friday 13:00~14:24

Room: 700A

좌장 : 임성현 울산대학교

Chair: RHIM Sonny (University of Ulsan)

J10.01 [13:00 - 13:12]

Investigation of magnetic ground state in antiferromagnetic Dirac material candidate TaCoTe₂ / SHON Won Hyuk^{*1}, JI Sungdae¹, LEE Seongsu¹, KIM Kyoo¹, KIM Jaewook¹, KO Kyung-tae², KIM Jeong-kyu³ (¹Advanced Quantum Materials Research Center, KAERI, ²Multipurpose Synchrotron Radiation Construction Project, KBSI, ³Center for Complex Phase Materials, Max Planck Korea/POSTECH)

J10.02 [13:12 - 13:24]

Using Cr₂X₃ (X= S, Se, Te) a non-vdW material as a base material for discovery of new magnetic materials / BERHE Yisehak Gebredingle¹, KIM Namme^{*1}, KIM Hee-sang^{*1} (¹Department of Physics, Soongsil University)

J10.03 [13:24 - 13:36]

A new type of cluster magnetism in the trimer-based hexagonal antiferromagnets / CHOI Sungkyun^{*1} (¹IBS-CINAP, Sungkyunkwan University)

J10.04 [13:36 - 13:48]

Observation of unconventional room-temperature carriers in the triangular-lattice Mott insulator TbInO₃ / JUNG TaekSun², XU Xianghan³, KIM Jaewook¹, KIM Beom Hyun⁴, SHIN Hyun Jun², CHOI Young Jae², MOON Eun-Gook^{*5}, CHEONG Sang-Wook³, KIM Jae Hoon^{*2} (¹Advanced Quantum Materials Research Center, KAERI, ²Department of Physics, Yonsei University, ³Department of Physics and Astronomy, Rutgers University, USA, ⁴School of Computational Sciences, KIAS, ⁵Department of Physics, KAIST)

J10.05 [13:48 - 14:00]

Observation of Dzyaloshinskii-Moriya interaction at Pt/Co single interface / CHOE Sug Bong^{*1}, YU Ji-Sung¹, LEE Seonghyub¹, CHANG Jun-Young¹, KIM Minhwan¹, YOON Jaesung¹, SHIN Jiho¹, SHIM Wooyoung¹ (¹Department of Physics, Seoul National University)

J10.06 [14:00 - 14:12]

Electronic structures and spin-defect states in quasi-one-dimensional MoBr₃ / PIL-LALA Karuna Kumari^{*2}, PARK Se Young^{*1} (¹Department of Physics, Soongsil University, ²Department of Physics and Origin of Matter and Evolution of Galaxies (OMEG) Institute, Soongsil University)

J10.07 [14:12 - 14:24]

Investigation of Magnetic and Optical properties of intrinsic bulk $\text{Ga}_{0.50}\text{V}_{0.50}\text{As}$ for Transparent Spintronics Applications / KHAN Imran^{*1}, HONG Ji Sang^{*1} (¹Department of Physics, Pukyong National University)

[J11-co] Strongly Correlated Systems III

2023. 10. 27 Friday 13:00~14:36

Room: 700B

좌장 : 박노정 울산과학기술원

Chair: PARK Noejung (UNIST)

J11.01* [13:00 - 13:12]

Electronic bipolar states in a Janus van der Waals semiconductor Nb_3TeI_7 / YUN Jo Hyun^{1,2}, SUNG Minki^{1,2}, CHOI Minhyuk^{1,2}, YANG Woojin¹, KIM Dowook¹, KIM Min Joong¹, HER Sung-Hyuk⁴, KIM Kyoo³, CHOI Si-Young⁴, KIM Tae-Hwan¹, KIM Jae-Young², YEOM Han Woong^{1,2}, KIM Jun Sung^{*1,2} (¹Department of Physics, POSTECH, ²Center of Artificial Low Dimensional Electronic Systems, IBS, ³KAERI, KAERI, ⁴Department of Materials Science & Engineering, POSTECH)

J11.02 [13:12 - 13:24]

Abnormal emergence of coherent and dissipative photon-magnon coupling in dual ISRR/YIG Hybrids / JEON Haechan¹, KIM Bojong¹, KIM Junyoung¹, BHOI Biswanath¹, KIM Sang-Koog^{*1} (¹Seoul National University)

J11.03 [13:24 - 13:36]

Order-Disorder Charge Density Wave Phase Transition in the Kagome Metal CsV_3Sb_5 / WANG Chongze¹, LIU Liangliang², WANG Bing³, LI Guoqiang³, BAI Ying³, JIA Yu², CHO Jun Hyung^{*1} (¹Department of Physics, Hanyang University, ²Key Laboratory for Special Functional Materials of the Ministry of Education, Henan University, China, ³School of Physics and Electronics, Henan University, China)

J11.04* [13:36 - 13:48]

Nature of charge density wave in kagome metal ScV_6Sn_6 / LEE Seongyong^{1,2}, WON Choongjae², KIM Jimin^{1,2}, KANG Min Gu³, PARK Jae-Hoon^{*1,2} (¹Department of Physics, POSTECH, ²Center for Complex Phase of Materials, Max Planck POSTECH Korea Research Initiative, ³Department of Physics, MIT, USA)

J11.05* [13:48 - 14:00]

Ultrafast dynamics of charge ordered states in $\text{Ir}(\text{Te},\text{Se})_2$ / GAO Hongchen¹, SINGH Palwinder¹, RULI Fardiman¹, OH Yoon Seok², WON Choongjae³, CHEONG Sang-Wook⁴,

KIM Kyungwan^{*1} (¹Chungbuk National University, ²Department of Physics, UNIST, ³Department of Physics, POSTECH, ⁴Department of Physics, Rutgers University, USA)

J11.06* [14:00 - 14:12]

Interplay between linear and nonlinear couplings in non-equilibrium steady states / PARK Geonsu¹, MOON Eun-Gook^{*1} (¹Department of Physics, KAIST)

J11.07 [14:12 - 14:24]

Singularity structure of the Non-Fermi liquid and the fate of their Topology / SIN Sang Jin^{*1}, YUK Taewon¹, SUKARKAN Supalert¹ (¹Department of Physics, Hanyang University)

J11.08 [14:24 - 14:36]

Emergent inductance from spin fluctuations in strongly correlated magnets / OH Taekoo^{*1}, NAGAOSA Naoto¹ (¹Center for Emergent Matter Science, RIKEN, Japan)

[J12-ap] Quantum Information and Processing & Biophysics and Bioengineering

2023. 10. 27 Friday 13:00~14:36

Room: 301

좌장 : 최태영 이화여자대학교

Chair: CHOI Taeyoung (Ewha Womans University)

J12.01* [13:00 - 13:12]

First-principles theory of quantum spin decoherence in transition metal dichalcogenides / PARK Taejoon^{1,2}, PARK Huijin^{1,2}, LEE Jaewook^{1,2}, SEO Hosung^{*1,2} (¹Department of Physics, Ajou University, ²Department of Energy Systems Research, Ajou University)

J12.02* [13:12 - 13:24]

Stability of defect candidates of single-photon emitters in hexagonal boron nitride wrinkles: an ab-initio study / KO Uijin¹, LEE Jaewook¹, PARK Taejoon¹, SEO Hosung^{*1} (¹Department of Physics, Ajou University)

J12.03* [13:24 - 13:36]

Experimental setup to individually address trapped-ion qubits using multi-channel acoustic optical modulators and diffractive optics / YOO Jieun¹, LEE Hye In¹, KIM Hyerin¹, KIM Hyunsoo¹, YUM Dahyun¹, CHOI Taeyoung^{*1} (¹Department of Physics, Ewha Womans University)

J12.04* [13:36 - 13:48]

Studies of polarization-dependent cooling of trapped Yb ions / KIM Hyunsoo¹, LEE Hye In¹, KIM Hyerin¹, YOO Jieun¹, YUM Dahyun¹, CHOI Taeyoung^{*1} (¹Department of Physics, Ewha Womans University)

J12.05* [13:48 - 14:00]

Optimization for Optical Setup for Trapping Yb¹⁷¹⁺ in a Blade Trap / CHOI Taeyoung^{*1}, LEE Hyein¹, KIM Hyerin¹, KIM Hyunsoo¹, YOO Jieun¹ (¹Department of Physics, Ewha Womans University)

J12.06* [14:00 - 14:12]

Theoretical investigation of the spin decoherence of carbon-related defects in hexagonal boron nitride / SEO Hosung^{*1}, KIM Hyeonsu¹ (¹Department of Physics, Ajou University)

J12.07* [14:12 - 14:24]

Qubit manipulation of trapped Yb⁺ ions / CHOI Taeyoung^{*1}, KIM Hyerin¹, YOO Jieun¹, KIM Hyunsoo¹, LEE HYE IN¹ (¹Department of Physics, Ewha Womans University)

J12.08 [14:24 - 14:36]

Nano-gravimetry for soft matter by using Quartz Tuning Fork sensor / KIM Dongwon¹, LEE Manhee^{*1} (¹Department of Physics, Chungbuk National University)

[J13] No Session

[J14-or] 정부출연연구기관의 차세대 컴퓨팅/반도체 연구II(Next-Generation Computing/Electronics Research at National Research Institutes in Korea II)

2023. 10. 27 Friday 13:00~14:12

Room: Convention Hall I

좌장 : 최준우 한국과학기술연구원

Chair: CHOI Jun Woo (KIST)

J14.01 [13:00 - 13:36]

All Solid-State Synapse Device Arrays Using 2D Channel/LiSiO_x Electrolyte for Next-Generation Neuromorphic Edge Computing / KIM Yonghun^{*1} (¹Surface & Nano Materials Division, KIMS)

J14.02 [13:36 - 14:12]

Quantum optical quantum computerors and simulators / KIM Yong-Su^{*1} (¹Center for Quantum Information, KIST)

[J15-ap] Oxide Materials and Computational Applied Physics

2023. 10. 27 Friday 13:00~14:24

Room: Convention Hall II

좌장 : 양상모 서강대학교

Chair: YANG Sang Mo (Sogang University)

J15.01 [13:00 - 13:12]

Ultrafast Polaronic Lattice Distortions in Perovskite-oxide Nanocrystal by-Time-resolved Bragg Coherent Diffraction Imaging / HA Sung Soo¹, CHOI Sung-wook¹, NAWAZ Muhammad Mahmood¹, KIM Jooheun¹, KIM Jaeseung¹, KIM Jiseong¹, HIEU Ngo Minh¹, DEVI Uma¹, IRFAN Rana Muhammad¹, KIM Sunam², EOM Intae², PARK Jaeku², SONG Sanghoon³, CHA Wonsuk⁴, JO Wonhyuk⁵, PUDELL Jan-Etienne⁵, MAD-SEN Anders⁵, KIM Hyunjung^{*1} (¹Department of Physics, Sogang University, ²PAL-XFEL, Pohang Accelerator Laboratory, ³Linac Coherent Light Source, SLAC Nationla Accelerator Laboratory, USA, ⁴Advanced Photon Source, Argonne National Laboratory, USA, ⁵Materials Imaging and Dynamics, European XFEL)

J15.02* [13:12 - 13:24]

Raman and infrared spectroscopic studies of oxygen defects in CoNb_2O_6 / PARK Joohee¹, KO Sojeong¹, LEE Songhee², BAE Soungmin³, KIM Myunghwa², YOON Seokhyun^{*1} (¹Department of Physics, Ewha Womans University, ²Department of Chemistry and Nanoscience, Ewha Womans University, ³Laboratory for Materials and Structures, Tokyo Institute of Technology, Japan)

J15.03* [13:24 - 13:36]

Raman and Photoluminescence Spectroscopic studies of single-phase ZnV_2O_6 Nanorods / YOON Seokhyun^{*1}, KO Sojeong¹, PARK Joohee¹, KIM Myung Hwa², KIM Yejin² (¹Department of Physics, Ewha Womans University, ²Department of Chemistry and Nanoscience, Ewha Womans University)

J15.04* [13:36 - 13:48]

High-temperature Chemiresistive and Gaschromic Hydrogen Gas Sensor Using Vanadium Oxide Film / SON Yeongjun¹, LEE Dooyong², LEE Jisung^{1,3}, SONG Sehwan⁴, LIM Si-Heon⁵, HAN Seongheon¹, KIM Hyun-Ho⁵, PARK Sungkyun^{*1} (¹Pusan National University, ²Department of Physics Education, Kyungpook National University, ³Center for Scientific Instrumentation, Korea Basic Science Institute, ⁴Quantum Spin Team, Quantum Technology Institute, KRISS, ⁵Department of Energy Engineering Convergence & School of Materials Science and Engineering, Kumoh National Institute of Technology)

J15.05 [13:48 - 14:00]

Optoelectronic Synapse Behaviors in $\text{Tb}^{3+}/\text{Al}^{3+}$ Co-doped CaSnO_3 with long persistent luminescence / WI Sang Won^{*1}, LEE Yun Sang¹ (¹Department of Physics, Soongsil University)

J15.06* [14:00 - 14:12]

Raman Spectroscopic Study of NZP Family Ceramics at Low Temperatures / KO Seoyeon¹, BAE Soungmin², MOCHIZUKI Yasuhide³, YOON Seokhyun^{*1} (¹Department of Physics, Ewha Womans University, ²Laboratory for Materials and Structures, Tokyo Institute of Technology, Japan, ³Department of Materials Science and Engineering, Tokyo Institute of Technology, Japan)

J15.07 [14:12 - 14:24]

Optical property database of inorganic phosphor / JANG Seunghun^{*1}, NA Gyoung S.¹, CHANG Hyunju¹ (¹KRICT)

[J16-co] Condensed-matter Computational Physics IV

2023. 10. 27 Friday 13:00~14:36

Room: Convention Hall III

좌장 : 최홍철 막스플랑크 한국/포스텍 연구소

Chair: CHOI Hongchul (Max Planck POSTECH Korea Research Initiative)

J16.01* [13:00 - 13:12]

PdCoO_2 as a new interconnect material: Prediction of its size-dependent conductivity based on size- and momentum-dependent mean free path / KWON Young-Kyun^{*1}, LEE YoungJun¹, KANG Seoung-Hun² (¹Department of Physics, Kyung Hee University, ²Materials Science and Technology Division, Oak Ridge National Laboratory, USA)

J16.02* [13:12 - 13:24]

Phonon Decoupling in Brownmillerite $\text{SrFeO}_{2.5}$ and $\text{CaFeO}_{2.5}$ / JIN Yeongrok¹, LEE Jaekwang^{*1} (¹Department of Physics, Pusan National University)

J16.03 [13:24 - 13:36]

Superconductivity of metastable LaH_2 with partial occupation at ambient pressure / KIM Heejeung¹, PARK Ina², SHIM J.H.², KIM Duckyoung^{*3,4} (¹MPPHC-CPM, Max Planck POSTECH/Korea Research Initiative, ²Department of Chemistry, POSTECH, ³Shanghai Branch, Center for High Pressure Science and Technology Advanced Research, China, ⁴Division of Advanced Nuclear Engineering, POSTECH)

J16.04* [13:36 - 13:48]

Role of Symmetries on Surface Band Gap in MnBi_2Te_4 with Antisite Defects: A First-Principles Study / JEONG Dameul¹, YOON Mina², KWON Young-Kyun^{*1} (¹Department of Physics, Kyung Hee University, ²Materials Science and Technology Division, Oak Ridge National Laboratory, USA)

J16.05 [13:48 - 14:00]

Theoretical Investigation of Perovskite-inspired Structures for Novel Inorganic Solar-cell Absorbers / YIM Kanghoon^{*1}, JUNG Wonze^{1,2}, LIM Suim^{1,3}, YOUN Yong¹, KIM Kihwan⁴ (¹Computational Science and Engineering Laboratory, KIER, ²Department of Physics, Chungnam National University, ³Department of Mechanical Engineering, Chungnam National University, ⁴Photovoltaics Research Department, KIER)

J16.06 [14:00 - 14:12]

Unconventional hidden Rashba effects in two-dimensional InTe / LEE Sangmin^{1,2}, KIM Miyoung², KWON Young-Kyun^{*1} (¹Department of Physics, Kyung Hee University, ²Department of Materials Science & Engineering, Seoul National University)

J16.07* [14:12 - 14:24]

Density-functional-based investigation of the electronic structures of $\text{LaInO}_3/\text{BaSnO}_3$ heterostructures / OH Minsik^{1,2}, CHOI Min Chul^{1,2,3}, PARK Se Young^{*1,2,3} (¹Department of Physics, Soongsil University, ²Origin of Matter and Evolution of Galaxies (OMEG) Institute, Soongsil University, ³Integrative Institute of Basic Sciences, Soongsil University)

J16.08* [14:24 - 14:36]

First-Principles Investigation of Phonon Transport Properties of Monolayer Fluorographene / HAN Seungbin¹, LEE DongKyu¹, LEE Sungwoo^{1,2}, LEE Gun-Do^{1,2}, JANG Hyejin^{*1,2} (¹Materials Science and Engineering, Seoul National University, ²Research Institute of Advanced Materials, Seoul National University)

Sessions T

2023 October 24(Tue) 16:00-17:48

[T1-T7] No session

Ⓚ [T8-ap] Tutorial: Energy Materials Experiment-based Analysis

2023. 10. 24 Tuesday 16:00~16:48

Room: 600A

좌장 : 김지영 한국과학기술연구원

Chair: KIM Gee Yeong (KIST)

T8.01 [16:00-16:48]

박막 태양전지의 실험 기반 분석 기술 - Cu(In,Ga)Se_2 박막 태양전지를 중심으로 / CHUNG Yong-Duck^{*1} (¹Emerging Materials Research Section, ETRI)

Ⓚ [T9-se] Tutorial: Quantum Dot; Physics and application to quantum light sources

2023. 10. 24 Tuesday 16:00~16:48

Room: 600B

좌장 : 유영준 충남대학교

Chair: YU Young-Jun (Chungnam National University)

T9.01 [16:00 - 16:48]

Semiconductor quantum dot: physics and applications to quantum light sources / LEE Donghan^{*1} (¹Department of Physics, Chungnam National University)

[T10-T16] No session

Sessions TT

2023 October 25(Wed) 11:00-13:48

[TT1] No session

[TT2-pa] Tutorial: Collider Phenomenology

2023. 10. 25 Wednesday 11:00~12:48

Room: 602

좌장 : 신서동 전북대학교

Chair: SHIN Seodong (Jeonbuk National University)

TT2.01 [11:00 - 11:48]

Basics of collider physics / PARK Chan Beom^{*1} (¹Department of Physics, Chonnam National University)

TT2.02 [11:48-12:36]

Deep Neural Networks in the Search for New Physics from Terrestrial to Cosmological Colliders / KIM Jeong Han^{*1} (¹Department of Physics, Chungbuk National University)

TT2.03 [12:36 - 12:48]

Collider Phenomenology Tutorial – Hands-on / KANG Dong Woo^{*1,2}, SHIN Seodong², PARK Chan Beom³ (¹School of Physics, Korea Institute for Advanced Study, ²Department of Physics, Jeonbuk National University, ³Department of Physics, Chonnam National University)

TT

[TT3-TT8] No session

[TT9-bp] Tutorial: Fundamentals and Applications of Alphafold2

2023. 10. 25 Wednesday 11:00~11:48

Room: 600B

좌장 : 김하진 울산과학기술원

Chair: KIM Hajin (UNIST)

TT9.01 [11:00 - 11:48]

Fundamentals and Applications of AlphaFold 2 / YOO Jejoong^{*1} (¹Sungkyunkwan University)

[TT10-TT16] No session

Sessions W

2023 October 25(Wed) 19:00-21:00

[W15-or] Open KIAS 대중강연 :물리학의 최전선

2023. 10. 25 Wednesday 19:00~21:00

Room: Convention Hall II

좌장 : 이재성 고등과학원

Chair: LEE Jae Sung (KIAS)

W15.01 [19:00 - 20:00]

우주의 비밀을 캐고자 하는 물리학자들이 지하로 가는 이유 / 이현수^{*1} (¹기초과학연구원 지하실험연구단 부연구단장)

W15.02 [20:00 - 21:00]

물리학자의 청각, AI 그리고 스타트업 / 안강현^{*1,2} (¹충남대학교 물리학과, ²주식회사 답이어링 대표이사)

W

Sessions WW

2023 October 26(Thu) 19:00-21:00

[WW15-or] APCTP 선정, 올해의 과학도서 저자 강연

2023. 10. 26 Thursday 19:00~21:00

Room: Convention Hall II

좌장 : 손승우 한양대학교

Chair: SON Seung-Woo (Hanyang University)

- 강연도서 <판타 레이> 민태기 저
- 사회자 손승우 (APCTP 과학문화위원장, 한양대학교 응용물리학과 교수)
- 강연자 민태기 (에스엔에이치)
- 패널 이은희(APCTP 과학문화위원, 과학커뮤니케이터)
이성빈(APCTP 과학문화위원, KAIST 물리학과 교수)
황정아(APCTP 과학문화위원, KASI 책임연구원)

Sessions Y

2023 October 26(Thu) 10:30-11:18

③ [Y1-or] Plenary Lecture

2023. 10. 26 Thursday 10:30~11:18

Room: Convention Hall III

좌장 : 박성찬 연세대학교

Chair: PARK Seongchan (Yonsei University)

Y1.01 [10:30 - 11:18]

Black Hole Thermodynamics: Then and Now / WITTEN Edward^{*1} (^{*1}The Institute for Advanced Study, School of Natural Sciences, Princeton University, USA)

포스터발표논문 시간표

Poster Session Schedule

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-ap.101

Micro Probe System for in-situ x-ray scattering / JANG Yunhyeong^{*1}, MOON Hakbeom¹, JEEN Hyoung Jeen², LEE Joon Hyuck², MOON Yeongdeuk², KIM HyunJung², CHO Jin Hyung³ (¹Research institute, NEXTRON, ²Department of Physics, Pusan National University, ³Department of Physics Education, Pusan National University)

P1-ap.102*

Giant hole-doping in 2H-WSe₂ by Ta substitution / CHOI Woojin¹, HWANG Jinwoong^{*1} (¹Department of Physics, Kangwon National University)

P1-ap.103

Development of polymer free transfer process of CVD grown large-area TMDCs / KIM Keun Soo^{*1}, NAM Jungtae¹, LEE Gil Yong¹, LEE Dong Yun¹ (¹Department of Physics and Astronomy, Sejong University)

P1-ap.104*

Study on ReS₂ homo-bilayers with various structures using optical spectroscopy / JANG Hajung¹, PARK Je Myoung¹, OH Siwon¹, CHEONG Hyeonsik^{*1} (¹Department of Physics, Sogang University)

P1-ap.105*

Influence of AlO_xN_y overlayer on Mobility in 2D FET Channels / NAM Sangwoo^{1,2}, PARK Beomjin¹, GU Minseon¹, AHN Hanyeol¹, IM Jaehui^{1,2}, CHANG Young Jun^{1,2}, HAN Moonup^{*1} (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul)

P1-ap.106

Ferroelectric HfZrO₂-based atomically-thin two-dimensional semiconductor MoS₂ field effect transistor working at low temperature. / SUH Dongseok^{*1}, JUNG Moonyoung² (¹Department of Physics, Ewha Womans University, ²Department of Energy Science, Sungkyunkwan University)

P1-ap.107

Research and development of rapid chemical vapor deposition of graphene for efficient production / LEE Dong Yun¹, NAM Jungtae¹, LEE Gil Yong¹, JANG A-Rang², KIM Keun Soo^{*1} (¹Department of Physics and Astronomy, Sejong University, ²Division of Electrical, Electronic and Control Engineering, Kongju National University)

P1-ap.108*

Te-deficiency induced hidden phase in 1T-TaTe₂ thin film / HWANG Jieun¹, HWANG Jinwoong^{*1} (¹Department of Physics, Kangwon National University)

P1-ap.109*

Thickness dependence and laser thinning of CrPS₄ / JANG Hyeonseo¹, CHO Suyeon², CHO Deok-Yong^{*1} (¹Department of Physics, Jeonbuk National University, ²Department of Chemical Engineering and Materials Science, Ewha Womans University)

P1-ap.110*

Photoluminescence Excitation Measurements on Quantum Emitters in hBN / LIM Seungjae¹, LEE Jae-Ung^{*2} (¹Department of Physics and Energy Systems Research, Ajou University, ²Department of Physics, Ajou University)

P1-ap.111*

Enhanced Trapped-Charge Memory Effect in Graphene Field Effect Transistor with Al₂O₃/SiO₂ Gate Insulator Stack / LEE Saehee², SONG Wonho³, HYUN Eunseok¹, PARK Jinyoung¹, JO Jaehyeong¹, KIM Jiwan¹, PARK Kibog^{*1,2,4} (¹Department of Physics, UNIST, ²Graduate School of Semiconductor Materials and Devices Engineering, UNIST, ³Medium OLED Panel Design Team, LG Display, ⁴Department of Electrical Engineering, UNIST)

P1-ap.112*

Optical Characterization of MoS₂ Transistor by Hyperspectral Imaging / LEE Wooseok¹, LEE Jae-Ung^{*1} (¹Department of Physics, Ajou University)

P1-ap.113*

Optical frequency doubling in WS₂ nanoscroll / HAN Seungman¹, LEE Jae-Ung^{*2} (¹Department of Energy Systems Research, Ajou University, ²Department of Physics, Ajou University)

P1-ap.114*

Impact of Quantum Confinement on Second Harmonic Generation in Ge-based 2D Ruddlesden-Popper Perovskite Series / LEE Kyeong-Hyeon¹, LIU Yang², JI Xiaoqin², MAO Lingling², JANG Joon Ik^{*1} (¹Department of Physics, Sogang University, ²Department of Chemistry, Southern University of Science and Technology, China)

P1-ap.115

Direct Visualization of Charge Density Wave Domains in Rippled GdTe₃ Using Transmission Electron Microscope / YEON Jieun¹, JANG Myeong Jin¹, LEE Kihyeon¹, KIM Kwanpyo^{*1} (¹Department of Physics, Yonsei University)

P1-ap.116

Raman investigation of substrate-induced strain in epitaxially grown graphene on low/high miscut angled silicon carbide and its application perspectives / KHADKA I.B.¹, HAQ B.U.¹, KIM Se-Hun^{*1} (¹Jeju National University)

P1-ap.117*

Optical spectroscopy of MoS₂-WSe₂ heterostructures / CHENDA Vong¹, CHEONG Hyeonsik^{*1} (¹Department of Physics, Sogang University)

P1-ap.118*

Investigation of Electrical Properties of SiP-based Field-Effect Transistor / KIM Taeyeon¹, LEE Yangjin¹, YUN Taekeun¹, KIM Kwanpyo^{*1} (¹Department of Physics, Yonsei University)

P1-ap.119*

Characterization of Atomically Thin HfX₂ (X=S, Se) by Using Low-Frequency Raman Spectroscopy / LY Chhor Yi^{1,2}, VONG Chenda¹, CHEONG Hyeonsik^{*1}, SRIV Tharith² (¹Department of Physics, Sogang University, ²Graduate Program in Physics, Royal University of Phnom Penh, Cambodia)

Poster Exposure Period : October 25, 12:00~19:30**Presentation (mandatory): October 25, 18:00-19:30**

Room: Exhibition Hall I

P1-ap.201

ZnTe ovonic threshold switching modulation by bottom electrode. / KHIM Yeong Gwang^{1,2,3}, KIM Min Jay¹, KIM Wansun⁴, PARK Sang Hwa⁵, KIM Jaeyeon⁴, RHEE Tae Gyu^{1,2,3}, LEE In Hak⁶, KIM Hyuk Jin¹, YANG Sang Mo⁵, SOHN Hyunchul⁴, CHANG Young Jun^{1,2,3} (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul, ³Department of Intelligent Semiconductor Engineering, University of Seoul, ⁴Department of Material Science and Engineering, Yonsei University, ⁵Department of Physics, Sogang University, ⁶Center for Spintronics, KIST)

P1-ap.202*

Ferroelastic phase transition as the origin of Rashba-like band splitting in MAPbBr₃ / PARK Joon Woo¹, PARK Jee Hong¹, KIM Kitae^{1,2}, PARK Soohyung², YI Yeonjin¹ (¹Department of Physics, Yonsei University, ²Advanced Analysis Center, KIST)

P1-ap.203

Morphological and Optoelectronic Properties of 2D Semiconductor AgSePh Grown on Varying Substrates / CHUNG Kwang Hyun¹, PARK Joon Woo¹, KIM Junho¹, PARK Jeehong¹, YI Yeonjin¹ (¹Department of Physics, Yonsei University)

P1-ap.204

The Analysis of Hole Injection Improvement when Utilizing Metal Fluorides(BiF₃) on Hole Injection Layer / NOH Hyunjung¹, PARK Joonwoo¹, KIM Junho¹, PARK Jeehong¹, YI Yeonjin¹ (¹Department of Physics, Yonsei University)

P1-ap.205*

In situ electrical aging system designed for precise research of interfacial layers of optoelectronic devices / ZHAO Yuehuan¹, YI Yeonjin¹, PARK Jeehong¹, LEE Donggyu¹ (¹Department of Physics, Yonsei University)

P1-ap.206*

Fabrication of circular and hexagonal shapes of nanotubes by anodic aluminum oxide / KIM Eun-Young¹, CHO Sam Yeon¹, BU Sang Don¹ (¹Department of Physics, Jeonbuk National University)

P1-ap.207*

Unraveling the Electronic structure of the 2D/3D Perovskite Heterostructure with halogenated organic spacer cations / LEE Donggyu¹, PARK Jeehong¹, KIM Kitae¹, YI Yeonjin^{*1} (¹Department of Physics, Yonsei University)

P1-ap.208

First-principles study of remote epitaxy through 2D materials on GaN and GaAs wafers / SUNG Dongchul¹, KIM Hyunseok², KIM Jeehwan², HONG Suklyun^{*1} (¹Department of Physics and Astronomy, Sejong University, ²Department of Mechanical Engineering, Massachusetts Institute of Technology, USA)

P1-ap.209

Application and Development of Boron Nitride Porous Materials / KIM Hyeonkwang¹, KIM Junghwan^{*1} (¹Department of Materials System Engineering, Pukyong National University)

P1-ap.210

Multicomponent X-ray Shielding Using Sulfated Cerium Oxide and Bismuth Halide Composites / MAHALINGAM Shanmugam¹, KWON Dae-Seong¹, KANG Seok-Gyu¹, KIM Junghwan^{*1} (¹Department of Materials System Engineering, Pukyong National University)

P1-ap.211

Cu₂O 나노 구조체의 구조적, 광학적 특성 연구 / CHEON Miyeon^{1,2}, PARK Sang Eon¹, KIM Maengsuk¹, KIM Hyun Jung¹, PARK Hongjun¹, LEE Kyeongmin¹, JEONG Se Young^{*1,3} (¹Quantum Matter Core-Facility, Pusan National University, ²Department of Physics, Pusan National University, ³Department of Optics and Mechatronics Engineering, Pusan National University)

P1-ap.212

SPEM-based Study of Contact Hole Connectivity for 3D Semiconductor Inspection / GU Minseon¹, JANG Hansol², AHN Hanyeol¹, KIM Hyuk Jin¹, HYUN Moon Seop³, BAIK Jaeyoon⁴, SHIN Hyun-Joon², HAN Moon-sup¹, PARK Yun Chang³, KIM Gyungtae³, CHANG Young Jun^{*1,5,6} (¹Department of Physics, University of Seoul, ²Department of Physics, Chungbuk National University, ³Department of Measurement and Analysis, National NanoFab Center, ⁴Beamline Division, Pohang Accelerator Laboratory, ⁵Department of Smart Cities, University of Seoul, ⁶Department of Intelligent Semiconductor Engineering, University of Seoul)

P1-ap.213

Gd-MOF based Bismuth Halide Composite for Efficient X-ray Shielding Application / HOSSAIN Nazmul¹, KIM Junghwan^{*1} (¹Department of Materials System Engineering, Pukyong National University)

P1-ap.214*

Two Full-Spectrum Responsive Catalysts: SnFe_2O_4 QDs and Heterojunction $\text{SnFe}_2\text{O}_4/\gamma\text{-Fe}_2\text{O}_3$ QDs. / LIU Chun Li¹, LIU Lei¹ (¹Department of Physics, Hankuk University of Foreign Studies)

P1-ap.215

The effect of the trailing edge of the pulse on the reset operation in Phase change memory / OH Gyoung Hoon¹, SUH Dongseok² (¹Department of Energy Science, Sungkyunkwan University, ²Department of Physics, Ewha Womans University)

P1-ap.216*

Lightweight, high electrically conductive CNT/Cu Hybrid yarn / WANG Feng¹, YUN Yoojoo¹, SUH Dongseok² (¹Department of Energy Science, Sungkyunkwan University, ²Department of Physics, Ewha Womans University)

P1-ap.217

용액중발 기반 3차원 프린팅 기술을 이용한 QD혼합 미세구조 제작 및 광학 분석 / HEO Damoon¹, LEE Jongmin¹, LEE Yewon¹, GU Seonhwa¹, KIM Jaemin¹ (¹반도체 전공, Hallym University)

P1-ap.218*

Structural identification of $\text{GeSe}_{2-x}\text{Te}_x$ nanowires: interlayer twist and twinning / KIM Kwanpyo¹, KIM Donggyu¹, KANG Hani¹, LEE Kihyun¹, LEE Yangjin¹, JUNG Joong-Eon¹, JANG MyeongJin¹ (¹Department of Physics, Yonsei University)

P1-ap.219

Binder-free supercapacitors for reducing leakage currents / SELVARAJ David¹, KAHNG Yung Ho¹ (¹Department of Physics Education, Chonnam National University)

P1-ap.220

Effects of ionic impurities on leakage currents of graphene-based supercapacitors / LIM Gil Hwan¹, CHO Sang Rhye¹, KAHNG Yung Ho¹ (¹Department of Physics Education, Chonnam National University)

P1-ap.221*

Enhanced Chage Trap Characteristics in MOIOS Flash Memory Structure by Silicon Quantum Dots in SiN_x / IM Jaehui^{1,2}, AHN Hanyeol¹, PARK Hyunsu¹, NAM Sangwoo^{1,2}, JANG Won¹, PARK Beomjin¹, GU Minseon¹, CHANG Young Jun^{1,2}, HAN Moonsup¹ (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul)

P1-ap.222

Influence of diverse acidic and mixed electrolytes on the electrochemical characteristics of graphene supercapacitors / JEONG Dong Yun¹, CHOI Woo Jun¹, KAHNG Yung Ho^{*1} (¹Department of Physics Education, Chonnam National University)

P1-ap.223

역광전자 분광기술을 이용한 유기 태양 전지의 전압 손실 측정 / 김영환^{*1}, 이규현¹, 맹민재¹, 이규명¹, 홍종암¹, 박용섭^{1,2} (¹Department of Physics, Kyung Hee University, ²Department of Information Display, Kyung Hee University)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-at.001*

Family-Vicsek scaling in the XX Heisenberg Model / KWON Kiryang¹, HUR Junhyeok¹, CHOI Jae Yoon^{*1} (¹Department of Physics, KAIST)

P1-at.002*

Towards Degenerate Fermi Gases of Ultracold Lithium-6 / LEE Deok-Young¹, JANG Byeong Joo¹, YU Yong Soo¹, CHOI Jae Yoon^{*1} (¹Department of Physics, KAIST)

P1-at.003*

Quantum Kelvin-Helmholtz instability in a ferromagnetic superfluid / HWANG Samgyu¹, HUH Seungjung¹, YUN Gabin¹, CHOI Jae Yoon^{*1} (¹Department of Physics, KAIST)

P1-at.004*

Towards the Creation of Degenerate Fermionic / Bosonic NaK Molecular Gases with Long-range Dipolar Interactions / KIM Yoonsoo¹, LEE Sungjun¹, CHANG Jaeryeong¹, JANG Seokmin¹, LIM Younghoon¹, KIM Sooshin¹, PARK Jee Woo^{*1} (¹Department of Physics, POSTECH)

P1-at.005*

Hydrodynamic approaches to spin turbulent Bose-Einstein condensate / SHIN Yong-il^{*1}, LEE Junghoon¹, KIM Jongmin¹, JUNG Jong Heum¹, LEE Kyuhwan¹, KIM Taecheon¹ (¹Department of Physics and Astronomy, Seoul National University)

P1-at.006

Floquet engineering of a one-dimensional optical lattice system with resonant shaking / PARK Junyoung¹, BAE Dalmin¹, KIM Myeonghyeon¹, KWAK Haneul¹, KWON Junhwan¹, SHIN Yong-il^{*1} (¹Department of Physics and Astronomy, Seoul National University)

P1-at.007

Optimization of Resolved Sideband Cooling Pulse Sequence using Reinforcement Learning / KIM Taehyun^{*3,4,5,6,7}, KIM Kyungmin¹, JEON Honggi^{2,3} (¹Research & Development Center, Alsemy Inc., ²Department of Physics and Astronomy, Seoul National University, ³Computer Science and Engineering, Seoul National University, ⁴Automation and System Research Institute, Seoul National University, ⁵Inter-university Semiconductor Research Center, Seoul National University, ⁶Institute of Computer Technology, Seoul National University, ⁷Institute of Applied Physics, Seoul National University)

P1-at.008*

루비듐 원자를 이용한 광집게 배열 실험 진행 상황 / PARK Byung-Tak¹, HA Taegyu¹, LEE Dowon¹, KIM Donggeon¹, LEE Ki-Se¹, LEE Moonjoo^{*1} (¹Department of Electrical Engineering, POSTECH)

P1-at.009*

Progress on Construction of Cryostat-based Yb ion Quantum Computer / LIM Sungjoo^{*1,2}, KIM Taehee^{1,3}, BAEK Seunghyun^{1,3}, IM Chanyang^{1,3}, LEE Dongyeon^{1,4}, JUNG Sungryul⁵, IM Donghawn^{1,4}, KO Byungsan^{1,4}, KIM Junki^{1,3,4} (¹SAINT, Sungkyunkwan University, ²Seoul National University, ³Department of Nano Science and Technology, Sungkyunkwan University, ⁴Department of Nano Engineering, Sungkyunkwan University, ⁵Department of Physics, UNIST)

P1-at.010*

극저온 이온 포획 시스템의 개발과정 / CHO Junhee¹, KIM Myunghun¹, HONG Jungsoo¹, KWON Sehyun¹, KIM Geumhyeon¹, LEE Hyegoo¹, LEE Moonjoo^{*1} (¹Department of Electrical Engineering, POSTECH)

P1-at.011*

Simulating the energy levels of optical trapped-ion qubit / LEE Hyegoo^{*1}, KIM Keumhyun¹, JEONG Noa¹, SHIN Yongha¹, KIM Myunghun¹, CHO Junhee¹, LEE Moonjoo¹ (¹Department of Electrical Engineering, POSTECH)

P1-at.012*

Exploring third-order exceptional point in an ion-cavity system / HA Taegyu^{*1}, KIM Jinuk², LEE Dowon¹, KIM Donggeon¹, LEE Ki-Se¹, WON Jongcheol¹, MOON Youngil¹, LEE Moonjoo¹ (¹Department of Electrical Engineering, POSTECH, ²Department of Physics, Yale University, USA)

P1-at.013*

Estimation of velocity distribution of a laser-cooled single atoms in a cavity / KIM Donggeon^{*1}, LEE Dowon¹, HA Taegyu¹, LEE Ki-Se¹, LEE Moonjoo¹ (¹Department of Electrical Engineering, POSTECH)

P1-at.014*

Room-temperature transduction and amplification of infrared photons into visible photons / SON Gibeom¹, OH Seunghoon¹, AN Kyungwon^{*1} (¹Department of Physics and Astronomy, Seoul National University)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-bp.101*

Prism-based spectral analysis for single-molecule FRET measurement / LEE Jiyeon¹, GANG Geunwon², JOO Chirlmin^{1,3}, LEE Sanghwa², KIM Sung Hyun^{*1,3}
 (¹Department of Physics, Ewha Womans University, ²Department of Medical Life Science, The Catholic University of Korea, ³Department of Bionanoscience, Delft University of Technology, Netherlands)

P1-bp.102

Tracking mouse USV origins with functional beamforming on sparse arrays / LEE Gyu-Hwan^{1,2}, JEONG Iljoo³, PARK Keonhyeok³, LEE Kangmin^{1,5}, LEE Seungchul⁴, CHOI Jee Hyun^{*1}, PARK Choonsu^{*3} (¹KIST, ²Linguistics, Seoul National University, ³Safety Measurement Institute, KRISS, ⁴Department of Mechanical Engineering, POSTECH, ⁵Department of Physics, Seoul National University)

P1-bp.103

Physical properties of anti-CD3 antibodies conjugated with magnetic nanoparticles for immunotherapy / LEE Sang Suk^{*1}, HASAN Mahbub¹, CHOI Jong Gu¹
 (¹Department of Digital Healthcare Engineering, Sangji University)

P1-bp.104*

GIGANTEA phase separation modulates thermosensitive flowering in Arabidopsis thaliana / KIM Jinkwang¹, GWAK Eunha¹, LEE Jong-Chan^{*1,2} (¹Department of New Biology, DGIST, ²New Biology Research Center, DGIST)

P1-bp.105*

CRISPR RNP Transfection for Live-Cell Imaging of Heterochromatin under DNA Damage Response / IM Jae-Kyeong¹, CHAUDHARY Narendra¹, PARK Eui-Jin¹, NHO Si-Hyeong¹, NAM Kihyeon¹, KIM Hajin^{*1} (¹UNIST)

P1-bp.106*

Visualizing PABPC1-mRNA Interaction: Investigating the Spatiotemporal Dynamics of Translation Initiation in Live Cells / SEOL Jincheol¹, KIM Byungju², PARK Yeonkyoung³, KIM Yoon Ki³, LEE Jong-Bong^{*1,2} (¹School of Interdisciplinary Bioscience & Bioengineering, POSTECH, ²Department of Physics, POSTECH, ³Creative Research Initiatives Center for Molecular Biology of Translation, KAIST)

P1-bp.107

Monitoring open-ended tunneling nanotubes using photoactivatable motor protein / OH Song-Mi², KIM Byungju¹, LEE Jong-Bong^{*1,2} (¹Department of Physics, POSTECH, ²School of Interdisciplinary Bioscience & Bioengineering, POSTECH)

P1-bp.108*

Formation and regulation of phase-separated UBQLN2 biomolecular condensate in vitro / LEE Jong-Chan^{*1,2}, GWAK Eunha¹, KIM Jinkwang¹ (¹Department of New Biology, DGIST, ²New Biology Research Center, DGIST)

P1-bp.109*

Two-color single-molecule cryo-fluorescence microscopy / YU Phil-Sang¹, LIM Seon-Woo², KIM Chae-Un², LEE Jong-Bong^{*1,3} (¹Department of Physics, POSTECH, ²Department of Physics, UNIST, ³Interdisciplinary Bioscience and Bioengineering, POSTECH)

P1-bp.110*

Exonuclease-independent DNA mismatch repair / YANG Keunsang¹, JUANI Ropez², JAMES A. London², SAMIR M. Hamdan³, RICHARD Fishel², LEE Jong-Bong^{*1,4} (¹School of Interdisciplinary Bioscience & Bioengineering, POSTECH, ²Department of Cancer Biology and Genetics, The Ohio State University Wexner Medical Center, USA, ³Division of Biological and Environmental Sciences and Engineering, KAUST, Saudi Arabia, ⁴Department of Physics, POSTECH)

P1-bp.111*

Single-Molecule Studies on The Mechanism of Intrinsic Termination / HAN Sun^{1,2}, SONG Eunho^{1,2}, HOHNG Sungchul^{*1,2} (¹Department of Physics and Astronomy, Seoul National University, ²Institute of Applied Physics, Seoul National University)

P1-bp.112*

Investigating the role of cytoplasmic FUS de-mixing under cellular stress in the context of neurodegenerative disease / DORJRENTSEN Sugarjav¹, LEE Jong-Chan^{*1} (¹Department of New Biology, DGIST)

P1-bp.113

Single-molecule studies of translesion DNA synthesis: the role of PAF15 / LEE Jinseob¹, YANG Keunsang¹, SAMIR Hamdan M.³, ALFREDO Biasio De³, FRANCISCO Blanco⁴, LEE Jong-Bong^{*1,2} (¹School of Interdisciplinary Bioscience & Bioengineering, POSTECH, ²Department of Physics, POSTECH, ³Division of Biological and Environmental Sciences and Engineering, KAUST, Saudi Arabia, ⁴Structural Biology Unit, CIC bioGUNE, Spain)

P1-bp.114

DNA hanger: novel surface-free/multiplexed single-molecule blotting platform / SEOL Jincheol², KIM Byungju¹, KIM Daehyung¹, JEONG Cherlhyun³, LEE Jong-Bong^{*1,2} (¹Department of Physics, POSTECH, ²School of Interdisciplinary Bioscience & Bioengineering, POSTECH, ³Center for Theragnosis, Biomedical Research Institute, KIST)

P1-bp.115

High-speed force-fluorescence setup for studying single-molecule dynamics under load / JUNG Jaehun¹, RAH Sang-Hyun¹, YANG Taehyun¹, SHON Min Ju^{*1,2} (¹Department of Physics, POSTECH, ² School of Interdisciplinary Bioscience & Bioengineering, POSTECH)

P1-bp.116

Enhancement of radiotherapeutic Effect by flagellin in sarcoma cell-bearing mouse brain tumor models / LIM Sa Hoe^{*1,2}, LIU Zhipeng², JUNG Shin^{1,2} (¹Medical School/Department of Neurosurgery, Chonnam National University, ²Department of Neurosurgery, Chonnam National University Hwasun Hospital)

P1-bp.117*

Study on allostery of the human dopamine D3R receptor in complex with an eckol / PARK Suhyun¹, YOON Hyun Jung¹, WU Sangwook^{*1} (¹Department of Physics, Pukyong National University)

P1-bp.118

Efficient labeling of vesicles with lipophilic fluorescent dyes via salt-change method / CHA Minkwon¹, JEONG Sang Hyeok¹, BAE Seoyoon², PARK Jun Hyuk¹, BAEG Yoonjin³, HAN Dong Woo³, KIM Sang Soo², SHIN Jaehyeon¹, PARK Jeong Eun³, OH Seung Wook³, GHO Yong Song², SHON Min Ju^{*1,4} (¹Department of Physics, POSTECH, ²Department of Life Sciences, POSTECH, ³Biodrone Research Institute, MDimune Inc., ⁴School of Interdisciplinary Bioscience and Bioengineering, POSTECH)

P1-bp.119*

High-Speed Magnetic Tweezers for Nanomechanical Measurements on Force-Sensitive Elements / PARK Celine¹, YANG Taehyun¹, RAH Sang-Hyun¹, KIM Hyun Gyu^{3,4}, YOON Tae-Young^{3,4}, SHON Min Ju^{*1,2} (¹Department of Physics, POSTECH, ²School of Interdisciplinary Bioscience and Bioengineering, POSTECH, ³School of Biological Sciences, Seoul National University, ⁴Institute for Molecular Biology and Genetics, Seoul National University)

P1-bp.120*

Role of Histone Tails in Inter-Nucleosome Stacking Interaction / NHO Sihyeong¹, AN Soyeong², AHN Seungmin³, KIM Seoyoon³, LEE Hongsoo¹, SOHN Byeongkwon¹, PARK Chanhoo¹, KIM Kipom⁴, KEE Jungmin³, MIN Duyoung³, LEE Jayil², KIM Hajin^{*1}
(¹Department of Biomedical Engineering, UNIST, ²Department of Biological Sciences, UNIST, ³Department of Chemistry, UNIST, ⁴Korea Brain Research Institute)

P1-bp.121*

SUPER-RESOLVED HETEROCHROMATIN STRUCTURE DURING DNA DAMAGE RESPONSE REVEALED BY CRISPR IMAGING / KIM Hajin^{*1,2}, PARK Eui-Jin¹, CHAUDHARY Narendra^{1,2}, JEPSON Tyler³, XU Ke³, MYUNG Kyungjae^{1,2} (¹Department of Biomedical Engineering, UNIST, ²Center for Genomic Integrity, IBS, ³Department of Chemistry, UC Berkeley, USA)

P1-bp.122*

Single-molecule ubiquitination / BU Gayun¹, LEE Jong-Bong^{*1,2} (¹Department of Physics, POSTECH, ²School of Interdisciplinary Bioscience & Bioengineering, POSTECH)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-bp.201

Investigating Autophagosome Motion through Single Particle Tracking by Employing Clustering Methods / JEON Hyeonjun^{1,2}, PARK Jin-Sung¹, LEE MinHyeong³, KIM Chungho³, HONG Seok-Cheol^{1,2}, CHO Minhaeng^{1,4} (¹Center for Molecular Spectroscopy and Dynamics, IBS, ²Department of Physics, Korea University, ³Department of Life Sciences, Korea University, ⁴Department of Chemistry, Korea University)

P1-bp.202

Assessment and Correction of Non-Bonded Interaction Parameters in the Amber ff19SB Force Field Using Experimental Osmotic Pressure Data / YOO Jaemin¹, YOO Jejoong^{*1} (¹Department of Physics, Sungkyunkwan University)

P1-bp.203*

MegaFold: Multi-GPU Implementation of AlphaFold2 / KIM Minsoo¹, JOO Keehyoung², YOO Jejoong^{*1} (¹Department of Physics, Sungkyunkwan University, ²Center for Advanced Computation, KIAS)

P1-bp.204*

수지상세포의 이동 경로에 기계학습을 적용하는 분석 방법에 대한 고찰 / SONG Taegeun^{*1}, HAN Seunghye¹ (¹Department of Data Information and Physics, Kongju National University)

P1-bp.205*

체장의 항상성 모델을 통한 랑게르한스섬의 크기에 따른 인슐린 분비능 고찰 / KIM Yun Gyeom¹, SONG Taegeun^{*1} (¹Department of Data Information and Physics, Kongju National University)

P1-bp.206

Tracking and single-trajectory analysis of transport dynamics of SCOTIN condensates on ER network in living cells / HAN Hyeongtark¹, JEON Jae-Hyung^{*1,2} (¹Department of Physics, POSTECH, ²APCTP)

P1-bp.207*

Molecular Dance with CUFIX-AMBER Forcefield: Leading-edge Coarse-Graining Illuminates Protein Binding & Phase Separations / YUK Seongho¹, YOO Jejoong^{*1}
(¹Department of Physics, Sungkyunkwan University)

P1-bp.208

A computational model of basal ganglia circuitry: neuronal dynamics and network properties / YOON Wooseung^{1,2}, WOO Junhyuk¹, CHOI Da-Eun¹, GARCIA-LOPEZ Daniela^{1,3}, KIM Chong-Hyun^{*1,3}, HAN Kyungreem^{*1,3} (¹Brain Science Institute, KIST, ²Department of Physics and Astronomy, Seoul National University, ³Neuroscience Program, Division of Bio-Medical Science & Technology, KIST School, UST)

P1-bp.209*

Machine-learning-based identification for diffusion states of the CRISPR-Cas9 complex / HONG Changbeom¹, LEE Jeongmin², JEONG Cherlhyun³, JEON Jae-Hyung^{*1,4} (¹Department of Physics, POSTECH, ²Department of Life Sciences, Korea University, ³Chemical and Biological Integrative Research Center, KIST, ⁴APCTP)

P1-bp.210*

Dynamic co-generation of interacting beta and gamma oscillations and their implication in neural communication / CHOI Jee Hyun^{*1}, KIM Jung-Young^{1,2,3}, BATTAGLIA Demian^{3,4} (¹KIST, ²Bio and Brain engineering, KAIST, ³Institute for Advanced Studies, University of Strasbourg, ⁴Theoretical Neuroscience Group, Aix-Marseille Université, France)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-co.101

Terahertz spectroscopic measurements of Molybdenum-Rhenium alloy superconductors / SEOK Jieun¹, LEE Ji Eun¹, KIM Bongkeon², DOH Yong-Joo², KIM Jae Hoon*¹ (¹Department of Physics, Yonsei University, ²Department of Physics and Photon Science, GIST)

P1-co.102

Optical properties of CrPS₄ / KIM Hanyeop¹, KIM Jae Hoon*¹, PARK Je-Geun², PARK Gi Ung² (¹Department of Physics, Yonsei University, ²Department of Physics and Astronomy, Seoul National University)

P1-co.103*

Ce 도핑에 따른 고 엔트로피 합금(Ta-Nb-Hf-Zr-Ti) 초전도 특성 변화 연구 / YOON Han¹, HAN Yoonseok², SONG Jaegu², IM Hyunsoo¹, PARK Tuson², JUNG Soon-Gil³, SEO Soonbeom*¹ (¹Department of Physics, Changwon National University, ²Center for Quantum Materials and Superconductivity (CQMS), Department of Physics, Sungkyunkwan University, ³Department of Physics Education, Sunchon National University)

P1-co.104*

Exploring Superconductivity in Pb_{10-x}Cu_x(PO₄)₆O: Comprehensive Investigations without Cu₂S Impurity / OK Jong Mok*¹, KIM Huiwon¹, KONG Minsik¹, KIM Seohee¹ (¹Department of Physics, Pusan National University)

P1-co.105

A Detailed Numerical Analysis of Optical Conductivity in High-temperature Superconductors Using the Slave-Boson Approach to the t-J Hamiltonian / AHN Sul-Ah¹, CHO Hyeyoung¹, SALK Sung-Ho S.² (¹National Supercomputing Center, Korea Institute of Science and Technology Information, ²Department of Physics, POSTECH)

P1-co.106*

High Entropy Alloy (HEA) superconductor : optical characteristics and the effects of ion irradiation / HWANG Jungseek¹, PANDA Chandan Kumar¹, JUNG Soon-Gil², LEE Hong gu¹ (¹Department of Physics, Sungkyunkwan University, ²Department of physics education, Sunchon National University)

P1-co.107*

Synthesis and physical properties of $Pb_{10-x}Cu_x(PO_4)_6O$ / PARK Tuson¹, PAEK Seung-Yeop¹, LEE Taehee¹, HAN Yoonseok¹, RHIE Junwon¹, SONG Jaegu¹, CHOI Seokmin¹, KANG Won Nam¹, LEE Hanoh¹, PARK Sung Min¹ (¹Department of Physics, Sungkyunkwan University)

P1-co.108

LK-99, The Attempt of Synthesis & Measuring Physical Properties / CHO Beopgil¹, PARK Jaemun¹, PARK Keeseong¹ (¹Department of Emerging Materials Science, DGIST)

P1-co.109*

Single crystal growth of topological superconductor candidate Ti_3Sb / KIM Seohee¹, OK Jong Mok¹, KONG Minsik¹, KIM Min Jae¹, KIM Youngwook², KIM Dohun², LEE Ho Nyung³, PARK Yunkyu³, BENJAMIN Shermane M⁴ (¹Department of Physics, Pusan National University, ²Department of Physics and Chemistry, DGIST, ³Materials Science and Technology Division, Oak Ridge National Lab, USA, ⁴Condensed Matter Science, National High Magnetic Field Laboratory, USA)

P1-co.110

Fabrication of high quality $YBa_2Cu_3O_7$ thin film for Josephson Junction / HAN Dong Hui¹, MAENG Jin Young¹, SONG Jong Hyun¹ (¹Department of Physics, Chungnam National University)

P1-co.111*

Thermal transport experiment on quasi-one-dimensional spin chain $NiTe_2O_5$ / KIM Jin Ho¹, YANG Heejun², PARK Je-Geun², OH Yoon Seok¹ (¹Department of Physics, UNIST, ²Department of Physics and Astronomy, Seoul National University)

P1-co.112*

Thermoelectric Properties of the Mn_3Sn -based Heterostructures / KIM Sanghoon¹, ULLAH Asif¹, LEE Siha¹, JEONG Dongchan¹, SEO Sungbin¹, IM Eunji¹, CHOI Wonyeong¹, LEE Nyung Jong¹ (¹Department of Physics, University of Ulsan)

P1-co.113*

저온에서 증착된 준강자성 (001) $NiCo_2O_4$ 박막의 자기적 및 전기적 특성 / PARK Jiseok¹, DHO Joonghoe¹ (¹Department of Physics, Kyungpook National University, ²Kyungpook National University)

P1-co.114*

Enhancing Spin Lifetime of Fe Atoms on Ag(111) through an Aromatic Molecule / OH Jeongmin^{2,1}, BORODIN Dmitriy², KOT Piotr², TAUTZ Frank Stefan³, TEMIROV Ruslan³, ESAT Taner³, HEINRICH Andreas^{2,1}, BAE Yujeong^{*2} (¹Department of Physics, Ewha Womans University, ²Center for Quantum Nanoscience, IBS, ³Department of Physics, Forschungszentrum Jülich, Germany)

P1-co.115*

Electric and magnetic properties of $\text{Fe}_{1.1-x}\text{Mn}_x\text{Sb}_{0.9}$ / HUR Namjung^{*1}, CHOI Yeonguk¹ (¹Department of Physics, Inha University)

P1-co.116*

Generation of ferromagnetism in $\text{CaRuO}_3/\text{Sr}_2\text{RuO}_4$ superlattices / HWANG Ji-min¹, LEE SANG A¹, HWANG Jae-Yeol^{*1} (¹Department of Physics, Pukyong National University)

P1-co.117*

ARPES study on the ferromagnetic transition in $2\text{H-Mn}_{1/3}\text{TaS}_2$ / PARK Kyoungree¹, RYU Hyejin², HWANG Choongyu³, HWANG Jinwoong^{*1} (¹Department of Physics, Kangwon National University, ²Center for Spintronics, KIST, ³Department of Physics, Pusan National University)

P1-co.118

Magnetic Anisotropy of the perpendicular spin states in $\text{Fe}_{1-x}\text{Co}_x\text{Sn}$ / PARK Jaemun¹, CHO Beopgil¹, PARK Keeseong^{*1} (¹Department of Emerging Materials Science, DGIST)

P1-co.119*

Strong Charge-to-Spin Conversion at a Van der Waals Interface of Topological Insulator and Ferromagnet / KIM Jun Sung^{*1}, CHOI Gyuseung¹ (¹Department of Physics, POSTECH)

P1-co.120*

Orbital-driven double nodal-line states in a room-temperature van der Waals ferromagnet Fe_3GaTe_2 / KIM Jun Sung^{*1}, KANG Beom Tak¹ (¹Department of Physics, POSTECH)

P1-co.121*

Ultra-thin 2D Fe_3GaTe_2 rare-earth free permanent magnet at finite temperatures / MARFOUA Brahim¹, HONG Ji Sang^{*1} (¹Department of Physics, Pukyong National University)

P1-co.122*

High-crystalline Van der Waals ferromagnet Fe_3GeTe_2 grown by flux-assisted growth method / CHOI Seungchul^{1,2}, LEE In Hak³, KHIM Yeong Gwang^{1,2}, CHANG Young Jun^{1,2,4} (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul, ³Center for Spintronics, KIST, ⁴Department of Intelligent Semiconductor Engineering, University of Seoul)

P1-co.123*

Proximity-induced Ferromagnetism in hBN/Graphene/CrPS₄ Heterostructure / KIM Ja-Yeon¹, SHIN Inseob¹, LEE Gil-Ho¹ (¹Department of Physics, POSTECH)

P1-co.124*

위상 준금속 $\text{NdSb}_{0.5}\text{Te}_{1.5}$ 의 온도와 자기장에 따른 전기저항 특성 연구 / JEONG Minju¹, PLOKHIKH Igor², PARK Tuson³, SEO Soonbeom¹ (¹Department of Physics, Changwon National University, ²Laboratory for Multiscale Materials Experiments, Paul Scherrer Institute, Switzerland, ³Center for Quantum Materials and Superconductivity (CQMS), Department of Physics, Sungkyunkwan University)

P1-co.125

High-frequency ESR study of anisotropic triangular antiferromagnet $\text{Cu}_2(\text{OH})_3\text{NO}_3$ / BAN Gyungbin¹, CHOI Kwangyoung¹, POVAROV Kirill², WOSNITZA Joachim², ZVYAGIN Sergei² (¹Department of Physics, Sungkyunkwan University, ²Dresden High Magnetic Field Laboratory, Helmholtz Zentrum Dresden Rossendorf, Germany)

P1-co.126*

Spin-Lattice Excitations in the Layered Antiferromagnets MPSe_3 (M=Fe, Mn) / QIU Jin¹, HUANG Wen-Juan², CHEN Xiang-Bai², LEE Young Jin¹, KIM Seung¹, YOON Seokhyun¹, YANG In-Sang¹ (¹Department of Physics, Ewha Womans University, ²Hubei Key Laboratory of Optical Information and Pattern Recognition, Wuhan Institute of Technology, China)

P1-co.127

Enhancing Sensitivity of wide-field quantum diamond microscope using nanopillar arrays / LEE Young Gie^{1,2}, KIM Young Duck^{2,3}, OH Sangwon⁴, LEE Oukjae¹, JANG Chaun¹ (¹Center for Spintronics, KIST, ²Department of Physics, Kyung Hee University, ³Department of Information Display, Kyung Hee University, ⁴Quantum Magnetic Imaging Team, KRISS)

P1-co.128*

Investigating Electron Properties of Dysprosium, Fe-Porphyrin Metal-Organic Coordination Networks on Au(111) and Ag(100) Surfaces / CHOI Dasom^{*1,2}, JEON Serim^{1,2}, SPREE Lukas Emanuel², URDANIZ Maria Corina², HOMMEL Caroline², WOLF Christoph², LUNGERICH Dominik³, HEINRICH Andreas^{1,2}, COLAZZO Luciano² (¹Department of Physics, Ewha Womans University, ²IBS – Center for Quantum Nanoscience, Ewha Womans University, ³Soft Organic Materials, In-Situ Electron Microscopy, Yonsei University)

P1-co.129*

Co 입자 형상과 물성과의 상관관계 연구 / PARK Sungkyun^{*1}, 박강진¹, 손영준¹, 송세환², 이지성^{1,3}, 주태성¹, 이두용⁴, 한승훈¹, 김송길⁵ (¹Department of Physics, Pusan National University, ²한국표준과학연구원 양자기술연구소, 양자스핀, ³한국기초과학지원연구원 연구장비개발부, ⁴경북대학교 물리교육과, ⁵부산대학교 기계공학부)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-co.201

Characterization on Lead-Free Hybrid Perovskite $[\text{NH}_3(\text{CH}_2)_5\text{NH}_3]\text{CuCl}_4$: Thermodynamic Properties and Molecular Dynamics / PARK Sanghyeon¹, NA Yeji¹, LIM Ae Ran^{*1,2} (¹Graduate School of Carbon Convergence Engineering, Jeonju University, ²Department of Science Education, Jeonju University)

P1-co.202

Effect of Cation Incorporation on the Structural Distortions and Phase Transitions in $\text{MA}_x\text{FA}_{1-x}\text{PbCl}_3$ Perovskite Single Crystals / KO Jaehyeon^{*1}, NAQVI Syed Furqan UI Hassan¹, JUNAID Syed Bilal¹, LEE Seongsu², SHON Wonhyuk² (¹School of Nano Convergence, Hallym University, ²Advanced Quantum Material Research Section, KAERI)

P1-co.203

Crystal structure, phase transition, thermodynamics, and molecular dynamics of organic-inorganic hybrid crystal $[\text{NH}(\text{CH}_3)_3]_2\text{ZnCl}_4$ / NA Changyub¹, KIM A Young¹, LIM Ae Ran^{*1,2} (¹Graduate School of Carbon Convergence Engineering, Jeonju University, ²Department of Science Education, Jeonju University)

P1-co.204

Multifunctionality of Bismuth Ferrite and Barium Titanate Solid Solution by Samarium Oxide Doping Effects / CHOI Hai In¹, LEE Myanghwan¹, KIM Won Jeong², SONG Tae Kwon^{*1} (¹School of Materials Science and Engineering, Changwon National University, ²Department of Physics, Changwon National University)

P1-co.205

Exploration of VO_2 thin films with oxygen deficiency / RANI Sunita¹, KUMAR Manish¹, LEE Hyun Hwi¹ (¹Energy Environment Material Research, Pohang Accelerator Laboratory, POSTECH)

P1-co.206*

Origin of morphotropic phase boundary in thin-film $\text{Hf}_{0.5}\text{Zr}_{0.5}\text{O}_2$ on the TiN electrode / YU Jaejun¹, LEE Ilyoung¹ (¹Department of Physics and Astronomy, Seoul National University)

P1-co.207*

Optical properties of film LaFeO_3 on SrTiO_3 / LEE Hong Gu¹, JUNG Eil Ho¹, KIM Minjae¹, OH Jin Young¹, JEONG Seung Gyo¹, SONG Sehwan², LEE Tae Yoon³, CHAE Seung Chul³, PARK Sungkyun², CHOI Woo Seok¹, HWANG Jungseek^{*1} (¹Department of Physics, Sungkyunkwan University, ²Department of Physics, Pusan National University, ³Department of Physics Education, Seoul National University)

P1-co.208*

Optimization of Substrate Treatment for (001)-oriented Nb-doped SrTiO_3 Substrate / SON Min Jae¹, KANG Kyeong Tae^{*1} (¹Department of Physics, Kyungpook National University)

P1-co.209*

Self-assembled vertically aligned nanocomposites of strontium cobalt oxide / BONG Hyungkun¹, KANG Kyeong Tae^{*1} (¹Department of Physics, Kyungpook National University)

P1-co.210*

Improvement in Conductance Characteristics of Ferroelectric Synaptic Transistor by Logarithmic Incremental Pulse Scheme / LEE Jae Yeob¹, KIM Cheol Jun¹, KIM Tae Hoon¹, NOH Taehee¹, LEE Seung Won², AHN Ji-Hoon², KANG Bo Soo^{*1} (¹Department of Applied Physics, Hanyang University, ²Department of Materials Science and Chemical Engineering, Hanyang University)

P1-co.211

Hard piezoelectric properties of lead-free BiFeO_3 - BaTiO_3 ceramics / LEE Myang Hwan¹, CHOI Hae In¹, KIM Da Jeong², KIM Ji Su², SONG Tae Kwon^{*1,2} (¹School of Materials Science and Engineering, Changwon National University, ²Department of Materials Convergence and System Engineering, Changwon National University)

P1-co.212*

High Piezoelectric Performance of Bi and Fe-Compensated 0.67BiFeO_3 - 0.33BaTiO_3 Piezoelectric Ceramics / KIM Jisu², LEE Myanghwan¹, KIM Da Jeong², CHOI Hai In¹, SONG Tae Kwon^{*1,2} (¹School of Materials Science and Engineering, Changwon National University, ²Department of Materials Convergence and System Engineering, Changwon National University)

P1-co.213*

X-ray micro-diffraction study of structural change in $(1-x)\text{BaTiO}_3$ - $x\text{CaZrO}_3$ / SEO Jiwoo¹, WI Sang Won¹, LEE Yun Sang¹, CHUNG Jin Seok^{*1} (¹Department of Physics, Soongsil University)

P1-co.214*

Pulsed laser epitaxy of Mo(d²)-doped SrRu(d⁴)O₃ thin films / PRASETIYAWATI Rahma Dhani¹, LEE Taehee¹, PARK Tuson¹, CHOI Woo Seok^{*1} (¹Department of Physics, Sungkyunkwan University)

P1-co.215*

Collective Control of Potential-constrained Oxygen Vacancies in LaAlO₃/SrTiO₃ Heterostructures for Analog Resistive Switching Applications / LEE Hyungwoo^{*1,2}, KIM Doyeop² (¹Department of Physics, Ajou University, ²Department of Energy System Research, Ajou University)

P1-co.216

The temperature dependent electronic structures of CeB₄: DMFT(Dynamical Mean Field Theory) study / SHIM Ji Hoon^{*1,2}, KIM Junwon², GOH Beomjoon¹, MIN Byung Il³ (¹Department of Chemistry, POSTECH, ²Division of Advanced Materials Science, POSTECH, ³Department of Physics, POSTECH)

P1-co.217*

P-31 NMR study in a NiPS₃ single crystal. / HWANG Jun Ik¹, PARK Sung Hoon¹, BYUN Seok Hyun¹, KIM Junghyun², PARK Je-Geun², BAEK Seung-Ho^{*1} (¹Department of Physics, Changwon National University, ²Department of Physics and Astronomy, Seoul National University)

P1-co.218*

Direct Investigation of Valence State in Kondo lattice YbCuAs₂ Using Resonant X-ray Emission Spectroscopy / LEE Heemin^{1,3,4}, HEO Seung-Pil^{1,3,4}, MUN Eundeok², SONG Changyong^{*1,3,4} (¹Department of Physics, POSTECH, ²Department of Physics, Simon Fraser University, Canada, ³Center for Ultrafast Science in Quantum Matter, Max Planck POSTECH Korea Research Initiative, ⁴Photon Science Center, POSTECH)

P1-co.219*

Optical study of a new kagome metal Ni₃M₂S₂ (M = In, Tl) / NAM Hyungwon¹, KIM Dong Wook¹, KIM Kwang-Tak², KIM Sangjin², KIM Kee Hoon², MOON Soonjae^{*1} (¹Department of Physics, Hanyang University, ²Department of Physics and Astronomy, Seoul National University)

P1-co.220*

Melting unidirectional charge density waves across twin domain boundaries / CHO Doohee^{*1}, KIM Eunseo¹, LEE Sanghun¹, BANG Junho¹, WULFERDING Dirk^{*2,3}, KIM Changyoung^{2,3}, PARK Jongho^{2,3} (¹Department of Physics, Yonsei University, ²Center for Correlated Electron Systems, IBS, ³Department of Physics and Astronomy, Seoul National University)

P1-co.221

Investigation of Charge Density Wave (CDW) Order parameters in kagome metal (K, Rb)V₃Sb₅ using X-ray scattering / CHOI Jungchan^{1,2}, HEO Seung Phil^{1,2}, WON Choongjae², NOH Woo-suk², HA Seung-Hyeok^{1,3}, KIM Hyun-Woo^{1,3}, SONG Changyong^{*1,2} (¹Department of Physics, POSTECH, ²Department of Physics, Max Planck POSTECH Korea Research Initiative, ³Department of Physics, IBS)

P1-co.222

Optical study of kagome metal Cs(Ti_{1-x}V_x)₃Sb₅ / KIM Dongwook¹, NAM Hyungwon¹, SUR Yeahan², KIM Kwang-Tak², KIM Kee Hoon², MOON Soonjae^{*1} (¹Department of Physics, Hanyang University, ²Center for Novel States of Complex Materials Research, Department of Physics and Astronomy, Seoul National University)

P1-co.223*

Band insulator to Mott insulator transition in ML 1T-TaSe₂ / LEE Hyobeom¹, IM Hayoon², HWANG Choongyu², HWANG Jinwoong^{*1} (¹Department of Physics, Kangwon National University, ²Department of Physics, Pusan National University)

P1-co.224

Controlling Pulse Laser Annealing to observe Resistance Switching Behavior in LaAlO₃/SrTiO₃ Heterostructure Memristors / KIM Yeonghun¹, MAENG Jinyoung¹, SONG Jong Hyun^{*1} (¹Department of Physics, Chungnam National University)

P1-co.225*

Compositional Gradient in Tungsten-Doped Vanadium Dioxide Thin Films for Exploring Doping Effects on Metal-Insulator Transition Characteristics / AHN Sehyeon², CHOI Eunji², YANG Yerim², KO Changhyun^{*1,2} (¹Department of Materials Physics, Sookmyung Women's University, ²Department of Applied Physics, Sookmyung Women's University)

P1-co.226*

Fabrication of antiperovskite Sr₃SnO thin films using sputtering technique / NAM Kideuk¹, OH Ju Hyun¹, KIM Donghyeon², LEE Dongik¹, PARK Jihun³, PANT Rohit³, KANG Mijeong², TAKEUCHI Ichiro³, LEE Seunghun^{*1} (¹Department of Physics, Pukyong National University, ²Department of Optics and Mechatronics Engineering, Pusan National University, ³Department of Materials Science and Engineering, University of Maryland, USA)

P1-co.227

Transition of temperature-dependent resistivity behavior in superlattices: Influence of SrIrO₃ film thickness and presence of SrTiO₃ capping layer / HWANG Seon Ha¹, CHOI Jeong Chan¹, MAENG Jin Young¹, SONG Jong Hyun^{*1} (¹Department of Physics, Chungnam National University)

P1-co.228*

Influence of ion-implantation on the metal insulator transition of VO₂ / HWANG In-Hui¹, YEO Sunmog², PARK Young-Woo³, HAN Sang-Wook^{*3} (¹Advanced Photon Source, Argonne National Laboratory, USA, ²Korea Multi-Purpose Accelerator Complex, Korea Atomic Energy Research Institute, ³Department of Physics Education, Jeonbuk National University)

P1-co.229

Reduction of nickelate by pulsed laser annealing / MAENG Jin Young¹, KIM Young Hun¹, HWANG Seon Ha¹, HAN Dong Hee¹, SONG Jong Hyun^{*1} (¹Department of Physics, Chungnam National University)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-co.301*

Nanoscale three-dimensional network structure of a mesoporous particle unveiled via adaptive multi-distance coherent X-ray tomography / LEE Sung Yun^{1,2,3}, CHO Do Hyung^{1,2}, SONG Sung Chan^{3,4}, SHIN Jaeyong^{1,2,3}, HWANG Junha^{1,2,3}, PARK Eunyoung^{1,2,3}, LEE Su Yong⁵, KIM Seongseop⁶, LEE Jinwoo⁷, SONG Changyong^{*1,2,3}

(¹Department of Physics, POSTECH, ²Photon Science Center, POSTECH, ³Center for Ultrafast Science on Quantum Matter, Max Planck POSTECH Korea Research Initiative, ⁴Department of Materials Science and Engineering, POSTECH, ⁵PLS-II Beamline Department, Pohang Accelerator Laboratory, ⁶Clean Energy Research Center, Jeonbuk National University, ⁷Department of Chemical and Biomolecular Engineering, KAIST)

P1-co.302*

Observation of self-induced strain and suppression of Metal-Insulator Transition in V₂O₃ thin film using In-situ X-ray Diffraction / KANG Sae Hyun¹, YUN Youngmin¹, OH Ho Jun¹, CHOI Sukjune¹, PARK Sang-Youn³, SONG Sehwan⁴, NOH Do Young¹, KANG Hyon Chol^{*2} (¹Department of Physics and Photon Science, GIST, ²Department of Materials Science and Engineering, Chosun University, ³Beamline Department, Energy Environment Research Team, Pohang Accelerator Laboratory, ⁴Department of Physics, Pusan National University)

P1-co.303

Development of a multiplex imaging chamber to investigate ultrafast phenomena at PAL-XFEL / NAM Daewoong^{*1} (¹XFEL Beamline Department, Pohang Accelerator Laboratory)

P1-co.304

Operando Lattice Distortion in Photoexcited Perovskite-oxides during Photocatalytic Conditions by Coherent Diffraction Imaging / KIM Hyunjung^{*1}, NAWAZ Muhammad Mahmood¹, HA Sung Soo¹, CHOI Sungwook¹, KIM Jaeseung¹, OH Jiseong¹, HIEU Ngo Minh¹, IRFAN Rana Muhammad¹, DEVI Uma¹, LEE Su Yong², KIM Sunam², PARK Jaeku², EOM Intae², CHA Wonsuk³, SONG Sanghoon⁴ (¹Department of Physics, Sogang University, ²PAL-XFEL & PLS-II, Pohang Accelerator Laboratory, ³Argonne National Laboratory, Advanced Photon Source, USA, ⁴LCLS, SLAC National Accelerator Laboratory, USA)

P1-co.305*

Direct investigation of ultrafast melting process of Au with time resolved coherent X-ray diffraction imaging / HWANG Junha^{1,2,3}, IHM Yungok^{3,4}, NAM Daewoong^{3,5}, SHIN Jaeyong^{3,5}, PARK Eunyoung^{1,2,3}, LEE Sung Yun^{1,2,3}, LEE Heemin^{1,2,3}, HEO Seung Phil^{1,2,3}, KIM Sangsoo⁵, AHN Je-Young⁴, SHIM Jihoon^{3,4}, KIM Minseok⁵, EOM Intae^{3,5}, SONG Changyong^{*1,2,3} (¹Department of Physics, POSTECH, ²Center for Ultrafast Science on Quantum Matter, Max Planck POSTECH Korea Research Initiative, ³Photon Science Center, POSTECH, ⁴Department of Chemistry, POSTECH, ⁵Beamline Division, Pohang Accelerator Laboratory)

P1-co.306*

Scanning microscopy for single diamond nitrogen vacancy centers / KIM Kiwoong^{*1}, SUB Shin Jun¹ (¹Department of Physics, Chungbuk National University)

P1-co.307*

Photoinduced ultrafast melting of metallic glass nanoparticles directly observed by XFEL single-pulse imaging / KIM Sinwoo^{1,2}, PARK Eunyoung^{1,2}, HWANG Junha^{1,2}, LEE Sung Yun^{1,2}, SHIN Jaeyong^{1,2}, LEE Heemin^{1,2}, HEO Seungphil^{1,2}, NAM Daewoong³, KIM Sangsoo³, KIM Min Seok³, EOM In Tae³, NOH Do Young⁴, SONG Changyong^{*1,2} (¹Department of Physics, POSTECH, ²Center for Ultrafast Science on Quantum Matter, Max Plank POSTECH/Korea Research Initiative, ³Pohang Accelerator Laboratory, Pohang Accelerator Laboratory, ⁴Department of Physics and Photon Science, GIST)

Poster Exposure Period : October 25, 12:00~19:30

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P1-nu.001

Discussion on the instanton effects in the QCD sum rule for the scalar meson $a_0(980)$ as a tetraquark state / LEE Hee Jung^{*1} (¹Department of Physics Education, Chungbuk National University)

P1-nu.002*

$\pi \rightarrow \pi\pi$ transition GPDs and the non-diagonal DVCS / SON Sangyeong^{*1}, SEMENOV-TYAN-SHANSKIY Kirill¹, SON Hyeon-Dong² (¹Department of Physics, Kyungpook National University, ²Department of Physics, Inha University)

P1-nu.003

The Evaluating Investigation on Using Helium and Oxygen Ion Beam for Radiation Therapy / WOO Jong-Kwan^{*1}, LIU Dong² (¹Department of Physics, Jeju National University, ²Medical Physics Laboratory, Jeju National University)

P1-nu.004

Exactly Separable X(5) Potential in $^{152-164}\text{Dy}$ / LEE Su-youn^{*1} (¹Division of Basic Sciences, Dong-Eui University)

P1-nu.005

Report of the improvement of the beam tracking algorithm of the prototype Beam Drift Chamber (pBDC) for the LAMPS experiment / KIM Hyunchul^{*1}, HEO Cheong¹, BAE Yunseul¹, SEO Junhu¹, MOON Dong Ho¹, HWANG Jaemin², HONG Byungsik², KIM Young Jin³, LEE Hyo Sang³, LEE Cheongsoo³ (¹Department of Physics, Chonnam National University, ²Department of Physics, Korea University, ³Rare Isotope Science Project, IBS)

P1-nu.006*

Characterization of $\text{CeBr}_3^{228}\text{Ra}$ scintillation crystal / CHOI Eunjin¹, JEONG Dongwoo¹, LEE Doohyeok^{*1}, LEE Hyun Su², SO Jung Ho², KIM Hong Joo¹, PARK Hwanbae¹ (¹Department of Physics, Kyungpook National University, ²Center for Underground Physics, IBS)

P1-nu.007

Characteristics of radiography system based on CMOS camera / NGUYEN Duc Ton¹, DANIEL D. Joseph¹, KIM Hong Joo^{*1} (¹Department of Physics, Kyungpook National University)

P1-nu.008

Growing low-background NaI(Tl) using VGF method for dark matter search / KIM Hong Joo^{*1}, TRUC Lam Tan¹, NGUYEN Luan Thanh¹, LEE Hyun Su² (¹Department of Physics, Kyungpook National University, ²Center for Underground Physics, IBS)

P1-nu.009

Cooling Performance Evaluation of Atmospheric Neutron Target Mockup with Tantalum / JANG Yongsik^{*1}, KANG Nam-woo¹, LEE Pilsoo¹, KIM Suk-Kwon², HWANG Ji Su³ (¹Accelerator development and research division, KAERI, ²Nuclear physics application research division, KAERI, ³Virtual Rx, Inc.)

P1-nu.010*

Simulation study on charged-particle production as a function of transverse activity classifier in proton-proton collisions / SHIN Seokhwan¹, NASSIRPOUR Adrian Fereydon¹, OH Saehanseul^{*1,2} (¹Department of Physics and Astronomy, Sejong University, ²Nuclear Science Division, Lawrence Livermore National Laboratory, USA)

P1-nu.011*

Feasibility study of K₁ measurement in pp collisions with ALICE / LIM Sanghoon^{*1}, Jl Sujeong¹ (¹Department of Physics, Pusan National University)

P1-nu.012*

Investigating new methods for high-purity phi-meson identification in hadron-hadron collisions / OH Changhyun¹, NASSIRPOUR Adrian Fereydon¹, OH Saehanseul^{*1,2} (¹Department of Physics and Astronomy, Sejong University, ²Nuclear Science Division, Lawrence Berkeley National Laboratory, USA)

P1-nu.013*

Searching for a hint of jet modification in small systems with AMPT model / LIM Sanghoon^{*1}, YU Sieun² (¹Department of Physics, Pusan National University, ²Department of New Material Physics, Dong-A University)

P1-nu.014*

Jet flavor tagging in pp collisions using neural network for the ALICE experiment / LIM Sanghoon^{*1}, CHOI Changhwan¹ (¹Department of Physics, Pusan National University)

P1-nu.015*

Investigation of bias on the centrality-dependent nuclear modification factor in p+A collisions with Monte-Carlo event generators / LIM Sanghoon^{*1}, PARK Jinhyun¹

(¹Department of Physics, Pusan National University)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-pa.001*

Performance Tests of Pure LaCl_3 Scintillation Crystal / PARK Hwanbae^{*1}, NGUYEN Luan Thanh¹, KIM Hong Joo¹, AHN Seon Woo¹, HWANG Yong Seok², NAM Uk-Won³, CHOI Eunjin¹ (¹Department of Physics, Kyungpook National University, ²Korea Multi-purpose Accelerator Complex, Korea Atomic Energy Research Institute, ³Space Science Division, Korea Astronomy and Space Science Institute)

P1-pa.002*

Design and optimization of KAPAE phase II detector and trigger / JEONG Dongwoo¹, PARK Hyeoung Woo¹, LEE Doohyeok¹, BANG Inha¹, KIM Hong Joo^{*1} (¹Department of Physics, Kyungpook National University)

P1-pa.003

Measurements of concentration of Gd in Gd-loaded LAB-based Liquid Scintillators / YEO Insung^{*1}, JEONG Dabin², JOO Kyungkwang² (¹Laboratory for High Energy Physics, Dongshin University, ²Department of Physics, Chonnam National University)

P1-pa.004

Vertex Reconstruction with Deep Learning based on GNN in KNO Detector / GOH Junghwan^{*1}, YOO Changhyun¹, JANG Jee-Seung², SEO Jiwoong³, KWON Eunhyang³, LEE Minwoo³, KIM Hyunsoo⁴ (¹Department of Physics, Kyung Hee University, ²Department of Physics and Optical Science, GIST, ³Department of Physics, Sungkyunkwan University, ⁴Department of Physics and Astronomy, Sejong University)

P1-pa.005*

DES analysis for radioactive impurities in pure copper / CHUNG Jongseok^{1,2}, KIM Yong-Hamb^{*2}, KIM Hyelim², LEONARD Douglas S², GILEVA Olga², LEE Kyungbeom³ (¹Department of Physics, Chung-Ang University, ²Center for Underground Physics, IBS, ³Radioactivity Metrology Team, KRISS)

P1-pa.006*

Axion dark matter search around 23.5 μeV using a multi-cell microwave cavity and a flux-driven Josephson parametric amplifier / PARASHAR Pallavi^{1,2}, AHN Saebyeok², BAE Sungjae^{1,2}, GKIKIA Violeta², IVANOV Boris², JEONG Junu², LEE Soohyung², UCHAIKIN Sergey V.², YOUN Sungwoo², VAN LOO Arjan F.^{3,4}, NAKAMURA Yasunobu^{3,4}, SEMERTZIDIS Yannis K.^{1,2} (¹Department of Physics, Korea Advanced Institute of Science and Technology, ²Center for Axion and Precision Physics Research, IBS, ³Center for Quantum Computing (RQC), RIKEN, ⁴Department of Applied Physics, Graduate School of Engineering, The University of Tokyo, Japan)

P1-pa.007*

Data classification for KAEM using Quantum Machine Learning / DO Hyeonseok¹, LEE Sehwook¹, HAUPTMAN John¹, RYU Minsag¹, HUH Changgi¹, KIM Bobae¹, LEE Junghyun¹, BYEON Heejeong¹ (¹Department of Physics, Kyungpook National University)

P1-pa.008*

Development of 16-channel switching system for testing of Hyper-Kamiokande readout electronics / LEE Yuno¹, KIM Hong Joo¹, LEE Jik¹, JOO Kyung Kwang², YOO Jonghee³ (¹Department of Physics, Kyungpook National University, ²Department of Physics, Chonnam National University, ³Department of Physics, Seoul National University)

P1-pa.009

Estimation of the background and sensitivity for AMoRE-II / SEO Jeewon¹, JEON Eun Ju¹ (¹CUP, IBS)

P1-pa.010

Feasible study of ratio LAB and DIN-based LS using SiO₂ core-shell perovskite QDs Perovskite / OH Hyun Soo^{1,2}, CHOI Ji Young³, JOO Kyung Kwang¹, KIM Ha Sul¹ (¹Department of Physics, Chonnam National University, ²Division of Frontier Photonics Research, APRI, ³Department of Fire Safety, Seoyeong University)

P1-pa.011*

Fast Neutron Monitoring System for the COSINE-100 Experiment / KIM Jinyoung¹, HA Chang Hyon¹, YU Gyunho² (¹Department of Physics, Chung-Ang University, ²Department of Physics, Sungkyunkwan University)

P1-pa.012*

Event selection status in the NEON experiment for coherent elastic neutrino-nucleus scattering signal detection / KOH Byoung-cheol¹ (¹Department of Physics, Chung-Ang University)

P1-pa.013

RENE Prototype Design / HWANG Hyunho¹, GOH Junghwan^{*1}, KIM Sang Yong², MOON Dongho², YOO Jonghee³, KIM Dojin³, LEE Wonjun³, YANG Byeongsu³ (¹Department of Physics, Kyung Hee University, ²Department of Physics, Chonnam National University, ³Department of Physics, Seoul National University)

P1-pa.014

A study to improve performance for AMoRE-II Detectors / KIM Yeongduk^{*1}, KIM Wootae¹, KIM Seungcheon¹, BIJAYA Sharma¹ (¹IBS Center for Underground Physics, IBS)

P1-pa.015*

Study of the reflectivity in the water Cherenkov detector / KIM Seeun^{1,2}, CHOI Koun^{*2} (¹Department of Physics, Chungnam National University, ²Center for Underground Physics, IBS)

P1-pa.016*

The performance test of 20 inch PMT for RENE experiment / OH Junkyo^{*1}, JANG Jee-Seung², YUN Eungyu¹, JOO Kyung Kwang¹ (¹Department of Physics, Chonnam National University, ²Department of Physics and Photon Science, GIST)

P1-pa.017

Simulation of neutron on A WIMP Detector using GEANT4 / KO Jew U.^{*1}, KO Young Joon¹, HWANG Jongseok¹, WOO Jong-Kwan¹ (¹Jeju National University)

P1-pa.018

Investigating the Potential of Perovskite Nanocrystal-Doped Liquid Scintillator: A Feasibility Study / LEE Hyungi¹, KIM Nari^{*1}, JOO Kyungkwang¹ (¹Department of Physics, Chonnam National University)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-se.101

Hexagonal Ge-AlN core-shell microneedles: Growth method and mechanism / MUN Suhyun¹, PARK Seonwoo¹, KIM Kyoung Hwa¹, AHN Hyung Soo^{*1}, LEE Jae Hak^{1,2}, YANG Min¹, CHUN Young Tea¹, YI Sam Nyung¹, LEE Won Jae³, KOO Sang-Mo⁴ (¹Department of Nano-Semiconductor Engineering, Korea Maritime and Ocean University, ²LNBS Co., Ltd., ³Department of Advanced Materials Engineering, Dong-Eui University, ⁴Department of Electronic Materials Engineering, Kwangwoon University)

P1-se.102

Characterization of hexagonal Si epilayers grown on 4H-SiC substrates / PARK Seonwoo¹, MUN Suhyun¹, KIM Kyoung Hwa¹, SHIN Myeong-Cheol², AHN Hyung Soo^{*1}, LEE Jae Hak^{1,3}, YANG Min¹, CHUN Young Tea¹, YI Sam Nyung¹, LEE Won Jae⁴, KOO Sang-Mo² (¹Department of Nano-Semiconductor Engineering, Korea Maritime and Ocean University, ²Department of Electronic Materials Engineering, Kwangwoon University, ³LNBS Co., Ltd, ⁴Department of Advanced Materials Engineering, Dong-Eui University)

P1-se.103*

Effects of RF power on oxygen content and surface morphology of ZnSnN₂ grown by reactive RF magnetron sputtering / KIM Dohyun¹, HWANG Juchan¹, PARK Kwangwook^{*1} (¹Advanced Materials Engineering, Jeonbuk National University)

P1-se.104*

다목적 응용을 위한 희토류 도핑된 NaKLaNbO₆ 형광체의 합성 및 발광 특성 / XIANG Weiwei², HUA Yongbin², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronic and Information Convergence Engineering, Kyung Hee University)

P1-se.105*

Al₂O₃-passivation layer as a route to prevent oxidation of HfS₂ in ambient condition / PARK Kwangwook^{*1}, HWANG Juchan¹, LEE Ki-Tae¹, KIM Dohyun¹ (¹Advanced Materials Engineering, Jeonbuk National University)

P1-se.106*

Structural and electrical characteristics of Pt thin films fabricated by oblique-angle deposition / KIM Daeju¹, CHO Jaehee^{*1} (¹Department of Semiconductor Science & Technology, Jeonbuk National University)

P1-se.107*

Thickness-dependent Reflectance and RGB color on Optical image of Perovskite microplate / PARK Jung-Gyu¹, KIM Moses¹, KIM Tae-Gwang¹, SONG Jung Hoon¹, KANG Jang-Won^{*1} (¹Department of Semiconductor and Applied Physics, Mokpo National University)

P1-se.108

Measurement of the Carrier Lifetime in the Mid-wavelength Photodiode using InAs / GaSb Type II Superlattice / KIM Minkyong¹, OH Hyun Soo¹, KIM Ha Sul¹ (¹Chonnam National University)

P1-se.109*

Estimation of effective refractive index of colloidal quantum dot thin film using optical contrast spectroscopy / KIM Tae-Gwang¹, PARK Junggyu¹, KIM Moses¹, SONG Jung Hoon^{*1}, KANG Jang-Won^{*1} (¹Department of Semiconductor and Applied Physics, Mokpo National University)

P1-se.110

Enhanced stability of perovskite nanocrystals by the microwave-assisted method / HAN Inah¹, KWAK Seoyoung¹, SHIM Jahyun¹, LEE Minhyuk¹, KIM Jungyun¹, CHO Sangeun¹, NOH Samkyu¹, KIM Hyungsang¹, IM Hyun Sik^{*1} (¹Dongguk University)

P1-se.111

Au Buffer Layer Effects on Fabrications of LiNbO₃ on ZnO:Al Double Layers by Using the RF Magnetron Sputter Depositions / JUN Byeong-Eog^{*1}, KIM Sun-Jae², CHANG Howon², JUNG Yoosoo², PARK Chul Hong³ (¹Department of Physics and Earth Science, Korea Science Academy, ²Korea Science Academy, ³Department of Physics Education, Pusan National University)

P1-se.112

Theoretical study of electronic structure and thermal properties of phase change materials: Cr₂Ge₂Te₆ and Ge₂Sb₂Te₅ / HONG Suklyn^{*1}, SON Shinwon¹ (¹Department of Physics and Astronomy, Sejong University)

P1-se.113

Study on effect of antimony composition on InAsSb/GaSb optical and structural properties / KIM Jong Su^{*1}, PAWAR Shubham Sarjerao¹, ZEINALVANDFARZIN Behnam¹, LEE Sang Jun² (¹Yeungnam University, ²Division of Interdisciplinary Materials Measurement Institute, KRISS)

P1-se.114*

Contactless electro-reflectance study of optical properties for InGaAs/InAlAs digital alloy / DO Jongwoong¹, CHA Jong Won¹, KIM Jong Su^{*1}, JO Hyun Jun¹, RYU Mee-Yi², SONG Jin Dong³ (¹Yeungnam University, ²Department of Physics, Kangwon National University, ³Center for Opto-Electronic Materials and Devices Research, KIST)

P1-se.115

New mobility measurement Method with transmission line method for 2D Material with High Contact Resistance / HWANG Soonchul¹, CHO Hyunmin¹, IM Seong Il^{*1} (¹Department of Physics, Yonsei University)

P1-se.116*

Modification of localized surface plasmon resonance in liquid via conductive atomic force microscopy / PARK Kyoung-Duck^{*1}, MOON Taeyoung¹, KOO Yeonjeong¹, LEE Hyeongwoo¹ (¹Department of Physics, POSTECH)

P1-se.117

Photocurrent and Responsivity of InGaAsP Semiconductor-based Metal-Semiconductor-Metal Near-Infrared Photodetector / SOHN Tae-Hun¹, LEE Seong-Yeon¹, YEE Ki-Ju^{*1} (¹Department of Physics, Chungnam National University)

P1-se.118*

Optical and electrical properties in 2-D semiconductors with varying layer numbers / KIM Jae Joon¹, HAN Ju Young¹, CHOI Soo Bong^{*1} (¹Department of Physics, Incheon National University)

P1-se.119*

Study on the Aging Effect of Quantum Dot-Based Light-Emitting Diodes (QLEDs): Impact of Encapsulation and Role of PFI Insertion Layer / JOE Sung-yoon^{*1}, RYU Hyung Suk², CHOI Hansol², JEON Young Woo², LEE Hyunho^{1,2}, LEE Sang-Shin^{1,2} (¹Nano Device Application Center, Kwangwoon University, ²Department of Electronic Engineering, Kwangwoon University)

P1-se.120*

질화 붕소 중간 계면층 사용으로 암전류를 감소시켜 성능이 향상된 그래핀/실리콘 / SHIN Donghee², 서민기¹ (¹Department of Physics, Andong National University, ²Department of Smart Sensors Engineering, Andong National University)

P1-se.121*

LaVO₃ / 다공성 실리콘 광대역 자가발전 광 검출기 소자 / SHIN Donghee^{*1}, 최보균², 이호선³ (¹Department of Smart Sensors Engineering, Andong National University, ²Department of Physics, Andong National University, ³Department of Applied Physics, Kyung Hee University)

P1-se.122

Graphene Oxide forming directly on MLG via UV-O₃ treatment for resistive switching memory / SHIN Beomkyu¹, KIM Jong Yun², GWON Ohhun¹, KANG Seok-Ju², BYUN Hye Ryung², JANG Seo Gyun¹, YU Young-Jun^{*1,2} (¹Department of Physics, Chungnam National University, ²Institute of Quantum Systems, Chungnam National University)

P1-se.123

MoO_x-incorporated PEDOT:PSS hole transport layer for organic solar cells / GWAK Donghun¹, CHOI Jin Woo^{*1} (¹Data Information and Physics, Kongju National University)

P1-se.124*

Design and fabrication of quantum dot-based short-wave infrared photodiode devices / KANG Ho Jun^{1,2}, SONG Jung Hoon^{*1,2} (¹Department of Semiconductor and Applied Physics, Mokpo National University, ²Semiconductor Nanotechnology Research Institute, Mokpo National University)

P1-se.125*

Technical Research for Ensuring the Stability of Indium Phosphide / KIM Sarang^{1,2}, SONG Jung Hoon^{*1,2} (¹Department of Semiconductor and Applied Physics, Mokpo National University, ²Semiconductor Nanotechnology Research Institute, Mokpo National University)

Poster Exposure Period : October 25, 12:00~19:30

Presentation (mandatory): October 25, 18:00-19:30

Room: Exhibition Hall I

P1-se.201*

Deterministic control of electron density in atomically thin semiconductor / KIM Sujeong¹, LEE Hyeongwoo¹, EOM Seonhye², JI Gangseon², JOO Huitae¹, CHOI Soo Ho³, KIM Ki Kang³, PARK Hyeong-Ryeol², PARK Kyoung-Duck^{*1} (¹Department of Physics, POSTECH, ²Department of Physics, UNIST, ³Center for Integrated Nanostructure Physics, Sungkyunkwan University)

P1-se.202*

Effect of precursor ratio on carrier dynamics in colloidal CdSe quantum dots / HEO Dong Gwon¹, KIM Sung Hun¹, LEE Hong Seok^{*1} (¹Department of Physics, Jeonbuk National University)

P1-se.203*

과포화 재결정법을 이용한 페로브스카이트 나노 결정의 상온 합성과 광학적 특성 연구 / HEO Jun Yeong¹, KIM Sung Hun¹, HEO Dong Gwon¹, LEE Hong Seok^{*1} (¹Department of Physics, Jeonbuk National University)

P1-se.204*

Optical characterization of cubic and pyramidal MAPbBr₃ film formed by perovskite nano-seed / KIM Taecheon¹, JEONG Hyeon Jun¹, SUNG Jae-Hyun¹, KIM Yejin², KO Seoyeon², SONG Jungeun², KIM Dong-Wook², YOON Seokhyun², JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University, ²Department of Physics, Ewha Womans University)

P1-se.205*

Unveiling Trap Charges Crucial for the Operation of MoS₂-based Field-Effect Transistor / CHOI Deogkyu¹, LEE Juchan¹, LEE Chae Won¹, JO Jieun¹, KWON Chan¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University)

P1-se.206*

Manipulation of optical properties of 0D/2D heterostructures / RYU Chang Hyeok¹, LEE Taegeon¹, KIM Sung Hun¹, LEE Hong Seok¹, RHO Heesuk^{*1} (¹Department of Physics, Jeonbuk National University)

P1-se.207*

Oxidation of freestanding monolayer Transition metal dichalcogenides on Zinc Oxide nanorods / JO Jieun¹, CHO Ga Hyun¹, JEONG Hyun¹, PARK Hyeon Jung¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University)

P1-se.208*

Tip-enhanced Förster resonance energy transfer spectroscopy in monolayer MoSe₂ / KIM Yongbin¹, LEE Hyeongwoo¹, KIM Byong Jae², CHOI Soo Ho³, CHAE Sang Hoon⁴, LIM Jaehoon², KIM Ki Kang³, PARK Kyoung-Duck^{*1} (¹Department of Physics, POSTECH, ²Energy Science, Sungkyunkwan University, ³Energy Science, Sungkyunkwan University, ⁴Electrical and Electronic Engineering, Nanyang Technological University, Singapore)

P1-se.209

Direct observation of the evolution of Mexican-hat band structure in quasicrystalline Bi(111) thin films / HAN Sang Wook^{*1}, YUN Won Seok², SEONG Seungho³, KANG J.-S.³ (¹Basic Science Research Institute, University of Ulsan, ²Convergence Research Institute, DGIST, ³Department of Physics, The Catholic University of Korea)

P1-se.210*

Modulation of electrical properties in 2D tellurium via ozone treatment / JEONG Mun Seok^{*1}, LEE Chaewon¹, PARK Dae Young¹, CHOI Incheol² (¹Department of Physics, Hanyang University, ²Department of Smart Fabrication Technology, Sungkyunkwan University)

P1-se.211*

Investigating the photoconductivity modulation of a WSe₂ monolayer using polyvinylpyrrolidone for in-plane p-n homojunction. / JEONG Mun Seok^{*1}, KANG Wooyoung¹, KIM Dohyeong¹, BANG Seungho¹ (¹Department of Physics, Hanyang University)

P1-se.212*

Interfacial charge trapping of monolayer MoS₂ for optoelectronic nonvolatile memory / KIM Dohyeong¹, KANG Wooyoung¹, BANG Seungho¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University)

P1-se.213*

Transition metal dichalcogenides / Gold nanoparticle plasmonic structure through reversible phase transition / LEE Dohyeong¹, KIM Taehoon¹, SUH Hyeongchan¹, PARK Dae Young¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University)

P1-se.214

Measurement of MoSe₂ carrier dynamics using pump-probe microscopy / JEONG Jin Young¹, CHOI Soo Bong^{*1} (¹Department of Physics, Incheon National University)

P1-se.215*

The Effects of Thermal Annealing on the Electrical and Optical Properties of Lignin / KWON Chan¹, JEONG Hyun¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University)

P1-se.216*

Correlation Between Raman and Photoluminescence Spectra in Single- and Few-Layer MoS₂/AuNPs Hybrid Structures Under Resonant Excitation / NAM Kiin¹, CHOI Soo Bong^{*1} (¹Department of Physics, Incheon National University)

P1-se.217*

Optical properties of monolayer WSe₂ on honeycomb patterned gold template / CHO Ga Hyun¹, JEONG Hyun¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University)

P1-se.218*

Controllable Synthesis of Topological Quantum Materials Based on Platinum and Tellurium Using Laser Irradiation / HWANG June¹, PARK Hyeon Jung¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University)

P1-se.219*

Valley and spin filtering with magnetic proximity effects on a bowtie-shaped monolayer WS₂ / YOU Suejeong¹, KIM Heesang¹, KIM Nammee^{*1} (¹Department of Physics, Soongsil University)

P1-se.220*

Nonlinear Hall Effect in 2D Tellurene under Time-Reversal-Symmetric Conditions / KIM Giheon¹, BAHNG Jaeuk², KIM Youngkuk³, LIM Seong Chu^{*1,2} (¹Department of Energy Science, Sungkyunkwan University, ²Department of Smart Fabrication Technology, Sungkyunkwan University, ³Department of Physics, Sungkyunkwan University)

P1-se.221

Electrical and Thermoelectric Transport Properties of Tellurene / BAHNG Jaeuk¹, KIM Giheon², LIM Seong Chu^{*1,2} (¹Department of Smart Fabrication Technology, Sungkyunkwan University, ²Department of Energy Science, Sungkyunkwan University)

P1-se.222*

Determining the twist angle of the moiré superlattice in 2D materials using polarized Raman spectroscopy / LEE Da Yong¹, SUH Hyeongchan¹, KIM Dong Hyeon^{1,2}, KIM Ji-hong¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University, ²Department of Energy Science, Sungkyunkwan University)

P1-se.223*

Quantative model of raman peak shift in a monolayer MoS₂ under bending strain and temperature change / KIM Ji-hong¹, SUH Hyeongchan¹, KIM Dong Hyeon^{1,2}, LEE Da Yong¹, JEONG Mun Seok^{*1} (¹Department of Physics, Hanyang University, ²Department of Energy Science, Sungkyunkwan University)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-ap.101*

Overcoming the thermal quenching effect in Emission of Eu^{3+} doped HfW_2O_8 via Negative Thermal Expansion / LEE Yun Sang^{*1}, LEE Kwan chu¹ (¹Department of Physics, Soongsil University)

P2-ap.102*

The enhancement of tunneling electroresistance effect of ferroelectric tunnel junction by using conductive filament formation / LEE Jae Heon¹, YOON Chan Soo², LEE Sang Woo¹, PARK Yu Bin¹, AN Sang Won¹, YANG Sang Mo^{*1} (¹Department of Physics, Sogang University, ²Department of Physics, Konkuk University)

P2-ap.103*

Fabrication of self-rolled-up SiO/SiO_2 microtube / RAHMAT Roni¹, CHO Yong Hoon^{*1} (¹KAIST)

P2-ap.104*

Metal-Insulator Phase Transition Characteristics of Vanadium Dioxide Thin Films Tailorable by Substitutional Doping Gradation / CHOI Eunji², AHN Sehyeon², SHIN Eunbi², KO Changhyun^{*1,2,3} (¹Department of Materials Physics, Sookmyung Women's University, ²Department of Applied Physics, Sookmyung Women's University, ³Institute of Advanced Materials and Systems, Sookmyung Women's University)

P2-ap.105*

Femtosecond Laser-induced Phase Transformation of WO_3 Nanorods synthesized on Laser-induced Graphene for Flexible Solar Water Splitting Cell / KIM Hyeonwoo¹, YEO Junyeob^{*1} (¹Department of Physics, Kyungpook National University)

P2-ap.106*

Electrocaloric cooling with triboelectric nanogenerator / JUNG Jong Hoon^{*1}, HU Ying Chieh¹ (¹Department of Physics, Inha University)

P2-ap.107

Er^{3+} 를 첨가한 $\text{K}_5\text{Y}(\text{P}_2\text{O}_7)_2$ 의 구조 및 광학 특성 연구 / LEE Caeyeon¹, JEONG Minjae¹, LEE Yun Sang^{*1} (¹Department of Physics, Soongsil University)

P2-ap.108*

Photomodulation of Two-dimensional Electron Gases at $\text{LaAlO}_3/\text{SrTiO}_3$ Heterointerfaces enabled by Surface Deprotonation / LEE Hyungwoo^{*1,2}, KIM Youngmin² (¹Department of Physics, Ajou University, ²Department of Energy Systems Research, Ajou University)

P2-ap.109*

Structural transformation and Photoluminescence properties of HfO_2 by doping Pr^{3+} and Eu^{3+} / HAN Jaeho¹, LEE Yun Sang^{*1} (¹Department of Physics, Soongsil University)

P2-ap.110*

Investigation of surface chemical state of $\text{SrFeO}_{2.5}$ films during topotactic transition by ambient pressure X-ray photoelectron spectroscopy / KIM Hyeonyu², KIM Yunzyne², SON Minjae², BONG Hyungkun², SIM Hyunbo¹, SON Yeongjun³, KANG Kyeong Tae², JEONG Beomgyun⁴, CHOI Woo Seok⁵, PARK Sungkyun³, LEE Dooyong^{*1} (¹Department of Physics Education, Kyungpook National University, ²Department of Physics, Kyungpook National University, ³Department of Physics, Pusan National University, ⁴Research Center for Materials Analysis, KBSI, ⁵Department of Physics, Sungkyunkwan University)

P2-ap.111*

Synthesis and characterization of SnO_2 thin films based ultraviolet photodetectors / KIM Seongeun¹, KANG Hyon Chol^{*1} (¹Department of Materials Science and Engineering, Chosun University)

P2-ap.112*

Investigation of Ferroelectricity and Switching Dynamics of $\text{Hf}_{0.5}\text{Zr}_{0.5}\text{O}_2$ Thin Films Depending on Annealing Temperatures / YANG Sang Mo^{*1}, AN Sang Won¹, BAE Sung Bin¹, KIM Beom Jun¹, KIM Yoon Ki¹, JUNG Tae Hyun¹, KIM Jae Seung¹, LEE Jae Heon¹, LEE Sang Woo¹, PARK Yu Bin¹, KIM Hyun Jung¹, YOO Hyo Bin¹ (¹Department of Physics, Sogang University)

P2-ap.113

Investigation on photoluminescence and photochromism in Eu^{3+} doped $(\text{Ba}_{1-x}\text{Ca}_x)\text{TiO}_3$ / LEE Dong Jae¹, LEE Yun Sang^{*1} (¹Department of Physics, Soongsil University)

P2-ap.114*

Mechanically stable and highly crystalline LaNiO_3 flexible thin film electrode / AHN Hyunsoo¹, CHOI Yeonguk¹, JUNG Jong Hoon^{*1} (¹Department of Physics, Inha University)

P2-ap.115*

Phase separation of Indium gallium oxide thin films grown by powder sputtering method in a reducing atmosphere / LIM Hyomi¹, KANG Hyon Chol^{*1} (¹Department of Materials Science and Engineering, Chosun University)

Poster Exposure Period : October 26, 09:00~17:00**Presentation (mandatory): October 26, 11:30-13:00**

Room: Exhibition Hall I

P2-ap.201*

Superlattice design of quantum-cascade lasers using artificial neural networks and genetic algorithms / KIM Jungho^{*1}, KIM Gibaek¹ (¹Department of Information Display, Kyung Hee University)

P2-ap.202*

Anomalous Raman spectrum of 1L-NiPS₃ in anti-ferromagnetic NiPS₃/FePS₃ heterostructures / NGUYEN Manh Hong¹, PARK Jeana², PARK Je-Geun², CHEONG Hyeonsik^{*1} (¹Department of Physics, Sogang University, ²Department of Physics and Astronomy, Seoul National University)

P2-ap.203*

Raman Study of low frequency magnons in NiPS₃ / CHEONG Hyeonsik^{*1}, OH Siwon¹, NA Woongki¹, PARK Pyeongjae^{2,3}, KIM Junghyun², SCHEIE Allen⁴, TENNANT David Alan⁵, PARK Je-Geun² (¹Department of Physics, Sogang University, ²Department of Physics and Astronomy, Seoul National University, ³Materials Science and Technology Division, Oak Ridge National Laboratory, USA, ⁴MPA-Q, Los Alamos National Laboratory, USA, ⁵Department of Physics and Astronomy, University of Tennessee, Knoxville, USA)

P2-ap.204

Inverse Spin Hall Effects in Noncollinear Magnetic System IrMn₃/Co / DO T. Nga¹, PHAM Trang Huyen Cao¹, NGUYEN Chi Dan¹, SONG Sehwan², PARK Sungkyun², HWANG Chan Yong³, KIM Tae Hee^{*1} (¹Department of Physics, Ewha Womans University, ²Department of Physics, Pusan National University, ³Quantum Spin Team, KRISS)

P2-ap.205*

Study on magnetodynamics of different CoGd structures using ferromagnetic resonance (FMR) / KIM Se Eun¹, KIM Yejin¹, LEE Kyungjae³, KIM Ji Min², LEE Sanghoon³, CHUNG Sunjae^{*1} (¹Department of Physics Education, Korea National University of Education, ²Department of Technology Education, Korea National University of Education, ³Department of Physics, Korea University)

P2-ap.206*

Tetragonal distortion inducing magneto-crystalline anisotropy in bcc-Fe and fcc-Ni / YOO Minjae¹, KIM Gyeonghye¹, NGUYEN Quynh Anh Thi¹, RHIM Sonny^{*1} (¹Department of Physics, University of Ulsan)

P2-ap.207*

Magneto-crystalline anisotropy of cubic Fe₄N via tetragonalization / LEE Hyunju¹, KIM Gyeonghye¹, NGUYEN Quynh Anh Thi¹, RHIM Sonny^{*1} (¹Department of Physics, University of Ulsan)

P2-ap.208*

Deep-Learning-Based Optical Design Optimization of Multilayer Thin Films / KIM Jungho^{*1}, JUNG Uijun¹ (¹Department of Information Display, Kyung Hee University)

P2-ap.209*

Spin-orbit torque switching of L1₀ FePt granular film / JEONG Dongchan¹, LIM Eunji¹, CHOI Wonyeong¹, LEE Siha¹, SEO Seongbin¹, LEE Nyunjong¹, KIM Sanghoon^{*1} (¹Department of Physics, University of Ulsan)

P2-ap.210*

Efficient Workflow of First-principles Calculations via Machine Learning / RYU Wonseok¹, HONG Suklyun^{*1} (¹Department of Physics and Astronomy, Sejong University)

P2-ap.211*

Mn_{3+x}Sn_{1-x} 박막에서 조성에 따른 자성특성의 결정학적 연구 / LEE Siha¹, CHOI Wonyeong¹, ULLAH Asif¹, IM Subin², LEE Nyun Jong¹, KIM Sanghoon^{*1} (¹Department of Physics, University of Ulsan, ²SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University)

P2-ap.212*

K-point convergence of total energy in density functional theory calculation / BYUN Jinyoung¹, PARK Ji-Sang^{*2} (¹Department of Nano Engineering, Sungkyunkwan University, ²SKKU Advanced Institute of Nanotechnology (SAINT) and Department of Nano Engineering, Sungkyunkwan University)

P2-ap.213

Development of near-edge X-ray absorption fine structure spectroscopy data processing / PARK Jae Yeon^{*1}, LEE Minwoong¹, JEONG Seong-Hoon², LEE Han-Koo² (¹Radiation Research Division, KAERI, ²Pohang Accelerator Laboratory, POSTECH)

P2-ap.214

Prediction of Ferromagnetic Phase of Fe_xO_y using Generative Adversarial Network
/ HONG Suklyun^{*1}, KIM Yunjae¹, RYU Wonseok¹ (¹Department of Physics and
Astronomy, Sejong University)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-ap.301*

Enhancing Device Performance through Vertical Organic Diodes and Organic Permeable Base Transistors (OPBTs) / CHO Hongrae¹, KIM Chang-Hyun¹ (¹School of Electronic Engineering, Gachon University)

P2-ap.302*

The Post-annealing Induced Enhancement of Vacuum Deposited Green Perovskite Light-emitting Diode / KIM Junho¹, JUNG Na Eun¹, CHOI Nagyeong¹, PARK Jeehong¹, YI Yeonjin¹ (¹Department of Physics, Yonsei University)

P2-ap.303

Nanostructure engineering in organic semiconductor devices toward interface matching / BOK Moonjeong^{1,2}, WANG SHAOCHUAN¹, WAN XINYUE¹, JEONG Jun-Ho², LIM EunJu¹ (¹Department of Creative Convergent Manufacturing Engineering, Dankook University, ²Nano Manufacturing Technology, Korea Institute of Machinery and Materials)

P2-ap.304*

Changing raman signal of Fine matter by local thermal effect of gold nanoparticles / HONG Minji¹, KIM Hyunwoo², KIM Kyoung-Ho¹ (¹Department of Physics, Chungbuk National University, ²Drug Discovery Platform Research Center, KRICT)

P2-ap.305

TiO₂를 활용한 폴리우레탄 폼의 내환경성 개선 연구 / YOO Jihoon³, HONG Woo Tae², BHARAT Lankamsetty Krishna², JUNG Jae Yong², PARK JinYoung¹, YANG Hyun Kyoung^{1,2,3} (¹Interdisciplinary Graduate Program of Artificial Intelligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, ²Marine-Bionics convergence technology center, Pukyong National University, ³Department of Electrical, Electronics and Software Engineering, Pukyong National University)

P2-ap.306

Mid Infrared molecular sensing using localized surface plasmon resonance in Si nanowire / KIM Kyoung-Ho¹, JEONG Daseul¹, JAHNG Junghoon² (¹Department of Physics, Chungbuk National University, ²Hyperspectral Nano-imaging Lab, KRISS)

P2-ap.307*

Enhancing Performance and Stability of Inverted Perovskite Solar Cells through Fluorine-Based Lewis Acid Doping in the Hole Transport Layer / MURUGAN Santhosh¹, LIU Xuewen¹, LEE Eun-Cheol^{*1} (¹Department of Physics, Gachon University)

P2-ap.308*

NIR 대역 PPG, BFI 신호 기반 비침습적 혈중 글루코스 농도 예측 모델 개발 / LEE Kijoon^{*1}, KIM Junho¹, KANG Gwanghui¹, CHUNG Haelk¹, RHEE Taeseong¹, PARK Jaeyoon¹ (¹Department of Information and Communication Engineering, DGIST)

P2-ap.309

Dopant-free poly[bis(4-phenyl)(2,4,6-trimethylphenyl)amine] hole transport layer for perovskite solar cells: Simple heterocyclic compound as precursor solvent / LEE Eun-Cheol^{*1}, LIU Xuewen¹ (¹Department of Physics, Gachon University)

P2-ap.310*

A photoemission study on the electronic properties of two-dimensional metal organic chalcogenolates / KIM Seunghwan^{1,2}, KIM Kitae^{1,2,4}, KIM Wonsik¹, KWON Namhee¹, SHIN Dongguen³, YI Yeonjin^{2,4}, PARK Soohyung^{*1} (¹Advanced Analysis Center, KIST, ²Department of Physics, Yonsei University, ³Department of Physics, Chonnam National University, ⁴Van der Waals Materials Research Center, Yonsei University)

P2-ap.311

Fabrication and investigation of optical properties of In₂Se₃ thin films / KIM Young Dong^{*1}, KIM Tae Jung¹, NGUYEN Xuan Au¹, LE Van Long² (¹Department of Physics, Kyung Hee University, ²Institute of Materials Science, Vietnam Academy of Science and Technology, Vietnam)

P2-ap.312

Variational Quantum Eigensolver Implementation with a SKKU Superconducting Qubit Device / KIM Youngdu¹, YEO Hwan-seop¹, CHOI Beomgyu¹, WOO Seungwook¹, PARK Jongwon¹, CHO Dongki¹, KIM Jeongwon¹, CHONG Yonuk^{*1} (¹Department of Nano Engineering, Sungkyunkwan University)

P2-ap.313

Predicting Qubit Parameters from Room-temperature Characterization / CHOI Beomgyu¹, KIM Youngdu¹, PARK Jongwon¹, CHOI Gahyun², CHOI Jiman², WOO Seungwook¹, KIM Jeongwon¹, CHO Dongki¹, YEO Hwan-Seop¹, LEE Yong-Ho², CHONG Yonuk^{*1} (¹Department of Nano Engineering, Sungkyunkwan University, ²Center of Superconducting Quantum Computing Systems, KRISS)

P2-ap.314*

Cat state generation with desired fidelity and time by optimizing parameter configuration using a lookup graph / KIM Jeongwon¹, WOO Seungwook¹, KIM Dongho², CHONG Yonuk^{*1} (¹Department of Nano Engineering, Sungkyunkwan University, ²AINano Engineering, POSCO holdings)

P2-ap.315*

Ion-gel gate induced molecular level modulation in mixed molecular vertical junctions / KIM Donguk¹, 이창준¹, SONG Minwoo¹, NAM Jongwoo¹, LEE Hyemin¹, LEE Takhee^{*1} (¹Department of Physics and Astronomy, Seoul National University)

P2-ap.316

Photoelastic coefficient of Au thin films measured by a modified spectroscopic rotating polarizer ellipsometer / KIM Jiwan^{*1}, SHIN Yooleemi¹ (¹Department of Physics, Kunsan National University)

P2-ap.317

Luminescent behavior of Mn⁴⁺ doped Mg₂TiO₄ deep-red emitting phosphors for LED and latent fingerprint visualization application / PARK Jinyoung¹, YOO Jihoon², HONG Woo Tae³, BHARAT Lankamsetty Krishna³, JUNG Jae Yong³, YANG Hyun Kyoung^{*1,2,3}, MOON Byung Kee⁴ (¹Department of Electrical, Electronics and Software Engineering, Pukyong National University, ²Interdisciplinary Graduate Program of Artificial Intelligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, ³Marine-Bionics convergence technology center, Pukyong National University, ⁴Department of Physics, Pukyong National University)

P2-ap.318

Thermal stability improvement in rare-earths-doped sodium gadolinium orthovanadate with post-transition metal doping / BHARAT Lankamsetty Krishna¹, YOO Jihoon², HONG Woo Tae¹, JUNG Jae Yong¹, PARK Jinyoung³, YANG Hyun Kyoung^{*1,2,3}, MOON Byung Kee⁴ (¹Marine-Bionics Convergence Technology Center, Pukyong National University, ²Interdisciplinary Graduate Program of Artificial Intelligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, ³Department of Electrical, Electronics and Software Engineering, Pukyong National University, ⁴Department of Physics, Pukyong National University)

P2-ap.319

Flexible metamaterial based on graphene-conductive inks for broadband perfect absorption / PHAM Thanh Son^{3,2,1}, LEE Young Pak^{*3,1,5}, ZHENG Haiyu^{3,1}, BUI Son Tung², BUI Xuan Khuyen², VU Dinh Lam⁴ (¹Alpha ADT, ²Institute of Materials Science, Vietnam Academy of Science and Technology, Vietnam, ³Hanyang University, ⁴Graduate University of Science and Technology, Vietnam Academy of Science and Technology, Vietnam, ⁵Department of Optical Science and Engineering, Fudan University, China)

P2-ap.320*

Growth and characterization of ultrathin single-crystalline two-dimensional Ruddlesden-Popper phase halide perovskite / YOU Seungyun¹, PAK Sooyeon¹, KIM Kitae^{1,2,4}, KIM Wonsik¹, KWON Namhee¹, KIM Seunghwan^{1,2}, SHIN Dongguen³, PARK Soohyung^{*1} (¹Advanced Analysis Center, KIST, ²Department of Physics, Yonsei University, ³Department of Physics, Chonnam National University, ⁴Van der Waals Materials Research Center, Yonsei University)

P2-ap.321*

Hyper Raman scattering in two-dimensional halide perovskite (C₆H₅C₂H₄NH₃)₂PbI₄ under resonant two-photon excitation / JANG Joon Ik^{*1}, SHIN Seunghan¹ (¹Department of Physics, Sogang University)

P2-ap.322*

Measurement of OLED AC impedance and modeling of equivalent circuits / PARK Joon hyung¹, SHIN Ye Ji¹, JEON Yongmin¹, KIM Chang-Hyun^{*1} (¹School of Electronic Engineering, Gachon University)

P2-ap.323*

Investigating the role of organic spacers on energy level alignment at interfaces in two-dimensional organic-inorganic hybrid Ruddlesden-Popper perovskites / YOON Eunki¹, HA Aelim¹, KIM Kitae^{1,2,4}, KIM Wonsik¹, KWON Namhee¹, KIM Seunghwan^{1,2}, SHIN Dongguen³, PARK Soohyung^{*1} (¹Advanced Analysis Center, KIST, ²Department of Physics, Yonsei University, ³Department of Physics, Chonnam National University, ⁴Van der Waals Materials Research Center, Yonsei University)

P2-ap.324*

Integration of In-situ Core/Shell Perovskite for Improved Photodetection Performance of MoS₂ photodetector / SIM Jinwoo¹, RYOO Sunggyu¹, KIM JooSung², JANG Juntae¹, LEE Tae-Woo^{*2}, LEE Takhee^{*1} (¹Department of Physics and Astronomy, Seoul National University, ²Department of Materials Science and Engineering, Seoul National University)

P2-ap.325

산소분위기 하에서 홀센서 맥박계와 광혈류측정기를 이용하여 측정한 말초혈류속도와 산소포화도의 특성 연구 / LEE Sang Suk^{*1}, CHOI Rak Gun¹, KIM Won Tae¹, SHIN Myung Woo¹, CHOI Jong Gu¹, HASAN Mahbub¹ (¹Department of Digital Healthcare Engineering, Sangji University)

P2-ap.326*

Simulation and Experiment of Organic Anti-Ambipolar Transistor / KIM Yeo Eun¹, KIM Chang-Hyun^{*1} (¹School of Electronic Engineering, Gachon University)

P2-ap.327*

Advancing OFETs on SiO₂ Substrates through Inkjet Printing / BAE Jisuk¹, KIM Chang-Hyun^{*1} (¹School of Electronic Engineering, Gachon University)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-as.001

Antarctic ice simulation studies of ice properties using IceCube Upgrade camera system / LEE Jiwoong^{*1}, ROTT Carsten^{1,2}, TOENNIS Christoph¹, CHOI Seowon¹, SEO Minyeong¹, SHIN Minji¹, OH Yubin¹, KIM Yoonyoung¹, RODAN Steve¹ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics and Astronomy, University of Utah, USA)

P2-as.002*

Production and Test Results of the IceCube Upgrade Camera System / CHOI Seowon^{*1}, ROTT Carsten^{1,2}, TöNNIS Christoph¹, RODAN Steven Thomas¹, LEE Jiwoong¹, SEO Minyeong¹, SHIN Minji¹, KIM Yoonyoung¹ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics and Astronomy, University of Utah, USA)

P2-as.003*

Deployment Hole Ice Study with the IceCube Upgrade Camera System / SHIN Minji^{*1}, ROTT Carsten^{1,2}, TöNNIS Christoph¹, RODAN Steven¹, CHOI Seowon¹, LEE Jiwoong¹, SEO Minyeong¹, OH Yubin¹, KIM Yoonyoung¹ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics and Astronomy, University of Utah, USA)

P2-as.004

Geometry Measurement using camera system for the IceCube Upgrade / SEO Minyeong^{*1}, ROTT Carsten^{1,2}, CHRISTOPH Toennis¹, RODAN Steven Thomas¹, LEE Jiwoong¹, CHOI Seowon¹, SHIN Minji¹, OH Yubin¹, KIM Yoonyoung¹ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics and Astronomy, University of Utah, USA)

P2-as.005

Long Exposure Time Verification for the IceCube Upgrade Camera System / KIM Yoonyoung^{*1}, ROTT Carsten^{1,2}, CHRISTOPH Toennis¹, RODAN Steven Thomas¹, LEE Jiwoong¹, CHOI Seowon¹, SEO Minyeong¹, SHIN Minji¹, OH Yubin¹ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics and Astronomy, University of Utah, USA)

P2-as.006

Visualization of trajectories in gravitational fields as geodesic: Focused on Kepler problems / CHO Suho¹, KANG Hyosang^{*1}, KIM Hyeongjun¹, KIM Jaeseok¹, KIM Mingun¹, SUNG Hyungue David¹ (¹School of Undergraduate Studies, DGIST)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-at.001

Electromagnetically induced absorption and transparency of a degenerate two-level system in Rb atoms with circularly polarized laser beams: Effects of neighboring transitions / HASSAN Aisar UI¹, NOH Heung-ryoul², KIM Jin-Tae^{*1} (¹Department of Photonic Engineering, Chosun University, ²Department of Physics, Chonnam National University)

P2-at.002

Effects of neighboring transitions on electromagnetically induced absorption and transparency of a degenerate two-level system in ⁸⁷Rb atoms with respect to varying hyperfine spacings / HASSAN Aisar UI¹, NOH Heung-Ryoul², KIM Jin-Tae^{*1} (¹Department of Photonic Engineering, Chosun University, ²Department of Physics, Chonnam National University)

P2-at.003

Modulation Transfer Spectroscopy for D1 transition of Rb atoms / KHAN Shabraz¹, HASSAN Aisar-ul¹, NOH Heung-ryoul², KIM Jin-Tae^{*1} (¹Department of Photonic Engineering, Chosun University, ²Department of Physics, Chonnam National University)

P2-at.004*

Towards Laser Cooling of MgF Molecules: Building a Hermetic 2nd Repump Laser / LEE Giseok¹, YOO Changhyuk¹, CHAE Eunmi^{*1} (¹Department of Physics, Korea University)

P2-at.005*

Laser frequency stabilization in the 10⁻¹⁴ Level by optimizing Modulation Transfer Spectroscopy on the ⁸⁷Rb D₂ Line / LEE Sang Bum^{*1}, LEE Sanglok^{1,2}, MOON Geol², PARK Sang Eon¹, HONG Hyun-Gue¹, LEE Jae Hoon¹, KWON Taeg Yong¹, SEO Sangwon¹ (¹Center for Time and Frequency, KRISS, ²Department of Physics, Chonnam National University)

P2-at.006*

Numerical study of a hybrid superradiant optical clock with zero frequency pulling coefficient / JEON Mingyu¹, AN Kyungwon^{*1} (¹Department of Physics and Astronomy, Seoul National University)

P2-at.007*

Photon-counting heterodyne spectroscopy of a superradiant laser / HA Junseo¹, OH Seunghoon¹, AN Kyungwon^{*1} (¹Department of Physics and Astronomy, Seoul National University)

P2-at.008

Study of anharmonic and resonance effects in IR spectra of atmospheric gas complexes / BHARTI Swati¹, PARK Young Choon¹, SONG Mi Young^{*1} (¹KFE)

P2-at.009*

Manifestation of Laser Resonance Chromatography on Lu⁺ ions / KIM Eunkang^{*1,2,4}, BLOCK Michael^{1,2,3}, JANA Biswajit^{1,2}, RAEDER Sebastian^{2,3}, RAMANANTOANINA Harry¹, RICKERT Elisabeth^{1,2,3}, ROMERO Elisa Romero^{1,2,3}, LAATIAOUI Mustapha^{1,2} (¹Department of Chemistry, Johannes Gutenberg University of Mainz, Germany, ²SHE, Helmholtz-Institut Mainz, Germany, ³Schwerionenforschung, GSI Helmholtzzentrum, Germany, ⁴Department of Chemistry, UNIST)

P2-at.010

Mode-hop assisted single beam all-optical atomic magnetometer / JIHOON Yoon¹, JEONG Taek^{*1}, LEE Sangkyung¹, YIM Sin Hyuk¹, HONG Sanghyuk¹ (¹Quantum Physics Technology Directorate, Agency for Defense Development)

P2-at.011

Optimization of Saddle Coil for Uniform Magnetic Field in Atomic Magnetometer Experiment / HONG Sanghyuk¹, JEONG Taek^{*1}, LEE Sangkyung¹, YIM Sin Hyuk¹, YOON Ji Hoon¹ (¹Quantum Physics Technology Directorate, Agency for Defense Development)

P2-at.012

Vapor cell oven design and simulation for spin-exchange relaxation-free magnetometer / LEE Minhwan^{1,2}, JOE Jaebong^{1,2}, LEE Sanglok^{1,3}, BAEK Jaek^{1,2}, PARK Sanghyun^{1,2}, MOON Geol^{*1,2} (¹Department of Physics, Chonnam National University, ²Center for Quantum Technologies, Chonnam National University, ³Time and Frequency Group, KRISS)

P2-at.013

Long-term polarization stabilization of a polarization maintaining fiber by dynamic temperature control / PARK Sanghyun^{1,2}, BAEK Jaeuk^{1,2}, LEE Minhwan^{1,2}, MOON Geol^{*1,2} (¹Department of Physics, Chonnam National University, ²Center for Quantum Technologies, Chonnam National University)

P2-at.014*

Polarization-selective four-wave mixing signals in degenerate multi-level system of ⁸⁵Rb cooling transition line / BAEK Jaeuk^{1,2}, PARK Sanghyun^{1,2}, LEE Minhwan^{1,2}, MOON Geol^{*1,2}, NOH Heung Ryoul^{*1,2} (¹Department of Physics, Chonnam National University, ²Center for Quantum Technologies, Chonnam National University)

P2-at.015*

Trap parameters measurement of ¹³³Cs cold atoms / KHAN Sibghat Ullah^{1,2}, BAEK Jaeuk^{1,2}, PARK Sanghyun^{1,2}, LEE Minhwan^{1,2}, MOON Geol^{*1,2} (¹Department of Physics, Chonnam National University, ²Center for Quantum Technologies, Chonnam National University)

P2-at.016*

Low-frequency electric field measurement using Rydberg Stark spectroscopy / PARK Seonghyeon^{*1}, KIM Kiwoong^{*1} (¹Department of Physics, Chungbuk National University)

P2-at.017*

광펌핑 원자 자력계 Free Induction Decay 신호의 고속 주파수 계수법 개발 / YUN Seha¹, KIM Kiwoong^{*1} (¹Department of Physics, Chungbuk National University)

P2-at.018

Towards quantum-enhanced sensing: generation of two-mode squeezed light from four-wave mixing in hot ⁸⁵Rb vapor / SIM Gisung¹, KIM Heewoo¹, MOON Han Seb^{*1} (¹Pusan National University)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-co.101*

Polarization-optimized tip-enhanced strong coupling of single quantum dots / BAE Jinhyuk¹, LEE Hyeongwoo¹, KIM Byoung Jae², JEONG Sohee², LIM Jaehoon², PARK Kyoung-Duck^{*1} (¹Department of Physics, POSTECH, ²Department of Energy Science, Sungkyunkwan University)

P2-co.102

Nb Josephson junctions fabricated using helium ion beam / KIM Jisu¹, KIM Younghyun¹, KIM Taeheui², AN Sung Jin^{1,2}, KIM Hakseong³, BAE Myung-Ho³, SEO Jungpil¹, JUNG Minkyung^{*2,4} (¹Department of Physics and Chemistry, DGIST, ²Department of Nanotechnology, DGIST, ³KRISS, ⁴Department of Interdisciplinary Engineering, DGIST)

P2-co.10

Gate-dependent transport properties near the electrical phase transitions in Mo_{0.67}W_{0.33}Se₂ devices with dual gates / KIM Wusin^{*1}, KIM Minsik², BAE Myungho², KIM Ju Jin¹ (¹Department of Physics, Chonbuk National University, ²Division of Physical Metrology, KRISS)

P2-co.104*

Gate-tunable supercurrent in Ti nanowire / KIM Pyeong Kang¹, JANG Yeongmin¹, KIM Nam-Hee¹, DOH Yong-Joo^{*1} (¹Department of Physics and Photon Science, GIST)

P2-co.105*

Fabrication technique for twisted double-bilayer graphene device without deformation of the superlattice pattern / LEE Gil-Ho^{*1}, JEONG Hyeonwoo¹, WATANABE Kenji², TANIGUCHI Takashi² (¹Department of Physics, POSTECH, ²Material science, NIMS)

P2-co.106

Waveguide in Strained Zigzag Graphene Nanoribbon / JUN Seunghyun¹, MYOUNG Nojoon^{*1} (¹Department of Physics Education, Chosun University)

P2-co.107

Degenerated energy states induced by geometrical symmetry in a rectangular quantum dot / SEON Woo Hyeon^{*1}, PARK Gyutae^{*1}, KIM Uhjin², LEE Seokyeong³, CHUNG Yun Chul¹, CHOI Hyoungsoon³, CHOI Hyungkook² (¹Department of Physics, Pusan National University, ²Department of Physics, Jeonbuk National University, ³Department of Physics, KAIST)

P2-co.108*

The modulation of the electronic band profile of the two dimensional layered materials in the Fermi level pinned and depinned contacted devices / KIM Mingue^{*1}, BAE Myung-Ho², KIM Ju Jin¹ (¹Department of Physics, Jeonbuk National University, ²Division of Physical Metrology, KRISS)

P2-co.109

박막에서 쌍결정 경계 (twin boundary)의 조절 연구 / KIM Su Jae², LEE Yousil³, KIM Nahee¹, JANG Insu¹, JEONG Se Young^{*1} (¹Department of Optics and Mechatronics engineering, Pusan National University, ²Crystal Bank Research Institute, Pusan National University, ³주식회사 씨아이티 기업부설연구소)

P2-co.110*

Orientation-dependent structural properties of CoO films studied using polarized XAFS / HAN Sang-Wook^{*3}, HWANG In-Hui¹, STAN Liliana², YU Chae-Hyun³, KANG Joon-Ho³, SUN Cheng-Jun¹ (¹X-ray Science Division, Advanced Photon Source, Argonne National Laboratory, USA, ²Center for Nanoscale Materials, Argonne National Laboratory, USA, ³Department of Physics Education, Jeonbuk National University)

P2-co.111*

Collapse of 2 x 1 insulating dimer state in monolayer 1T-IrTe₂ by Rb dosing / LEE Mingyung¹, HWANG Jinwoong^{*1} (¹Department of Physics, Kangwon National University)

P2-co.112

Effects of post annealing on phase of PbTiO₃ nanotubes / CHO Sam Yeon¹, KIM Eun-Young¹, BU Sang Don^{*1} (¹Department of Physics, Jeonbuk National University)

P2-co.113

Surface and Interface Characterization of Thin Films by Neutron Reflectivity / LEE June Hyuk^{*1} (¹Neutron Science Division, KAERI)

P2-co.114*

Surface photovoltaic effect on pristine and K adsorbed MoS₂ surface / LEE Wonhui¹, LEE Sangsoo¹, LEE Geun Seop^{*1} (¹Department of Physics, Inha University)

P2-co.115

Sample preparation in UHV for STM measurements / HOMMEL Caroline^{*1}, SPREE Lukas Emanuel¹, CHOI Dasom¹, COLAZZO Luciano¹ (¹Center for Quantum Nanoscience, Ewha Womans University)

P2-co.116

Two-Dimensional Networks of Biphenyl with OH Ligands on Au(111) Studied by Scanning Tunneling Microscopy / KANG Min-Jeong¹, CHANG Min Hui¹, KAHNG Se-Jong^{*1} (¹Department of Physics, Korea University)

P2-co.117*

Dirac cone in 1T-VS₂ single crystals / KHIM Min Cheol^{1,2}, KIM Hyuk Jin¹, CHOI Byoung Ki³, RHEE Tae Gye^{1,2}, LEE Sunghun⁴, CHANG Young Jun^{*1,2,5} (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul, ³Advanced Light Source, Lawrence Berkeley National Lab, ⁴Department of Physics and Astronomy, Sejong University, ⁵Department of Intelligent Semiconductor Engineering, University of Seoul)

Poster Exposure Period : October 26, 09:00~17:00**Presentation (mandatory): October 26, 11:30-13:00**

Room: Exhibition Hall I

P2-co.201

Investigations of thermoelectric properties of different gallium nitride polytypes through first-principles approach / UL HAQ Bakhtiar¹, KHADKA I.B.¹, KIM Se-Hun^{*1} (Jeju National University)

P2-co.202*

Magnetic Order Classification of Pyrochlore Iridates by Machine Learning / JANG Yerin¹, KIM Choong Hyun^{2,3}, GO Ara^{*1} (¹Department of Physics, Chonnam National University, ²Center for Correlated Electron Systems, IBS, ³Department of Physics and Astronomy, Seoul National University)

P2-co.203*

Prediction of Lattice thermal conductivity of material applied at power semiconductor with Machine learning force field and ab-initio molecular dynamics / PARK Kwanhong¹, LEE Byeongho¹, KIM Sungmoon¹, HWANG Seungjae¹, SHIN Mujin¹, HWANG Jaejin¹, JIN Yeongrok¹, LEE Jaekwang^{*1} (¹Department of Physics, Pusan National University)

P2-co.204

Electronic structures of graphene/MoSSe/hBN heterostructure using First-Principle Calculation / YUN Junho¹, KIM Yunjae¹, SUNG Dongchul¹, HONG Suklyun^{*1} (¹Department of Physics and Astronomy, Sejong University)

P2-co.205

Electronic structure and Landau level spectrum of lattice-relaxed twisted triple-bilayer graphene / JUNG Jeil^{*1,2}, JHARAPLA Prathap Kumar¹, LECONTE Nicolas¹, SHAFULLAH Md^{1,2} (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul)

P2-co.206*

Commensuration torques and lubricity in double moire twisted trilayer hexagonal boron nitride and graphene heterostructures / PARK Youngju¹, LECONTE Nicolas¹, JHARAPLA Prathap Kumar¹, SHAFULLAH Md^{1,2}, JUNG Jeil^{*1,2} (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul)

P2-co.207*

Layer Antiferromagnetic State in Extended Hubbard Corrected Tight-binding Model of Rhombohedral Stacked Few-layer Graphene / LEE Dongkyu^{1,2}, JUNG Jeil^{1,2} (¹Department of Physics, University of Seoul, ²Department of Smart Cities, University of Seoul)

P2-co.208

Simulation of Transverse Field Ising Chain Model: A Comparative Study Using DMRG and Exact Solution / CHA Jeonghyeok¹, KIM Heung-Sik^{*1} (¹Department of Physics, Kangwon National University)

P2-co.209

Thermoelectric properties of a novel half-Heusler compounds NbRuX (X = Sb and Bi) / YUN Won Seok¹, LEE Hyeon-Jun¹, KIM June-Seo¹, LEE Myoung-Jae¹, HAN Sang Wook² (¹Division of Nanotechnology, Convergence Research Institute, DGIST, ²Basic Science Research Institute and EHSRC, University of Ulsan)

P2-co.210

Revisiting LaMnO₃: density functional theory study / LEE Juhyeon¹, KIM Bongjae^{*1} (¹Department of Physics, Kunsan National University)

P2-co.211*

Crystal structures of bismuth oxides in varying oxidation states: a first-principles study / KWON Young-Kyun¹, SONG Jihoon¹ (¹Department of Physics, Kyung Hee University)

P2-co.212*

Systematic first-principles study of magnetism in 2D monolayer transition metal dichalcogenides family / CHA Yuhyun¹, KIEM Do Hoon¹, HAN Myung Joon^{*1} (¹Department of Physics, KAIST)

P2-co.213*

Ab initio study on the electronic structures of multi-layered graphene with various stacking sequences / KWON Young-Kyun¹, KANG Seoung-Hun², KIM Sangwan¹ (¹Department of Physics, Kyung Hee University, ²Materials Science and Technology Division, Oak Ridge National Laboratory)

P2-co.214*

Supervised machine learning approach for the detection of multiple nanobubbles in graphene / KIM Subin¹, MYOUNG Nojoon², GO Ara^{*1} (¹Department of Physics, Chonnam National University, ²Department of Physics Education, Chosun University)

P2-co.215*

Bath parameter fitting of hybridization function: database construction for machine learning / KIM Taeung¹, GO Ara^{*1} (¹Department of Physics, Chonnam National University)

P2-co.216*

Machine-learning models for band gap of kesterite materials based on hybrid density functional theory / LEE Donggeon², KIM Sooran^{*1}, PARK Ji-Sang^{*3} (¹Department of Physics Education, Kyungpook National University, ²Department of Physics, Kyungpook National University, ³SKKU Advanced Institute of Nanotechnology (SAINT) and Department of Nano Engineering, Sungkyunkwan University)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-op.001커 렌징 효과를 이용한 Yb:CALGO 펄스 레이저 제작 및 특성 분석 / SON Sang-Cheol¹, YEE Ki-Ju¹ (¹Department of Physics, Chungnam National University)**P2-op.002***Design of fs Ti:sapphire laser oscillator with LD pumping / GO Namseok¹, YEO Junyeob¹, NAM Inhyuk², KWON Seong-Hoon² (¹Department of Physics, Kyungpook National University, ²PAL-XFEL, Pohang Accelerator Laboratory)**P2-op.003**이중 파장대역을 이용한 초분광 단층 영상 / KIM Hyun Seong¹, LEE Seung Seok¹, CHOI Eun Seo¹ (¹Department of Physics, Chosun University)**P2-op.004***바이오 리액터 모니터링 시스템을 위한 소구경 현미경 광학계 개발 / PARK Doo Jae^{*1}, BYUN Dong Hu¹, SONG Jin Ha¹, LIM Ga Hyun¹, JUNG Jun Yeong¹ (¹School of Nano Convergence Technology, Hallym University)**P2-op.005***Thickness Characterization of SiO₂/Si Wafers Using a Rotating Compensator-Type Spectroscopic Ellipsometer / LEE Heewoo¹, CHOI Soo Bong^{*1} (¹Department of Physics, Incheon National University)**P2-op.006***Phase shifting lateral scanning white light interferometry / CHOI Soo Bong^{*1}, IM Jaeseung¹ (¹Department of Physics, Incheon National University)**P2-op.007**PEDOT:PSS Film with Brij C10-additive Characterized by THz-TDS / SONG Sujin¹, CHOI Seungsun¹, JEONG Jeeyoon^{*1} (¹Department of Physics, Kangwon National University)

P2-op.008

muticycle 15 THz generation from lithium-niobate wafers using 150TW laser / KIM Hyeongmun^{1,2}, ROH Yulan¹, KIM Sang Beom¹, JANG Dogeun³, KIM Young-Il¹, KIM Gyeong-Ryul¹, BARK Hyeon Sang¹, KEE Chul Sik¹, LEE Joogn Wook², KIM Ki Yong⁴, KANG Chul^{*1} (¹Advanced Photonics Research Institute, GIST, ²Department of Physics, Chonnam National University, ³XFEL beamline, Pohang Accelerator Laboratory, ⁴Institute for research in Electronics and Applied Physics, University of Maryland, USA)

P2-op.009

테라헤르츠 분광법을 이용한 니켈크롬박막의 전기적 특성 연구 / OH Seung Jae^{*1}, MAENG Inhee¹, JI Young Bin², BARK Hyeon Sang³ (¹YUHS-MCRI, Yonsei University Health System, ²Gimhae Biomedical Center, Gimhae Biomedical Industry Promotion Agency, ³Advanced Photonics Research Institute, GIST)

P2-op.010

Terahertz microcavities for studies on interaction between excitons and phonon-polaritons / JEONG Jeeyoon^{*1}, HO SUNG Jeong¹ (¹Department of Physics, Kangwon National University)

P2-op.011*

Terahertz metamaterial lens by 3D printing / JANG Dahye¹, RYU Heonseong¹, LEE Sang-Hun^{*1} (¹Department of Optical Engineering, Kumoh National Institute of Technology)

P2-op.012*

Nanostructuring PEDOT using maskless photolithography / YEO Sebin¹, LEE Seung Hyun¹, CHOI Min¹, LEE Hyun Seok¹, KANG Evan S Hyunkoo^{*1} (¹Department of Physics, Chungbuk National University)

P2-op.013

Ultrastrong Phonon-Photon Coupling in Terahertz Nano-Slots with Dual Resonances / CHAE Min Jun¹, JEONG Jeeyoon^{*1} (¹Department of Physics, Kangwon National University)

P2-op.014

Surface Lattice Resonance using Organic Excitonic Nanoantennas / JEON Inho¹, KANG Evan S Hyunkoo^{*1} (¹Department of Physics, Chungbuk National University)

P2-op.015*

실리콘 광집적회로에 구현된 pin diode의 자발적 방출에 기반한 quantum random number generator / LEE Wook-Jae^{*1,2}, 송유리², 전상범¹, 이준희¹, 이병근¹, 이기원^{1,2}, 김용기^{1,2} (¹Department of Physics, Kongju National University, ²Department of Data Information and Physics, Kongju National University)

P2-op.016*

Brillouin scattering by surface phonon vibration via High-Q On-Chip Microresonator / LEE Hansuek^{*1}, KIM Dohyeong¹, SUK Daewon² (¹Department of Physics, KAIST, ²Graduate School of Nanoscience and Technology, KAIST)

P2-op.017

Optical spin Hall effect in out-of-plane refraction / LEE Yeon Ui^{*1}, PARK Dong Hee¹, JOO Bin Chan¹ (¹Department of Physics, Chungbuk National University)

P2-op.018*

Anomalous double peaks in non-coupled organic films with Fabry-Perot cavity / JEONG Yeojun¹, LEE Hojun¹, KANG Evan S Hyunkoo^{*1} (¹Department of Physics, Chungbuk National University)

P2-op.019*

Strong plasmon-exciton coupling using Ag nanodisk array and TDBC / LEE Hojun¹, KANG Evan S Hyunkoo^{*1} (¹Department of Physics, Chungbuk National University)

P2-op.020

자율주행 자동차용 LiDAR기기 개발에 응용을 위한 광위상배열 소자 연구 / SON Seong-Jin¹, YU Nan Ei^{*1} (¹APRI, GIST)

P2-op.021

1차원 센서를 사용하는 D-ToF 방식 Mechanical type LiDAR 수신부 광학계의 Ghost 분석 / PARK Hyemi^{*1}, KIM Taekyung¹, KIM Daeguen¹, KIM Hoyoung¹ (¹Convergence components Lab, LG Innotek)

P2-op.022

Correlation between wettability and core thickness and contact lens tensile strength / HA Byungho¹, KIM Ki Hong^{*1} (¹Department of Optometry & Vision Science, Daegu Catholic University)

P2-op.023*

Single Photon Emitters of Chemical Treated WSe₂ / JANG Junwon¹, LEE Jae-Ung^{*1} (¹Department of Physics, Ajou University)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-pa.001*

Development of Jet-based MET correction at Level-1 trigger for the CMS Phase-II upgrade / GOH Junghwan^{*1}, OH Junwon¹, MOON Chang-Seong², HONG Jieun², HERWIG Christian³ (¹Department of Physics, Kyung Hee University, ²Department of Physics, Kyungpook National University, ³FNAL, Fermilab, USA)

P2-pa.002*

Development of the antiproton buncher test system for Antiproton trap of the GBAR experiment and its SIMION simulation. / WON Donghwan¹, KIM Sun Kee^{*1}, KIM Bongho², LEE Byungchan¹, PARK Kwanhyung¹, JANG Sangcheol¹, CHUNG Moses³, YU Kyunghoon³, KIM Eun San⁴, LIM Eunhoon⁴ (¹Department of Physics and Astronomy, Seoul National University, ²Center for Underground Physics, IBS, ³Department of Physics, UNIST, ⁴Department of Accelerator Science, Korea University)

P2-pa.003*

Study of characteristics of Low Gain Avalanche Detector (LGAD) sensors / MOON Chang-Seong^{*1}, KIM Jongyeob¹, NAM Hogyeong¹, LEE Jaewon¹, HONG Byeongjin², YOO Jaehyeok², LEE Kyungmin² (¹Department of Physics, Kyungpook National University, ²Department of Physics, Korea University)

P2-pa.004

KDAR neutrino search in JSNS² / YEO Insung², JANG Jee-Seung^{*1}, JOO K. K.³, KIM J. Y.³, LIM I. T.³, MOON D. H.³, PARK Y. G.³, PARK H. W.³, KIM E. J.⁴, CHOI J. H.², PAC M. Y.², PARK J. S.⁵, KIM W.⁵, GOH J.⁶, HWANG W.⁶, YOO C.⁶, JANG H. I.⁷, CHOI J. Y.⁷, KANG S. K.⁸, CHEOUN M. G.⁹, LEE C. Y.⁹, JUNG D. E.¹⁰, YU I.¹⁰ (¹Department of Physics and Photon Science, GIST, ²Laboratory for High Energy Physics, Dongshin University, ³Department of Physics, Chonnam National University, ⁴Division of Science Education, Jeonbuk National University, ⁵Department of Physics, Kyungpook National University, ⁶Department of Physics, Kyung Hee University, ⁷Department of Fire Safety, Seoyeong University, ⁸School of Liberal Arts, Seoul National University of Science and Technology, ⁹Department of Physics, Soongsil University, ¹⁰Department of Physics, Sungkyunkwan University)

P2-pa.005

A performance study of small scale computing clusters using a new benchmark scheme dedicated to particle experiments / KIM Doris Yangsoo^{*1}, AN Jihun¹, KWON Youngjoon^{*2}, KIM Yongkyu² (¹Department of Physics, Soongsil University, ²Department of Physics, Yonsei University)

P2-pa.006*

Non thermal leptogenesis in PQ Higgs pole inflation / LEE Hyun Min^{*1}, SONG Jun Ho¹, MENKARA Adriana Guerrero¹, SEONG Myeong Joong¹ (¹Department of Physics, Chung-Ang University)

P2-pa.007*

Event generation for millicharged particle search at Fermilab / YOO Jae Hyeok^{*1}, HWANG Insung¹, TSAI Yu-Dai² (¹Department of Physics, Korea University, ²Department of Physics, UC Irvine, USA)

P2-pa.008

Development of MC generation on HPC for LHC / BANG Junhyeong¹, GOH Junghwan^{*1} (¹Department of Physics, Kyung Hee University)

P2-pa.009

Analysis of lithium pollution reduction of lithium charge stripper by using skimner / KANG Tae Uk^{*1}, KIM Hee Reyoung¹ (¹Department of Nuclear Engineering, UNIST)

P2-pa.010

Pomeron-CQM Model of J/psi photoproduction including the final-state interaction / KIM Hong Joo^{*1}, S Sakinah¹ (¹Department of Physics, Kyungpook National University)

P2-pa.011*

Pre-Kicker study in JSNS² experiment / PARK Hyeon Woo^{*1}, HWANG Wonsang², JOO K.K.¹, KIM J.Y.¹, LIM I.T.¹, MOON D.H.¹, PARK R.G.¹, KIM E.J.³, CHOI J.H.⁴, PAC M.Y.⁴, YEO I.S.⁴, JANG J.S.⁵, PARK J.S.⁶, KIM W.⁶, GOH J.², YOO C.², JANG H.I.⁷, CHOI J.Y.⁷, KANG S.K.⁸, CHEOUN M.G.⁹, LEE C.Y.⁹, JUNG D.E.¹⁰, YU I.¹⁰ (¹Department of physics, Chonnam National University, ²Department of Physics, Kyung Hee University, ³Division of Science Education, Jeonbuk National University, ⁴Laboratory for High Energy Physics, Dongshin University, ⁵Department of Physics and Optical Science, Gwangju Institute of Science and Technology, ⁶Department of Physics, Kyungbook National University, ⁷Department of Fire Safety, Seoyeong University, ⁸School of Liberal Arts, Seoul Naional University of Science and Technology, ⁹Department of Physics, Soongsil University, ¹⁰Department of Physics, Sungkyunkwan University)

P2-pa.012

Monitoring PMT gain with dark hits in the JSNS² experiment / PARK Ryeonggyoon^{*1}, JOO K. K.¹, KIM Jae Yool¹, LIM In Taek¹, MOON D. H.¹, PARK H. W.¹, KIM Eun Joo², CHOI J. H.³, PAC Myoung Youl³, YEO Insung³, JANG Jee-Seung⁴, KIM Wooyoung⁵, PARK Jungsic⁵, GOH Junghwan⁶, HWANG Wonsang⁶, YOO Chang Hyun⁶, JANG H. I.⁷, CHOI Ji Young⁷, KANG S. K.⁸, CHEOUN Myung Ki⁹, LEE C. Y.⁹, JUNG Da Eun¹⁰, YU Intae¹⁰ (¹Department of Physics, Chonnam National University, ²Division of Science Education, Jeonbuk National University, ³Laboratory for High Energy Physics, Dongshin University, ⁴Department of Physics and Optical Science, Gwangju Institute of Science and Technology, ⁵Department of Physics, Kyungbook National University, ⁶Department of Physics, Kyung Hee University, ⁷Department of Fire Safety, Seoyeong University, ⁸School of Liberal Arts, Seoul National University of Science and Technology, ⁹Department of Physics, Soongsil University, ¹⁰Department of Physics, Sungkyunkwan University)

P2-pa.013*

Muon g-2 and supersymmetry in light of gauge coupling unification and proton decay / LEE Hyun Min^{*1}, SIM Sungbo¹ (¹Department of Physics, Chung-Ang University)

P2-pa.014*

PQ inflation and axion quality problem / LEE Hyun Min^{*1}, SEONG Myeong Jung¹, SONG Jun ho¹, MENKARA Adriana Guerrero¹ (¹Department of Physics, Chung-Ang University)

P2-pa.015

MC study of $D^0 \rightarrow V$ gamma decays at Belle II experiment / KIM Jaeyoung¹, KWON Youngjoon^{*1} (¹Department of Physics, Yonsei University)

P2-pa.016

Feasibility study for tthh production in CMS Run3 data using Deep Neural Network. / CHO Seong Beom^{*1}, RYOU Yeon Su^{*1}, KIM Tae Jeong^{*1} (¹Department of Physics, Hanyang University)

P2-pa.017*

Study of D decays to invisible final states in Belle II experiment / KWON Youngjoon^{*1}, KIM Chanho¹ (¹Department of Physics, Yonsei University)

P2-pa.018*

Identification of tH(bb) from ttbb events using Spiking Neural Network on Loihi neuromorphic chip / RYOU Yeon Su^{*1}, KIM Tae Jeong^{*1} (¹Department of Physics, Hanyang University)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-pl.101

Effect of microwave power on the formation of the crystalline diamond by CVD deposition method / TRUONG Hien Thi¹, OH Sangwon¹ (¹Quantum Technology Research Department, KRISS)

P2-pl.102

레이저 흡수 분광법을 이용한 헬륨 유도 결합 플라즈마내 준안정 준위 밀도 측정 / JUNG Jaehoon¹, LEE Wonwook¹, OH Cha-Hwan¹ (¹Department of Physics, Hanyang University)

P2-pl.103

Investigating AC loss in low current ramp rates of KSTAR superconducting PF magnets / KIM Mu-yong¹, LEE Hyun Jung¹, KWON Gi-il¹, NAM Seokho¹, KIM Hyun Wook¹, YONEKAWA Hirofumi¹, KIM Kwang Pyo¹, PARK Kaprai¹ (¹KFE)

P2-pl.104

충돌-방사 모델을 이용한 아르곤 유도 결합 플라즈마의 물성 진단 / WE Changhyeon¹, LEE Wonwook¹, OH Cha-Hwan¹ (¹Department of Physics, Hanyang University)

P2-pl.105

Particle Image Velocimetry and Lissajous Curve for a Plasma Actuator Based on Series Three-Electrode Surface Dielectric Barrier Discharges / LEE Hae June¹, JEON Sang Un¹, WAN Kim Jae¹ (¹Department of Electrical Engineering, Pusan National University)

P2-pl.106*

Calculation of the radial electric field profile using the Motional Stark effect diagnostic system / KO Juyoung^{1,2}, KO Jinseok¹ (¹KSTAR, KFE, ²Plasma and Nuclear fusion, UST)

P2-pl.107*

Particle-in-Cell 플라즈마 시뮬레이션에서 Super particle 비율이 미치는 영향 / LEE Hae June¹, KIM Dongyoung¹, BAEK Geon U¹, SHIN Ji Hyun¹ (¹Department of Electrical Engineering, Pusan National University)

P2-pl.108

이중 주파수 구동 축전 결합 플라즈마 장비에서 이온 에너지 분포함수에 미치는 blocking capacitor의 영향 / LEE Hae June^{*1}, BAEK Geon U¹ (¹Department of Electrical Engineering, Pusan National University)

P2-pl.109

Simulation studies on effect of target configuration on laser-ablated plasma scale length / YU Hyungyu¹, LEE Chunghwa¹, LEE Hyojeong¹, SUK Hyyong^{*1} (¹Department of Physics and Photon Science, GIST)

P2-pl.110*

Effect of fluctuation of plasma density at laser pulse compression by a density gradient plasma / KIM Hyunsuk¹, HUR Min Sup^{*1} (¹Department of Physics, UNIST)

P2-pl.111*

Plasma generation from Processed Low Reflectance Aluminum Using Femtosecond Laser pulses / SUK Hyyong^{*1}, 김수호¹ (¹Department of Physics and Photon Science, GIST)

P2-pl.112*

Al Plasma Diagnostics with a Nomarski Interferometer Using a Frequency-tripled Ti:sapphire Laser / LEE Hyojeong¹, ROH Kyungmin¹, KIM Suho¹, SUK Hyyong^{*1} (¹Department of Physics and Photon Science, GIST)

P2-pl.113*

다중 펄프레이저를 이용한 라만 산란 증폭 빔 결합기 / PARK Dohyun¹, LEE Jaeho¹, HUR Min Sup^{*1} (¹Department of Physics, UNIST)

P2-pl.114*

High-Density-Gradient laser-produced plasma diagnostics using a double-grating differential interferometer / ROH Kyungmin¹, LEE Hyojeong¹, JEON Seongjin¹, KANG Keekon¹, SUK Hyyong^{*1} (¹Department of Physics and Photon Science, GIST)

P2-pl.115*

플라즈마 확산 메커니즘을 통한 고밀도 플라즈마 생성에 대한 연구 / KIM Seungyun¹, HUR Min Sup^{*1} (¹Department of Physics, UNIST)

P2-pl.116*

Single-shot chirped-pulse interferometry to measure the transient optical properties of Warm Dense Matter / CHO Byoung Ick^{*1}, LEE Changhoo¹ (¹Department of Photon and Physics, GIST)

P2-pl.117*

Particle-in-cell simulation for transition radiation from hot electrons produced in relativistic laser-solid interactions / LEE Kyungbae¹, LEE Changhoo^{1,3}, KANG Gyeongbo^{1,3}, SOHN Janghyeob¹, LEE Gysang^{1,3}, LEE Hyungjin¹, BAE Leejin^{1,2}, KIM Chul Min^{1,2,3}, CHO Byoung Ick^{*1,3} (¹GIST, ²Advanced Photonics Research Institute, APRI, ³Center for Relativistic Laser Science, IBS)

P2-pl.118

플라즈마 cut-off frequency 이용한 Thz 생성 및 증폭 / LEE Yun Gyu¹, HUR Min Sup^{*1}
(¹Department of Physics, UNIST)

P2-pl.119*

High energy resolution off-resonant spectroscopy to probe electronic structures using self-seeded XFEL beams / SOHN Janghyeob¹, KANG Gyeongbo^{1,2}, LEE Gysang^{1,2}, LEE Changhoo^{1,2}, CHUN Sae Hwan³, PARK Jaeku³, CHOI Tae-Kyu³, CHO Byoung Ick^{*1,2} (¹Department of Photon and Physics, GIST, ²Center for Relativistic Laser Science, IBS, ³XFEL Division, Pohang Accelerator Laboratory)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-pl.201

Generation of Soft X-Ray Attosecond Free Electron Laser using Non-Resonant Laser Modulator / MOON Kook-Jin^{*1}, CHO Myung Hoon¹, SHIM Chi Hyun¹, YANG Haeryong¹, KWON Seong-Hoon¹, NAM Inhyuk¹ (¹Accelerator Control Team, Pohang Accelerator Laboratory)

P2-pl.202

Commissioning of 6.5MeV electron Beam of Microtron for THz FEL system / KIM Keon Ho¹, CHO Hee Jin¹, JEONG Young Uk², BAE Sang Yoon², PARK Seong Hee^{*1} (¹Department of Accelerator Science, Korea University, ²KAERI)

P2-pl.203

Development of a capillary gas-cell with plasma density gradient for LWFA experiment / JEONG Junyeong^{*1}, NAM Inhyuk², CHUNG Moses¹ (¹Department of Physics, UNIST, ²XFEL, Pohang Accelerator Laboratory)

P2-pl.204

A non-destructive energy spread detection for electron beam of XFEL with stripline-based monitor / NAM Inhyuk^{*1}, SUNG Chang-Kyu¹, MIN Chang-Ki¹, CHUNG Moses² (¹PAL-XFEL, Pohang Accelerator Laboratory, ²Department of Physics, UNIST)

P2-pl.205

알라닌과 Gafchromic 필름을 이용한 가속기 시설 내 선량 평가 방법 / KIM Kye-Ryung^{*1}, CHO Yong-Sub¹, LEE Seunghyun¹, YUN Sang pil¹, KIM Han Sung¹ (¹Korea Multi-purpose Accelerator Complex, KAERI)

P2-pl.206*

Round beam generation and Emittance exchange studies using difference resonance coupling with Korea-4GSR lattice / KIM JunHa¹, CHUNG Moses^{*1} (¹Department of Physics, UNIST)

P2-pl.207*

Capacitive pick-up monitor optimization for the RAON low-energy experimental systems / KWAK Donghyun^{1,2}, CHUNG Moses^{*1}, HAM Cheolmin², TSHOO Kyoungho², KIM Gi Dong², WOO Hyung Joo², SHIN Taeksu² (¹Department of Physics, UNIST, ²Rare Isotope Science Project, IBS)

P2-pl.208

Research for orbit correction at RAON SCL2 / JIN Hyunchang^{*1}, HAN Jang-Min¹ (¹IRIS, IBS)

P2-pl.209

Improvement of an image segmentation routine specialized for texture processing / GIL Kyehwan^{*1} (¹Pohang Accelerator Laboratory)

P2-pl.210

Leveraging Game Engines for Interactive Digital Twin Simulations: A Case Study with Unreal Engine and NuBDeC / MOON Taeuk^{*1}, RHEE Tongnyeol², KWON Jae-Min², YOON Eisung¹ (¹Department of Nuclear Engineering, UNIST, ²Division of Integrated Simulation, KFE)

P2-pl.211*

아르곤 제어가스 주입에 의한 KSTAR H-mode 플라스마에서의 열속 감소 효과의 SOLPS-ITER 전산모사 / LEE Chanyeong², SHIN Haewon¹, HWANG Junghoo², HAN Yoonseong², CHOE Wonho^{*2} (¹Nuclear and Quantum Engineering, KAIST, ²Nuclear Physics Application Research Division, KAERI)

P2-pl.212

텅스텐 디버터 식각률 측정을 위한 다중 선스펙트럼 기반 S/XB 진단법 개발 / SHIN Changmin^{1,2}, KWON Duck-Hee², SHIN Haewon², CHAI Kil-Byoung², CHOE Wonho^{*1} (¹Department of Nuclear and Quantum Engineering, KAIST, ²Department of Nuclear Physics Application Research, KAERI)

P2-pl.213

Optimization of a Slotted Waveguide Antenna to Launch Lower Hybrid Fast Wave in KSTAR Plasmas / JO Jong Gab^{*1}, KIM Sun Ho¹ (¹Nuclear Physics Application Research Division, KAERI)

P2-pl.214

크립톤 개스 주입에 의한 KSTAR 플라스마 열속 감소의 SOLPS-ITER 전산모사 / YOON Junhyeok¹, HWANG Junghoo¹, SHIN Haewon², HAN Yoonseong¹, LEE Hyeongho³, YOON Siwoo³, CHOE Wonho^{*1} (¹Department of Nuclear and Quantum Engineering, KAIST, ²Korea Atomic Energy Research Institute, ³Korea Institute of Fusion Energy)

P2-pl.215*

SOLPS-ITER 전산모사를 활용한 KSTAR 플라즈마내 중수소 개스 주입 및 플라즈마 드리프트 영향 분석 / HWANG Junghoo¹, PARK Jae-Sun², PITTS Richard A³, JUHN June-Woo⁴, HAN Yoon Seong¹, LEE Hyungho⁴, BAK Jun-Gyo⁴, HONG Suk-Ho⁵, CHOE Wonho*¹ (¹Department of Nuclear and Quantum Engineering, KAIST, ²Oak Ridge National Laboratory, USA, ³ITER Organization, France, ⁴KFE, ⁵General Atomics, USA)

P2-pl.216*

Gaussian process tomography 방법을 이용한 토카막 내 불순물 수송계수 획득 알고리즘 개발 및 GUI 적용 / HAN Yoonseong¹, YOON Junhyeok¹, LEE Hyunghoo², YOON Siwoo², CHOE Wonho*¹ (¹Department of Nuclear and Quantum Engineering, KAIST, ²Korea Institute of Fusion Energy, KFE)

P2-pl.217*

Bayesian Neural Network for predicting disruption using 0D parameters and 1D profiles in KSTAR / KIM Jinsu¹, NA Yong Su*¹ (¹Department of Nuclear Engineering, Seoul National University)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-se.001*

Formation of amorphous Ga_2O_3 thin films on metal substrates by MOCVD and characteristics of diodes / AHN Namjune¹, AN Jang Beom¹, KIM Kyoung Hwa¹, AHN Hyung Soo¹, YANG Min^{*1} (¹Electronic Material Engineering, Korea Maritime and Ocean University)

P2-se.002*

온도에 따른 ITO 박막의 물성변화 연구 / HAN Seonghoon¹, SON Yeongjun¹, SONG Sehwan^{1,2}, LEE Jisung³, BAE Jong-seong⁴, PHAM Anh Tuan Thanh⁵, PHAN Thang Bach⁵, PARK Sungkyun^{*1} (¹Pusan National University, ²양자기술연구소 양자스핀팀, KRISS, ³연구장비개발부, KBSI, ⁴부산센터, KBSI, ⁵INOMAR, Vietnam National University, Vietnam)

P2-se.003*

후속 열처리 공정에 의한 상 변이 메커니즘을 이용한 고품질 Ga_2O_3 박막의 형성 및 전기적 전도성 제어 / LEE Dong Ho¹, LEE Ji Ye¹, MUN Seonjin¹, KIM Kyoung Hwa¹, AHN Hyung Soo¹, YANG Min^{*1} (¹Korea Maritime and Ocean University)

P2-se.004

산소분압의 변화에 따른 스퍼터 증착법으로 제작된 Ga_2O_3 박막의 특성 변화 / KIM Jong Su^{*1}, HWANG Tae Jong² (¹Yeungnam University, ²College of General Studies, Yeungnam University)

P2-se.005*

Tailored Core-Shell Synthesis and Slurry Formulation for Enhanced Scratch-Free Copper CMP / AHN Ho-Jun^{1,2}, KIM Pil-Su^{1,2}, JEON Min-Uk^{1,3}, JIN Hyeong-Ju^{1,2}, KIM Ju-Yeon^{1,2}, PARK Jeagun^{*1,2,3} (¹Hanyang University, ²Department of Nanoscale Semiconductor Engineering, Hanyang University, ³Department of Electronic Engineering, Hanyang University)

P2-se.006*

Reversible multi-mode switching behavior for VO_2 mott memristor / WANG Gunuk^{*1,2,3}, PARK Gwanyeong¹, CHOI Sanghyeon¹ (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Department of Integrative Energy Engineering, Korea University, ³Center for Neuromorphic Engineering, KIST)

P2-se.007*

Lowering dielectric constant of ferroelectric HZO film with ultra-thin Al₂O₃ intermediate layer / PARK Jinyoung¹, KIM Junhyung², PARK Hyunjae¹, SONG Wonho³, JO Jaehyeong¹, KIM Jiwan¹, PARK Kibog^{*1,4} (¹Department of Physics, UNIST, ²Terrestrial & Non-Terrestrial Integrated Telecommunications Research Laboratory, ETRI, ³Medium OLED Panel Design Team, LG Display, ⁴Department of Electrical Engineering, UNIST)

P2-se.008

Investigating the Effect of Metal Ion Doping on the Performance of ZnO-based RRAM Memory Devices / KIM Yumi^{*1}, KWON So-Yeon², KO Woon-San², LEE Ga-Won² (¹Particle Beam Research Division, KAERI, ²Department of Electronics, Chungnam National University)

P2-se.009*

Enhancing surface plasmons at visible to near-infrared wavelengths by ITO nanoparticles in light pressure for piezoelectric energy harvesting / JANG Jun-Hyeon¹, KIM Sung-Hyun^{1,2}, KIM Min Jung¹, HWANG Sun-Lyeong³, AHN Hyung Soo¹, CHUN Young Tea¹, YI Sam Nyung^{*1,2} (¹Major of Nano-Semiconductor Engineering, Korea Maritime and Ocean University, ²Interdisciplinary Major of Maritime AI Convergence, Korea Maritime and Ocean University, ³Department of ICT Convergence Engineering, Kangnam University)

P2-se.010*

Effect of molecular tilt configuration in molecular heterojunction with two-dimensional semiconductor / EO Jung Sun¹, SHIN Jaeho², JANG Jingon¹, JEON Takkyeong¹, WANG Gunuk^{*1} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Department of chemistry, Rice University, USA)

P2-se.011

높은 광반응 및 넓은 광대역의 그래핀/WS₂/다공성 실리콘 이중접합 광검출소자 / JANG Chan Wook¹, SHIN Dong Hee², CHOI Suk-Ho^{*1} (¹Department of Applied Physics, Kyung Hee University, ²Department of Smart Sensor Engineering, Andong National University)

P2-se.012*

Above-Room Temperature 2D Ferromagnet Fe₃GaTe₂ / CHO Woohyun¹, YANG Heejun^{*1} (¹Department of Physics, KAIST)

P2-se.013*

A Modified Wet Transfer Method for Eliminating Interfacial Impurities in Graphene / JANG Dong Jin¹, HAIDARI Mohd Musaib¹, KIM Jin Hong¹, KO Jin-Yong¹, CHOI Jin Sik^{*1} (¹Department of Physics, Konkuk University)

P2-se.014*

Considerable Contact Resistance Effects on Vertical Carrier Density Profile within WSe₂ Multilayers / CHOI Dahyun¹, JOO Min-Kyu^{*1} (¹Department of Applied Physics, Sookmyung Women's University)

P2-se.015*

Synthesis of Au nanoparticles supported ITO and its application to electrochemical sensor / HAN Mincheol¹, AN Sangsu¹, LEE Changhan¹, CHO Youngji¹, BAE Chanyoung¹, KIM Dongjun¹, JEON Jun Su¹, SONG Yujin¹, PARK Jaejin², LEE Moonjin², CHANG Jiho^{*1} (¹Korea maritime and Ocean University Nano Semiconductor Engineering, Korea Maritime and Ocean University, ²Korea Research Institute of Ships & Ocean Engineering Ocean and Maritime Digital Technology Research Division, KRISO)

P2-se.016*

A Study on the Fabrication of Capacitive Sensor Using Indium-Tin-Oxide (ITO) film for the Detection of Hazardous and Noxious Substances / BAE Chanyoung¹, AN Sangsu¹, LEE Changhan¹, CHO Youngji¹, HAN Mincheol¹, KIM Dongjun¹, JEON Junsu¹, SONG Yujin¹, PARK Jaejin², LEE Moonjin², CHANG Jiho^{*1} (¹Major of Nano-Semiconductor Engineering, Korea Maritime and Ocean University, ²Engineering Ocean and Maritime Digital Technology Research Division, KRISO)

P2-se.017*

Improvement of selectivity of detection of Hazardous and Noxious Substances(HNS) in the sea using Indium Tin Oxide(ITO) film / JIN Song Yu¹, AN Sangsu¹, LEE Changhan¹, CHO Youngji¹, BAE Chanyoung¹, KIM Dongjun¹, JEON Junsu¹, HAN Mincheol¹, PARK Jaejin², LEE Moonjin², CHANG Jiho^{*1} (¹Nano-Semiconductor Engineering, Korea Maritime and Ocean University, ²Korea Research Institute of Ships & Ocean Engineering Ocean and Maritime Digital Technology Research Division, KRISO)

P2-se.018*

A Study on the Influence of Surface Residual Binder of Indium Tin Oxide Film in the Utilization of Underwater Hazardous Substance Detection Sensor / KIM Dongjun¹, SONG Yujin¹, AN Sangsu¹, LEE Changhan¹, CHO Youngji¹, BAE Chanyoung¹, JEON Junsu¹, HAN Mincheol¹, PARK Jaejin², LEE Moonjin², CHANG Jiho^{*1} (¹Major of Nano-Semiconductor Engineering, Korea Maritime and Ocean University, ²Korea Research Institute of Ships and Ocean Engineering Ocean and Maritime Digital Technology Research Division, KRISO)

P2-se.019*

A study on the application of underwater metal ion detection sensor using ITO nanoparticle printed thin film / JEON Junsu^{*1}, AN Sangsu¹, LEE Changhan¹, CHO Younji¹, KIM Dongjun¹, SONG Yujin¹, HAN Mincheol¹, BAE Chanyoung¹, PARK Jaejin², LEE Moonjin², CHANG Jiho¹ (¹Korea Maritime and Ocean University, ²Maritime Safety and Environmental Research Division, KRISO)

Poster Exposure Period : October 26, 09:00~17:00

Presentation (mandatory): October 26, 11:30-13:00

Room: Exhibition Hall I

P2-st.001*Nonlocality in vapor deposition polymerization / SHIN Jungyu¹, LEE In Jae^{*1}
(¹Department of Physics, Chonbuk National University)**P2-st.002**Thermodynamic bounds in deterministic chemical reaction systems far from equilibrium / CHANU Athokpam Langlen^{*1} (¹APCTP)**P2-st.003**The speed-accuracy trade-off under viscoelastic feedback using one-dimensional biased random walks / AN Jaehong¹, JEON Jae-Hyung^{*1,2} (¹Department of Physics, POSTECH, ²APCTP)**P2-st.004***이황화레늄(ReS₂)과의 상호작용에 의한 네마틱 액정의 배향 특성 연구 / 방수진¹, 이준용², 유정선², 이재훈¹, 김종현^{*1,2} (¹Department of Physics, Chungnam National University, ²Institute of Quantum Systems, Chungnam National University)**P2-st.005**Critical Binder Ratio of Long-range Antiferromagnetic Quantum Ising Chain / KIM Dong-Hee^{*1}, KIM Jicheol¹ (¹Department of Physics and Photon Science, GIST)**P2-st.006**Direct measurement of correlation length in pair contact process with diffusion / LEE Jae Hwan¹, KIM Jin Min^{*1} (¹Department of Physics, Soongsil University)**P2-st.007***Optimal combinations of simple discrimination strategies in direct and indirect reciprocity / CHAE Sunhee¹, JEONG Hyeong-Chai^{*1} (¹Department of Physics and Astronomy, Sejong University)

P2-st.008*

Prediction of public official elections based on regional voter turnout / GWON Eunseo¹, JEONG Hyeong-Chai^{*1} (¹Department of Physics and Astronomy, Sejong University)

P2-st.009*

Investors as information creators: the role of the writer for social media in financial markets. / YOON Jinjoo¹, PARK Ayoung¹, OH Gab jin^{*1} (¹Chosun University)

P2-st.010*

Modeling epidemic processes in mobility-based networks of Republic of Korea / SEO Yeonji¹, KWON Okyu², JO Hang-Hyun^{*1} (¹Department of Physics, The Catholic University of Korea, ²Public Data Research Team, NIMS, Japan)

P2-st.011

비엔나와 대구 도시철도의 네트워크 중심성 비교 / YU Segi^{*1}, AHN Kwangsinn John¹ (¹Department of Physics, Hankuk University of Foreign Studies)

P2-st.012*

Roughening transition of information landscape on complex networks / SEO Haechan¹, YOOK Soon Hyung^{*1} (¹Department of Physics, Kyung Hee University)

P2-st.013

Hierarchy and inequality of faculty hiring in South Korea / LEE Eun^{*1}, JUNG Woojin² (¹Scientific Computing, Pukyong National University, ²School of Electrical Engineering, KAIST)

P2-st.014*

Wealth dynamics on the networked Talent versus Luck model / HUR Jaeseok^{*1}, JEONG Hawoong¹ (¹Department of Physics, KAIST)

P2-st.015*

Unveiling Characteristic Substructures in Anomalous Diffusion through Deep Learning / BAE Jaeyong¹, BAEK Yongjoo^{*3}, JEONG Hawoong^{*1,2} (¹Department of Physics, KAIST, ²Center for Complex Systems, KAIST, ³Department of Physics and Astronomy & Center for Theoretical Physics, Seoul National University)

P2-st.016*

Boosting Generalization in Neural Networks with Stochastic Restarting / BAE Young-kyoung¹, SONG Yeongwoo¹, JEONG Hawoong^{*1,2} (¹Department of Physics, KAIST, ²Center for Complex Systems, KAIST)

P2-st.017*

A Comprehensive Evaluation of Information Entropy-based Network Directionality Estimation Method using world trade web and brain networks / KIM Donghyeok^{1,2}, LEE Eun¹, KANG Jiyoung^{*1} (¹Department of Scientific Computing, Pukyong National University, ²Department of Physics, Pukyong National University)

P2-st.018

Quantifying concurrency of edges in temporal networks / KANG Jiyoung^{*1}, MASUDA Naoki² (¹Department of Scientific Computing, Pukyong National University, ²Department of Mathematics, State University of New York at Buffalo, USA)

P2-st.019

Functional connectivity and network analysis in the mouse brainstem after concussion / LEE Dongha¹, KIM Kipom^{*2} (¹Cognitive Science Research Group, Korea Brain Research Institute, ²Research Strategy Office, Korea Brain Research Institute)

P2-st.020

Characterization of spiking neuron-based reservoir computers / WOO Junhyuk¹, KIM Soon Ho¹, KIM Hyeongmo^{1,2}, HAN Kyungreem^{*1} (¹Brain Science Institute, KIST, ²Department of Physics and Astronomy, Seoul National University)

P2-st.021*

On the interpretability of reservoir computers: Hamiltonian flow and criticality / KIM Hyeongmo^{1,2}, WOO Junhyuk¹, HAN Kyungreem^{*1} (¹Brain Science Institute, KIST, ²Department of Physics and Astronomy, Seoul National University)

P2-st.022*

Multiscale description of cardiac dynamics / PAIK Joonho^{1,2}, HAN Kyungreem^{*1} (¹Brain Science Institute, KIST, ²Department of Physics and Astronomy, Seoul National University)

P2-st.023*

Interplay between spiking dynamics, network morphology, memory processes in a dopamine-reward Pavlovian conditioning system / LEE Kyoung Jin^{*1}, JEONG In Hoi² (¹Department of Physics, Korea University)

P2-st.024

The Role of Rigid Random Connectivity in Temporal Pavlovian Conditioning of a Model Spiking Neural Network / KIM Jongmu², LEE Kyoung Jin^{*1} (¹Department of Physics, Korea University, ²Department of Mechanical Engineering, Korea University)

Poster Exposure Period : October 26, 09:00~17:00

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P2-te.001물리 중심 연계 과목의 교육 과정 분석 을 통한 역량 강화 / LEE Kyung Mee^{*1} ('Yangji High School)**P2-te.002**고등학교 양자물리학 수업에서 물리 교사의 논증구조 분석 / LEE Taegyong¹, YOON HyunJu¹, KANG Nam-Hwa^{*1} (¹Department of Physics Education, Korea National University of Education)**P2-te.003**온라인 시험 및 평가 플랫폼을 활용한 물리 교육에 대한 학생들의 인식 변화 / PARK Seonhwa¹, KANG Dongyeol^{*2} (¹Department of Firearms and Optics, Daeduk University, ²School of Basic Sciences, Hanbat National University)**P2-te.004***초등학교 교사의 과학전람회 물리분야 지도 경험에 대한 질적 탐구 / MOON Sujin¹, LEE Jiwon², KIM Jung Bog^{*1} (¹Department of Physics Education, Korea National University of Education, ²Department of Physics Education, Seoul National University)**P2-te.005***양자 상태 단층 촬영을 통한 두-입자 계의 분석 / LIM Jaemin¹, KIM Zion¹, SHIN Hyon¹, KIM Junho², KIM Chanwoo², PARK Jaeyoon², LEE Kijoon², GHIM Zae-young^{*1} (¹Faculty of Arts and Liberals, Korea Science Academy, ²Department of Electrical Engineering and Computer Science, DGIST)**P2-te.006***양자구속 효과의 실험적 경험을 위한 교육용 키트 제작 / CHO Joonghyun¹, CHOI Jin Woo^{*1} (¹Data Information and Physics, Kongju National University)

발표자 색인

Presenter Index

※ 초록제출시 입력 오류로 인해 성/이름의 순서가 바뀔 경우가 있을 수 있는 점 양해해주시요

A

ADAM Wolfgang	F2.02	AHN Saebyeok	H3.05, P1-pa.006
ADAMS Kyla Ann	I1.02	AHN Sehyeon	P1-co.225, P2-ap.104
AGHAEI ABCHOUYEH Maryam	J4.06	AHN Seon Woo	P1-pa.001
AHN Chunggeung	B11.01	AHN Seongjin	B5.04
AHN Danho	H3.02, H3.04, J4.07	AHN SeungMin	P1-bp.120
AHN Deuk Soon	C7.03, C7.06	AHN So Hyun	B7.06
AHN Gihyeon	E16.04	AHN Sul-Ah	P1-co.105
AHN Hanyeol	P1-ap.105, P1-ap.212, P1-ap.221	AHN Sunghoon	B7.08
AHN Heebeom	I15.01	AHN Sunghoon	C7.03, C7.06
AHN HeonSu	A15.02	AHN Sunghoon(Tony)	B6.04
AHN Ho-Jun	D14.01, P2-se.005	AHN Yeong Hwan	H5.03
AHN Hyung Soo	P1-se.101, P1-se.102, P2-se.001, P2-se.003, P2-se.009	AKERS Charles	C7.01
AHN Hyunsoo	P2-ap.114	AKERS Charles	C7.06
AHN Jaewook	D8.02, E8.01, E8.02, F8.02, F8.03, G8.04, G8.05, J8.02	ALFREDO Biasio De	P1-bp.113
AHN Je-Young	P1-co.305	ALI Asad	H14.03
AHN Je Young	G16.02	ALKALAY Tomer	E10.02
AHN Ji-Hoon	C11.06, P1-co.210	AMoRE Collaboration	C2.06, C2.08
AHN Ji-Hoon	H13.06	AN Daehyeon	H12.03
AHN Jung Keun	A6.02, A6.03, B6.06, B6.08, C7.05, C7.07, C7.09, I7.04, I7.07, I7.08, I7.09, J2.05, J7.02	AN Geon-Hyoung	F14.04
AHN Kwangsinn John	P2-st.011	AN Jaehong	P2-st.003
AHN Moohyun	H3.07	AN Jang Beom	P2-se.001
AHN NamJune	P2-se.001	AN Jiaqi	A16.04
AHN Saebyeok	H3.03	AN Jihun	P2-pa.005
		AN Kyongmo	H12.05
		AN Kyungwon	A8.01, A8.02, P1-at.014, P2-at.006, P2-at.007
		AN Sang Won	P2-ap.102, P2-ap.112
		AN Sangmin	F13.04
		AN Sangsu	P2-se.015, P2-se.016, P2-se.017, P2-se.018, P2-se.019
		AN Seohyeon	B7.01
		AN Soyeong	P1-bp.120
		AN Sung Jin	P2-co.102
		AN Sungjin	H14.03
		ANDO Shung-Ichi	B6.09
		ARDOñA Herdeline Ann M.	G10.04

ASILAR Ece D2.06
 ASIM Muhammad H14.05
 AVILA Melina L B6.04
 AYYALURI Ramakrishna Reddy A14.02

B

BAE Chanyoung P2-se.015,
 P2-se.016,
 P2-se.017,
 P2-se.018,
 P2-se.019
 BAE Dalmin P1-at.006
 BAE Gimin I5.05
 BAE Jaeyong P2-st.015
 BAE Jinhyuk F5.04,
 P2-co.101
 BAE Jisuk P2-ap.327
 BAE Jong-seong P2-se.002
 BAE Joonsuk D7.09, H2.02,
 H2.03, H2.04,
 H2.05, H2.06,
 H2.07, H2.08,
 H2.09, J2.02,
 J7.06
 BAE Joonwoo B5.03
 BAE Leejin P2-pl.117
 BAE Minwoo I9.04
 BAE Myung-Ho B13.04,
 P2-co.102,
 P2-co.108
 BAE MyungHo P2-co.103
 BAE Sang Yoon P2-pl.202
 BAE Seoyoon P1-bp.118
 BAE Soungmin J15.02, J15.06
 BAE Sung Bin P2-ap.112
 BAE Sunghan B6.04, B7.08
 BAE Sunghan C7.03, C7.06
 BAE SungJae H3.06, H3.09
 BAE SungJae P1-pa.006
 BAE Young-kyoung P2-st.016

BAE Yujeong F12.02
 BAE Yujeong P1-co.114
 BAE Yunseul C7.08,
 P1-nu.005
 BAEG Yoonjin P1-bp.118
 BAEK Geon U P2-pl.107,
 P2-pl.108
 BAEK Inwha B9.01
 BAEK Jaeuk P2-at.012,
 P2-at.013,
 P2-at.014,
 P2-at.015
 BAEK Kyunghyun H8.02
 BAEK Seung-Ho P1-co.217
 BAEK Seung-Hyub B12.01
 BAEK Seung Ki I9.04
 BAEK Seunghyun P1-at.009
 BAEK Soojeong I5.07
 BAEK Yongjoo P2-st.015
 BAGCHI Manjari F4.02
 BAHNG Jaeuk P1-se.220,
 P1-se.221
 BAHNG Sehoon H9.04
 BAI Ying J11.03
 BAIK Jaeyoon F13.02,
 P1-ap.212
 BAK Dongsu C10.08
 BAK Dongsu I4.04
 BAK Jun-Gyo P2-pl.215
 BAKKALI-HASSANI Brice C5.04
 BAN Gyungbin P1-co.125
 BAN Kayoung E2.02
 BANDIERA Laura J2.03
 BANG Inha P1-pa.002
 BANG Jeongho H8.02
 BANG Junho P1-co.220
 BANG Junhyeong P2-pa.008
 BANG Seungho P1-se.211,
 P1-se.212
 BANG Woosuk E6.03
 BARBUI Marina B6.04
 BARDAYAN Daniel W B6.04
 BARK Chan Bin A16.03
 BARK Hyeon Sang H5.05

BARK Hyeon Sang P2-op.008,
 P2-op.009
 BARRETT Bruce R. A7.04
 BARTLETT Rodney J. D5.01
 BARYSHEVSKY Vladimir J2.01
 BASU Urmimala D9.04
 BATTAGLIA Demian P1-bp.210
 BAUSCH Andreas R G10.04
 BENJAMIN Shermane M P1-co.109
 BERHE Yisehak Gebredingle J10.02
 BHARAT Lankamsetty Krishna
 P2-ap.305,
 P2-ap.317,
 P2-ap.318
 BHARTI Swati P2-at.008
 BHIMANABOINA Ramulu A14.02
 BHOI Biswanath J11.02
 BHORASKAR Vasant I7.03, I7.05
 BHYUN Ji Hwan B3.05
 BIJAYA Sharma P1-pa.014
 BISHOP Jack B6.04
 BISWAS Anirban D3.05
 BLOCK Michael D5.02
 BLOCK Michael P2-at.009
 BLUMSTENGEL Sylke I15.02
 BOK Jeongsu D7.01, J7.03
 BOK Moonjeong P2-ap.303
 BONG Hyungkun P1-co.209,
 P2-ap.110
 BORAN Fatma B3.03
 BORISOV Pavel G16.03
 BORODIN Dmitriy F12.02
 BORODIN Dmitriy P1-co.114
 BOSTWICK Aaron C10.03
 BRAMBRINK Erik F6.02
 BRITO Walber Hugo D11.08
 BU Gayun P1-bp.122
 BU Sang Don P1-ap.206,
 P2-co.112
 BUDKER Dmitry E7.02
 BUI Son Tung P2-ap.319
 BUI Xuan Khuyen P2-ap.319
 BYEON HeeJeong I3.05,
 P1-pa.007

BYUN Andrew F8.02
 BYUN Bokyoung G3.05
 BYUN Dong Hu P2-op.004
 BYUN HeeSu H3.02, H3.04
 BYUN HeeSu H3.05
 BYUN Hye Ryung P1-se.122
 BYUN Jinyoung P2-ap.212
 BYUN Seok Hyun P1-co.217

C

CECIL Thomas W H12.04
 CHA Eunseo I15.02
 CHA Jeonghyeok P2-co.208
 CHA Jinwoong H11.04
 CHA Jong Won D14.03,
 P1-se.114
 CHA Jong Won D14.05, D14.07
 CHA Jongjin H15.02
 CHA Minkwon P1-bp.118
 CHA Soomi B6.04, B7.08
 CHA Soomi C7.03, C7.06
 CHA Wonsuk J15.01
 CHA Wonsuk P1-co.304
 CHA Yongtae A10.03
 CHA Yuhyun P2-co.212
 CHAE Eunmi D5.06,
 P2-at.004
 CHAE Jungseok A10.03
 CHAE Kyung Yuk B6.01, C7.03,
 C7.04
 CHAE Kyungyuk B6.04
 CHAE Min Jun P2-op.013
 CHAE Minji D13.02
 CHAE Moonsik I6.04
 CHAE Sang Hoon P1-se.208
 CHAE Seung Chul P1-co.207
 CHAE Sunhee P2-st.007
 CHAI Kil-Byoung C6.01, H6.01,
 P2-pl.212
 CHAKRAVARTHY Rohan E7.02

CHAN Yang-Hai	D8.03	CHEON SangHyun	I9.07
CHANG Dae-sik	C6.03	CHEON Yechan	J7.08
CHANG Howon	P1-se.111	CHEONG Hyeonsik	B15.07,
CHANG Huibin	G10.04		P1-ap.104,
CHANG Hye Jung	B12.01		P1-ap.117,
CHANG Hyunju	J15.07		P1-ap.119,
CHANG Jae Hyeok	J3.06		P2-ap.202,
CHANG JaeRyeong	P1-at.004		P2-ap.203
CHANG Jiho	P2-se.015,	CHEONG Sang-Wook	J10.04, J11.05
	P2-se.016,	CHEONG Yong Wook	H1.03
	P2-se.017,	CHEOUN M. G.	P2-pa.004
	P2-se.018,	CHEOUN M.G.	I2.04,
	P2-se.019		P2-pa.011
CHANG Jun-Young	J10.05	CHEOUN Myung-Ki	A7.01
CHANG Min Hui	P2-co.116	CHEOUN Myung Ki	A6.01, B6.03,
CHANG Seo Hyoung	F16.01		B6.05, I7.01,
CHANG Young Jun	D12.01		P2-pa.012
CHANG Young Jun	P1-ap.105,	CHEOUN Myung Ki	B6.07
	P1-ap.221	CHILLERY Thomas William	B6.04
CHANG Young Jun	P1-ap.201,	CHO Baek Sun	C3.08
	P1-ap.212,	CHO Beong Ki	B10.06
	P1-co.122,	CHO Beongki	G13.02
	P2-co.117	CHO Beopgil	P1-co.108,
CHANU ATHOKPAM Langlen			P1-co.118
	P2-st.002	CHO Byoung-ick	F6.02
CHAR Kookrin	H10.02, H10.03	CHO Byoung Ick	F6.01,
CHARITON Stella	G11.01, G11.02		P2-pl.116
CHAUDHARY Narendra	P1-bp.105	CHO Byoung Ick	P2-pl.117,
CHAUDHARY Narendra	P1-bp.121		P2-pl.119
CHAVAN Vivek Raghunath	I7.03, I7.05	CHO Byungjin	B14.03
CHECKELSKY Joseph	C10.03	CHO Chang-Hee	H13.04,
CHEN Alan	B6.04		H13.07, H13.08
CHEN Shangzhi	I5.03	CHO Changwoo	H11.02
CHEN Shuzhang	B12.01	CHO Deok-Yong	E12.02,
CHEN Xiang-Bai	P1-co.126		P1-ap.109
CHEN Ying-Cheng	D8.03, F8.05	CHO Do Hyung	P1-co.301
CHENDA Vong	P1-ap.117	CHO Dong Hyun	B5.01
CHEON Byunggu	H2.02, H2.03,	CHO Dongki	P2-ap.312,
	H2.04, H2.05,		P2-ap.313
	H2.06, H2.07,	CHO Doohee	D12.02,
	H2.08, H2.09,		P1-co.220
	J2.02	CHO Ga Hyun	P1-se.207,
CHEON Miyeon	P1-ap.211		P1-se.217
CHEON Sang Mo	C10.04, F10.05	CHO Gil Young	B11.01

CHO Gil Young	F16.04	CHO Sung Tae	H7.08
CHO Guk	C3.01, H2.02, H2.03, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02	CHO Sungjae	C11.05
		CHO Sungwoong	I2.05, I2.06
		CHO Suyeon	C10.04, P1-ap.109
CHO Haein	H14.02	CHO Won-Ki	B9.03
CHO Hee Jin	P2-pl.202	CHO Won Sang	E2.03
CHO Hongrae	P2-ap.301	CHO Woo Hyun	P2-se.012
CHO Hyeongmin	H10.03	CHO Wosik	F5.06
CHO Hyeyoung	P1-co.105	CHO Yong-Sub	P2-pl.205
CHO Hyung Hee	D14.02	CHO Yong Hoon	F5.02, G14.03, H14.06, P2-ap.103
CHO Hyunmin	P1-se.115		
CHO Il Sung	C9.03	CHO Young Ju	D5.06
CHO Jaehee	P1-se.106	CHO Young Sul	G9.01
CHO JaeYoon	D7.02	CHO Youngji	P2-se.015, P2-se.016, P2-se.017, P2-se.018
CHO Jin Hyung	D11.02, P1-ap.101		
CHO Joonghyun	P2-te.006	CHO Youngju	C7.06
CHO Jun Hyung	J11.03	CHO Youngju	E7.03
CHO Jung-Wook	C6.01	CHO Youngwoo	E11.01
CHO Junhee	B5.05, C5.01, P1-at.011	CHO Younji	P2-se.019
CHO Junhee	P1-at.010	CHO Yuna	E12.04
CHO Keunki	B10.06	CHOE Sug Bong	A12.03, J10.05
CHO Keunki	G13.02	CHOE Wonho	C6.01, P2-pl.212, P2-pl.214, P2-pl.215, P2-pl.216
CHO Kihyeon	H2.01, J2.03		
CHO Kihyeon	I2.07		
CHO Minhaeng	A9.04, P1-bp.201	CHOE Wonho	P2-pl.211
CHO Minhaeng	D9.06	CHOEJO YeolLin	D3.09
CHO Minhyun	B12.01	CHOH Sung Ho	C11.07
CHO Minseok	F3.01	CHOI Beomgyu	P2-ap.312, P2-ap.313
CHO Myung Hoon	H6.05, P2-pl.201	CHOI Byoung Ki	P2-co.117
CHO Sam Yeon	P1-ap.206, P2-co.112	CHOI Changhwan	J7.04, P1-nu.014
CHO Sang Rhye	P1-ap.220		
CHO Sang Wan	I15.02	CHOI Da-Eun	P1-bp.208
CHO Sangeun	P1-se.110	CHOI Dahyun	P2-se.014
CHO Seong Beom	P2-pa.016	CHOI Dasom	A10.05, P2-co.115
CHO Shinuk	C15.02		
CHO Soohyun	B16.04	CHOI Dasom	P1-co.128
CHO Suho	P2-as.006	CHOI DeogKyu	P1-se.205

CHOI Deung-Jang	F12.04	CHOI Jeong-Mo	D9.07
CHOI E. J.	E16.04	CHOI Jeong Chan	P1-co.227
CHOI E. M.	C6.02	CHOI Ji Young	P1-pa.010
CHOI Eun Ji	G9.03	CHOI Ji Young	P2-pa.012
CHOI Eun Seo	P2-op.003	CHOI Jieun	D2.06
CHOI Eunji	P1-co.225	CHOI Jiman	P2-ap.313
CHOI Eunji	P2-ap.104	CHOI Jin Sik	D14.04,
CHOI Eunjin	P1-nu.006,		P2-se.013
	P1-pa.001	CHOI Jin Woo	P1-se.123,
	P2-ap.313		P2-te.006
CHOI Gahyun	I5.02	CHOI Jin	B3.05
CHOI Geunchang	P1-co.119	CHOI Jong Gu	P1-bp.103,
CHOI Gyuseung	P1-co.211		P2-ap.325
CHOI Hae In	P1-co.204,	CHOI Joonyoung	H5.01
CHOI Hai In	P1-co.212	CHOI Jun Woo	B12.01
		CHOI Jungchan	P1-co.221
CHOI Han Yong	C10.09	CHOI Keunsu	B15.08
CHOI Hansol	P1-se.119	CHOI Ki-Seok	I7.01
CHOI Hongchul	D11.06	CHOI Ki-Young	D3.07, I2.02,
CHOI Hyeon-Seo	H13.07, H13.08		I2.03
CHOI Hyeonggi	G16.03	CHOI Kiri	C9.04
CHOI Hyoju	E16.01	CHOI Koun	A2.01,
CHOI Hyoung Joon	C10.01, C10.02,		P1-pa.015
	D16.06	CHOI Kwang Yong	B16.04, C16.02
CHOI Hyungsoon	P2-co.107	CHOI Kwangyoung	P1-co.125
CHOI Hyung-Jin	B12.01	CHOI Min-Yeong	A15.02
CHOI Hyungkook	P2-co.107	CHOI Min Chul	J16.07
CHOI In Cheol	H13.03	CHOI Min	P2-op.012
CHOI In Hyeok	C11.01, G16.01	CHOI Minhyuk	J11.01
CHOI In Soo	D14.02	CHOI Nagyeong	P2-ap.302
CHOI Incheol	P1-se.210	CHOI Rak Gun	P2-ap.325
CHOI J, Y.	P2-pa.004	CHOI Sanghyeon	H14.04,
CHOI J. H.	P2-pa.004,		P2-se.006
	P2-pa.012	CHOI Sangkook	D11.08
CHOI J.H.	I2.04,	CHOI Seokmin	P1-co.107
	P2-pa.011	CHOI Seong Youl	D3.06
CHOI J.Y.	I2.04	CHOI Seowon	E4.03,
CHOI J.Y.	P2-pa.011		P2-as.001,
CHOI Jae Yoon	P1-at.001,		P2-as.002,
	P1-at.002,		P2-as.003,
	P1-at.003		P2-as.004,
CHOI Jaejin	C2.04		P2-as.005
CHOI Jee Hyun	C9.01	CHOI Seungchul	P1-co.122
CHOI Jee Hyun	P1-bp.102,	CHOI Seungkyu	I11.05
	P1-bp.210		

CHOI Seungsun	H15.04	CHOI Woojin	P1-ap.102
CHOI Seungsun	P2-op.007	CHOI Yeonguk	P1-co.115, P2-ap.114
CHOI Si-Young	C11.03		
CHOI Si-Young	J11.01	CHOI Yongjun	H7.03
CHOI Soo Bong	P1-se.118, P1-se.214, P1-se.216, P2-op.005, P2-op.006	CHOI Young Jai	J10.04
		CHOI Youngsu	B16.04
		CHONG Yonuk	I11.02
		CHONG Yonuk	P2-ap.312, P2-ap.313, P2-ap.314
CHOI Soo Ho	P1-se.201, P1-se.208		
CHOI Soo Kyung	I2.08	CHOO Jaegul	E11.01
CHOI Su Yong	D2.06	CHRISTOPH Toennis	P2-as.004, P2-as.005
CHOI Suji	G10.04		
CHOI Suk-Ho	G13.03	CHU Hong	G5.01
CHOI Suk-Ho	P2-se.011	CHUCHALIN Andrei	B5.04
CHOI Sukjune	P1-co.302	CHUJO Tatsuya	F7.01
CHOI Sungkyun	B10.02, B10.07, J10.03	CHUN Sae Hwan	D4.02, P2-pl.119
		CHUN Sae Hwan	G16.03
CHOI Sungwook	A6.02	CHUN Young-bum	C6.03
CHOI Sungwook	J15.01, P1-co.304	CHUN Young Tea	F14.01, P1-se.101, P1-se.102, P2-se.009
CHOI Sunjin	F3.01, F3.02		
CHOI Suyong	D2.04, H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, I2.05, I2.06, J2.02	CHUNG Haelk	P2-ap.308
		CHUNG Jin Seok	P1-co.213
		CHUNG Jongseok	P1-pa.005
		CHUNG Kwang Hyun	P1-ap.203
CHOI Tae-Kyu	P2-pl.119	CHUNG Kwangzoo	B7.05
CHOI Taeyoung	J12.03, J12.04, J12.05, J12.07	CHUNG Kwun-Bum	H15.03
		CHUNG Moses	H6.03, P2-pa.002, P2-pl.203, P2-pl.204, P2-pl.206, P2-pl.207
CHOI Won Mook	E16.05		
CHOI Wonshik	G5.04		
CHOI Wonyeong	P1-co.112, P2-ap.209, P2-ap.211	CHUNG S. B.	E16.04
		CHUNG Suk Bum	C10.06
CHOI Woo Hun	A13.01	CHUNG Suk Bum	C10.07
CHOI Woo Jun	P1-ap.222	CHUNG Sunjae	P2-ap.205
CHOI Woo Seok	C11.01, G16.01, H10.04, P1-co.207, P1-co.214, P2-ap.110	CHUNG Woohyun	H3.01, H3.02, H3.04
		CHUNG Woohyun	H3.05
		CHUNG Yong-Duck	T8.01

CHUNG Yun Chul P2-co.107
 COGNATA Marco La B6.04
 COLAZZO Luciano Colazzo A10.05
 COLAZZO Luciano P1-co.128,
 P2-co.115
 COMAN Ioana F3.08
 COMIN Riccardo C10.03
 COWAN Thomas E F6.02
 CRUST Kevin J. D15.02
 CUNNINGHAM Eric Flint F6.03
 CURRY Chandra Brienne F6.03

D

DANG Jeongjeung D6.01
 DANIEL D. Joseph P1-nu.007
 DAVOUDIASL Hooman J3.03
 DE LANNOY Carlos D9.01
 DE LÉSÉLEUC Sylvain G8.03
 DEVI Uma J15.01,
 P1-co.304
 DHO Joonghoe P1-co.113
 DING Feng E12.01
 DIVAN Ralu H12.04
 DO HyeonSeok I3.05,
 P1-pa.007
 DO Hyunsuk H2.02, H2.03,
 H2.04, H2.05,
 H2.06, H2.07,
 H2.08, H2.09,
 J2.02
 DO Jongwoong P1-se.114
 DO Seungkyung B6.04, B7.08
 DO T. Nga P2-ap.204
 DOGRA Sunil Manohar B3.06, B3.07,
 D7.08
 DOH Yong-Joo I11.05,
 P1-co.101,
 P2-co.104
 DONGCHUL Sung P2-co.204
 DÖNIGUS Benjamin D7.04

DORJRENTSEN Sugarjav P1-bp.112
 DYER Gilliss McNaughton F6.03

E

E42 Collaboration A6.03
 EDUGULLA Girija Shankar A14.03
 EFROS Alexander L. F5.04
 ENG Peter G11.01, G11.02
 ENOMOTO Kazuki J3.03
 EO Jung Sun P2-se.010
 EO Yun H2.02, H2.03,
 H2.04, H2.05,
 H2.06, H2.07,
 H2.08, H2.09,
 J2.02
 EOM Hwajin I4.05
 EOM In Tae G16.04
 EOM In Tae P1-co.307
 EOM Intae D4.01, G16.03,
 J15.01,
 P1-co.304
 EOM Intae P1-co.305
 EOM Jaeun B12.01
 EOM Jonghwa H14.05
 EOM Seonhye P1-se.201
 EOM Young-Ho I9.05, I9.06
 ESAT Taner F12.02
 ESAT Taner P1-co.114
 ESENER Yildiz I9.01

F

FàBREGA Cristian E14.01
 FABRIZIO Cossu I10.02
 FANG Shiang C10.03
 FARROW Tristan G14.04
 FLACKE Thomas J3.04

FLETCHER Luke F6.03
 FOMIN Vladimir M. C14.02
 FRANCISCO Blanco P1-bp.113
 FRY Alan F6.03

G

GABARDI Rudy G10.04
 GALTIER Eric F6.03
 GANG GeunWon P1-bp.101
 GAO Hongchen J11.05
 GARCIA-LOPEZ Daniela P1-bp.208
 GARCIA Alejandro Laso F6.02
 GEFEN Yuval E10.02
 GHEE Young-Seok B13.04
 GHIM Cheol-Min H9.04
 GHIM Dai Sik H15.02
 GHIM Dai Sik H5.04
 GHIM Young Chul C6.01
 GHIM Zae-young P2-te.005
 GHO Yong Song P1-bp.118
 GHORAI Debabrata E3.03
 GIL Kyehwan P2-pl.209
 GILEVA Olga P1-pa.005
 GKIKA Violeta P1-pa.006
 GLEASON Arianna F6.03
 GLENZER Siegfried F6.03
 GO Ara B11.01, C12.03,
 P2-co.202,
 P2-co.214,
 P2-co.215
 GO Byeong Guk H9.05
 GO Gyungchoon F10.03, H12.03
 GO Jiseong D14.05, D14.08
 GO Namseok P2-op.002
 GOH Beomjoon F16.06
 GOH Beomjoon P1-co.216
 GOH J. I2.04,
 P2-pa.004,
 P2-pa.011
 GOH Junghwan C3.04,

P1-pa.004,
 P1-pa.013,
 P2-pa.001,
 P2-pa.008,
 P2-pa.012
 A13.01, C4.02
 E10.02
 G7.02
 C5.04
 B7.08
 C7.03, C7.06
 B6.04
 P1-ap.105,
 P1-ap.212,
 P1-ap.221
 P1-ap.217
 G11.02
 H10.03
 I4.07
 P1-se.123
 P1-bp.104,
 P1-bp.108
 J8.01
 P2-st.008
 P1-se.122
 C5.01

GONG Su-Hyun
 GORNYI Igor
 GOTO Yuji
 GREINER Markus
 GU Gyoungmo
 GU Gyoungmo
 GU Gyuongmo
 GU Minseon
 GU Seonhwa
 GUIGNOT Nicolas
 GUNKEL Felix
 GWAK Bogeun
 GWAK Donghun
 GWAK Eunha
 GWAK Geunhee
 GWON Eunseo
 GWON OhHun
 GWON Sehyeon

H

HA Aelim P2-ap.323
 HA Byungcho P2-op.022
 HA Chang Hyon I3.08,
 P1-pa.011
 C2.08
 D14.03,
 D14.05,
 D14.07, E14.02,
 E14.04
 D14.08
 E7.01

HA Daehoon
 HA Jae Du
 HA Jaedu
 HA Jeongsu

HA Junseo	A8.02, P2-at.007	HAN Jung Hoon	B11.07
HA Meesoon	G9.05	HAN Junseok	C8.03
HA Sangwoo	J1.01	HAN Kyungreem	P1-bp.208
HA Seung-Hyeok	P1-co.221	HAN Kyungreem	P2-st.020, P2-st.021, P2-st.022
HA Seungkyu	B3.01, C3.01, H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02	HAN Mincheol	P2-se.015, P2-se.016, P2-se.017, P2-se.018, P2-se.019
HA Sung Soo	J15.01, P1-co.304	HAN Moon-sup	P1-ap.105, P1-ap.212, P1-ap.221
HA Taegyū	C5.02, P1-at.008, P1-at.012, P1-at.013	HAN Myung Joon	D13.06, P2-co.212
HA Taewoo	C13.02	HAN Sang-Hoon	F10.05
HAHN Kevin Insik	B6.04, B7.08	HAN Sang-Wook	A10.02, P1-co.228, P2-co.110
HAHN Kevin Insik	C7.03, C7.06		
HAIDARI Mohd Musaib	D14.04, P2-se.013	HAN Sang Wook	P1-se.209, P2-co.209
HAJIMA Ryoichi	B8.01	HAN Seongheoon	J15.04
HAM Cheolmin	C7.01, I7.03, P2-pl.207	HAN Seonghoon	P2-se.002
HAM Cheolmin	C7.06	HAN Seungbin	J16.08
HAM Seonggil	H14.04	HAN Seunghee	P1-bp.204
HAN Dong-Soo	H12.01	HAN Seungman	P1-ap.113
HAN Dong Hee	P1-co.229	HAN Song hee	B10.06
HAN Dong Hui	P1-co.110	HAN Subin	E2.03
HAN Dong Woo	P1-bp.118	HAN Sun	P1-bp.111
HAN GuiHyun	H16.02	HAN Yeongseo	D13.02
HAN Hee-Sung	G12.04	HAN Yoon Seong	P2-pl.215
HAN Hio-Been	C9.01	HAN Yoonseok	P1-co.103, P1-co.107
HAN Huijun	E12.01, E12.03	HAN Yoonseong	P2-pl.211
HAN HyeongTark	P1-bp.206	HAN Yoonseong	P2-pl.214, P2-pl.216
HAN Hyewon	I4.07		
HAN Hyok Sang	B5.01	HAN Young-Kwon	F3.09
HAN Il Ki	F5.03	HAN Younghoon	B7.04
HAN Inah	P1-se.110	HAQ B.U.	P1-ap.116
HAN Jae Ho	B11.06	HARA Hideaki	C8.03
HAN Jaeho	P2-ap.109	HARBOLA Varun	D15.02
HAN Jang-Min	P2-pl.208	HARDIN Corey	F6.03
HAN Ju Young	P1-se.118	HARRIES James R	C8.01

HASAN Mahbub	P1-bp.103, P2-ap.325	HOEPPNER Hauke	F6.02
HASSAN Aisar-ul	P2-at.003	HOFFMANN Axel	H12.04
HASSAN Aisar UI	P2-at.001, P2-at.002	HOHNG Sungchul	D9.05, P1-bp.111
HAUPTMAN John M	I3.05	HOHNG Sungchul	D9.08
HAUPTMAN John	P1-pa.007	HOMMEL Caroline	A10.05, P1-co.128, P2-co.115
HAYAKAWA Seiya	B6.04		
HAYAKAWA Shuhei	I7.08	HONG Byeong Jin	B3.04
HEIBLUM Moty	E10.02	HONG ByeongJin	P2-pa.003
HEILER Ann-Caroline	G10.04	HONG Byungsik	B6.04, C7.02, C7.08, D7.03, D7.06, H7.02, I7.02, P1-nu.005
HEIMANN Philip	F6.03		
HEINRICH Andreas	A10.03, A10.05	HONG Changbeom	P1-bp.209
HEINRICH Andreas	F12.02	HONG Changki	E10.02
HEINRICH Andreas	P1-co.114	HONG Deog Ki	D3.02
HEINRICH Andreas	P1-co.128	HONG Dongpyo	H15.06
HENRIET Loïc	F8.01	HONG Heemyoung	D13.05, H14.01
HENRY Laura	G11.02	HONG Hyun-Gue	P2-at.005
HEO Cheong	C7.08, P1-nu.005	HONG Ji Sang	B10.04, J10.07, P1-co.121
HEO DaMoon	P1-ap.217		
HEO Dong Gwon	H13.05, P1-se.202, P1-se.203	HONG Jieun	P2-pa.001
HEO Hoon	H6.05	HONG Juhee	D7.04
HEO Jeewon	D2.07, D2.08	HONG Jungehy	D11.03
HEO Jeong Il	H6.04	HONG Jungsoo	P1-at.010
HEO Jun Yeong	P1-se.203	HONG Minji	P2-ap.304
HEO Kyoungsu	I7.01	HONG Sanghyuk	P2-at.010, P2-at.011
HEO Seung-Phil	G16.05		
HEO Seung-Pil	P1-co.218	HONG Seog Woo	I13.02
HEO Seung Phil	P1-co.221	HONG Seok-Cheol	A9.04, P1-bp.201
HEO Seung Phil	P1-co.305		
HEO SeungPhil	P1-co.307	HONG Seok-Cheol	D9.06
HEO Seungpil	G16.04	HONG Seokmin	I14.03
HEO Yoon Seong	B15.05	HONG Seung-Woo	C7.06
HEO Yooun	D15.03	HONG Seung Woo	I7.03, I7.05
HEO Yunseok	C11.04	HONG SeungBeom	B10.05
HER Sung-Hyuk	J11.01	HONG Suk-Ho	P2-pl.215
HERWIG Christian	P2-pa.001	HONG SukLyun	P1-ap.208, P1-se.112, P2-ap.210, P2-ap.214, P2-co.204
HIEU Ngo Minh	J15.01, P1-co.304		
HILL Elizabeth	F6.03		
HOBBS George	F4.01		

HONG Woo Tae	P2-ap.305, P2-ap.317, P2-ap.318	HWANG Insung	I2.05, I2.06, P2-pa.007
HONG Yoonha	J7.04	HWANG Jae-Yeol	P1-co.116
HOSSAIN Nazmul	P1-ap.213	HWANG Jaein	C7.08, P1-nu.005
HSIAO Ya-Fen	D8.03	HWANG Jaejin	P2-co.203
HU Yaozong	F16.04	HWANG Ji-min	P1-co.116
HU Ying Chieh	P2-ap.106	HWANG Ji su	P1-nu.009
HUA Yongbin	E14.03, P1-se.104	HWANG Jieun	P1-ap.108
HUANG I-Chia	D8.03, F8.05	HWANG Jinwoong	A10.04, P1-ap.102, P1-ap.108, P1-co.117, P1-co.223, P2-co.111
HUANG Lingen	F6.02	HWANG Jongseok	B7.03, P1-pa.017
HUANG Wen-Juan	P1-co.126	HWANG Jongwon	C7.06
HUANG Ya-Ting	J9.04	HWANG Juchan	P1-se.103
HUH Changgi	B3.03, C3.03, H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, I3.05, J2.02, P1-pa.007	HWANG Juchan	P1-se.105
HUH SeungJung	P1-at.003	HWANG Jun Ik	P1-co.217
HUMPHRIES Oliver	F6.02	HWANG June	P1-se.218
HUR Jaeseok	P2-st.014	HWANG Junghoo	P2-pl.211
HUR Junhyeok	P1-at.001	HWANG Junghoo	P2-pl.214, P2-pl.215
HUR Min Sup	E6.01, E6.02, G6.01, P2-pl.110, P2-pl.113, P2-pl.115, P2-pl.118	HWANG Jungseek	C16.02, P1-co.106, P1-co.207
HUR Namjung	P1-co.115	HWANG Junha	G16.04, P1-co.305
HWANG Chan Yong	I14.02, P2-ap.204	HWANG Junha	P1-co.301
HWANG Chanyong	G12.02	HWANG Junha	P1-co.307
HWANG Choongyu	P1-co.117, P1-co.223	HWANG Junsik	I13.02
HWANG Dae-Kyu	E12.04	HWANG Kyungwook	I13.02
HWANG Eunji	D13.04	HWANG Kyuyeong	D2.01, H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02
HWANG Han Sub	G8.04, G8.05	HWANG Myung-Joong	F5.05
HWANG Harold Y.	D15.02	HWANG Samgyu	P1-at.003
HWANG HyunHo	P1-pa.013	HWANG Seon Ha	P1-co.227, P1-co.229
HWANG In-Hui	P1-co.228, P2-co.110	HWANG Seonggeun	J7.08

HWANG Seungha	D9.08
HWANG Seungjae	P2-co.203
HWANG Soonchul	P1-se.115
HWANG Sun-Lyeong	P2-se.009
HWANG Sunglin	F5.06
HWANG Sunhwa	G8.04, G8.05
HWANG Tae Jong	P2-se.004
HWANG W.	I2.04, P2-pa.004
HWANG Wonsang	P2-pa.011, P2-pa.012
HWANG Yong Seok	P1-pa.001
HYEON Changbong	C9.04
HYEON Changbong	F9.02
HYEON Seonwoo	P2-co.107
HYUN Eunseok	P1-ap.111
HYUN Moon Seop	P1-ap.212

IMAI Nobuaki	B6.04
IMAI Yasutaka	C8.03
INDUKURU Ramesh Reddy	D11.05
INOMATA Keisuke	F4.03
IOANNIDIS Ioannis	F12.03
IOVINE Nadege	A2.01
IRFAN Rana Muhammad	J15.01, P1-co.304
IVANOV Boris I.	I11.03
IVANOV Boris	H3.05, P1-pa.006
IWASA Naohito	B6.04
IWAYAMA Hiroshi	C8.01

J

IGOR Di Marco	I10.02
IGUCHI Arisa	C8.01
IHM Yungok	G16.02
IHM Yungok	P1-co.305
IM Chanyang	P1-at.009
IM Donghawn	P1-at.009
IM Eunji	P1-co.112
IM Hayoon	P1-co.223
IM Hyun Sik	P1-se.110
IM Hyunsoo	P1-co.103
IM Jae-Kyeong	P1-bp.105
IM Jaehui	P1-ap.105, P1-ap.221
IM Jaeseung	P2-op.006
IM Mi-Young	G12.04
IM Sang Hui	J4.07
IM Seong Il	B15.04, P1-se.115
IM Seongil	F15.01
IM Subin	P2-ap.211
IM Sungmin	H1.06

JAHNG Junghoon	P2-ap.306
JAMES A. London	P1-bp.110
JANA Biswajit	D5.02
JANA Biswajit	P2-at.009
JANG A-Rang	B14.02, P1-ap.107
JANG Bo Gyu	D11.04
JANG Byeong Joo	P1-at.002
JANG Chan Wook	P2-se.011
JANG Chaun	B12.01, P1-co.127
JANG Dahye	P2-op.011
JANG Dogeun	G16.03, P2-op.008
JANG Dong Jin	P2-se.013
JANG Eunji	I2.08
JANG H. I.	P2-pa.004
JANG H. I.	P2-pa.012
JANG H.I.	I2.04
JANG H.I.	P2-pa.011
JANG Haeun	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07,

	H2.08, H2.09, J2.02		H2.08, H2.09, J2.02
JANG Hajung	P1-ap.104	JANG Seunghun	J15.07
JANG Hangil	J7.07	JANG Won	P1-ap.221
JANG Hansol	P1-ap.212	JANG Woojin	D2.03, D2.08
JANG Hoyoung	D10.02	JANG Yeongmin	I11.05, P2-co.104
JANG Hoyoung	G16.03		P2-co.202
JANG Hoyoung	G16.05	JANG Yerin	P1-nu.009
JANG Hyejin	J16.08	JANG Yongsik	H2.02, H2.03, H2.05, H2.06, H2.08, H2.09, J2.02
JANG Hyeonseo	P1-ap.109	JANG Yoonjun	H2.04
JANG Hyewon	H1.01		H2.07
JANG Hyunjun	D5.06		C7.06
JANG Insu	P2-co.109		P1-ap.101
JANG J.S.	I2.04	JANG Yoonjun	G6.03
JANG J.S.	P2-pa.011	JANG Yoonjun	A15.01, A15.04, B15.01, B15.03, B15.07
JANG Jae-Won	E14.01	JANG Youngseub	C11.04, D11.02
JANG Jee-Seung	A2.04, P1-pa.004, P1-pa.016, P2-pa.004	JANG Yunhyeong	P1-ap.101
	P2-pa.012	JAROSZYNSKI Dino A	G6.03
JANG Jee-Seung	A2.01	JE Yugyeong	A15.01, A15.04, B15.01, B15.03, B15.07
JANG Jee Seung	H6.03, H6.04		C11.04, D11.02
JANG Ji Ho	H14.02, H14.04, P2-se.010	JEEN Hyoung Jeen	P1-ap.101
JANG Jiong	E13.03, P1-ap.114, P2-ap.321	JEEN Hyoung Jeen	D8.03
JANG Joon Ik	P2-se.009	JEN Hsiang-Hua	E12.04
JANG Jun-Hyeon	P2-ap.324	JEON Dong-Hwan	H6.04
JANG Juntae	P2-op.023	JEON Dong-O	H9.05
JANG Junwon	A2.01	JEON Euijin	C6.03
JANG Mincheol	P1-ap.115	JEON Eun-chae	P1-pa.009
JANG Myeong Jin	B15.06, P1-ap.218	JEON Eun Ju	I12.05, J11.02
JANG MyeongJin	P2-pa.002	JEON Haechan	P1-at.007
	P1-se.122	JEON Honggi	A9.04, P1-bp.201
JANG Sangcheol	C9.04	JEON Hyeonjun	P2-op.014
JANG Seo Gyun	P1-at.004		C9.05, C9.06, H9.03, P1-bp.206, P1-bp.209, P2-st.003
JANG Seogjoo J.	H14.04	JEON Jae-Hyung	H9.02
JANG Seokmin	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07,	JEON Jihoon	H14.04
JANG Seonghoon		JEON Jun Oh	E12.02
JANG Seoyun		JEON Jun su	P2-se.015
		JEON Junsu	P2-se.016,

	P2-se.017, P2-se.018, P2-se.019	JEONG Hyeonhui JEONG Hyeonjong JEONG Hyeonwoo JEONG Hyun-Sik JEONG Hyun	B15.01 H13.07, H13.08 P2-co.105 F3.04 P1-se.207, P1-se.215, P1-se.217
JEON Min-Uk	D14.01, P2-se.005		
JEON Mingyu	P2-at.006		
JEON Ok Sung	H15.06		
JEON Sang Un	P2-pl.105	JEONG Hyung Mo	H13.03
JEON Sangjun	D12.03	JEONG Hyunjeong	A15.01, A15.04, B15.01, B15.03
JEON Seongjin	P2-pl.114		
JEON Serim	P1-co.128	JEONG Iljoo	P1-bp.102
JEON Takkyeong	P2-se.010	JEONG In Hoi	F9.01, P2-st.023
JEON Yongmin	P2-ap.322		
JEON Young Woo	P1-se.119	JEONG Ingu	D3.06
JEONG Beomgyun	P2-ap.110	JEONG Jaehoon	D3.06
JEONG Cherlhyun	B9.03	JEONG Jaewook	I13.02
JEONG Cherlhyun	P1-bp.114, P1-bp.209	JEONG Jeeyoon	H5.04, P2-op.007, P2-op.010, P2-op.013
JEONG Dabin	P1-pa.003		
JEONG Dameul	J16.04		
JEONG Daseul	I5.03, P2-ap.306	JEONG Ji Hyeok	I2.08
		JEONG Jiho	G5.01
JEONG Dong Yun	P1-ap.222	JEONG Jin Young	P1-se.214
JEONG Dongchan	P1-co.112, P2-ap.209	JEONG Jinryong	H2.02, H2.03, H2.05, H2.06, H2.08, H2.09
JEONG Dongwoo	P1-nu.006, P1-pa.002		
JEONG Doo sub	C10.02	JEONG Jinryong	H2.04
JEONG Eun-Suk	A10.02	JEONG Jinryong	H2.07
JEONG Haemin	I2.01	JEONG JinYong	J2.02
JEONG Hansol	C5.03	JEONG Jong Ryul	I12.03
JEONG Hawoong	G9.05, P2-st.015, P2-st.016	JEONG Jonghyun	I13.02
		JEONG Jun-Ho	P2-ap.303
		JEONG Junu	H3.06, H3.08, H3.09, P1-pa.006
JEONG Hawoong	P2-st.014		
JEONG Heejeong	F8.02	JEONG Junwoo	F8.02
JEONG Ho Sung	P2-op.010	JEONG Junyeong	P2-pl.203
JEONG Hoon	G5.02	JEONG Juyeong	D13.06
JEONG Hoyong	I2.05, I2.06	JEONG Kwang-yong	C4.01
JEONG Hyeon Jun	P1-se.204	JEONG Kwang Sik	J3.06
JEONG Hyeon U	J9.07	JEONG Minjae	P2-ap.107
JEONG Hyeong-Chai	I9.03, P2-st.007, P2-st.008	JEONG Minjin	E4.04
		JEONG Minju	P1-co.124
		JEONG Mun Seok	H13.03,

	P1-se.204, P1-se.205, P1-se.207, P1-se.210, P1-se.211, P1-se.212, P1-se.213, P1-se.215, P1-se.217, P1-se.218, P1-se.222, P1-se.223	JHUN Youngseok JI Chang-Woo JI Gangseon JI Jeong-Young JI SuJeong JI Sungdae JI Xiaoqin JI Young Bin JI Young rae JIA Yu JIN Hyeong-Ju JIN Hyunchang JIN Hyungjoo JIN Kyung-Hwan JIN Kyung-hwan JIN Qianru JIN Song Yu JIN Yeongrok	H1.05 F3.04 H5.04, I5.02, P1-se.201 D6.04 P1-nu.011 B10.03, J10.01 P1-ap.114 P2-op.009 J1.02 J11.03 P2-se.005 P2-pl.208 D14.01 B11.01 C16.03 G10.04 P2-se.017 J16.02, P2-co.203 H2.04 P2-st.010 C6.01 H14.03 E14.02 D14.03, P1-se.114 P1-ap.111, P2-se.007 P1-se.205, P1-se.207 P2-pl.213 F9.03 A15.02 C7.06 D5.03, D5.04 A12.01, E12.04 H15.01 J15.01 C3.07 H5.01 P2-at.012 P1-se.119 I5.03
JEONG Noa	B5.05, P1-at.011		
JEONG Sang Hyeok	P1-bp.118		
JEONG Sanghoon	B7.01		
JEONG Se Young	B12.04, P2-co.109		
JEONG Se Young	P1-ap.211		
JEONG Seok Ho	F8.03		
JEONG Seokho	F8.02	JO Guk	
JEONG Seong-Hoon	P2-ap.213	JO Hang-Hyun	
JEONG Seong Min	I13.05	JO HangJin	
JEONG Seung-Gyo	F10.05	JO Hyerin	
JEONG Seung Gyo	C11.01, G16.01, P1-co.207	JO Hyun-Jun JO Hyun Jun	
JEONG Siwon	A15.03		
JEONG Sodam	I5.07	JO Jaehyeong	
JEONG Sohee	F5.04, P2-co.101		
JEONG Sukmin	E12.02	JO JiEun	
JEONG Taek	P2-at.010, P2-at.011		
JEONG Wonhee	G9.04	JO Jong Gab JO Junghyo JO Moon-Ho JO Seong Gi JO Seong Gi JO William JO William JO Wonhyuk JO Youngmin JO Younjung JOE Jaebong JOE Sung-yoon JONSSON Magnus	
JEONG Yeojun	P2-op.018		
JEONG Yong	C9.01		
JEONG Young Uk	P2-pl.202		
JEONG Yu Seon	J3.01		
JEONG Yujin	A12.02		
JEPSON Tyler	P1-bp.121		
JHARAPLA Prathap Kumar	P2-co.205, P2-co.206		
JHO Yong Seok	J9.02, J9.03		

JOO Bin Chan	P2-op.017	JUNG Jaehun	P1-bp.115
JOO Chirlmin	D9.01	JUNG Jee yeon	G5.01
JOO Chirlmin	P1-bp.101	JUNG Jeil	A16.04,
JOO Huitae	F5.04,		P2-co.206,
	P1-se.201		P2-co.207
JOO K. K.	P2-pa.004,	JUNG Jeil	P2-co.205
	P2-pa.012	JUNG Jin-woo	H13.04, H13.08
JOO K.K.	I2.04,	JUNG Jong Heum	C5.05,
	P2-pa.011		P1-at.005
JOO Keehyoung	P1-bp.203	JUNG Jong Hoon	D11.03,
JOO Kyung Kwang	A2.04, I3.03,		P2-ap.106,
	P1-pa.008,		P2-ap.114
	P1-pa.010,	JUNG Joong-Eon	B15.04, B15.06,
	P1-pa.016		B15.07,
JOO Kyung	D14.02		P1-ap.218
JOO Kyungkwang	P1-pa.003,	JUNG Ju-Hyun	A15.02
	P1-pa.018	JUNG Jun Yeong	P2-op.004
JOO Min-Kyu	D13.02,	JUNG Jung-Hoon	I9.06
	P2-se.014	JUNG Kihyun	J4.04
JOO Sungmin	H9.03	JUNG Min Wan	G5.02
JOO Yanggeun	D13.05, D13.07	JUNG Minkyung	P2-co.102
JOSHI Bhagyashree S	D9.01	JUNG Moonyoung	P1-ap.106
JOSHI Saurabh Suredra	I15.04	JUNG Na Eun	P2-ap.302
JOZWIAK Chris	C10.03	JUNG Shin	P1-bp.116
JU Gyeongbin	A13.03	JUNG Soon-Gil	P1-co.103,
JU Tae-Seong	G12.02		P1-co.106
JUANI Ropez	P1-bp.110	JUNG Sungryul	P1-at.009
JUEID Adil	E2.04	JUNG Suyong	H11.03
JUHN June-Woo	P2-pl.215	JUNG Tae Hyun	P2-ap.112
JUMA Oyoo Michael	E16.02, E16.03	JUNG TaekSun	J10.04
JUN Byeong-Eog	P1-se.111	JUNG Uijun	P2-ap.208
JUN Seunghyun	P2-co.106	JUNG Wonzee	J16.05
JUN Yonggun	J9.04	JUNG Woojin	P2-st.013
JUNAID Syed Bilal	D11.03,	JUNG WooSeung	A6.03
	P1-co.202	JUNG Ye Ji	G5.02
JUNG D. E.	P2-pa.004	JUNG Yeri	A10.01
JUNG D.E.	P2-pa.011	JUNG Yong Hun	G5.01
JUNG Da Eun	I2.04,	JUNG Yoosoo	P1-se.111
	P2-pa.012	JUNG Young-Kwang	I15.01
JUNG Eil Ho	P1-co.207	JUNNG Seunghyun	A2.01
JUNG Jae Yong	P2-ap.305,		
	P2-ap.317,		
	P2-ap.318		
JUNG Jaehoon	P2-pl.102		

K

KAHNG Byungnam	G9.06, J9.01	KANG Jeongmyung	P1-se.109
KAHNG Se-Jong	P2-co.116	KANG Jin-Kyu	H7.06
KAHNG Yung Ho	P1-ap.219,	KANG Jin Young	A12.01, E12.04
	P1-ap.220,	KANG Jiyoung	D9.08
	P1-ap.222		P2-st.017,
KANG Beom Tak	P1-co.120	KANG Joon-Ho	P2-st.018
KANG Bo Soo	C11.06,	KANG Joongoo	P2-co.110
	P1-co.210	KANG JoonHyun	D16.05
KANG Byeongwon	I5.03	KANG Keehoon	F5.03
KANG Byungmin	C5.04	KANG Keekon	I15.01
KANG Byungmin	I7.09, J7.02	KANG Kicheon	P2-pl.114
KANG Chang-Jong	B16.01, C12.02	KANG Kyeong Tae	E10.01
KANG Changwon	D9.08		E15.02,
KANG Chul	H5.05	KANG Mijeong	P1-co.208,
KANG Chul	P2-op.008	KANG Min-Jeong	P1-co.209,
KANG Dong Woo	D3.06	KANG Min Gu	P2-ap.110
KANG Dong Woo	TT2.03	KANG Min Ho	P1-co.226
KANG Donghee	I15.02	KANG Mingu	P2-co.116
KANG DongYel	P2-te.003	KANG Mingu	J11.04
KANG Donyoung	G10.01	KANG Minho	C11.02
KANG Evan S Hyunkoo	B4.01, I5.03,	KANG Myungjun	C10.03
	P2-op.012,	KANG Nam-Hwa	F5.04
	P2-op.014,		C3.07
	P2-op.018,		C10.04
	P2-op.019		G3.03, H1.04,
KANG Gwanghwi	P2-ap.308	KANG Nam-woo	P2-te.002
KANG Gyeongbo	P2-pl.117,	KANG Nuri	P1-nu.009
	P2-pl.119	KANG Rira	B5.02
KANG Hani	B15.06,	KANG S. K.	I13.01
	P1-ap.218	KANG S. K.	P2-pa.004
KANG Ho Jun	P1-se.124	KANG S.K.	P2-pa.012
KANG Hye Lin	H6.02	KANG Sae Hyun	I2.04
KANG Hyon Chol	P1-co.302,	KANG Seok-Gyu	P2-pa.011
	P2-ap.111,	KANG Seok-Ju	P1-co.302
	P2-ap.115	KANG Seoung-Hun	P1-ap.210
KANG Hyosang	P2-as.006		P1-se.122
KANG Hyunmin	A10.03	KANG Sungjin	J16.01,
KANG J.-S.	P1-se.209	KANG Tae In	P2-co.213
KANG Jan-Won	H13.04	KANG Tae Uk	I13.02
KANG Jang-Won	H13.07,	KANG Taein	A13.02
	P1-se.107,		P2-pa.009
			D14.05,
			D14.07,
			D14.08, E14.02,

	E14.04		P1-pa.007
KANG Won Nam	P1-co.107	KIM Bojong	A12.04, I12.05, J11.02
KANG Woosik	A2.03, E4.04		
KANG Wooyoung	P1-se.211, P1-se.212	KIM Bongho	P2-pa.002
		KIM Bongjae	D11.05
KANG Yechan	D2.05	KIM Bongjae	I10.03
KAR Arpan	D3.05	KIM Bongjae	P2-co.210
KASPRZAK Jacek	G14.02	KIM Bongju	H10.03
KEE Chul Sik	H5.05	KIM Bongkeon	P1-co.101
KEE Chul Sik	P2-op.008	KIM Boram	C11.05
KEE Jung Yun	B12.01	KIM Bosung	A12.04
KEE Jungmin	P1-bp.120	KIM Bum-Kyu	B13.04
KESARIMANGALAM Sriram		KIM Bumjoon	D4.03
	I5.03	KIM Byong Jae	F5.04, P1-se.208
KHADKA I.B.	P1-ap.116, P2-co.201	KIM Byoung Choul	A9.01
KHAN Imran	J10.07	KIM Byoung Jae	P2-co.101
KHAN Muhammad Asghar		KIM Byung gyu	D9.07
	H14.05	KIM Byunggun	G9.08
KHAN Shabraz	P2-at.003	KIM Byungju	P1-bp.106, P1-bp.107, P1-bp.114
KHAN Sibghat Ullah	P2-at.015		
KHIM Min Cheol	P2-co.117	KIM Chae-Eon	B7.01
KHIM Seunghyun	E16.04	KIM Chae-Un	P1-bp.109
KHIM Yeong Gwang	P1-ap.201	KIM Chae Won	F14.01
KHIM Yeong Gwang	P1-co.122	KIM Chang-Hyun	I15.03, I15.04, P2-ap.301, P2-ap.322, P2-ap.326, P2-ap.327
KIEM Do Hoon	D13.06, P2-co.212		
KIM A Young	P1-co.203	KIM Chang-Seok	G5.03
KIM Aram	B6.04	KIM Changyoung	H16.04
KIM Babae	H2.04	KIM Changyoung	P1-co.220
KIM Beom Hyun	B11.06	KIM Chanhee	B6.04, B7.08, C7.04, C7.06
KIM Beom Hyun	J10.04		
KIM Beom Jun	P2-ap.112	KIM Chanho	P2-pa.017
KIM Beom Kyu	D7.05, D7.09	KIM Chanwoo	D9.02
KIM Beomkyu	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02, J7.06	KIM Chanwoo	P2-te.005
		KIM Cheol-Joo	A15.02
KIM Bobae	B3.01, H2.02, H2.03, H2.05, H2.06, H2.07, H2.08, H2.09, I3.05, J2.02,	KIM Cheol Jun	C11.06, P1-co.210
		KIM Cheolhee	G3.01, G3.02
		KIM Chong-Hyun	P1-bp.208
		KIM Chong	H7.01

KIM Chong	J7.06	KIM Donggyu	P1-ap.218
KIM Choong Hyun	P2-co.202	KIM Dongho	I13.02
KIM Chul Min	P2-pl.117	KIM Dongho	P2-ap.314
KIM Chungho	A9.04, P1-bp.201	KIM DongHwan	H6.03
KIM Cook Hyun	G9.06	KIM Donghyeok	P2-st.017
KIM Cook	J9.01	KIM Donghyeon	P1-co.226
KIM Da Jeong	P1-co.211, P1-co.212	KIM Dongjun	P2-se.015, P2-se.016, P2-se.017, P2-se.018, P2-se.019
KIM Dae-Hwan	A12.01, E12.04		
KIM Daeguen	P2-op.021	KIM Dongmin	F16.05
KIM Daehyung	P1-bp.114	KIM Donguk	P2-ap.315
KIM Daeju	P1-se.106	KIM Dongwon	J12.08
KIM Dahee	B6.04	KIM Dongwook	A14.04, D11.04
KIM Dahee	C7.03	KIM Dongwook	H2.02, H2.05, H2.09, J2.02
KIM Dai-Sik	I5.02	KIM Dongwook	H2.03, H2.06
KIM Do Wan	E14.01	KIM Dongwook	H2.04
KIM Dohun	I11.04, I8.02	KIM Dongwook	H2.07
KIM Dohun	P1-co.109	KIM Dongwook	H2.08
KIM Dohyeong	P1-se.211, P1-se.212	KIM Dongwook	P1-co.222
KIM Dohyeong	P2-op.016	KIM Dongwoon	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02
KIM Dohyun	D13.08, E13.04		
KIM Dohyun	P1-se.103, P1-se.105	KIM DongYoung	P2-pl.107
KIM Dojin	I3.02, P1-pa.013	KIM Doris Yangsoo	P2-pa.005
KIM Dong-Hee	P2-st.005	KIM Dowook	J11.01
KIM Dong-Wook	B4.02, P1-se.204	KIM Doyeong	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02
KIM Dong Geon	C7.01		
KIM Dong Geon	C7.06	KIM Doyeop	P1-co.215
KIM Dong Hyeon	H13.03, P1-se.222, P1-se.223	KIM Duck-Ho	A12.03
KIM Dong Kyun	I13.02	KIM Duckyoung	J16.03
KIM Dong Min	C6.05	KIM Duk Y,	C10.04
KIM Dong Wook	B7.06	KIM E. J.	P2-pa.004
KIM Dong Wook	P1-co.219	KIM E.J.	I2.04, P2-pa.011
KIM Donggeon	C5.02, P1-at.008, P1-at.012, P1-at.013	KIM Eojin	D9.07
KIM Donggeurami	D14.02	KIM Eun-San	D5.03

KIM Eun-Young	P1-ap.206, P2-co.112	KIM Heejae	G16.06
KIM Eun Joo	J2.04, P2-pa.012	KIM Heejun	I9.01
KIM Eun San	P2-pa.002	KIM Heejung	J16.03
KIM Eunjong	I11.01	KIM Heesang	J10.02, P1-se.219
KIM Eunkang	D5.02	KIM Heewoo	C5.03, P2-at.018
KIM Eunkang	P2-at.009	KIM Heon-Jung	G13.02
KIM Eunseo	P1-co.220	KIM Heung-Sik	C16.02, I10.02, P2-co.208
KIM Gee Young	A12.02	KIM Hong Jeong	G3.01, G3.02
KIM Geon	A9.02, I5.06	KIM Hong Joo	A2.04, B2.02, C2.08, I3.06, P1-nu.006, P1-nu.007, P1-nu.008, P1-pa.001, P1-pa.002, P1-pa.008, P2-pa.010
KIM Geumhyeon	P1-at.010		
KIM Gi Dong	H6.03, P2-pl.207		
KIM Gibaek	P2-ap.201		
KIM Gibum	C6.05		
KIM Giheon	P1-se.220, P1-se.221		
KIM Giyeong	H7.02		
KIM Go Woon	C2.09		
KIM Gon-Ho	C6.05	KIM Hoon	D4.03
KIM Gugyoung	G9.02	KIM Hoyoung	P2-op.021
KIM Gwang	H14.06	KIM Huiwon	P1-co.104
KIM Gyeheon	B11.04	KIM Hwanhee	I5.02
KIM Gyeong-Ryul	P2-op.008	KIM Hyelim	P1-pa.005
KIM GyeongHun	G5.03	KIM Hyeong-Chan	I4.08, I4.09
KIM Gyeonghye	P2-ap.206, P2-ap.207	KIM Hyeong-Do	G16.03
	H6.05	KIM Hyeongjun	P2-as.006
KIM Gyujin	P1-ap.212	KIM Hyeongmo	P2-st.020, P2-st.021
KIM Gyungtae	P1-pa.010, P1-se.108	KIM Hyeongmun	P2-op.008
KIM Ha Sul	B9.04, D9.04, P1-bp.105, P1-bp.120	KIM Hyeonkwang	P1-ap.209
KIM Hajin	D9.02	KIM Hyeonsu	J12.06
KIM Hajin	P1-bp.121	KIM Hyeonwoo	P2-ap.105
KIM Hakseong	P2-co.102	KIM Hyeonyu	P2-ap.110
KIM Han Beom	C2.06	KIM Hyerin	J12.03, J12.04, J12.05, J12.07
KIM Han Sung	H6.03, I6.02, P2-pl.205	KIM Hyesung	G5.01
KIM Hanyeop	P1-co.102	KIM Hyo Won	A10.03
KIM Hee IL	J4.02	KIM Hyomin	D3.05
KIM Hee Reyoung	P2-pa.009	KIM Hyuk Jin	P1-ap.201, P1-ap.212, P2-co.117
		KIM Hyun-Ho	J15.04

KIM Hyun-Joon	I13.02	KIM Jaehyun	J7.05
KIM Hyun-Woo J	P1-co.221	KIM JaeMin	P1-ap.217
KIM Hyun Gyu	P1-bp.119	KIM Jaeseok	P2-as.006
KIM Hyun Jung	P1-ap.211	KIM Jaeseung	J15.01, P1-co.304
KIM Hyun Jung	P2-ap.112		
KIM Hyun Seong	P2-op.003	KIM Jaesung	C7.01
KIM Hyun Wook	P2-pl.103	KIM Jaesung	C7.06
KIM Hyunchul	C7.08, P1-nu.005	KIM Jaepup	J9.07
		KIM Jaewan	H8.02
KIM Hyung-do	E2.03, F2.04	KIM Jaewook	B10.03, J10.01, J10.04
KIM Hyung Jin	H6.04		
KIM Hyungjin	I5.01	KIM Jaeyeon	P1-ap.201
KIM Hyungsang	P1-se.110	KIM Jaeyoung	P2-pa.015
KIM Hyunjung	J15.01, P1-co.304	KIM Jeehwan	P1-ap.208
		KIM Jehan	J6.03
KIM HyunJung	P1-ap.101	KIM Jeong-kyu	J10.01
KIM Hyunseok	P1-ap.208	KIM Jeong Han	TT2.02
KIM HyunSoo	D2.02, D2.05, P1-pa.004	KIM JeongHan	D3.04
		KIM Jeonghoon	I5.04
KIM Hyunsoo	J12.03, J12.04, J12.05, J12.07	KIM Jeongwon	P2-ap.312, P2-ap.313, P2-ap.314
			C14.03, I10.01
KIM Hyunsuk	P2-pl.110	KIM Ji-Hee	P1-se.222, P1-se.223
KIM Hyunwoo	P2-ap.304	KIM Ji-hong	P2-ap.205
KIM Inha	I15.01		P1-co.211
KIM Isaac H	B11.08	KIM Ji Min	G5.02
KIM J. Y.	P2-pa.004	KIM Ji Su	G5.05
KIM J.Y.	I2.04, P2-pa.011	KIM Ji Won	P2-st.005
KIM Ja-Yeon	P1-co.123	KIM Ji Won	E13.01
KIM Jae-hyun	H14.02	KIM Jicheol	B3.01
KIM Jae-Young	J11.01	KIM Jiha	C10.04, D11.07
KIM Jae Cheon	C7.01	KIM Jihun	H15.01
KIM Jae Cheon	C7.06	KIM Jihyun	J11.04
KIM Jae Hoon	G15.01, H5.01, J10.04, P1-co.101, P1-co.102	KIM Jimin	D4.03
		KIM Jin-Kwang	P2-at.001, P2-at.002, P2-at.003
KIM Jae Joon	P1-se.118		P1-co.111
KIM Jae Seung	P2-ap.112	KIM Jin Ho	D14.04, P2-se.013
KIM Jae Wan	P2-pl.105	KIM Jin Hong	P2-st.006
KIM Jae Yong	F11.02		B7.06
KIM Jae Yool	P2-pa.012		
KIM Jaeeun	D16.01, E11.04	KIM Jin Min	
KIM Jaegyu	C11.03	KIM Jin Sung	

KIM Jinheung	E2.01, E2.04	KIM Jooheun	J15.01
KIM Jinho	A10.01	KIM Joonho	B15.04, B15.07
KIM Jinkwang	P1-bp.104, P1-bp.108	KIM Joosung	I13.02
KIM Jinmyeong	H3.05	KIM JooSung	P2-ap.324
KIM Jinmyeong	I11.03	KIM Ju-Yeon	D14.01, P2-se.005
KIM Jinsu	H3.02, H3.04	KIM Ju Jin	P2-co.103
KIM Jinsu	H3.05	KIM Ju Jin	P2-co.108
KIM Jinsu	P2-pl.217	KIM Jun Sung	J11.01
KIM Jintae	B11.07	KIM Jun Sung	P1-co.119, P1-co.120
KIM Jinuk	A8.01	KIM June-Seo	P2-co.209
KIM Jinuk	A8.02, P1-at.012	KIM Jung-Young	P1-bp.210
KIM Jinyoung	I3.08, P1-pa.011	KIM Jung Bog	E7.02
KIM Jiseong	J15.01	KIM Jung Bog	H1.02, P2-te.004
KIM Jisoo	C9.01	KIM Jung Young	C9.03
KIM Jisu	P1-co.212	KIM Jungdae	D12.01
KIM Jisu	P2-co.102	KIM Jungho	P2-ap.201, P2-ap.208
KIM Jiwan	P1-ap.111, P2-se.007	KIM Junghwan	P1-ap.209, P1-ap.210, P1-ap.213
KIM Jiwan	P2-ap.316	KIM Junghyun	P1-co.217, P2-ap.203
KIM Jiwoong	C3.04	KIM Jungkil	G13.01
KIM Jiyeon	H13.04	KIM Jungyun	P1-se.110
KIM Jiyoung	B7.07	KIM JunHa	P2-pl.206
KIM Jiyoung	H7.02	KIM Junho	P1-ap.203, P1-ap.204, P2-ap.302
KIM Jong Su	A13.02, A13.04, D14.03, D14.05, D14.07, D14.08, E14.02, E14.04, P1-se.113, P1-se.114, P2-se.004	KIM Junho	P2-ap.308, P2-te.005
KIM Jong Yun	P1-se.122	KIM Junhyung	P2-se.007
KIM JongGeon	I3.01	KIM Junki	D5.05, P1-at.009
KIM Jongkuk	D3.07	KIM Junki	I8.03
KIM Jongmin	C5.05, P1-at.005	KIM Junwon	F16.06
KIM Jongmu	F9.01, P2-st.024	KIM Junwon	P1-co.216
KIM JongYeob	P2-pa.003	KIM Junyoung	A12.04, I12.05, J11.02
		KIM JuSeong	I9.02
		KIM Kab-Jin	G12.02
		KIM Kab-Jin	H12.04, I12.03,

	I12.04		P1-ap.218
KIM Kangheun	E8.02, F8.02, F8.03	KIM Kye-Ryung	P2-pl.205
KIM Kanghuen	E8.01	KIM Kyoo	G13.02, J10.01, J11.01
KIM Kee Hoon	G16.03, P1-co.219, P1-co.222	KIM Kyoung-Ho	B4.03, I5.03, P2-ap.304, P2-ap.306
KIM Keon Ho	P2-pl.202	KIM Kyoung-Whan	G12.02
KIM Keumhyun	B5.05, C5.01, C5.02, P1-at.011	KIM Kyoung Hwa	P1-se.101, P1-se.102, P2-se.001, P2-se.003
KIM Keun-Young	F3.04		A3.03, A3.04, E3.01, E3.02
KIM Keun Soo	P1-ap.103, P1-ap.107	KIM Kyung Kiu	F5.06
KIM Keun Su	G15.03	KIM Kyung Taec	H2.01, I2.07
KIM Ki Hong	P2-op.022	KIM Kyunggho	I7.06
KIM Ki Jeong	J6.04	KIM Kyungil	P1-at.007
KIM Ki Kang	P1-se.201, P1-se.208	KIM Kyungmin	F5.06
KIM Ki Seok	D12.01	KIM Kyungseung	I7.01
KIM Ki Yong	P2-op.008	KIM Kyungsik	H6.01
KIM Kihwan	J16.05	KIM Kyungtae	D10.01, J11.05
KIM Kipom	P1-bp.120, P2-st.019	KIM Kyungwan	C2.03
KIM Kitae	I15.02	KIM M. S.	H8.02
KIM Kitae	P1-ap.202	KIM Maengsuk	P1-ap.211
KIM Kitae	P1-ap.207	KIM Mijung	C7.01
KIM Kitae	P2-ap.310, P2-ap.320, P2-ap.323	KIM Mijung	C7.06
KIM Kiwoong	P1-co.306, P2-at.016, P2-at.017	KIM Min-Sik	B13.04
KIM Kooktae	F16.03	KIM Min-Su	C11.03
KIM Kun Woo	G15.02	KIM Min Jae	P1-co.109
KIM Kwang-Tak	P1-co.219, P1-co.222	KIM Min Jay	P1-ap.201
KIM Kwang pyo	P2-pl.103	KIM Min Joong	J11.01
KIM Kwangsui	I9.02	KIM Min Jung	P2-se.009
KIM Kwanpyo	B15.04	KIM Min Seok	G16.04
KIM Kwanpyo	B15.06, B15.07, F13.01, F15.04, P1-ap.115, P1-ap.118,	KIM Min Seok	P1-co.307
		KIM Mingeun	P2-as.006
		KIM MinGue	P2-co.108
		KIM Minho	D7.07
		KIM Minhwan	A12.03
		KIM Minhwan	J10.05
		KIM Minhyo	J4.03
		KIM Minhyuk	D8.02, E8.02, F8.02, F8.03
		KIM Minjae	D11.08

KIM MinJae	J7.04	KIM Sang Beom	P2-op.008
KIM Minjae	P1-co.207	KIM Sang In	G5.02
KIM Minju	B6.04, C7.06	KIM Sang Soo	P1-bp.118
KIM Minju	B7.08	KIM Sang yong	I3.03,
KIM Minju	C7.03		P1-pa.013
KIM Minkyeeong	P1-se.108	KIM Sangho	F7.02
KIM Minseok	G16.03,	KIM Sanghoon	I12.02, I12.04,
	P1-co.305		P1-co.112,
KIM MinSik	P2-co.103		P2-ap.209,
KIM Minsoo	P1-bp.203		P2-ap.211
KIM Minsuk	B3.01, C3.01,	KIM Sangjin	P1-co.219
	H2.02, H2.03,	KIM Sangsoo	G16.04
	H2.05, H2.06,	KIM Sangsoo	P1-co.305,
	H2.08, H2.09,		P1-co.307
	J2.02	KIM Sangtae	C6.03
KIM Minsuk	H2.04	KIM Sangwan	P2-co.213
KIM Minsuk	H2.07	KIM Sarang	P1-se.125
KIM Minwook	D13.03	KIM Se-Hun	P1-ap.116,
KIM Miyoung	J16.06		P2-co.201
KIM Moses	P1-se.107,	KIM Se-Jin	A3.03, A3.04
	P1-se.109	KIM Se Eun	P2-ap.205
KIM Mu-yong	P2-pl.103	KIM Se Kwon	C10.07, F10.03,
KIM Myeonghyeon	P1-at.006		H12.03
KIM Myung Hwa	J15.03	KIM Se Yong	J3.05
KIM Myunghun	B5.05, C5.01,	KIM Sean L	G10.04
	P1-at.011	KIM SeEun	P1-pa.015
KIM Myunghun	P1-at.010	KIM Sejin	E3.01, E3.02
KIM Myunghwa	J15.02	KIM Seohee	P1-co.104,
KIM Myungkuk	A7.02		P1-co.109
KIM NaHee	P2-co.109	KIM Seong ho	D9.07
KIM Nam-Hee	H11.03	KIM Seong Keun	H14.04
KIM Nam-Hee	P2-co.104	KIM Seongeun	P2-ap.111
KIM Nammee	J10.02,	KIM Seonghyeon	H10.03
	P1-se.219	KIM Seonghyun	A7.01
KIM Nari	P1-pa.018	KIM Seongseop	P1-co.301
KIM Pil-Su	D14.01,	KIM Seongsik	D3.08
	P2-se.005	KIM Seoyoon	D9.03, D9.07,
KIM Pyeong Kang	P2-co.104		P1-bp.120
KIM Rak-Hee	I11.05	KIM Seung-Hyun	A12.01
KIM S. H.	C6.02	KIM Seung	P1-co.126
KIM Sang-Koog	A12.04, B10.01,	KIM SeungCheon	P1-pa.014
	I12.01, I12.05,	KIM Seungchul	B15.08
	J11.02	KIM Seunghwan	P2-ap.310,
KIM Sang-Yoon	F9.05		P2-ap.320,

	P2-ap.323	KIM Sungil	D11.07
KIM Seungkyu	F3.02	KIM Sungmoon	P2-co.203
KIM Seungyun	P2-pl.115	KIM Sungwon	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02
KIM Seyong	J4.06		
KIM Shin Hyung	B6.06, I7.07		
KIM Sinwoo	P1-co.307		
KIM Sohyun	B6.01, B6.04, B7.08, C7.06	KIM Sunji	C7.06
		KIM Tae-Gwang	P1-se.107, P1-se.109
KIM Soo Kyung	E11.01		
KIM Sooho	G6.02	KIM Tae-Hwan	F10.05
KIM Soon Ho	P2-st.020	KIM Tae-Hwan	F16.02, J11.01
KIM Sooran	C12.04, P2-co.216	KIM Tae Hee	P2-ap.204
		KIM Tae Hoon	C11.06, P1-co.210
KIM Sooshin	C5.04		
KIM Sooshin	P1-at.004	KIM Tae Hyung	A16.01, A16.02, D16.02
KIM Su Jae	B12.04, P2-co.109		
		KIM Tae Jeong	D2.06, G2.01, P2-pa.018
KIM Subin	P2-co.214		
KIM Suho	P2-pl.112	KIM Tae Jung	P2-ap.311
KIM Sujeong	P1-se.201	KIM Tae Wan	G5.02
KIM Suk-Kwon	P1-nu.009	KIM Tae Woo	G5.02
KIM Sun-Jae	P1-se.111	KIM Taehee	B3.09
KIM Sun-Jeong	C6.04	KIM Taehee	P1-at.009
KIM Sun Ho	P2-pl.213	KIM Taeheui	P2-co.102
KIM Sun Kee	B2.01, P2-pa.002	KIM Taehoon	P1-at.005
		KIM Taehoon	P1-se.204, P1-se.213
KIM Sun Kyung	C4.03		
KIM Sunam	J15.01, P1-co.304	KIM Taehun	D3.03
		KIM Taehyun	P1-at.007
KIM Sung-Ha	D14.06	KIM Taejeong	C3.07
KIM Sung-Hyun	P2-se.009	KIM TaeJeong	P2-pa.016
KIM Sung-Won	I4.09	KIM Taekyung	P2-op.021
KIM Sung Ha	H13.01	KIM Taeng	P2-co.215
KIM Sung Hun	H13.05, P1-se.202, P1-se.203, P1-se.206	KIM Taeyeon	P1-ap.118
		KIM Taeyeong	J3.02
KIM Sung Hyun	D9.01	KIM Taiwoo	C3.05
KIM Sung Hyun	I2.02, I2.03	KIM Teun-Teun	C13.01, H5.02, I5.07
KIM Sung Hyun	P1-bp.101		
KIM Sung Won	J4.01	KIM Tongil	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02
KIM Sungchul	D9.05		
KIM Sunghun	B13.02		
KIM Sunghwan	H15.02		

KIM Uhjin	P2-co.107	KIM Yong Soo	E13.03, G15.02
KIM W.	I2.04,	KIM Yong Woon	H9.05, H9.06
	P2-pa.004	KIM Yongbin	P1-se.208
KIM W.	P2-pa.011	KIM Yongchan	I13.02
KIM Wansun	P1-ap.201	KIM Yonghun	J14.01
KIM Won Jeong	P1-co.204	KIM Yongjin	I15.01
KIM Won Kyu	C9.04	KIM Yongjun	H14.04
KIM Won Kyu	H9.02	KIM Yongjun	H2.02, H2.03,
KIM Won Tae	P2-ap.325		H2.05, H2.06,
KIM Wonsik	P2-ap.310,		H2.07, H2.08,
	P2-ap.320,		H2.09, J2.02,
	P2-ap.323		J7.03
KIM Woo Jin	D15.02	KIM Yongjun	H2.04
KIM Woojong	A10.01	KIM Yongkyu	P2-pa.005
KIM WooJong	I3.07	KIM Yongsun	F7.04, H7.07,
KIM Wook Hyun	A12.01		H7.09, J7.08
KIM Wootae	P1-pa.014	KIM Yoon Ki	P1-bp.106
KIM Wooyoung	P2-pa.012	KIM Yoon Ki	P2-ap.112
KIM Wusin	P2-co.103	KIM Yoonsoo	P1-at.004
KIM Yechan	D3.09	KIM Yoonyoung	P2-as.001,
KIM Yeeun	I15.01		P2-as.002,
KIM Yejin	A12.02, J15.03,		P2-as.003,
	P1-se.204		P2-as.004,
KIM Yejin	P2-ap.205		P2-as.005
KIM Yeoeun	P2-ap.326	KIM Young-III	P2-op.008
KIM Yeong Gyun	I2.02, I2.03	KIM Young-Min	J4.04
KIM Yeongduk	B2.03,	KIM Young Dong	P2-ap.311
	P1-pa.014	KIM Young Duck	B12.01
KIM Yeonghun	P1-co.224	KIM Young Duck	P1-co.127
KIM Yeongjin	H9.02	KIM Young Hun	P1-co.229
KIM Yeonjoon	D2.04	KIM Young Jin	G9.07
KIM Yohan	E12.01, E12.03	KIM Young Jin	J7.02
KIM Yong-Hamb	C2.06,	KIM Young Jin	P1-nu.005
	P1-pa.005	KIM Youngdu	P2-ap.312,
KIM Yong-Hoon	A16.01, A16.02,		P2-ap.313
	D16.01, D16.02,	KIM Younggeun	H3.06, H3.09
	D16.04, E11.03,	KIM Younghak	D11.02
	E11.04	KIM Younghyun	P2-co.102
KIM Yong-Hyun	D13.08	KIM Youngjin	C7.08
KIM Yong-Jin	C11.03	KIM YoungJun	I7.04
KIM Yong-Su	J14.02	KIM Youngkuk	P1-se.220
KIM Yong Baek	B11.01	KIM Youngman	A7.02
KIM Yong Kyun	C7.06	KIM Youngman	A7.04
KIM Yong Moo	C11.07	KIM Youngmin	P2-ap.108

KIM Youngseok	A16.03	KO Seung Woo	E11.01
KIM Youngwan	B3.08	KO Sojeong	J15.02, J15.03
KIM Youngwook	B13.03, P1-co.109	KO Uijin	J12.02
KIM Yujong	I6.04	KO Woon-San	P2-se.008
KIM Yumi	P2-se.008	KO Young Joon	P1-pa.017
KIM Yun Gyeom	P1-bp.205	KO YoungJoon	B7.03
KIM Yung Hee	E7.03, J7.01	KOH Byoung-cheol	P1-pa.012
KIM Yunghee	B6.04, B7.08	KOHRI Kazunori	F4.03
KIM Yunghee	C7.06	KONG KyoungChul	D3.04
KIM Yunjae	P2-ap.214, P2-co.204	KONG Minsik	P1-co.104, P1-co.109
KIM Yunzyne	P2-ap.110	KOO Hyeonmo	I4.04
KIM Zae Young	I9.08	KOO Sang-Mo	P1-se.101, P1-se.102
KIM Zion	P2-te.005	KOO Yeonjeong	F5.04
KING Andrew	G11.02	KOO Yeonjeong	P1-se.116
KITAMURA Noritaka	B6.04	KORKULU Zeren	C7.06
KITANO Kenta	C8.02	KOSHCHYI Yevgen	B6.04
KLUGE Thomas	F6.02	KOSHIBA Yuya	G5.05
KO Byeong Hak	D2.07	KOT Piotr	P1-co.114
KO ByeongRok	H3.05	KOTLIAR Gabriel	D11.04
KO Byungsan	P1-at.009	KOTLIAR Gabriel	D11.08
KO Changhyun	P1-co.225	KRAUS Dominik	F6.02
KO Changhyun	P2-ap.104	KRISHNA Sanjay	E14.02
KO Jae U.	B7.03	KROUPP Eyal	F6.02
KO Jaehyeon	D11.03, P1-co.202	KU Hyeeyeong	B9.03
KO Jew U.	B7.02, P1-pa.017	KU Jaseung	I8.01
KO Jihoon	G10.02	KU Minkyung	C11.06
KO Jin-Yong	D14.04, P2-se.013	KUBONO Shigeru	B6.04
KO Jin joo	J6.04	KUMA Susumu	C8.01
KO Jinseok	P2-pl.106	KUMAR Manish	D11.01, P1-co.205
KO Juyoung	P2-pl.106	KUMAR Manoj	E6.01, E6.02
KO Kyung-tae	J10.01	KURAKULLA Anand	A14.01
KO Minsu	I11.03	KUSANO Toshi	G8.02
KO Sanghyun	B3.02, H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02	KWAG Minsik	C7.01
KO Seoyeon	A12.02, J15.06, P1-se.204	KWAG Minsik	C7.06
		KWAK Donghyun	C7.01
		KWAK Donghyun	C7.06
		KWAK Donghyun	H6.03
		KWAK Donghyun	P2-pl.207
		KWAK Haneul	P1-at.006
		KWAK Joon Young	I14.01
		KWAK Kyujin	J4.04

LEE Chang Hyeon	J3.06	LEE DongYub	C3.06
LEE Chang Jin	G5.01	LEE Doohyeok	C2.02,
LEE Changhan	P2-se.015,		P1-nu.006,
	P2-se.016,		P1-pa.002
	P2-se.017,	LEE Dooyong	H10.01, J15.04,
	P2-se.018,		P2-ap.110
	P2-se.019	LEE Dowon	C5.02,
LEE Changhoo	P2-pl.116		P1-at.008,
LEE Changhoo	P2-pl.117,		P1-at.012,
	P2-pl.119		P1-at.013
LEE ChangJoo	C9.06	LEE Eun-Cheol	P2-ap.307,
LEE Changjun	I15.01		P2-ap.309
LEE Chanyeong	P2-pl.211	LEE Eun	I9.01,
LEE Cheong Soo	C7.06		P2-st.013,
LEE CheongSoo	C7.01		P2-st.017
LEE Cheongsoo	C7.08,	LEE Eungkyu	C13.05
	P1-nu.005	LEE Eunhwi	D5.05
LEE Chul-Ho	F15.02	LEE Fang-Yu	D8.03
LEE Chung Soo	J7.02	LEE Ga-Won	P2-se.008
LEE Chunghwa	G6.02,	LEE Gayoung	H15.05
	P2-pl.109	LEE Geun-Hee	I12.03
LEE Da Yong	P1-se.222,	LEE Geun Seop	P2-co.114
	P1-se.223	LEE Gil-Ho	H11.01,
LEE Daehyo	D9.03		P1-co.123,
LEE Deok-Young	P1-at.002		P2-co.105
LEE Dohyeon	P1-se.213	LEE Gil Yong	P1-ap.103,
LEE Dong-won	C6.03		P1-ap.107
LEE Dong Ho	P2-se.003	LEE Giseok	D5.06,
LEE Dong Jae	P2-ap.113		P2-at.004
LEE Dong Yun	P1-ap.103,	LEE Gun-Do	J16.08
	P1-ap.107	LEE Gwangjun	B6.03
LEE Donggeon	P2-co.216	LEE Gyoungho	I1.03
LEE Donggyu	P1-ap.205,	LEE Gyu-Hwan	P1-bp.102
	P1-ap.207	LEE Gyusang	F6.02
LEE Dongha	P2-st.019	LEE Gyusang	P2-pl.117,
LEE Donghan	T9.01		P2-pl.119
LEE Donghyeon	I12.04	LEE Hae Ja	F6.03
LEE Dongik	B12.04,	LEE Hae June	D6.04
	P1-co.226	LEE Hae June	P2-pl.105,
LEE DongKun	A13.02		P2-pl.107,
LEE Dongkyu	A16.04,		P2-pl.108
	P2-co.207	LEE Haein	C7.05, C7.07,
LEE DongKyu	J16.08		I7.08
LEE Dongyeon	P1-at.009	LEE Hakseong	B3.06, C3.06

LEE Han-Koo	P2-ap.213	LEE Hyo Sang	J7.02
LEE Han Joo	B15.04	LEE Hyo Sang	P1-nu.005
LEE Hanbee	H14.02	LEE Hyobeom	P1-co.223
LEE Hanoh	B16.04,	LEE Hyojeong	G6.02,
	P1-co.107		P2-pl.109,
LEE Hansuek	P2-op.016		P2-pl.112,
LEE Hee Jung	P1-nu.001		P2-pl.114
LEE Heemin	G16.04,	LEE Hyosang	C7.08
	P1-co.305	LEE Hyoung-Taek	I5.02, I5.04
LEE Heemin	G16.05	LEE Hyun-Woo	F5.05, H12.03
LEE Heemin	P1-co.218	LEE Hyun Bok	H15.04
LEE Heemin	P1-co.307	LEE Hyun Gyung	B5.01
LEE Heewoo	P2-op.005	LEE Hyun Hwi	D11.01,
LEE Ho Nyung	P1-co.109		P1-co.205
LEE Hochoel	I4.02	LEE Hyun Jung	P2-pl.103
LEE Hojin	F3.07	LEE Hyun Min	D3.08,
LEE Hojin	I13.02		P2-pa.006,
LEE Hojun	P2-op.018,		P2-pa.013,
	P2-op.019		P2-pa.014
LEE Hong Gu	P1-co.106,	LEE Hyun Seok	P2-op.012
	P1-co.207	LEE Hyun Su	C2.03
LEE Hong Seok	H13.05,	LEE Hyun Su	C2.04
	P1-se.202,	LEE Hyun Su	P1-nu.006,
	P1-se.203,		P1-nu.008
	P1-se.206	LEE Hyunbok	I15.02
LEE Hongsoo	P1-bp.120	LEE Hyungho	P2-pl.215
LEE Hunpyo	B12.02	LEE Hyunghoo	P2-pl.216
LEE Hye-Sung	D3.09, J3.03	LEE Hyungi	P1-pa.018
LEE Hye In	J12.03, J12.04,	LEE Hyungjin	P2-pl.117
	J12.07	LEE Hyungjoon	J7.06
LEE Hyegoo	B5.05, C5.01,	LEE Hyungjun	D7.05, H2.02,
	P1-at.011		H2.03, H2.04,
LEE Hyegoo	P1-at.010		H2.05, H2.06,
LEE Hyein	J12.05		H2.07, H2.08,
LEE Hyeji	B6.04		H2.09, J2.02
LEE Hyemin	P2-ap.315	LEE Hyungsuk	G10.01
LEE Hyeon-Jun	P2-co.209	LEE Hyungwoo	P1-co.215,
LEE Hyeongho	P2-pl.214		P2-ap.108
LEE Hyeongwoo	F5.04,	LEE Hyunho	P1-se.119
	P1-se.201,	LEE Hyunju	P2-ap.207
	P1-se.208,	LEE Hyupwoo	H2.02, H2.03,
	P2-co.101		H2.04, H2.05,
LEE Hyeongwoo	P1-se.116		H2.06, H2.07,
LEE Hyeyoung	C7.03		H2.08, H2.09,

	J2.02		H2.05, H2.06,
LEE Il-Buem	A9.04, D9.06		H2.07, H2.08,
LEE Ilyoung	P1-co.206		H2.09, J2.02
LEE In-Sung	H15.06	LEE Jayil	P1-bp.120
LEE In Hak	P1-ap.201	LEE Je-Ho	G15.02
LEE In Hak	P1-co.122	LEE Jeeyong	D16.06
LEE In Jae	P2-st.001	LEE Jeong Yu	I13.05
LEE Inhak	B12.01	LEE Jeongmin	P1-bp.209
LEE Inho	H14.02	LEE Jeongwon	D16.02
LEE J. P	C6.02	LEE Ji Eun	H5.01,
LEE Jae-Ung	B15.05		P1-co.101
LEE Jae-Ung	P1-ap.110,	LEE Ji Ye	P2-se.003
	P1-ap.112,	LEE Jiheon	J3.03
	P1-ap.113,	LEE Jik	A2.04,
	P2-op.023		P1-pa.008
LEE Jae-Weon	I4.03, I4.04	LEE Jin Hee	H15.03
LEE Jae Hak	P1-se.101	LEE Jin Hong	B12.01
LEE Jae Hak	P1-se.102	LEE Jinseob	P1-bp.113
LEE Jae Heon	P2-ap.102	LEE Jinwoo	P1-co.301
LEE Jae Heon	P2-ap.112	LEE Jisung	J15.04
LEE Jae Hoon	P2-at.005	LEE Jisung	P2-se.002
LEE Jae Hwan	P2-st.006	LEE Jiwon	H3.02
LEE Jae Sung	H9.01	LEE Jiwon	H3.04
LEE Jae Yeob	C11.06,	LEE Jiwon	P2-te.004
	P1-co.210	LEE Jiwoong	E4.03,
LEE Jaebaek	E12.04		P2-as.001,
LEE JaeDong	H13.02, I5.05		P2-as.002,
LEE Jaehak	B5.02		P2-as.003,
LEE Jaeho	E6.01		P2-as.004,
LEE Jaeho	P2-pl.113		P2-as.005
LEE Jaehwan	C7.06	LEE Jiyeon	P1-bp.101
LEE Jaehyeok	H10.03	LEE Jong-Bong	P1-bp.106
LEE Jaehyun	C10.05	LEE Jong-Bong	P1-bp.107,
LEE Jaehyun	I6.04		P1-bp.109,
LEE Jaekwang	J16.02,		P1-bp.110,
	P2-co.203		P1-bp.113,
LEE Jaewon	P2-pa.003		P1-bp.114,
LEE Jaewook	J12.01		P1-bp.122
LEE Jaewook	J12.02	LEE Jong-Chan	P1-bp.104,
LEE Jason Sang Hun	C3.08, D2.03,		P1-bp.108
	D2.05, D2.07,	LEE Jong-Chan	P1-bp.112
	D2.08, E4.02	LEE Jong-Wan	J3.07
LEE Jason Sanghun	H2.04	LEE Jong Seok	C11.01, G16.01
LEE Jason	H2.02, H2.03,	LEE Jonghoon	I15.01

LEE Jongjun M.	F5.05	LEE Ki-Se	C5.02,
LEE JongMin	P1-ap.217		P1-at.008,
LEE Jongwon	H7.02		P1-at.012,
LEE Joo-Hyoung	C12.01		P1-at.013
LEE Joogn Wook	P2-op.008	LEE Ki-Suk	G12.04
LEE Joon-Bin	B3.09	LEE Ki-Tae	P1-se.105
LEE Joon Hyuck	P1-ap.101	LEE Kihyeon	P1-ap.115
LEE Joon Hyuk	C11.04	LEE Kihyun	B15.04
LEE Joon Sue	H11.04	LEE Kihyun	C6.03
LEE Joonseok	E11.01	LEE Kihyun	P1-ap.218
LEE Jooyeon	G5.01	LEE Kijoon	P2-ap.308,
LEE Jooyoung	I3.06		P2-te.005
LEE Juchan	P1-se.205	LEE Kiwoong	H3.05
LEE Juho	D16.02, E11.03,	LEE Kwan-Woo	H16.01
	E11.04	LEE Kwan chul	P2-ap.101
LEE Juho	E6.04	LEE Kwang-Bok	C7.06
LEE Juhyeon	P2-co.210	LEE Kwangbok	C7.01
LEE Julian	J9.05	LEE Kyeong-Hyeon	P1-ap.114
LEE Jun Ho	D14.02	LEE Kyeongmin	P1-ap.211
LEE June Hyuk	E16.05,	LEE Kyeongpil	D2.01
	P2-co.113	LEE KyeoReh	I5.06
LEE Jung-gu	C6.03	LEE Kyong Sei	C3.07
LEE Jung-Hun	A3.03	LEE Kyong Sei	I2.02, I2.03
LEE Junghoon	C5.05,	LEE Kyoung Jin	F9.01,
	P1-at.005		P2-st.023,
LEE Junghun	A3.04		P2-st.024
LEE Junghyun	B3.03, C3.03,	LEE Kyuhwan	P1-at.005
	H2.02, H2.03,	LEE Kyung-ha	J4.03
	H2.04, H2.05,	LEE Kyung-Jin	H16.03
	H2.06, H2.07,	LEE Kyung-Sun	A3.02
	H2.08, H2.09,	LEE Kyung Mee	P2-te.001
	I3.05, J2.02,	LEE Kyungbae	P2-pl.117
	P1-pa.007	LEE Kyungbeom	P1-pa.005
LEE Jungmin	B10.03	LEE Kyunggoo	G5.01
LEE Jungwoo	B6.04, B7.08	LEE Kyungjae	P2-ap.205
LEE Jungwoo	G9.07	LEE KyungMin	P2-pa.003
LEE Junseok	D7.03	LEE Kyungsun	A3.01
LEE Kang-nyeoung	H13.03	LEE Kyusup	H12.02
LEE Kang Young	I2.02	LEE Manhee	A13.03, E16.01,
LEE Kang Young	I2.03		J12.08
LEE Kanghoon	F3.07	LEE Mi Jin	G9.02, I9.02,
LEE Kangmin	P1-bp.102		I9.07
LEE Keel Yong	G10.04	LEE Min Uk	D6.04
LEE Ki-Hong	F3.01	LEE Mingyung	P2-co.111

LEE Minhwan	P2-at.012, P2-at.013, P2-at.014, P2-at.015	LEE Sang-Shin LEE Sang-Wook	P1-se.119 A15.01, A15.04, B15.01, B15.03
LEE MinHyeong	A9.04, P1-bp.201	LEE Sang A LEE Sang Bum LEE Sang Hoon	P1-co.116 P2-at.005 G9.03, G9.04
LEE Minhyuk	P1-se.110	LEE Sang Jun	A13.02, D14.05, E14.04,
LEE Minjin	I9.07		P1-se.113
LEE Minki	D16.05		P1-bp.103, P2-ap.325
LEE Minkyu	B6.05	LEE Sang Suk	P2-ap.102, P2-ap.112
LEE Minwoo	A2.01, P1-pa.004	LEE Sang Woo	C6.03 P2-ap.205
LEE Minwoong	P2-ap.213	LEE Sangbeen	P1-co.220
LEE Moonjin	P2-se.015, P2-se.016, P2-se.017, P2-se.018, P2-se.019	LEE Sanghooon LEE Sanghun LEE Sanghwa LEE Sangjin	P1-bp.101 C7.01 C7.06 D14.08
LEE Moonjoo	B5.05, C5.01, C5.02, D8.01, P1-at.008, P1-at.011, P1-at.012, P1-at.013	LEE Sangjun LEE Sangkyung	P2-at.010, P2-at.011 P2-at.005 P2-at.012
LEE Moonjoo	P1-at.010	LEE Sanglok	F3.07
LEE Myang Hwan	P1-co.211	LEE Sangmin	J16.06
LEE Myanghwan	P1-co.204, P1-co.212	LEE Sangmin LEE Sangsoo	P2-co.114 B15.07
LEE Myeong-Geon	C6.05	LEE SangWook	C10.04
LEE Myoung-Jae	P2-co.209	LEE Sangyun	D11.07
LEE Nahyeon	I9.03	LEE Sangyun	H9.01
LEE Nam Ki	A9.03	LEE Se Byeong	B7.01
LEE Narm Hee	F3.06	LEE Se Hun	H15.06
LEE Nyun Jong	P2-ap.211	LEE Sehwook	B3.01, B3.03, C3.09, H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, I3.05, J2.02, P1-pa.007
LEE Nyunjong	P1-co.112		
LEE Oukjae	P2-ap.209 I14.03, P1-co.127		
LEE Pilsoo	P1-nu.009		
LEE Ryong-Gyu	D16.04, E11.03		
LEE Ryong Gyu	A16.01, E11.04		
LEE Saehee	P1-ap.111	LEE Sengsu	B10.03
LEE Sang-Hun	C13.04, P2-op.011	LEE Seo Hyun LEE Seokyeong	C2.03 P2-co.107

LEE Seong-Yeon	D14.06, P1-se.117	LEE Sung Keun	G11.03
LEE Seong Won	A13.01	LEE Sung Yun	G16.04, P1-co.305
LEE Seong Yeon	H13.01	LEE Sung Yun	P1-co.301
LEE Seonghak	A2.01	LEE Sung Yun	P1-co.307
LEE Seonghyub	J10.05	LEE SungBin	C16.01
LEE Seongmin	E6.03	LEE Sunghun	P2-co.117
LEE Seongsu	D11.03, J10.01, P1-co.202	LEE Sungjun	P1-at.004
LEE Seongyong	J11.04	LEE Sungjune	C7.09
LEE Seung-Jea	G10.03	LEE Sungmin	I9.07
LEE Seung-Woo	B5.02	LEE Sungwoo	J16.08
LEE Seung Hyun	P2-op.012	LEE Tae-Woo	P2-ap.324
LEE Seung Seok	P2-op.003	LEE Tae Yoon	P1-co.207
LEE Seung Won	C11.06, P1-co.210	LEE Taegeon	H13.06, P1-se.206
LEE Seung Won	H13.06	LEE Taegyoung	P2-te.002
LEE Seungchul	P1-bp.102	LEE Taehee	P1-co.107, P1-co.214
LEE Seunghun	B12.04, P1-co.226	LEE Taejin	H13.08
LEE Seunghwan	H7.09, J7.08	LEE Takhee	I15.01, P2-ap.315, P2-ap.324
LEE Seunghyun	C6.03, D6.01, H6.03, P2-pl.205	LEE Won Jae	P1-se.101, P1-se.102
LEE Seunghyun	E14.02	LEE Won Jun	F5.03
LEE Seunghyun	I5.03	LEE Wonhui	P2-co.114
LEE Seungjun	D2.02	LEE WonJun	I3.04, P1-pa.013
LEE SeungWon	D9.04	LEE Wonseok	B5.01
LEE Seungwoo	B8.03	LEE Wonwoo	I4.09
LEE Seungyeol	B16.04	LEE Wonwook	P2-pl.102, P2-pl.104
LEE Siha	P1-co.112, P2-ap.209, P2-ap.211	LEE Woochan	H2.02, H2.05, H2.09, J2.02
LEE Sol	B15.04	LEE Woochan	H2.03, H2.06
LEE Sol	B15.06	LEE Woochan	H2.07
LEE Songhee	J15.02	LEE Woochan	H2.08
LEE Soohwan	D7.03, D7.06	LEE Wook-Jae	P2-op.015
LEE Soohyung	H3.05, P1-pa.006	LEE Wooseok	P1-ap.112
LEE SooJin	E2.04	LEE Yangjin	P1-ap.118, P1-ap.218
LEE Su-youn	P1-nu.004	LEE Yeon Ui	P2-op.017
LEE Su Hong	D7.04	LEE YeongKyu	J9.02, J9.03
LEE Su Yong	P1-co.301, P1-co.304	LEE Yewon	P1-ap.217

LEE Yong-Ho	P2-ap.313	LIM Ae Ran	P1-co.201, P1-co.203
LEE Yong Joon	H15.06		
LEE Yong Joong	E16.02, E16.03	LIM Chaeyoung	C7.06
LEE Yong Soo	G5.02	LIM Chaeyoung	D5.03, D5.04
LEE Yonghun	D15.02	LIM Chan	C9.05
LEE Yongjoon	D13.08	LIM Do-Hwan	B9.02
LEE Yongwoong	D5.06	LIM Dongkyu	D5.06
LEE Young-Jun	H13.04, H13.08	LIM Eunhoon	P2-pa.002
LEE Young-Ouk	C7.01	LIM Eunji	P2-ap.209
LEE Young-Ouk	C7.06	LIM EunJu	P2-ap.303
LEE Young Gie	P1-co.127	LIM Ga Hyun	P2-op.004
LEE Young Hee	D13.08	LIM GeiYoub	J2.04
LEE Young Jin	P1-co.126	LIM Geumha	A12.01
LEE Young Pak	P2-ap.319	LIM Gil Hwan	P1-ap.220
LEE Youngjae	H3.07	LIM Gunhyoung	D9.08
LEE YoungJun	J16.01	LIM Hak Jun	D14.02
LEE Younjoo	H15.04	LIM Hyomi	P2-ap.115
LEE Yousil	P2-co.109	LIM Hyungbin	I15.01
LEE Yujin	I3.08	LIM Hyunji	H7.01
LEE Yun Gyu	P2-pl.118	LIM I. T.	P2-pa.004
LEE Yun Sang	J15.05, P1-co.213, P2-ap.101, P2-ap.107, P2-ap.109, P2-ap.113	LIM I.T.	I2.04, P2-pa.011
		LIM In Taek	P2-pa.012
		LIM Jaehoon	F5.04, P1-se.208, P2-co.101
LEE Yunjae	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02	LIM Jaemin	P2-te.005
		LIM Ji Soo	C11.05
		LIM Jinho	H12.04
		LIM Jongsoo	I9.03
LEE Yunki	I13.04	LIM Jongwon	D2.06
LEE Yuno	A2.04, P1-pa.008	LIM Jun	J6.01
		LIM Kyung-Geun	F14.02
LEI Hechang	B16.04	LIM Sa Hoe	P1-bp.116
LEI Sun	F11.02	LIM SangHoon	D7.04, G7.01, H2.02, H2.03, H2.05, H2.06, H2.07, H2.08, H2.09, H7.01, H7.04, J2.02, J7.03, J7.04, J7.06, J7.07, P1-nu.011, P1-nu.013,
LEONARD Douglas S	P1-pa.005		
LI Bin	F11.02		
LI Fengping	A16.04		
LI Guoqiang	J11.03		
LI Jiarui	D15.02		
LI Yanfei	C5.04		
LI Yi	H12.04		
LI Zhen	A7.04		

P1-nu.014,
 P1-nu.015
 LIM Sanghoon H2.04
 LIM SeHwan D3.04
 LIM Seon-Woo P1-bp.109
 LIM Seong Chu P1-se.220,
 P1-se.221
 LIM Seungjae P1-ap.110
 LIM Si-Heon J15.04
 LIM Su-Min G5.04
 LIM Suim J16.05
 LIM Sungjoo P1-at.009
 LIM Weon Cheol C7.09
 LIM Woochang F9.05
 LIM Yeunhwan A7.03
 LIM Younghoon P1-at.004
 LIN Yu-Ju D8.03, F8.05
 LIST-KRATOCHVIL Emil J.W.
 I15.02
 LIU Chun Li B15.02,
 P1-ap.214
 LIU Dong B7.03,
 P1-nu.003
 LIU Lei B15.02,
 P1-ap.214
 LIU Liangliang J11.03
 LIU Xuewen P2-ap.307,
 P2-ap.309
 LIU Xujie G10.04
 LIU Yang P1-ap.114
 LIU Zhipeng P1-bp.116
 LKHAGVADORJ Erdenebulgan
 D3.07
 LOETZSCH Robert F6.02
 LOH Huangqian F8.04
 LU Philip D3.03
 LUAN Nguyen Thanh P1-pa.001
 LUNGERICH Dominik P1-co.128
 LY Chhor Yi P1-ap.119

M

MACKENZIE A. P. E16.04
 MACQUEEN Luke A G10.04
 MADSEN Anders J15.01
 MAEDA Haruka C8.02
 MAENG Inhee P2-op.009
 MAENG Jin Young P1-co.110,
 P1-co.227,
 P1-co.229
 MAENG Jinyoung P1-co.224
 MAHALINGAM Shanmugam
 P1-ap.210
 MAL Priyanath I11.05
 MANCHI Punnarao A14.01
 MANDAR VASANT PARANJAP Mandar
 A14.01
 MANGANO Michelangelo
 G2.04
 MAO Lingling P1-ap.114
 MARCIANO William Joseph
 J3.03
 MARFATIA Danny D3.03
 MARFOUA Brahim P1-co.121
 MARIS Pieter A7.04
 MARTINEZ Mikael F6.03
 MARTON Krisztina B3.03
 MASUDA Naoki P2-st.018
 MATLASHOV Andrei H3.05
 MCCALL Terika I9.01
 MCKINLEY Gareth H I16.01
 MENKARA Adriana Guerrero
 P2-pa.006,
 P2-pa.014
 MIN Byung Il P1-co.216
 MIN Chang-Ki P2-pl.204
 MIN Duyoung D9.03,
 P1-bp.120
 MIN Duyoung D9.07
 MIN Seung kyu D9.07
 MISHCHENKO Mikhail F6.02
 MIYAMOTO Yuki C8.03
 MIYATSU Tsuyoshi A6.01, B6.03

MO Mianzen	F6.03
MOCEK Tomas	G5.05
MOCHIZUKI Yasuhide	J15.06
MOHIT Kumar	A14.02
MøLMER Klaus	E8.01
MOON Byul	B6.04
MOON Byul	C7.03, C7.06
MOON Byung Kee	P2-ap.317, P2-ap.318
MOON Chang-Seong	B3.06, B3.07, C3.04, C3.05, C3.06, P2-pa.001, P2-pa.003
MOON Changseong	D7.08
MOON D. H.	P2-pa.004, P2-pa.012
MOON D.H.	I2.04, P2-pa.011
MOON Dalho	I7.03, I7.05
MOON Dong Ho	C7.08, D7.08, P1-nu.005
MOON DongHo	A2.01, P1-pa.013
MOON Eun-Gook	B11.02, B11.05, B11.08, J10.04, J11.06
MOON Geol	P2-at.005
MOON Geol	P2-at.012, P2-at.013, P2-at.014, P2-at.015
MOON Hakbeom	P1-ap.101
MOON Han Seb	C5.03, P2-at.018
MOON Hyeon-Min	A9.04
MOON Hyunki	I2.05, I2.06
MOON Joon-Young	C9.02
MOON Joon-Young	F9.04
MOON Kook-Jin	H6.05, P2-pl.201
MOON Kyoung-Woong	G12.02
MOON Kyungsun	F16.05
MOON S. J.	E16.04

MOON Seok-Ho	H6.03
MOON Soonjae	P1-co.219, P1-co.222
MOON Sujin	P2-te.004
MOON Taeuk	P2-pl.210
MOON Taeyoung	F5.04, P1-se.116
MOON Yeongdeuk	P1-ap.101
MOON Youngil	P1-at.012
MORALES Nicolas Zorn	I15.02
MOSKALENKO Andrey S.	B5.04
MUHAMMAD Suleman	D13.03
MUN Eundeok	P1-co.218
MUN Jongchul	J8.03
MUN Myeong-Hwan	A7.01
MUN Seonjin	P2-se.003
MUN Suhyun	P1-se.101, P1-se.102
MUN Yeongdeuk	C11.04
MURUGAN Santhosh	P2-ap.307
MUSA Luciano	G2.02
MUZIK Jiri	G5.05
MYOUNG Nojoon	P2-co.106, P2-co.214
MYUNG Kyungjae	P1-bp.121

N

NA Changyub	P1-co.203
NA Gyoung S.	J15.07
NA Junhong	F14.03
NA Wonkyung Teresa	C9.03
NA Woongki	P2-ap.203
NA Y. S.	C6.02
NA Yeji	P1-co.201
NA Yong Su	P2-pl.217
NAGAOSA Naoto	J11.08
NAGLER Bob	F6.03
NAKAMURA Takashi	B6.04
NAKAMURA Yasunobu	H3.05, I11.03, P1-pa.006

OFFICER Timothy	G11.01
OH Byeong Hun	D2.04
OH Cha-Hwan	P2-pl.102, P2-pl.104
OH Changhyun	P1-nu.012
OH Dongjin	C10.03
OH Gab jin	G9.09, P2-st.009
OH Gyeong-Seok	D9.05
OH Gyoung Hoon	P1-ap.215
OH Ho Jun	P1-co.302
OH Hongseok	H14.03
OH Hyun Soo	P1-pa.010
OH Hyun Soo	P1-se.108
OH Jeongmin	F12.02
OH Jeongmin	P1-co.114
OH Ji Seop	B16.03
OH Jin Young	P1-co.207
OH Jiseong	P1-co.304
OH JongHo	J7.06
OH Ju Hyun	B12.04, P1-co.226
OH Junkyo	P1-pa.016
OH Junwon	P2-pa.001
OH Minseok	B3.09
OH Minsik	J16.07
OH Myungchul	D12.04
OH Saehanseul	H7.06, P1-nu.012
OH Saehanseul	P1-nu.010
OH Sangwon	P1-co.127, P2-pl.101
OH Seongkyeong	I9.05
OH Seongshik	E16.04
OH Seonjeong	H3.05
OH Seonjeong	I11.03
OH Seung-hoon	A8.02
OH Seung Jae	P2-op.009
OH Seung Wook	P1-bp.118
OH Seunghoon	P1-at.014, P2-at.007
OH Seyong	I7.03, I7.05
OH Siwon	P1-ap.104, P2-ap.203

OH Song-Mi	P1-bp.107
OH Taekoo	J11.08
OH Wonsuk	H14.03
OH Ye Jin	G5.05
OH Yoon Seok	J11.05, P1-co.111
OH Yubin	P2-as.001, P2-as.003, P2-as.004, P2-as.005
OH Yun-Tak	B11.07
OK Jong Mok	B13.01, P1-co.104, P1-co.109
OKAMOTO Issei	G8.02
OKAWA Kodai	B6.04
OTIENO Luke Oduor	E16.02, E16.03
OZAWA Naoya	G8.02

P

PAC M. Y.	P2-pa.004
PAC M.Y.	I2.04, P2-pa.011
PAC Myoung Youl	P2-pa.012
PADMANABAN Jayashri	C3.02
PAEK Seung-Yeop	P1-co.107
PAIK Joonho	P2-st.022
PAK Sang-il	B7.01
PAK Sangyeon	B14.04
PAK Seik	E10.03
PAK Sooyeon	P2-ap.320
PANDA Chandan Kumar	P1-co.106
PANDEY Juhi	D13.05
PANT Rohit	P1-co.226
PARANJAPE Mandar Vasant	A14.03
PARASHAR Pallavi	P1-pa.006
PARK A-Young	G9.09
PARK Aaron	D7.04

PARK Albert Min-Gyu	I12.04		E14.04
PARK Albert Min Gyu	G12.02	PARK Gyutae	P2-co.107
PARK Ayoung	P2-st.009	PARK Gyuyoung	B10.01
PARK Beomjin	P1-ap.105, P1-ap.221	PARK H. W.	P2-pa.004, P2-pa.012
PARK Bum Sik	H6.04	PARK H.W.	I2.04
PARK Byung-Tak	C5.02, P1-at.008	PARK Ha Kyung	A12.01, E12.04
PARK Byung Cheol	C13.03	PARK Hayun	B12.02
PARK Byung Do	I2.02, I2.03	PARK Hea-Lim	C15.01
PARK Byunghyun	I7.03, I7.05	PARK Heung-Sik	C11.03
PARK Celine	P1-bp.119	PARK Heung-Sik	C11.05
PARK Chaeyeon	B6.04	PARK Hoewon	A9.02
PARK Chaeyeon	B7.08	PARK Hongjun	P1-ap.211
PARK Chaeyeon	C7.03	PARK Huijin	J12.01
PARK Chan Beom	TT2.01, TT2.03	PARK Hwanbae	P1-nu.006, P1-pa.001
PARK Chan	G4.02	PARK Hyebin	H2.04, J2.02
PARK Chan	J4.07	PARK Hyemi	P2-op.021
PARK Changwon	B16.02	PARK Hyeon Jung	P1-se.207, P1-se.218
PARK Chanho	P1-bp.120	PARK Hyeon Woo	P2-pa.011
PARK Chanhui	I15.02	PARK Hyeong-Ryeol	H5.04, I5.02, I5.04, P1-se.201
PARK Chanyong	A3.03, A3.04		I5.07
PARK Choonsu	P1-bp.102	PARK Hyeonggi	P1-pa.002
PARK Chul Hong	P1-se.111	PARK Hyeoung Woo	C15.03, E13.01, E13.02
PARK Dae Young	H13.03, P1-se.210, P1-se.213	PARK Hyesung	H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02
PARK Daesung	A15.03		J2.02
PARK Dohyun	P2-pl.113	PARK Hyeongeon	H9.06
PARK Dong Hee	P2-op.017	PARK Hyosub	H13.02
PARK Doo Jae	P2-op.004	PARK Hyun Min	D13.03
PARK Eui-Jin	P1-bp.105, P1-bp.121	PARK Hyunjae	P2-se.007
PARK Eun Kyoung	G5.05	PARK Hyunsu	P1-ap.221
PARK Eunyoung	G16.04, P1-co.305	PARK Hyunwoo	I5.07
PARK Eunyoung	P1-co.301	PARK Il-Woo	C11.07
PARK Eunyoung	P1-co.307	PARK In Chul	G5.05
PARK Geonsu	J11.06	PARK Ina	D11.04, J16.03
PARK Gi Ung	P1-co.102	PARK Inkyu	C10.08
PARK Giung	I11.04	PARK Inkyu	D2.03, D2.05,
PARK Gunhee	B9.03		
PARK Gwanyong	P2-se.006		
PARK Gyoung Du	D14.05, E14.02,		

	D2.07, D2.08, H2.04, I3.07	PARK Jeong Young	F13.03
PARK J. S.	P2-pa.004	PARK Jeonghyeok	C7.02, H7.02
PARK J.S.	I2.04	PARK Jeongwoo	J2.04
PARK J.S.	P2-pa.011	PARK Ji-Sang	B12.03, P2-ap.212, P2-co.216
PARK Jae-Hoon	J11.04		
PARK Jae-Sun	P2-pl.215	PARK Jihun	B12.04, P1-co.226
PARK Jae Whan	B11.01		
PARK Jae Yeon	I6.04, P2-ap.213	PARK Jin-Sung	A9.04, D9.06, P1-bp.201
PARK Jaejin	P2-se.015, P2-se.016, P2-se.017, P2-se.018, P2-se.019	PARK Jinhyun	J7.04, P1-nu.015
		PARK Jinsub	B15.06, B15.07
		PARK Jinyoung	P1-ap.111, P2-se.007
PARK Jaeku	J15.01, P1-co.304, P2-pl.119	PARK JinYoung	P2-ap.305, P2-ap.317, P2-ap.318
PARK Jaemun	P1-co.108, P1-co.118	PARK JiSeok	P1-co.113
PARK JaeYoon	P2-ap.308, P2-te.005	PARK Jiwon	A10.03
		PARK Jiwon	D2.06
PARK Je-Geun	I11.04	PARK Jong-Chul	D3.01, J3.02
PARK Je-Geun	P1-co.102, P1-co.111, P1-co.217, P2-ap.203	PARK Jong Seon	G5.02
	P2-ap.202	PARK Jong Won	G3.06, J1.03
PARK Je-Geun	B15.07, P1-ap.104	PARK JongChul	D3.04
PARK Je Myoung	D14.01, P2-se.005	PARK Jongho	P1-co.220
		PARK Jongwon	P2-ap.312, P2-ap.313
PARK Jeagun	P2-ap.202	PARK Joochun	C7.06
		PARK Joochun	E7.04
PARK Jeana	P1-at.004	PARK Joohee	J15.02, J15.03
PARK Jee Hong	I15.02	PARK Joon-Yong	I13.02
PARK Jee Woo	P1-ap.203, P1-ap.204, P1-ap.205, P1-ap.207, P2-ap.302	PARK Joon hyung	P2-ap.322
PARK Jeehong	I4.02	PARK Joon Woo	P1-ap.202, P1-ap.203
PARK Jeehong	I9.08		P1-ap.204
	P1-bp.118	PARK Joonwoo	B6.03, B6.05
PARK Jeong-Hyuck		PARK Jubin	B6.07
PARK Jeong-Hyuck		PARK Jubin	D11.02
PARK Jeong Eun		PARK Jucheol	P1-bp.118
		PARK Jun Hyuk	H13.07
		PARK Jung-Gue	P1-se.107
		PARK Jung-Gyu	H8.02
		PARK Jung Jun	P1-se.109
		PARK JungGyu	

PARK Jungsic	A2.04	PARK Sang Hwa	P1-ap.201
PARK Jungsic	P2-pa.012	PARK SangHyeon	P1-co.201
PARK Junyoung	P1-at.006	PARK Sanghyun	P2-at.012,
PARK JuYoung	E8.02, F8.03		P2-at.013,
PARK Kaprai	P2-pl.103		P2-at.014,
PARK Keeseong	P1-co.108,		P2-at.015
	P1-co.118	PARK Sangjoon	G9.06
PARK Keon Joo	F14.01	PARK SangYoon	H15.06
PARK Keonhyeok	P1-bp.102	PARK Se Young	B12.01
PARK Kibog	P1-ap.111	PARK Se Young	J10.06
PARK Kibog	P2-se.007	PARK Se Young	J16.07
PARK Kihong	H2.01	PARK Seong Hee	P2-pl.202
PARK Kimin	H8.01	PARK Seongchan	E2.02
PARK Kiwan	B6.02	PARK Seonghyeon	P2-at.016
PARK Kwangwook	P1-se.103,	PARK Seongjun	B11.02
	P1-se.105	PARK Seongtae	H3.02, H3.04
PARK Kwanhong	P2-co.203	PARK SeongTae	H3.05
PARK Kwanhyung	P2-pa.002	PARK Seongyu	C9.06
PARK Kyoung-Duck	C14.01, F5.04,	PARK Seonhwa	P2-te.003
	P1-se.116,	PARK Seonwoo	P1-se.101,
	P1-se.201,		P1-se.102
	P1-se.208,	PARK Seung Hyuk	G5.02
	P2-co.101	PARK Sohee	D16.07
PARK Kyoungree	P1-co.117	PARK SoHyun	B7.03
PARK Miju	B11.04	PARK Soohyung	I15.02
PARK Mingyu	D9.07	PARK Soohyung	P1-ap.202
PARK Minkyu	H16.02	PARK Soohyung	P2-ap.310,
PARK Minwoo	C10.06		P2-ap.320,
PARK Moo Jip	B11.06		P2-ap.323
PARK Moon Jip	A16.03, B10.05,	PARK Suhyun	P1-bp.117
	E10.03	PARK Sung-Min	B11.08
PARK Moon Jip	B11.03	PARK Sung Hoon	P1-co.217
PARK Myeonghun	E2.02	PARK Sung Jong	D5.03, D5.04
PARK Pyeongjae	P2-ap.203	PARK Sung Min	P1-co.107
PARK R.G.	I2.04,	PARK Sunghun	H11.04
	P2-pa.011	PARK Sungjun	H14.02
PARK RyeongGyoon	A2.01,	PARK Sungkyun	G16.01
	P2-pa.012	PARK Sungkyun	J15.04,
PARK S.-Y.	D11.02		P1-co.129,
PARK Sang-Youn	G16.03,		P1-co.207,
	G16.05,		P2-ap.110,
	P1-co.302		P2-ap.204,
PARK Sang Eon	P1-ap.211		P2-se.002
PARK Sang Eon	P2-at.005	PARK Sunho	D16.03

RAMANANTOANINA Harry	D5.02, P2-at.009	ROH Seung Hwan	B5.01
		ROH Seunghwan	D5.06
RANI Sunita	D11.01, P1-co.205	ROH Youn Jung	D2.03, D2.05, D2.07, D2.08
RASCHKE Markus B.	F5.04	ROH Yulan	P2-op.008
RECCHIA Francesco	E7.01	ROMERO Elisa Romero	D5.02
RENO Mary Hall	J3.01	ROMERO Elisa Romero	P2-at.009
REO Youjin	I15.01	ROOSA Michael	B6.04
RHEE Tae Gye	P2-co.117	ROSSEINSKY Matthew J.	G16.03
RHEE Tae Gyu	P1-ap.201	ROTENBERG Eli	C10.03
RHEE Taeseong	P2-ap.308	ROTT Carsten	E4.03, E4.04, P2-as.001, P2-as.002, P2-as.003, P2-as.004, P2-as.005
RHEE Tongnyeol	P2-pl.210		
RHIE Junwon	P1-co.107		
RHIM Jun Won	F10.02, F16.05		
RHIM Sonny	H16.02, P2-ap.206, P2-ap.207	RULI Fardiman	J11.05
		RYOO Sunggyu	P2-ap.324
RHO Chang Dong	E4.02	RYOU Yeon Su	P2-pa.016, P2-pa.018
RHO Heesuk	H13.06, P1-se.206		
		RYOU Yeonsu	D2.06
RHYEE Jong-Soo	G13.02	RYU Chang Hyeok	P1-se.206
RHYEE Jongsoo	B10.06	RYU Heonseong	P2-op.011
RICHARD Fishel	P1-bp.110	RYU Hyejin	B12.01, P1-co.117
RICHARDSON Colin	G10.04		
RICKERT Elisabeth	D5.02	RYU Hyung Suk	P1-se.119
RICKERT Elisabeth	P2-at.009	RYU Jaehyeok	H2.02, H2.03, H2.05, H2.06, H2.07, H2.08, H2.09, H7.04, J2.02
RIMAL Gaurab	E16.04		
RIVERS Mark L.	G11.02		
RIVERS Mark	G11.01		
RODAN Steve	P2-as.001		
RODAN Steven Thomas	E4.03, P2-as.002, P2-as.004, P2-as.005	RYU Jaehyeok	H2.04
		RYU Mee-Yi	D14.07, P1-se.114
RODAN Steven	P2-as.003	RYU Min Sang	C3.09, H2.03, H2.05, H2.09, J2.02
ROGACHEV Grigory V	B6.04		
ROH Chan	J8.01	RYU Min Sang	H2.02
ROH Cheong Hyun	D14.02	RYU MinSang	H2.04, H2.06, H2.07
ROH Ki-Baek	C6.05		
ROH Kwangdong	H15.05	RYU MinSang	H2.08
ROH Kyungmin	G6.02, P2-pl.112, P2-pl.114	RYU MinSang	I3.05
		RYU Minsnag	P1-pa.007
		RYU Sangkyun	D11.02

RYU Wonseok P2-ap.210,
P2-ap.214
RYU Young-Jay G11.02
RYU Young Jay G11.01
RYU Younghun H11.04
RYU Youngjay F11.02

S

S Sakinah P2-pa.010
SADONGO Victor Wedia D9.07
SAITO Koichi A6.01
SALK Sung-Ho S. P1-co.105
SAMANTA Subhasis C16.02
SAMIR Hamdan M. P1-bp.113
SAMIR M. Hamdan P1-bp.110
SANDBERG Richard F6.03
SANGSU Yer E13.04
SASANO Masaki B6.04
SASAO Noboru C8.03
SCHAARSCHMIDT Thomas C9.03
SCHEIE Allen P2-ap.203
SCHNEIDER Lucas F12.03
SCOPEL Stefano D3.05
SEGURA Perrin C5.04
SEKMEN Sezen B3.03, C3.03
SELVARAJ David P1-ap.219
SEMENOV-TYAN-SHANSKIY Kirill P1-nu.002
SEMERTZIDIS Yannis K. H3.02
SEMERTZIDIS Yannis K. H3.05
SEMERTZIDIS Yannis K. H3.08
SEMERTZIDIS Yannis K. I11.03
SEMERTZIDIS Yannis K. P1-pa.006
SEMERTZIDIS Yannis Kyriakos H3.09
SEO Chang Hyun I2.05, I2.06
SEO Dongmin E16.04
SEO Haechan P2-st.012
SEO Hosung J12.01

SEO Hosung J12.02, J12.06
SEO Hyun Woo C6.05
SEO Jaemin C6.04, D6.03
SEO Jeewon C2.07
SEO Jeewon P1-pa.009
SEO Jeong Ah A10.03
SEO Jeongdae B12.01
SEO JeongWon F3.03
SEO Jihyung E13.01, E13.02
SEO Jiwoo P1-co.213
SEO Jiwoong A2.01, A2.02,
P1-pa.004
SEO Jung Hwa H15.03
SEO Jungpil P2-co.102
SEO Junhu C7.08, D7.08,
P1-nu.005
SEO Minyeong E4.03,
P2-as.001,
P2-as.002,
P2-as.003,
P2-as.004,
P2-as.005
SEO Sangwon P2-at.005
SEO Seongbin P2-ap.209
SEO Soonbeom D11.07,
P1-co.103,
P1-co.124
SEO Sunghin P1-co.112
SEO Yeonji P2-st.010
SEO Yongho D13.03
SEO Yunseok A3.03, A3.04,
E3.01, E3.02
SEOK Jieun P1-co.101
SEOL Jincheol P1-bp.106
SEOL Jincheol P1-bp.114
SEONG Maeng-Je B12.01, E13.03,
G15.02
SEONG Myeong Joong P2-pa.006
SEONG Myeong Jung P2-pa.014
SEONG Seungho P1-se.209
SEONG Taehyeon H3.05
SESANA Alberto G4.01
SEYEDEINARDEBILI Seyedehbahareh A13.04

SFERRAZZA Michele	B6.04	SHIN Hyun Jun	J10.04
SHAIFULLAH Md	P2-co.205	SHIN Hyung-Joon	E12.01
SHAIFULLAH Md	P2-co.206	SHIN Hyung-Joon	E12.03
SHEN Jiayu	D9.04	SHIN Ik Jae	A7.04
SHIM Chi Hyun	H6.05, P2-pl.201	SHIN Inseob	P1-co.123
SHIM Hyung-Jin	C7.01	SHIN Jae Cheol	F5.03
SHIM J.H.	J16.03	SHIN Jaeho	P2-se.010
SHIM Jahyun	P1-se.110	SHIN Jaehyeon	P1-bp.118
SHIM Ji Hoon	A14.04, D11.04, D11.06, G16.02	SHIN Jaeyong	J6.01
SHIM Ji Hoon	F16.06	SHIN Jaeyong	P1-co.301
SHIM Ji Hoon	P1-co.216	SHIN Jaeyong	P1-co.305
SHIM Jihoon	P1-co.305	SHIN Jaeyong	P1-co.307
SHIM Myungbo	F3.08	SHIN Jai-Kwang	I13.02
SHIM Sang-In	F7.04	SHIN Jeacheol	I11.04
SHIM Seung-Bo	H11.04	SHIN Jeongwon	A9.02
SHIM Wooyoung	J10.05	SHIN Ji Hyun	P2-pl.107
SHIN BeomKyu	P1-se.122	SHIN Jiho	J10.05
SHIN Bong Gyu	A10.03	SHIN Jihoon	D2.04
SHIN Chang Sub	J3.06	SHIN Junghyun	H11.04
SHIN Changmin	P2-pl.212	SHIN Jungyu	P2-st.001
SHIN Dong-bin	G16.05	SHIN Kwang Woo	G16.03
SHIN Dong-Chul	I13.02	SHIN Minji	P2-as.001, P2-as.002, P2-as.003, P2-as.004, P2-as.005
SHIN Dong Bin	G16.01		
SHIN Dong Hee	P2-se.011	SHIN Mujin	P2-co.203
SHIN Dongguen	C15.04, P2-ap.310, P2-ap.320, P2-ap.323	SHIN Myeong-Cheol	P1-se.102
SHIN DongHee	P1-se.120, P1-se.121	SHIN Myung Woo	P2-ap.325
SHIN Donghoon	A15.01	SHIN Seodong	D3.06, TT2.03
SHIN Eui-cheol	D13.08	SHIN Seokhwan	P1-nu.010
SHIN Eunbi	P2-ap.104	SHIN Seung Hwan	I6.01, J6.04
SHIN Haewon	P2-pl.211	SHIN Seunghan	P2-ap.321
SHIN Haewon	P2-pl.212	SHIN Taeksu	C7.01, D5.03, D5.04, P2-pl.207
SHIN Haewon	P2-pl.214		
SHIN Hee-Sup	C9.01	SHIN Taeksu	C7.06
SHIN Hee Jun	G16.03	SHIN Woojin	H15.04
SHIN Hyeon Suk	F15.03	SHIN Ye Ji	P2-ap.322
SHIN Hyon	P2-te.005	SHIN Yong-il	C5.05, P1-at.005, P1-at.006
SHIN Hyun-Joon	P1-ap.212	SHIN Yongha	B5.05, P1-at.011

SHIN Yooleemi	P2-ap.316	SOHN Tae-Hun	D14.06,
SHIN Young Jae	I11.04		P1-se.117
SHIOTA Yoichi	G12.01	SON Dae-Ho	E12.04
SHIROKOV Andrey M.	A7.04	SON Eunbin	E13.01, E13.02
SHON Min Ju	P1-bp.115,	SON Gangmin	G9.05
	P1-bp.118,	SON Gibeom	A8.02,
	P1-bp.119		P1-at.014
SHON Won Hyuk	G13.02, J10.01	SON Hyeon-Dong	P1-nu.002
SHON Wonhyuk	B10.06, D11.03	SON Min Jae	P1-co.208
SHON Wonhyuk	P1-co.202	SON Minjae	P2-ap.110
SIKOCINSKI Pawel	G5.05	SON Sang-Cheol	P2-op.001
SIM Gisung	P2-at.018	SON Sangyeong	P1-nu.002
SIM Heung-Sun	F10.01	SON Seok-Kyun	B14.01
SIM Hyunbo	P2-ap.110	SON Seong-Jin	P2-op.020
SIM JinWoo	P2-ap.324	SON Seora	G9.03
SIM Kyung Ik	H5.01	SON Seung-Woo	G9.02
SIM Sungbo	P2-pa.013	SON Seung-Woo	I9.02, I9.07
SIM Yumin	B12.01	SON Shinwon	P1-se.112
SIN Sang Jin	E3.03, E3.04,	SON Suhan	I11.04
	F3.03, F3.05,	SON YeongJun	J15.04,
	F3.09, J11.07		P2-ap.110,
			P2-se.002
SINGH Palwinder	J11.05	SON Yong Hyun	C7.06
SIRAJ Haq	B10.04	SON Young-Woo	B16.02
SIRRINGHAUS Henning	I15.01	SON Youngwan	E4.02, H2.02,
SIVAKUMAR Akhil	A3.01, A3.02		H2.03, H2.04,
SMID Michal	F6.02		H2.05, H2.06,
SMIRNOVA Nadezda A.	A7.04		H2.07, H2.08,
SMIRNOVA Nadezda	A7.03		H2.09, J2.02
SMITH Michael S	B6.01		
SO Jung Ho	C2.07,	SONG Aeran	H15.03
	P1-nu.006	SONG Changyong	D4.04
SO Sunae	F5.01	SONG Changyong	G16.04,
SO Woon Young	I7.01		P1-co.305
SOEGianto Maynardo	Pratama	SONG Changyong	G16.05
	G8.05	SONG Changyong	P1-co.218
SOHN Byeong-Kwon	D9.04	SONG Changyong	P1-co.221
SOHN Byeongkwon	P1-bp.120	SONG Changyong	P1-co.301
SOHN Byungmin	D15.04	SONG Changyong	P1-co.307
SOHN Changhee	B11.04	SONG Chiwan	E6.03
SOHN Hyunchul	P1-ap.201	SONG Eunho	D9.05,
SOHN Jang Hyeob	F6.02		P1-bp.111
SOHN Janghyeob	P2-pl.117,	SONG Hyun Gyu	F5.02, G14.03,
	P2-pl.119		H14.06
SOHN Jong Yoon	I2.02, I2.03	SONG Jaegu	B16.04,

	P1-co.103, P1-co.107	SONG Taesoo	D7.04
SONG Jaewon	F3.01, F3.02	SONG Wonho	P1-ap.111, P2-se.007
SONG Jeong-Pil	C10.08	SONG Yeongwoo	P2-st.016
SONG Jeonghyeon	E2.04	SONG Young-Ho	A7.02
SONG Ji-Yoon	D16.04	SONG Young Jae	A10.03
SONG Jihoon	P2-co.211	SONG Yujin	P2-se.015, P2-se.016, P2-se.018, P2-se.019
SONG Jin Dong	D14.07		
SONG Jin Dong	P1-se.114		
SONG Jin Ha	P2-op.004		
SONG Jinwoong	G3.05	SONG Yunheung	G8.01
SONG Jong Hyun	P1-co.110, P1-co.224, P1-co.227, P1-co.229	SONTYANA Adonijah Graham	A14.01
		SPINKA Thomas	F6.03
SONG Juhee	D2.06	SPREE Lukas Emanuel	A10.05, P1-co.128, P2-co.115
SONG Jun ho	P2-pa.006, P2-pa.014		P1-ap.119
SONG Jung Hoon	P1-se.107, P1-se.109	SRIV Tharith	A16.04
SONG Jung Hoon	P1-se.124, P1-se.125	SRIVANI Javvaji	F6.02
SONG Jungeun	P1-se.204	STAMBULCHIK Evgeny	P2-co.110
SONG Mi Young	P2-at.008	STAN Liliana	G16.03
SONG Minwoo	P2-ap.315	STAUB Urs	I15.01
SONG Moojune	G12.02	STRANKS Samuel D.	G11.01, G11.02
SONG Moojune	H12.04	STUBBS Joanne	C7.06
SONG Moojune	I12.04	STUHL Laszlo	P1-co.306
SONG Sanghoon	I13.02	SUB Shin Jun	P1-ap.106, P1-ap.215, P1-ap.216
SONG Sanghoon	J15.01, P1-co.304	SUH Dongseok	B12.01
SONG Sehwan	G16.01	SUH Hoyoung	P1-se.213, P1-se.222, P1-se.223
SONG Sehwan	J15.04	SUH HyeongChan	C11.05
SONG Sehwan	P1-co.207, P1-co.302, P2-ap.204	SUH Jeonghun	H11.04
SONG Sehwan	P2-se.002	SUH Junho	P2-op.016
SONG Sujin	P2-op.007	SUK Daewon	G6.02, P2-pl.109, P2-pl.111, P2-pl.112, P2-pl.114
SONG Sung Chan	P1-co.301	SUK Hyyong	J11.07
SONG Tae Kwon	P1-co.204	SUKARKAN Supalert	E3.04
SONG Tae Kwon	P1-co.211, P1-co.212	SUKRAKARN Supalert	E11.01
SONG Taegeun	P1-bp.204, P1-bp.205	SUL Jinhwan	

SUN Cheng-Jun	P2-co.110
SUNG Chang-Kyu	H6.05, P2-pl.204
SUNG Choongki	C6.01
SUNG Dongchul	P1-ap.208
SUNG Hyungue David	P2-as.006
SUNG Jae-Hyun	P1-se.204
SUNG Jooyoung	G14.01
SUNG Minki	J11.01
SUNG Shi-Joon	E12.04
SUNG Yubin	D9.02
SUR Yeahan	P1-co.222
SUTTON Steve	G11.01
SUZUKI Motohiro	G12.03
SYTOV Alexei	H2.01, J2.01
SYTOV Alexei	J2.03
SYTOVA Svetlana	J2.01

T

TABARELLI Tommaso	F2.03
TAE Bongho	B3.07, C3.04
TAKAHASHI Yoshiro	G8.02
TAKANO Tetsushi	G8.02
TAKASU Yosuke	G8.02
TAKATA Kei-ichi	D9.02
TAKEUCHI Ichiro	B12.04, P1-co.226
TAKHISTOV Volodymyr	D3.03
TANAKA Kazuhiro	G7.03
TANIDA Kiyoshi	I7.08, J2.05
TANIGUCHI Takashi	D13.06
TANIGUCHI Takashi	P2-co.105
TAUTZ Frank Stefan	F12.02
TAUTZ Frank Stefan	P1-co.114
TAYLOR Robert Andrew	C14.04
TEMIROV Ruslan	F12.02
TEMIROV Ruslan	P1-co.114
TENNANT David Alan	P2-ap.203
TERADA Takahiro	F4.03
THAT TON Khai	F12.03

TOENNIS Christoph	E4.03
TOENNIS Christoph	E4.04, P2-as.001
TOK Ufuk Guney	B3.03
TONCIAN Toma	F6.02
TöNNIS Christoph	P2-as.002, P2-as.003
TRAN Hue Thi	A15.04
TRAN Van Tam	E16.05
TREAGUST David Franklin	I1.01
TRUC Lam Tan	P1-nu.008
TRUONG Hien Thi	P2-pl.101
TSAI Yu-Dai	P2-pa.007
TSESMELIS Emmanuel	F2.01
TSHOO Kyounggho	C7.01, D5.03, D5.04, P2-pl.207
TSHOO Kyounggho	C7.06

U

UCHAIKIN Sergey V.	H3.05, P1-pa.006
UCHAIKIN Sergey V.	I11.03
UDAYA MOHANAN Kannan	I15.03
UEDA Hiroki	G16.03
UL HAQ Bakhtiar	P2-co.201
ULLAH Asif	P1-co.112, P2-ap.211
UMANSKY Vladimir	E10.02
URDANIZ MARIA CORINA	P1-co.128
USCHMANN Ingo	F6.02

V

VAN LOO Arjan F	H3.05
-----------------	-------

VAN LOO Arjan F. I11.03
 VAN LOO Arjan F. P1-pa.006
 VAN Phuoc Cao I12.03
 VAN PUTTEN Maurice H J4.05, J4.06
 VAN QUANG Nguyen E16.05
 VARY James P. A7.04
 VELASCO-SEVILLA Liliana D3.05
 VELASCO-SEVILLA Liliana I4.02
 VENKATA Siva Kavarthapu A14.01
 VERMA Sonu E10.03
 VONG Chenda P1-ap.119
 VU Dinh Lam P2-ap.319

W

WAKEFIELD Joshua C10.03
 WALKER Bright H15.03
 WAN Xinyue P2-ap.303
 WANG Bai Yang D15.02
 WANG Bing J11.03
 WANG Bob Minyu I11.05
 WANG Chongze J11.03
 WANG Daohan E2.04
 WANG Feng P1-ap.216
 WANG Gunuk H14.02,
 H14.04,
 P2-se.006
 P2-se.010
 WANG Gunuk P2-ap.303
 WANG Shaochuan D8.03, F8.05
 WANG Tsai-Ni F11.03, G11.01,
 G11.02
 WATANABE Haruki F16.04
 WATANABE Kenji D13.06
 WATANABE Kenji P2-co.105
 WATSON Ian James C3.08, D2.03,
 D2.05, D2.08,

E4.01, E4.02
 WE Changhyeon P2-pl.104
 WEITZ David A I16.02
 WELP Ulrich H12.04
 WENDT Klauss E7.02
 WESTERLUND Fredrik I5.03
 WHETTEN Benjamin G. F5.04
 WI Jiwon D5.05
 WI Sang Won J15.05,
 P1-co.213
 WIEBE Jens F12.03
 WIESENDANGER Roland F12.03
 WIJESINGHE Wijesinghelage Chandima D9.03, D9.07
 Bhashini
 WITTEN Edward Y1.01
 WOLF Christoph P1-co.128
 WON Choongjae G16.05, J11.04
 WON Choongjae J11.05
 WON Choongjae P1-co.221
 WON DongHwan P2-pa.002
 WON Eunil I2.05, I2.06
 WON JongCheol P1-at.012
 WOO Hyung Joo P2-pl.207
 WOO Jaeyong I15.01
 WOO Jong-Kwan B7.02, B7.03,
 P1-nu.003,
 P1-pa.017
 WOO Ju Young F5.04
 WOO Junhyuk P1-bp.208,
 P2-st.020,
 P2-st.021
 WOO Kyungrim H7.03
 WOO Seungwook P2-ap.312,
 P2-ap.313,
 P2-ap.314
 WOSNITZA Joachim P1-co.125
 WU Sangwook P1-bp.117
 WU Tianyu F11.02
 WULFERDING Dirk B16.04
 WULFERDING Dirk P1-co.220

X

XAYAVONG Latsamy	A7.03
XIANG Weiwei	P1-se.104
XIE Si	B3.07
XU Ke	P1-bp.121
XU Man	G11.01
XU Ruijuan	D15.02
XU Xianghan	J10.04

Y

YADAV Poonam	B10.02
YAMAGUCHI Hidetoshi	B6.04
YAMAGUCHI Masahide	C1.01
YAMASHITA Kimiko	D3.08
YAMAZAKI Masahito	F3.08
YANG Byeongsu	A2.01, C2.05, P1-pa.013
YANG Byeongsu	H3.07
YANG Chan-Ho	B12.01, C10.05, C11.02
YANG Chan-Ho	C11.03
YANG Chan-Ho	C11.05
YANG Daeho	B8.02
YANG Fan	E8.01
YANG Haeryong	H6.05, P2-pl.201
YANG Heejun	D13.04, D13.05, D13.06, D13.07, D13.08, E13.04, H14.01, P2-se.012
YANG Heejun	P1-co.111
YANG Hyosim	H5.04
YANG Hyun Kyoung	P2-ap.305, P2-ap.317, P2-ap.318

YANG In-Sang	P1-co.126
YANG Jeongyeol	A2.01
YANG Kai	F12.01
YANG Kee-Jeong	A12.01, E12.04
YANG Keunsang	P1-bp.110, P1-bp.113
YANG Min	P1-se.101, P1-se.102, P2-se.001, P2-se.003
YANG Sang Mo	P1-ap.201, P2-ap.102, P2-ap.112
YANG Seongbae	C7.05, I7.08, J2.05
YANG Seungjin	C3.04
YANG Seungjin	D2.07
YANG Seungjin	D2.08
YANG Seungmo	G12.02
YANG Steven	F6.03
YANG Taehyun	P1-bp.115, P1-bp.119
YANG Un-ki	B3.05, B3.08, B3.09, D2.04
YANG Woojin	J11.01
YANG Yerim	P1-co.225
YANG Yongsoo	D15.01
YANG Zuxing	A7.04
YARLOO Hadi	E8.01
YEE Ki-Ju	P1-se.117, P2-op.001
YEE Ki Ju	D14.06, H13.01
YEO Hwan-Seop	I11.02
YEO Hwan-Seop	P2-ap.312, P2-ap.313
YEO Hyeonwoo	D16.01, E11.03, E11.04
YEO I.S.	I2.04, P2-pa.011
YEO Insung	P1-pa.003, P2-pa.004, P2-pa.012
YEO Junyeob	P2-ap.105, P2-op.002

YEO Sebin	P2-op.012	YOO Geonwook	I13.02
YEO Sunmog	D14.06, P1-co.228	YOO GunWoo	A15.02
YEO Youngki	C11.03	YOO Ho yeon	D13.05
YEOM Cheolheon	E10.03	YOO Hocheon	I15.04
YEOM Cheolhun	B11.03	YOO Hwidong	B3.01, B3.02, C3.01, D2.01, H2.02, H2.03, H2.04, H2.05, H2.06, H2.07, H2.08, H2.09, J2.02
YEOM Dong-han	I4.06		
YEOM Han Woong	B11.01		
YEOM Han Woong	J11.01		
YEOM Min Jae	I13.02		
YEON Jieun	P1-ap.115		
Yi-hyun Park	C6.06	YOO Hyo Bin	P2-ap.112
YI Andrew Kunwoo	H3.05	YOO Hyobin	A15.03
YI Chang-Hwan	F10.04	YOO In-Kwon	H7.03
YI Gyu-Chul	H14.03	YOO Jae Hyeok	B3.04, C3.02, I2.05, I2.06, P2-pa.007
YI Ju Yeon	H9.06		
YI Sam Nyung	P1-se.101, P1-se.102	YOO JaeHyeok	P2-pa.003
YI Sam Nyung	P2-se.009	YOO Jaemin	P1-bp.202
YI Seunghoon	E11.01	YOO Jejoong	P1-bp.202, P1-bp.203, P1-bp.207, TT9.01
YI Soojung	A9.03		
YI Taeil	A10.01		
YI Yeonjin	H15.04, P1-ap.202, P1-ap.203, P1-ap.204, P1-ap.205, P1-ap.207, P2-ap.302	YOO Jieun	J12.03, J12.04, J12.05, J12.07
YI Yeonjin	I15.02, P2-ap.310	YOO Jihoon	P2-ap.305, P2-ap.317, P2-ap.318
YIM Kanghoon	J16.05		
YIM Seongbin	H14.05	YOO Jisu	H15.04
YIM Sin Hyuk	P2-at.010, P2-at.011	YOO JongHee	A2.01, A2.04, I3.02, P1-pa.008, P1-pa.013
YIN Lu	I4.02	YOO Jonghee	H3.07
YONEKAWA Hirofumi	P2-pl.103	YOO Jun Sang	G5.02
YONG Daeseong	J9.06	YOO Minjae	P2-ap.206
YOO C.	I2.04, P2-pa.004, P2-pa.011	YOO Seong Moon	I2.02
YOO Chang Hyun	P2-pa.012	YOO Seungwoo	E11.02
YOO Changhyuk	P2-at.004	YOO Young Joon	H15.06
YOO Changhyun	P1-pa.004	YOOK Soon Hyung	P2-st.012
		YOON Chan Soo	P2-ap.102
		YOON Chun Sil	I2.02
		YOON Chun Sil	I2.03
		YOON Eisung	C6.01,

	P2-pl.210	YOSHIMURA Motohiko	C8.03
YOON Euijoon	I13.02	YOU Daeho	I13.03
YOON Eunki	P2-ap.323	YOU Mujin	G12.02
YOON Han	P1-co.103	YOU Mujin	I12.04
YOON Hojin	H3.07	YOU Seungyun	P2-ap.320
YOON HongKee	E11.01	YOU Suejeong	P1-se.219
YOON Hoon Hahn	B15.06	YOUM Dojun	H3.04
YOON Hye-Gyoung	G3.04	YOUN SungWoo	H3.05, H3.06, H3.08, H3.09, P1-pa.006
YOON HyunJung	P1-bp.117		
YOON HyunJu	H1.04, P2-te.002	YOUN Yong	J16.05
YOON Inseok	D2.04	YOUNG Shin Jae	G16.04
YOON Jaesung	J10.05	YOUSUF Saqlain	B16.04
YOON Ji Hoon	P2-at.011	YU Byung Yong	C7.09
YOON Jihoon	P2-at.010	YU Chae-Hyun	P2-co.110
YOON Jin-Hee	G2.03	YU Dong	I11.05
YOON Jinjoo	G9.09, P2-st.009	YU Gyunho	C2.01, P1-pa.011
YOON Junggi	A3.01	YU Hyungyu	G6.02, P2-pl.109
YOON Junggi	A3.02	YU I.	I2.04, P2-pa.004, P2-pa.011
YOON Junhyeok	P2-pl.214, P2-pl.216		
YOON Ki-Jun	A9.02	YU Intae	A2.01, P2-pa.012
YOON Mina	J16.04	YU Jae Su	A14.01, A14.02, A14.03, E14.03, P1-se.104
YOON Sangmoon	E15.01		
YOON Seokchan	G5.04	YU Jaejun	P1-co.206
YOON Seokhyun	A12.02, J15.02, J15.03, J15.06, P1-co.126, P1-se.204	YU Ji-Sung	J10.05
YOON Seungha	B10.06	YU Kilwon	D9.08
YOON Siwoo	P2-pl.214	YU Kyunghoon	P2-pa.002
YOON Siwoo	P2-pl.216	YU Min-Chul	I13.02
YOON Soohyun	D2.06	YU Nan Ei	P2-op.020
YOON Tae-Young	P1-bp.119	YU Phil-Sang	P1-bp.109
YOON TaeGeun	A10.03	YU SeGi	P2-st.011
YOON Wooseung	P1-bp.208	YU Seunghyun	A16.02
YOON Young-Do	J8.01	YU Sieun	P1-nu.013
YOON Young-Gui	G15.02, H13.06	YU Tony	G11.01, G11.02
YOON Young Dae	H6.02	YU Unjong	G9.04
YOON Young Soo	C6.06	YU Yijun	D15.02
YOSHIDA Shinsuke	F7.03	YU Yong Soo	P1-at.002
YOSHIMI Akihiro	C8.03	YU Young-Jun	P1-se.122
YOSHIMURA Koji	C8.03	YUK Seongho	P1-bp.207

YUK Taewon	E3.03, E3.04, F3.05, F3.09, J11.07		
YUM Dahyun	D5.05, J12.03, J12.04	김송길 김수호	P1-co.129 P2-pl.111
YUN Eungyu	P1-pa.016	김영환	P1-ap.223
YUN Gabin	P1-at.003	김용기	P2-op.015
YUN Gunsu	E6.04	김종현	P2-st.004
YUN Gunsu	H6.01		
YUN Gunsu	H6.02		
YUN Hyeongock	D7.04		
YUN Jo Hyun	J11.01		
YUN Jonginn	I11.04		
YUN Junho	P2-co.204		
YUN Sang pil	P2-pl.205	맹민재	P1-ap.223
YUN Seha	P2-at.017	민태기	WW15.01
YUN SeokJoon	D13.01		
YUN Sung Won	B5.03		
YUN Taekeun	P1-ap.118		
YUN Won Seok	P1-se.209, P2-co.209		
YUN Yoojoo	P1-ap.216		
YUN Youngmin	P1-co.302	박강진 박도현 박용섭 방수진	P1-co.129 E6.01 P1-ap.223 P2-st.004

Z

ZASTRAU Ulf	F6.02		
ZEINALVAND FARZIN Behnam	A13.02		
ZEINALVANDFARZIN Behnam	P1-se.113		
ZHANG Gu	E10.02	서민기	P1-se.120
ZHANG Kaixuan	I11.04	선상범	P2-op.015
ZHANG Qian	B6.04	손영준	P1-co.129
ZHAO Mali	D13.08	송세환	P1-co.129
ZHAO YUEHUAN	P1-ap.205	송유리	P2-op.015
ZHENG Haiyu	P2-ap.319		
ZHENG Shoujun	D13.06		
ZHOU Yehao	F3.08		
ZIMMERMAN John F	G10.04		
ZVYAGIN Sergei	P1-co.125	안강현	W15.02

안태규	F1.01
유정선	P2-st.004
이규명	P1-ap.223
이규현	P1-ap.223
이기원	P2-op.015
이두용	P1-co.129
이병근	P2-op.015
이성빈	B1.01
이재훈	P2-st.004
이준규	E14.03
이준용	P2-st.004
이준희	P2-op.015
이지성	P1-co.129
이창준	P2-ap.315
이현수	W15.01
이호선	P1-se.121

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장동진	D14.04
제송근	A1.02
조연정	A1.01
주태성	P1-co.129
지영래	A1.03

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차주홍	D6.02
채은미	B1.01
최보규	P1-se.121

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한승훈	P1-co.129
홍종암	P1-ap.223

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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17	(주)스위텍	36	파워테크
18	RNDWARE	37	알머티리얼즈
19	Quantum Design	38	MSTECH - OTS TECHNOLOGY

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인 쇄 2023년 10월 19일

발 행 2023년 10월 24일

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사단법인 한국물리학회

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반데르발스 물질 연구센터

센터
목적

고성능 소자 구현을 통한 새로운 물리 현상 발현
반데르발스계 신구조 및 신물질 구현
새로운 물리 현상 발견 및 물성 제어
반데르발스 물질 기반 신개념 미래 양자 소자 제시

센터
비전

세계 선도적 반데르발스 물질 및 소자 전문 연구센터



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베리곡률 기반 신물성 연구센터

선도연구센터(SRC)

센터장: 성맹제 (중앙대)



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