KPS 한국물리학회
The Korean Physical Society

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 GNTO 경남관광재단 GYEONGNAM TOURISM ORGANIZATION

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

포항가속기연구소

PLS-II & PAL-XFEL

PAL 포항가속기연구소

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

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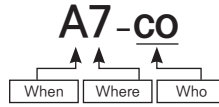
세션코드 읽는 법 (How to Read Session Code?)



(1) The capital letter : when

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

(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)

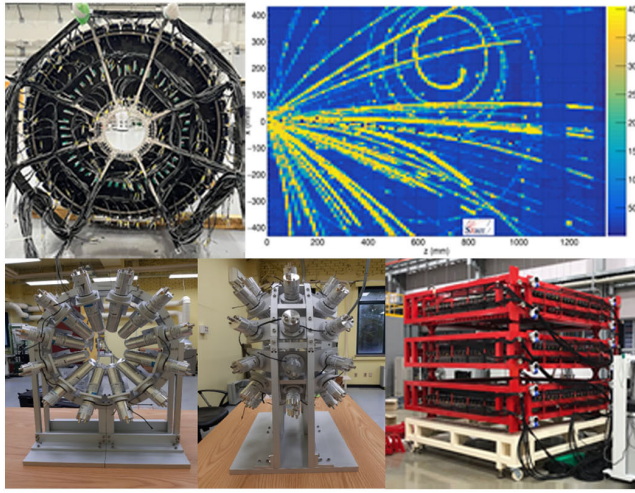
- ap : applied physics
- as : astrophysics
- at : atomic and molecular physics
- bp : biological physics
- co : condensed matter physics
- nu : nuclear physics
- op : optics and quantum electronics
- or : KPS
- pa : particles and fields
- pl : plasma physics
- se : semiconductor physics
- st : statistical physics
- te : physics teaching
- in : institution

CENuM
Center for
Extreme
Nuclear Matters

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 (QDP)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

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	• 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 Ⓔ or by Ⓚ 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 other 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 Sesson 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

- Poster Exposure Period :
  October 25, 12:00 ~ October 25, 19:30
- Presentation (mandatory):
  October 25, 18:00-19:30

P1-pa Particle Physics: Non Accelerator-based Particle Physics	**P1-se.1** Semiconductor Physics: Semiconductor Growth, Structure , Characterization/ Devices
P1-nu Nuclear Physics	**P1-se.2** Semiconductor Physics: Low-dimensional Materials and Novel Quantum Phenomena
P1-co.1 Condensed-Matter Physics: Magnetism/Superconductivity	**P1-bp.1** Biological Physics I
P1-co.2 Condensed-Matter Physics: Strongly Correlated/ Dielectrics/Functional Oxides	**P1-bp.2** Biological Physics II
P1-co.3 Condensed-Matter Physics: Other Condensed Materials/ Instrumentation and Big Facilities	
P1-ap.1 Applied Physics: 2D Materials	
P1-ap.2 Applied Physics: Nano Materials & Surface and Interface	
P1-at Atomic and Molecular Physics I	

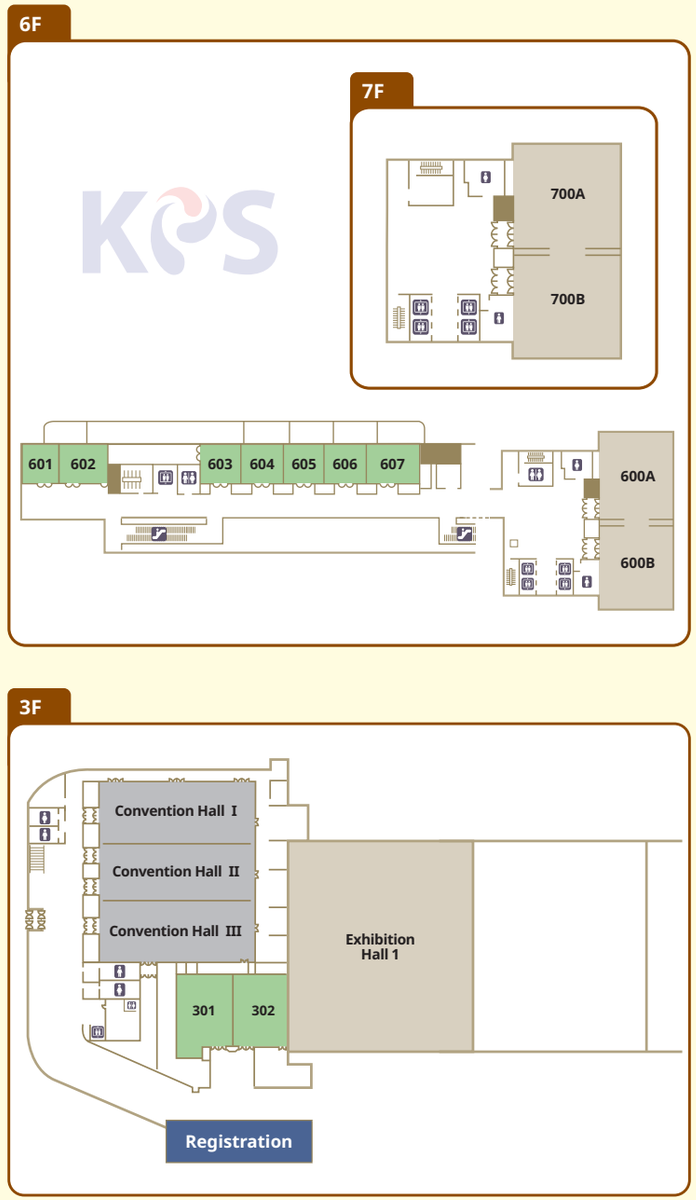
Session P2

- Poster Exposure Period :
  October 26, 9:00 ~ October 26, 17:00
- Presentation (mandatory):
  October 26, 11:30-13:00

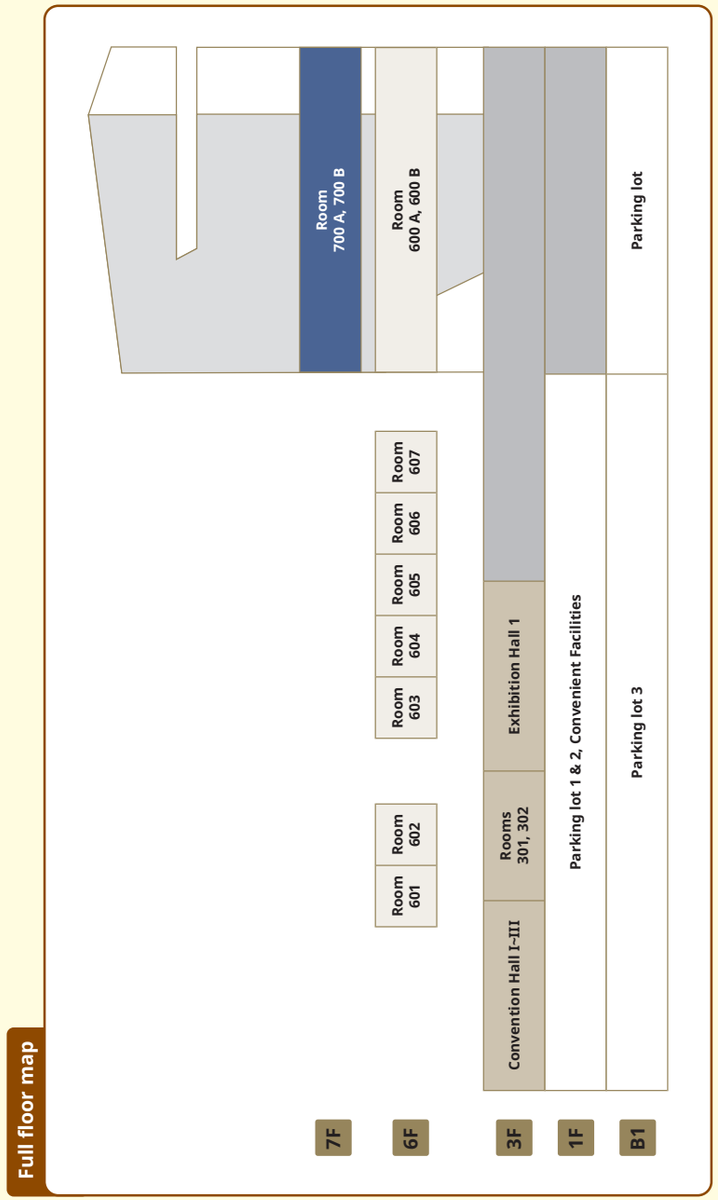
P2-pa Particle Physics: Accelerator-based Particle Physics & Theory	**P2-pl.1** Plasma Physics: Laser Plasma; Plasma Applications; Basic Plasmas
P2-co.1 Condensed-Matter Physics: Nano and Mesoscopic Physics & Surface/Interface/ Nanomaterials	**P2-pl.2** Plasma Physics: Nuclear Fusion; Accelerator & Beam
P2-co.2 Condensed-Matter Physics: Computational Physics	**P2-op** Optics and Quantum Electronics
P2-ap.1 Applied Physics: Oxide and Energy Materials	**P2-at** Atomic and Molecular Physics II
P2-ap.2 Applied Physics: Spin and Magnetism & Computational Applied Physics	**P2-se** Semiconductor Physics: Next-generation Semiconductors & Devices/ Emerging 2D/Sensors
P2-ap.3 Applied Physics: Photonics/Quantum/Organic/ Bio	**P2-as** Astrophysics
P2-st Statistical Physics	
P2-te Physics Teaching	

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

창원컨벤션센터 발표장 안내도



Guide map for conference rooms



Plenary Lecture

Tutorial Sessions

Sessions Organized by KPS Committees

Institutional Special Session

List of Award Winners' Presentations

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

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

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

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

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

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

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

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

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

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

Poster Session P1
Poster Exposure Period: October 25(Wed), 12:00-19:30
Presentation (mandatory): October 25(Wed), 18:00-19:30

Poster Session P2
Poster Exposure Period: October 26(Thu), 09:00 -17:00
Presentation (mandatory): October 26(Thu), 11:30-13:00

구두발표논문 시간표

Oral Session Schedule

기조강연 Plenary Lecture

Ⓔ[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)

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).

[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*1 ([1]Chungbuk National University)

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

Ultrafast X-ray spectroscopy and scattering using X-ray Free Electron Laser / JANG Hoyoung*1 ([1]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, 이멀젼, 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 상대로 부족한 점이 있었다고 여겨지고 있다. 연성물질의 두 가지 플랫폼(마이크로플루이딕스와 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 ([1]Dept. of Mechanical Engineering, MIT, USA)

I16.02 [11:18 - 12:06]
Drop-based microfluidics / WEITZ David A*1 ([1]Dept. 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 소자로의 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)Se_2 박막 태양전지를 중심으로 / CHUNG Yong-Duck*1 ([1]Emerging 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 ([1]Department 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 ([1]Department of Physics, Chungbuk National University)

TT2.03 [12:36 - 12:48]
Collider Phenomenology Tutorial – Hands-on / KANG Dong Woo*1,2, SHIN Seodong[2], PARK Chan Beom[3] ([1]School of Physics, KIAS, [2]Department of Physics, Jeonbuk National University, [3]Department 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.

TT9.01 [11:00 - 11:48]

Fundamentals and Applications of AlphaFold 2 / YOO Jejoong[*1] ([1]Sungkyunkwan 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: 제승근(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)

Ⓔ[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 ([1]CTPU-CGA, IBS)

Ⓚ[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	

Ⓚ[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	정종훈(인하대, 교육위원장)
• 교육부의 대학구조 조정 방향성과 물리학과의 대처	엄종화(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 ([1]KIST)

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

Next Generation Spintronic Device / HWANG Chan Yong*1 ([1]Institute 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 ([1]KIST)

[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 ([1]Surface & Nano Materials Division, KIMS)

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

Quantum optical quantum computerors and simulators / KIM Yong-Su*1 ([1]Center 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] ([1]기초과학연구원 지하실험연구단 부연구단장)

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

물리학자의 청각, AI 그리고 스타트업 / 안강헌[*1,2] ([1]충남대학교 물리학과, [2]주식회사 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)

기관특별세션 Institutional Special Session

[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] ([1]XFEL 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] ([1]XFEL 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 Junyoung[1] ([1]Department of Physics, POSTECH, [2]Center for Artificial Low Dimensional Electronic Systems, IBS, [3]Department of Physics, CALTECH, USA)

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

Ultrafast and nanoscale imaging with XFELs / SONG Changyong*[1] ([1]Department of Physics, POSTECH)

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

HX-2 FEL line construction plan / NAM Inhyuk*[1] ([1]PAL-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] ([1]Department 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 Naoto[1] ([1]Center 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] ([1]경북대학교 물리학과)

A1.02 [13:28 - 13:38]
새물리 발전방안 1 / 제승근[*1] ([1]Department of Physics, Chonnam National University)

A1.03 [13:38 - 13:48]
새물리 발전방안2 / 지영래[*1] ([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 Koun[3], JANG Jee Seung[2], JUNNG Seunghyun[4], KWON Eunhyang[5], MOON Dongho[1], YANG Byeongsu[*4], YANG Jeongyeol[4], YOO Jong-hee[4], YU Intae[5], IOVINE Nadege[3], LEE Seonghak[1], JANG Mincheol[1], LEE Minwoo[5], SEO Jiwoong[5], PARK RyeongGyoon[1] ([1]Department of Physics, Chonnam National University, [2]Department of Physics and Photon Scienc, GIST, [3]Center of Underground Physics, IBS, [4]Department of Physics and Astronomy, Seoul National University, [5]Deparment of Physics, Sungkyunkwan University)

A2.02 [13:12 - 13:24]
Search for proton decay via $p \to e^+ \pi^0 \pi^0$ and $p \to \mu^+ \pi^0 \pi^0$ in Super-Kamiokande I-V / KWON Eun Hyang[*1], SEO Jiwoong[1] ([1]Department 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] ([1]Department of Physics, Sungkyunkwan University)

A2.04* [13:36 - 13:48]
Characterization of large-diameter photomultiplier tube / LEE Yuno[1], KIM Hong Joo*[1], LEE Jik[1], PARK Jungsic[1], JOO Kyung Kwang[2], YOO Jonghee[3], JANG Jee-Seung[4] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Chonnam National University, [3]Department of Physics, Seoul National University, [4]Department 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 Akhil[1] ([1]Junior Research Group, APCTP, [2]Department of Physics, POSTECH, [3]School of Physics, KIAS, [4]School 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-Sun[2], YOON Junggi*[1], SIVAKUMAR Akhil[1] ([1]Junior Research Group, APCTP, [2]School of Physics, KIAS)

A3.03 [13:24 - 13:36]
End of the World Perspective to BCFT / LEE Jung-Hun*[1], KIM Kyung Kiu[1], KIM Se-Jin[1], PARK Chanyong[2], SEO Yunseok[1] ([1]Kookmin University, [2]Department of Physics and Photon Science, GIST)

A3.04 [13:36 - 13:48]
End of the world perspective to BCFT / KIM Kyung Kiu*[1], SEO Yunseok[1], KIM Se-Jin[1], LEE Junghun[1], PARK Chanyong[2] ([1]College of General Education, Kookmin University, [2]물리광과학과, 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 Ki[1], SAITO Koichi[2] ([1]Department of Physics and OMEG Institute, Soongsil University, [2]Department 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 $^{12}C(K^-, p)$ reaction at 1.8 GeV/c / CHOI Sungwook[1], AHN Jung Keun[*1] ([1]Department of Physics, Korea University)

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

Production of S=-2 systems near the threshold in the $^{12}C(K^-,K^+)X$ reaction at 1.8 GeV/c / JUNG WooSeung[1], AHN Jung Keun[*1], FOR THE E42 Collaboration[1,2,3] ([1]Department of Physics, Korea University, [2]ASRC, JAEA, Japan, [3]Department 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 Seonghyun[1], CHEOUN Myung-Ki[1] ([1]Department 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 Myungkuk[1], SONG Young-Ho[*2], KIM Youngman[1] ([1]CENS, IBS, [2]Rare Isotope Science Project, IBS)

A7.03 [13:24 - 13:36]
Shell-Model Description of the Mirror Asymmetry in Gamow-Teller Transition Rates / XAYAVONG Latsamy*[1], LIM Yeunhwan[1], SMIRNOVA Nadezda[2] ([1]Department of Physics, Yonsei University, [2]Department 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 Zhen[2], KIM Youngman[7], MARIS Pieter[8], VARY James P.[8] ([1]Institute for Rare-Isotope Science, IBS, [2]LP2IB, CNRS/IN2P3, France, [3]Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Russia, [4]Institute of Modern Physics, Chinese Academy of Science, China, [5]Nishina Center, RIKEN, Japan, [6]Department of Physics, University of Arizona, USA, [7]Center for Exotic Nuclear Studies, IBS, [8]Department 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 Jinuk[1], AN Kyungwon[2] ([1]Department of Physics, Yale University, USA, [2]Department 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-hoon[1], KIM Jinuk[2], HA Junseo[1], SON Gibeom[1], AN Kyungwon*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department 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 ([1]Major 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 Geon[1], PARK Hoewon[2], SHIN Jeongwon[2], YOON Ki-Jun[2], PARK YongKeun*1 ([1]Department of Physics, KAIST, [2]Department 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 Soojung[1], LEE Nam Ki*1 ([1]Seoul National University)

A9.04 [13:36 - 13:48]
ER-associated organelle dynamics across microtubular and ER networks / PARK Jin-Sung[1], JEON Hyeonjun[1,2], LEE Il-Buem[1], MOON Hyeon-Min[1], LEE MinHyeong[3], KIM Chungho[3], HONG Seok-Cheol*[1,2], CHO Minhaeng[1,4] ([1]Center for Molecular Spectroscopy and Dynamics, IBS, [2]Department of Physics, Korea University, [3]Department of Life Sciences, Korea University, [4]Department 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 Ti_6Al_4V under indentation using molecular dynamics simulations / YI Taeil*1, JUNG Yeri[1], KIM Jinho[1], KIM Woojong[2] ([1]School of Mechanical Engineering, Kyungnam University, [2]R&D Team, Daegun Tech)

A10.02 [13:12 - 13:24]
Comparison of Fourier-transformed and Wavelet-transformed EXAFS / HAN Sang-Wook*1, JEONG Eun-Suk[1] ([1]Department 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 Hyunmin[2], SEO Jeong Ah[3], YOON TaeGeun[2], SHIN Bong Gyu[2], CHA Yongtae[2], PARK Jiwon[4], HEINRICH Andreas[6], KIM Hyo Won[3,5], CHAE Jungseok[3], SONG Young Jae[*1,2,7] ([1]Department of Nano Engineering and Department of Physics, Sungkyunkwan University, [2]SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University, [3]Center for Quantum Nanoscience, Ewha Womans University, [4]Department of Chemistry, Sungkyunkwan University, [5]Quantum Computing Research, Samsung Advanced Institute of Technology, [6]Department of Physics, Ewha Womans University, [7]Department of Nano Science and Technology, Sungkyunkwan University)

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

The effect of bilayer graphene substrate on epitaxially grown monolayer $TaSe_2$ film / HWANG Jinwoong[*1] ([1]Department 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 Caroline[1], COLAZZO Luciano Colazzo[1], CHOI Dasom[1], POPOV Alexey[2], HEINRICH Andreas[1] ([1]Center for Quantum Nanoscience, Ewha Womans University, [2]Fullerenes, 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 $Cu_2ZnSn(S,Se)_4$ solar cells / LIM Geumha[1], PARK Ha Kyung[1], KIM Wook Hyun[2], KIM Seung-Hyun[3], YANG Kee-Jeong[2], KANG Jin-Kyu[2], KIM Dae-Hwan[2], JO William[*1] ([1]Department of Physics, Ewha Womans University, [2]Division of Energy Technology, DGIST, [3]Research Institute, YKSintering Co.,Ltd.)

A12.02* [13:12 - 13:24]
Exploring Laser-Patterned Hybrid Perovskite Modules through Optical Spectroscopy / KIM Yejin[1], JEONG Yujin[2,3], KO Seoyeon[1], KIM Gee Young[2], YOON Seokhyun[*1] ([1]Department of Physics, Ewha Womans University, [2]Advanced Photovoltaic Research Center, KIST, [3]Department 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] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Spintronics, KIST)

A12.04 [13:36 - 13:48]
Circuit Model Analysis of Negative Refraction in a Photon-Magnon Hybrid System / KIM Junyoung[1], KIM Bojong[1], KIM Bosung[1], KIM Sang-Koog[*1] ([1]Seoul 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 $MoSe_2$ / LEE Seong Won[1], CHOI Woo Hun[1], GONG Su-Hyun[*1] ([1]Department 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 Behnam[1], KIM Jong Su[*1], LEE DongKun[2], KANG Tae In[1], LEE Sang Jun[3] ([1]Yeungnam University, [2]Institute of Photonic & Nano Technology, Yeungnam University, [3]KRISS)

A13.03 [13:24 - 13:36]
콜로이드 분석을 위한 광학계 구성 및 시뮬레이션 / LEE Manhee[*1], JU Gyeongbin[1] ([1]Department 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 Seyedehbahareh[1], KIM Jong Su[*1] ([1]Yeungnam 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 $Ba_2NaNb_5O_{15}$ 물질의 합성 및 특성 분석 / VENKATA Siva Kavarthapu[2], SONTYANA Adonijah Graham[2], MANCHI Punnarao[2], MANDAR VASANT PARANJAPE Mandar[2], KURAKULLA Anand[2], YU Jae Su[*1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department 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 Reddy[2], MOHIT Kumar[2], BHIMANABOINA Ramulu[2], YU Jae Su[*1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department 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 Shankar[2], PARANJAPE Mandar Vasant[2], YU Jae Su[*1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department of 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 Dongwook[1] ([1]Department of Chemistry, POSTECH)

[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 Yugyeong[1], SHIN Donghoon[2], JEONG hyunjeong[1], LEE Sang-Wook*[1] ([1]Department of Physics, Ewha Womans University, [2]Kavli 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] ([1]Center for van der Waals Quantum Solids, IBS, [2]Department of Chemical Engineering, POSTECH, [3]Department of Materials Science and Engineering, POSTECH)

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

Ferroelectric domain wall dynamics in trilayer transition metal dichalcogenides / PARK Daesung[1], JEONG Siwon[1], YOO Hyobin*[1] ([1]Department of Physics, Sogang University)

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

Electrical response of a flexible MoS_2 monolayer-based electronic device under a controllable mechanical deformation / LEE Sang-Wook*[1], JEONG Hyunjeong[1], TRAN Hue Thi[1], JE Yugyeong[1] ([1]Department 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 Suryabalisinh[1], LEE Ryong Gyu[1], KIM Tae Hyung[1], KIM Yong-Hoon*[1] ([1]School of Electrical Engineering, KAIST)

A16.02* [13:12 - 13:24]
Multiscale non-equilibrium first-principles calculation based on electrostatic quantum embedding / YU Seunghyun[1], KIM Tae Hyung[1], KIM Yong-Hoon[*1] ([1]School of Electrical Engineering, KAIST)

A16.03* [13:24 - 13:36]
Realization of Hofstadter butterfly in quantum computer / BARK Chan Bin[1], KIM Youngseok[2], PARK Moon Jip[*1] ([1]Department of Physics, Hanyang University, [2]IBM 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 Fengping[1], LEE Dongkyu[1,2], NICOLAS Leconte[1], AN Jiaqi[1], SRIVANI Javvaji[1] ([1]Department of Physics, University of Seoul, [2]Department of Smart Cities, University of Seoul)

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

Ⓚ [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, Kyungpook 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 llγ final states at 13 TeV / KIM Bobae[*1], HA Seungkyu[2], KIM Jihun[3], KIM Minsuk[4], LEE Sehwook[1], YOO Hwidong[2] ([1]Kyungpook National University, [2]Department of Physics, Yonsei University, [3]Department of Physics, Seoul National University, [4]Department 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 Sanghyun[1], YOO Hwidong[*2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department 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 Sezen[1], LEE Sehwook[1], LEE Junghyun[1], BORAN Fatma[2], TOK Ufuk Guney[2], MARTON Krisztina[3] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Cukurova University, Turkey, [3]Department 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 Jin[1] ([1]Department 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 Hwan[1], YANG Un-ki[1] ([1]Department 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 Hakseong[1], MOON Chang-Seong[*1], DOGRA Sunil Manohar[1] ([1]Department 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 Bongho[1], MOON Chang-Seong[*1], DOGRA Sunil Manohar[1], XIE Si[2] ([1]Department of Physics, Kyungpook National University, [2]Department 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 Youngwan[1] ([1]Department 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 Taehee[1], LEE Joon-Bin[1], OH Minseok[1] ([1]Department 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] ([1]Department 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] ([1]Department of Physics, Ewha Womans University)

B4.03 [14:48 - 15:12]
Mid-infrared plasmonics in nanostructures / KIM Kyoung-Ho[*1] ([1]Department 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 Gyung[*1], ROH Seung Hwan[2], LEE Wonseok[2], HAN Hyok Sang[3], CHO Dong Hyun[2] ([1]Division of Physical Metrology, KRISS, [2]Department of Physics, Korea University, [3]Department 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-Woo[*1] ([1]Center for Quantum Information, KIST, [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Physics, Korea University)

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

Training Parametrized Quantum Circuits for Optimal Measurements / YUN Sung Won[1], BAE Joonwoo[*1] ([1]School of Electrical Engineering, KAIST)

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

Towards exact ultrashort quantum gates / AHN Seongjin[*1], CHUCHALIN Andrei[1], MOSKALENKO Andrey S.[1] ([1]Department of Physics, KAIST)

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

Coherent control of an optical trapped-ion qubit / KIM Keumhyun[*1], LEE Hyegoo[1], JEONG Noa[1], SHIN Yongha[1], KIM Myunghun[1], CHO Junhee[1], LEE Moonjoo[1] ([1]Department 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 ^{19}Ne / KIM Sohyun[1], CHAE Kyung Yuk[*1], SMITH Michael S[2] ([1]Department of Physics, Sungkyunkwan University, [2]Physics 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] ([1]Department of Physics, Soongsil University)

B

B6.03* [14:24 - 14:36]
Equation of state for neutron stars including fermionic dark matter / LEE Gwangjun[1], CHEOUN Myung Ki[*1], MIYATSU Tsuyoshi[1], PARK Jubin[1] ([1]Department of Physics and OMEG Institute, Soongsil University)

B6.04* [14:36 - 14:48]
Study of the $^{14}O(\alpha,p)^{17}F$ Cross Section for Type I X-ray burst light curve / AHN Sunghoon(Tony)[*2], PARK Chaeyeon[1,2], AVILA Melina L[17], BAE Sunghan[2], BARBUI Marina[4], BARDAYAN Daniel W[7], BISHOP Jack[4], CHA Soomi[2], CHAE Kyungyuk[10], CHEN Alan[8], CHILLERY Thomas William[3], COGNATA Marco La[13], DO Seungkyung[9], GU Gyuongmo[10], HAHN Kevin Insik[2], HAYAKAWA Seiya[3], HONG Byungsik[9], IMAI Nobuaki[3], IWASA Naohito[11], KIM Dahee[2], KIM Younghee[2], KIM Minju[10], KIM Sohyun[10], KIM Chanhee[10], KIM Aram[9], KITAMURA Noritaka[3], KOSHCHIY Yevgen[4], KUBONO Shigeru[15], LEE Hyeji[12], MOON Byul[2], NAKAMURA Takashi[12], NGUYEN Duy Ngoc[14], OKAWA Kodai[3], PARKER Cody Cody[4], PSALTIS Athanasios[16], ROGACHEV Grigory V[4,5], ROOSA Michael[4,5], SASANO Masaki[15], SFERRAZZA Michele[6], YAMAGUCHI Hidetoshi[3], ZHANG Qian[3], LEE Jungwoo[2], PEREIRA LóPEZ Xesus[2] ([1]Department of Physics, Ewha Womans University, [2]Center for Exotic Nuclear Studies, IBS, [3]Center for Nuclear Study, University of Tokyo, Japan, [4]Cyclotron Institute, Texas A&M University, USA, [5]Department of Physics & Astronomy, Texas A&M University, USA, [6]Département de Physique, Université Libre de Bruxelles, Belgium, [7]Department of Physics & Astronomy, University of Notre Dame, USA, [8]Department of Physics and Astronomy, McMaster University, Canada, [9]Department of Physics, Korea University, [10]Department of Physics, Sungkyunkwan University, [11]Department of Physics, Tohoku University, Japan, [12]Department of Physics, Tokyo Institute of Technology, Japan, [13]Istituto Nazionale di Fisica Nucleare, Italy, [14]Institute of Postgraduate Program, Van Lang University, Vietnam, [15]Nishina Center, RIKEN, Japan, [16]Triangle Universities Nuclear Laboratory, Duke University, USA, [17]Argonne National Laboratory, USA)

B6.05 [14:48 - 15:00]
The thermal history of the dark ages in the early universe with Kompaneets equation / LEE Minkyu[1], PARK Jubin[1], CHEOUN Myung Ki[*1] ([1]Department of Physics, Soongsil University)

B6.06 [15:00 - 15:12]
Simulation studies for a $^{12}C(\alpha,\gamma)^{16}O$ reaction experiment near stellar energies / KIM Shin Hyung[1], AHN Jung Keun[*1] ([1]Department 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] ([1]Department of Physics, Soongsil University, [2]Origin of Matter and Evolution of Galaxies (OMEG) Institute, Soongsil University)

B6.08 [15:24 - 15:36]
Resonance Strength Measurement of the ^{27}Al(p, γ)^{28}Si Reaction near E_p=2.05 MeV / AHN Jung Keun[*1] ([1]Department 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] ([1]Department 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-il[1], AN Seohyeon[1,2], JEONG Sanghoon[4], KIM Chae-Eon[1,3] ([1]Proton Therapy Center, National Cancer Center, [2]Department of Physics, Hanyang University, [3]Department of Nuclear Engineering, Hanyang University, [4]Department 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-Kwan[1] ([1]Jeju 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 YoungJoon[1], HWANG JongSeok[1], LIU Dong[2], PARK SoHyun[3] ([1]Department of Physics, Jeju National University, [2]Medical Physics Lab., Jeju National University, [3]Hospital, Jeju National University)

B7.04 [14:36 - 14:48]
Effect of Ionizing Radiation on the 28nm MOSFETs / PARK Tae Yong[*1], HAN Younghoon[*1], KWON Youngil[*1] ([1]Department 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 ([1]Department of Radiation Oncology, Samsung Medical Center)

B

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 Hyun[3], KIM Jin Sung[1,2] ([1]Radiation Oncology, Yonsei University Health System, [2]College of Medicine, Yonsei University, [3]School of Medicine, Ewha Womans University)

B7.07 [15:12 - 15:24]
Overview of R&D activities of ALICE-ITS3 upgrade project in Korea / KIM Jiyoung*1,2 ([1]Department of Physics, Korea University, [2]Department 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 Insik[1], AHN Sunghoon[1], BAE Sunghan[1], DO Seungkyung[3], GU Gyoungmo[1,2], KIM Chanhee[2], KIM Minju[1,2], KIM Sohyun[2], KIM Yunghee[1], LEE Jungwoo[1], PEREIRA-LOPEZ Xesus[1], PARK Chaeyeon[1] ([1]Center for Exotic Nuclear Studies, IBS, [2]Department of Physics, Sungkyunkwan University, [3]Department 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 ([1]Kansai 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 ([1]Department of Physics, Gachon University)

B8.03 [15:12 - 15:48]
DNA grabbers and steerers of quantum emitter for superradiance / LEE Seung-woo[*1] ([1]Graduate 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] ([1]College 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] ([1]School 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 Gunhee[3], CHO Won-Ki[*3,4], JEONG Cherlhyun[*1,5] ([1]Chemical and Biological Integrative Research Center, KIST, [2]KHU-KIST Department of Converging Science and Technology, Kyung Hee University, [3]Department of Biological Sciences, KAIST, [4]KI for Health Science and Technology, KAIST, [5]Division of Bio-Medical Science and Technology, KIST School, UST)

B9.04 [15:12 - 15:36]
Revisiting DNA with Single Molecule Methods / KIM Hajin[*1] ([1]Department of Biomedical 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 quasiperiodic route to chaos / PARK Gyuyoung[1], KIM Sang-Koog[*1] ([1]Seoul National University)

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

Noncollinear magnetic order, in-plane anisotropy, and magnetoelectric coupling in a pyroelectric honeycomb antiferromagnet $Ni_2Mo_3O_8$ / YADAV Poonam[1], CHOI Sungkyun[*1] ([1]IBS-CINAP, Sungkyunkwan University)

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

Single-crystal synthesis of 3-dimesional quantum spin liquid candidate $Yb_3Sc_2Ga_3O_{12}$ / LEE Jungmin[1], JI Sungdae[1], LEE Sengsu[1], KIM Jaewook[*1] ([1]Advanced 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 Haq[1], HONG Ji Sang[*1] ([1]Department of Physics, Pukyong National University)

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

Possible unconventional superconductivity in altermagnetism / HONG Seung-Beom[1], PARK Moon Jip[*1] ([1]Department 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 Ki[*1], SHON Wonhyuk[3], YOON Seungha[2], HAN Song hee[5], RHYEE Jongsoo[*4] ([1]School of Materials Science and Engineering, GIST, [2]Green Energy and Nano Technology R&D Group, KITECH, [3]Advanced Quantum Materials Research Center, KAERI, [4]Institute of Natural Sciences, Kyung Hee University, [5]3Division 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 $Co_4Ta_2O_9$ / CHOI Sungkyun[*1] ([1]IBS-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 Chungeung[1,2], JIN Kyung-Hwan[2], PARK Jae Whan[2], YEOM Han Woong[1,2], GO Ara[3], KIM Yong Baek[4], CHO Gil Young[*1,2] ([1]Department of Physics, POSTECH, [2]Center for Artificial Low Dimensional Electronic Systems, IBS, [3]Department of Physics, Chonnam National University, [4]Department of Physics, University of Toronto, Canada)

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

Emergent Excitations with Non-trivial Configurations of Visons in the Kitaev Quantum Spin Liquid / PARK Seongjun[1], MOON Eun-Gook[*1] ([1]Department of Physics, KAIST)

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

Dynamics of exceptional points in non-Hermitian toric code / YEOM Cheolhun[1], PARK Moon Jip[*2] ([1]Department of Physics, Hanyang University, [2]Department 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 $A_3Co_2SbO_6$ (A=Cu, Na) / SOHN Changhee[*1], PARK Miju[1], KIM Gyehyeon[1] ([1]Department of Physics, UNIST)

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

The Effects of the Strain on Kitaev Quantum Spin Liquids / NOH Pureum[1], MOON Eun-Gook[*1] ([1]Department 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 Ho[1], PARK Moo Jip[2] ([1]Center for Theoretical Physics of Complex Systems, IBS, [2]Department 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-Tak[2], HAN Jung Hoon[1] ([1]Department of Physics, Sungkyunkwan University, [2]Division 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-Min[1], KIM Isaac H[2], MOON Eun-Gook[*1] ([1]Department of Physics, KAIST, [2]Computer Science, University of California, Davis, USA)

B

[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 $Fe_{3-x}GeTe_2/In_2Se_3$ van der Waals heterostructures / EOM Jaeun[1,2], LEE Inhak[1], KEE Jung Yun[1,3], CHO Minhyun[4], SEO Jeongdae[5], SUH Hoyoung[6], CHOI Hyung-Jin[7], SIM Yumin[8], CHEN Shuzhang[9,10], CHANG Hye Jung[6], BAEK Seung-Hyub[7], PETROVIC Cedomir[9,10], RYU Hyejin[1], JANG Chaun[1], KIM Young Duck[4], YANG Chan-Ho[5], SEONG Maeng-Je[8], LEE Jin Hong[1], PARK Se Young[*3,11], CHOI Jun Woo[*1] ([1]Center for Spintronics, KIST, [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Physics, Soongsil University, [4]Department of Physics and Department of Information Display, Kyung Hee University, [5]Department of Physics, KAIST, [6]Advanced Analysis Center, KIST, [7]Electronic Materials Research Center, KIST, [8]Department of Physics, Chung-Ang University, [9]Condensed Matter Physics and Materials Science Department, Brookhaven National Lab, USA, [10]Department of Physics and Astronomy, Stony Brook University, USA, [11]Origin 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 Hayun[1] ([1]School 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] ([1]SKKU 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 Dongik[1], OH Ju Hyun[1], PARK Jihun[2], KIM Su Jae[3], TAKEUCHI Ichiro[2], JEONG Se Young[4], LEE Seunghun[*1] ([1]Department of Physics, Pukyong National University, [2]Department of Materials Science and Engineering, University of Maryland, USA, [3]Crystal Bank Research Institute, Pusan National University, [4]Department 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 ([1]Department of Physics, Pusan National University)

B13.02 [14:24 - 14:48]
Two-dimensional pure electron liquid and hetero-surface / KIM Sunghun*1 ([1]Department of Physics, Ajou University)

B13.03 [14:48 - 15:12]
Bose-Einstein Condensation of Composite Fermions in Twisted Bilayer Graphene / KIM Youngwook*1 ([1]Department of Physics and Chemistry, DGIST)

B13.04 [15:12 - 15:36]
Single electron manipulations / KIM Min-Sik[1,2], KIM Bum-Kyu[1], GHEE Young-Seok[1], BAE Myung-Ho*1 ([1]KRISS, [2]Department 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 (Dongguk University)

B14.01 [14:00 - 14:24]
Quantum acoustics: a surface-acoustic wave assisted single-photon emission / SON Seok-Kyun*1 ([1]Department 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 ([1]Division 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 ([1]Department of Advanced Material Engineering, Chungbuk National University)

B14.04 [15:12 - 15:36]
Copper Sulfide Electrodes for Electronic and Optoelectronic Applications / PAK Sangyeon[*1] ([1]School of Electronic and Electrical Engineering, Hongik University)

B

[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 Hyeonhui[1], JEONG Hyunjeong[1], JE Yugyeong[1], LEE Sang-Wook[*1] ([1]Department of Physics, Ewha Womans University)

B15.02* [14:12 - 14:24]
Full spectrum photothermal catalytic effect in narrow bandgap $SnFe_2O_4$ quantum dots / LIU Chun Li[*1], LIU Lei[2] ([1]Department of Physics, Hankuk University of Foreign Studies, [2]Department of Physics, Hankuk University of Foreign Studies)

B15.03* [14:24 - 14:36]
In-situ Parameter-Driven Exploration of Stacked 2D Material Characteristics / JEONG Hyunjeong[1], JE Yugyeong[1], LEE Sang-Wook[*1] ([1]Department of Physics, Ewha Womans University)

B15.04* [14:36 - 14:48]
Laser Induced Phase Transition of Encapsulated γ-GeSe / KIM Kwanpyo[*1,2], KIM Joonho[1], LEE Kihyun[1,2], JUNG Joong-Eon[1], LEE Sol[1,2], LEE Han Joo[1], IM Seong Il[1] ([1]Department of Physics, Yonsei University, [2]Center 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] ([1]Department of Physics, Ajou University, [2]Department 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-Eon[1], LEE Sol[1], YOON Hoon Hahn[2], KANG Hani[1], JANG MyeongJin[1], PARK Jinsub[1], KIM Kwanpyo[*1] ([1]Department of Physics, Yonsei University, [2]Department of Electronics and Nanoengineering, Aalto University, Finland)

B15.07* [15:12 - 15:24]
Investigation of vibrational and thermal properties of γ-GeSe / PARK Jinsub[1], JE Yugyeong[2], KIM Joonho[1], JUNG Joong-Eon[1], PARK Je Myoung[3], CHEONG Hyeonsik[3], LEE SangWook[2], KIM Kwanpyo[*1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Ewha Womans University, [3]Department of Physics, Sogang University)

B15.08 [15:24 - 15:36]
Chemical reaction mechanism in metal-free defective carbon-based materials / CHOI Keunsu[*1], KIM Seungchul[2] ([1]Department of Physics, UNIST, [2]Computational 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] ([1]Department of Physics, Chungnam National University)

B16.02 [14:24 - 14:48]
Condensation of preformed charge density waves in kagome metals / PARK Changwon[1], SON Young-Woo[*1] ([1]School 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] ([1]Department of Physics, UC Berkeley, USA, [2]Department 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 Seungyeol[2], CHOI Youngsu[3], CHO Soohyun[4], LEI Hechang[5], YOUSUF Saqlain[3], SONG Jaegu[3], LEE Hanoh[3], PARK Tuson[3], CHOI Kwang Yong[3] ([1]IBS Center for Correlated Electron Systems, Seoul National University, [2]Department of Physics, Chung-Ang University, [3]Department of Physics, Sungkyunkwan University, [4]Center for Excellence in Superconducting Electronics, Shanghai Institute of Microsystem and Information Technology, China, [5]Department of Physics, Renmin University, China)

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

Ⓔ [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 ([1]CTPU-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 ([1]Department of Physics, Sungkyunkwan University)

C2.02* [16:12 - 16:24]
COSINE-100 upgrade at Yemilab / LEE Doohyeok*1 ([1]Department 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 Kyungwon[2], LEE Hyun Su*1,2 ([1]Basic Science, UST, [2]Center for Underground Physics, IBS)

C2.04* [16:36 - 16:48]
Neutrino Elastic-scattering Observation with NaI(Tl)(NEON) / CHOI Jaejin[1,2], LEE Hyun Su*2 ([1]Department of Physics & Astronomy, Seoul National University, [2]Center for Underground Physics, IBS)

C2.05 [16:48 - 17:00]
XMASS 전 데이터를 사용한 암흑 물질 직접 탐색 / YANG Byeongsu*1 ([1]Department 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 Collaboration[1] ([1]Center for Underground Physics, IBS, [2]Department of Physics and Astronomy, Seoul National University)

C2.07 [17:12 - 17:24]
A search for ^{7}Li solar axions with Li_2MoO_4 detectors in the AMoRE-I / SEO Jee-won*1, SO Jung Ho*1 ([1]CUP, IBS)

C2.08 [17:24 - 17:36]
Multi-crystal-hit study of 2υββ decay of ^{100}Mo to the excited states of ^{100}Ru at AMoRE / KIM Hong Joo*1, HA Daehoon[1], ON Behalf of AMoRE Collaboration[2] ([1]Department of Physics, Kyungpook National University, [2]CUP, IBS)

C2.09 [17:36 - 17:48]
Status of AMoRE-II preparation at Yemilab / KIM Go Woon*1 ([1]CUP, 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 Guk[1], HA Seungkyu[1], KIM Minsuk[2] ([1]Department of Physics, Yonsei University, [2]Department 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 Jayashri[1] ([1]Department of Physics, Korea University)

C3.03* [16:24 - 16:36]
Reinterpreting Studies with ADL/CutLang / LEE Junghyun*[1], HUH Changgi[1], SEKMEN Sezen[1] ([1]Department of Physics, Kyungpook National University)

C3.04 [16:36 - 16:48]
Transformer-based Deep Regression Model for Estimating Missing Transverse Momentum / GOH Junghwan[1], KIM Jiwoong[2], MOON Chang-Seong[2], TAE Bongho[2], YANG Seungjin*[1] ([1]Department of Physics, Kyung Hee University, [2]Department of Physics, Kyungpook National University)

C3.05* [16:48 - 17:00]
Test of the Endcap Timing Readout Chip 2 for CMS MIP Timing Detector Project / KIM Taiwoo[1], MOON Chang-Seong*[1] ([1]Department 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 DongYub[1], LEE Hakseong[1] ([1]Department 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 Taejeong[1,2] ([1]Center for Extreme Nuclear Matters, Korea University, [2]Department 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 Sun[1], WATSON Ian James*[1], LEE Jason Sang Hun[1] ([1]University 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 Sehwook[2] ([1]Center for High Energy Physics, Kyungpook National University, [2]Department 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] ([1]Department of Physics, Chungnam National University)

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

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

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

High-conductivity nanometer-thick transition metals and their applications / KIM Sun Kyung*[1] ([1]Department 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 Junhee[1], GWON Sehyeon[1], KIM Keumhyun[1], LEE Hyegoo[1], LEE Moonjoo[1] ([1]Department of Electrical Engineering, POSTECH)

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

Pushing single atoms into an optical resonator / LEE Dowon*[1], HA Taegyu[1], KIM Donggeon[1], KIM Keumhyun[1], PARK Byung-Tak[1], LEE Ki-Se[1], LEE Moonjoo[1] ([1]Department 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 Heewoo[1], JEONG Hansol[1], MOON Han Seb*[1] ([1]Pusan National University)

C5.04 [16:36 - 17:12]
Generation, Dynamics, and Interaction of Dipolar Excitations in a Bose-Hubbard System / KIM Sooshin*[1], KANG Byungmin[2], SEGURA Perrin[1], LI Yanfei[1], KWAN Joyce[1], LAKE Ethan[2], BAKKALI-HASSANI Brice[1], GREINER Markus[1] ([1]Department of Physics, Harvard University, USA, [2]Department 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 Junghoon[1], KIM Jongmin[1], JUNG Jong Heum[1] ([1]Department of Physics and Astronomy, Seoul National University)

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[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 Wonho[1], SUNG Choongki[1], YOON Eisung[2], CHO Jung-Wook[3], CHAI Kil-Byoung[4], JO HangJin[3] ([1]KAIST, [2]UNIST, [3]POSTECH, [4]KAERI)

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] ([1]KAERI, [2]UNIST, [3]Hanyang University, [4]Seoul 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-won[1], CHANG Dae-sik[1], LEE Kihyun[1], LEE Sangbeen[1], CHUN Young-bum[1], NOH Sanghoon[2], LEE Jung-gu[3], JEON Eun-chae[3], NAM Ho-seok[4], KIM Sangtae[5] ([1]Nulcear Physics Application Research Division, KAERI, [2]Department of Materials Science and Engineering, Pukyong National University, [3]Department of Material Engineering, University of Ulsan, [4]Department of Engineering, Kookmin University, [5]Department 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 Jaemin[2] ([1]School of Software, Hallym University, [2]Department 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-Ho[1], KIM Dong Min[2], NOH Seung Jeong[3], KIM Gibum[1], ROH Ki-Baek[1], LEE Myeong-Geon[1], SEO Hyun Woo[2] ([1]Department of Nuclear Engineering, Seoul National University, [2]Department of Materials Science and Engineering, Hongik University, [3]NIFTEP, 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] ([1]Department of Materials Science and Engineering, Gachon University, [2]Blanket 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 Cheolmin[1], LEE Sangjin[1], LEE Young-Ouk[1,3], LEE CheongSoo[1], PYEUN Seong Jae[1], LEE Kwangbok[1], AKERS Charles[1], KIM Mijung[1], KIM Jae Cheon[1], KWAG Minsik[1], KWAK Donghyun[1,4], KIM Dong Geon[1,5], SHIN Taeksu[1], SHIM Hyung-Jin[2] ([1]IBS, [2]Department of Nuclear Engineering, Seoul National University, [3]Nuclear Physics Application Research Division, KAERI, [4]Department of Physics, UNIST, [5]Department 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] ([1]Department 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 Soon[1], AHN Sunghoon[1], CHA Soomi[1], CHAE Kyung Yuk[2], GU

Gyoungmo[1,2], HAHN Kevin Insik[1], KIM Dahee[1], KIM Minju[1,2], LEE Hyeyoung[1], MOON Byul[1], PARK Chaeyeon[1,3], PEREIRA-LOPEZ Xesus[1] ([1]Center for Exotic Nuclear Studies, IBS, [2]Department of Physics, Sungkyunkwan University, [3]Department of Physics, Ewha Womans University)

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

Deep learning to classify and restore particle signals from experiments / KIM Chanhee[*1], CHAE Kyung Yuk[1] ([1]Department 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 Haein[1], AHN Jung Keun[*1], YANG Seongbae[1] ([1]Department of Physics, Korea University)

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

^{40}Ar Beam Commissioning of KoBRA for Rare Isotope Production at RAON / KIM Dong Geon[*1,2], TSHOO Kyoungho[1], AHN Deuk Soon[3], AHN Sunghoon[3], AKERS Charles[1], BAE Sunghan[3], CHA Soomi[3], CHO Youngju[3,4], GU Gyoungmo[3,5], HAHN Kevin Insik[3], HAM Cheolmin[1], HONG Seung-Woo[1], HWANG Jongwon[3], JANG Youngseub[3,6], JO Seong Gi[1], KWAK Donghyun[1,7], KIM Chanhee[5], KIM Jae Cheon[1], KIM Jaesung[1,8], KIM Mijung[1], KIM Minju[5], KIM Sohyun[5], KIM Sunji[3], KIM Yong Kyun[2], KIM Yunghee[3], KORKULU Zeren[3], KWAG Minsik[1], LEE Cheong Soo[1], LEE Jaehwan[3,6], LEE Kwang-Bok[1], LEE Sangjin[1], LEE Young-Ouk[9], LIM Chaeyoung[10], MOON Byul[3], PARK Joochun[3], PEREIA-LOPEZ Xesus[3], PYEUN Seong Jae[1], SHIN Taeksu[1], SON Yong Hyun[3,4], STUHL Laszlo[3] ([1]Institute for Rare Isotope Science, IBS, [2]Nuclear Engineering, Hanyang University, [3]Center for Exotic Nuclear Studies, IBS, [4]Department of Physics and Astronomy, Seoul National University, [5]Department of Physics, Sungkyunkwan University, [6]Department of Physics, Korea University, [7]Department of Physics, UNIST, [8]Department of Nuclear Engineering, Seoul National University, [9]Nuclear Physics Application Research Division, KAERI, [10]Department of Accelerator Science, Korea University)

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

Development of Low-pressure Gas TPC for Stellar Nucleosynthesis Reactions / LEE Haein[1], AHN Jung Keun[*1] ([1]Department 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 Ho[*1], HEO Cheong[1], BAE Yunseul[1], SEO Junhu[1], KIM Hyunchul[1], HWANG Jaein[2], HONG Byungsik[2], KIM Youngjin[3], LEE Hyosang[3], LEE Cheongsoo[3] ([1]Department of Physics, Chonnam National University, [2]Department of Physics, Korea University, [3]Rare Isotope Science Project, IBS)

C7.09* [17:36 - 17:48]
Development of a $LaBr_3$ detector array for high-energy gamma-ray measurement / AHN Jung Keun[*1], LEE Sungjune[1], YU Byung Yong[2], LIM Weon Cheol[2] ([1]Department of Physics, Korea University, [2]Advanced Analysis Center, KIST)

Ⓔ [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 R[1], IGUCHI Arisa[*2,3], KUMA Susumu[*3], IWAYAMA Hiroshi[*4] ([1]Synchrotron Radiation Research Centre, QST, Japan, [2]Department of Physics, Tokyo Metropolitan University, Japan, [3]Azuma AMO Laboratory, RIKEN, Japan, [4]UVSOR, Institute of Molecular Science, Japan)

C8.02 [16:36 - 17:12]
Coherent driving of superfluorescence by a continuous-wave laser / KITANO Kenta[*1], MAEDA Haruka[1] ([1]Department of Physical Sciences, Aoyama Gakuin University, Japan)

C8.03 [17:12 - 17:48]
Super-radiance and fundamental physics / HARA Hideaki[*1], MIYAMOTO Yuki[1], HAN Junseok[1,2], IMAI Yasutaka[1], SASAO Noboru[1], YOSHIMI Akihiro[1], YOSHIMURA Koji[1], YOSHIMURA Motohiko[1] ([1]Research Institute for Interdisciplinary Science, Okayama University, Japan, [2]Department 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-Been[1], SHIN Hee-Sup[2], JEONG Yong[3], KIM Jisoo[4], CHOI Jee Hyun[*1,5] ([1]KIST, [2]Center for Cognition and Sociality, IBS, [3]Department of Bio and Brain Engineering, KAIST, [4]Department of Neuroscience, University of Cambridge, UK, [5]Department 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] ([1]Center for Neuroscience Imaging Research, Sungkyunkwan University, [2]Center 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 Thomas[1], NA Wonkyung Teresa[2], KIM Jung Young[1], CHO Il Sung*[1] ([1]RI Translational Research Team, KIRAMS, [2]International 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 Kiri[1], HYEON Changbong[1], JANG Seogjoo J.[2] ([1]School of Computational Sciences, KIAS, [2]Department 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 Chan[1], JEON Jae-Hyung*[1,2] ([1]Department of Physics, POSTECH, [2]APCTP)

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 Seongyu[1], LEE ChangJoo[1], JEON Jae-Hyung*[1,2] ([1]Department of Physics, POSTECH, [2]APCTP)

[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 $Pb_9Cu(PO_4)_6O$ / CHOI Hyoung Joon*[1] ([1]Department 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 sub[1] ([1]Department of Physics, Yonsei University)

C10.03 [16:24 - 16:36]
Three-dimensional flat bands in pyrochlore metal $CaNi_2$ / OH Dongjin*[1], KANG Mingu[1], WAKEFIELD Joshua[1], NEVES Paul[1], FANG Shiang[1], JOZWIAK Chris[2], BOSTWICK Aaron[2], ROTENBERG Eli[2], CHECKELSKY Joseph[1], COMIN Riccardo[1] ([1]Department of Physics, MIT, USA, [2]Advanced Light Source, Lawrence Berkeley National Lab, USA)

C10.04* [16:36 - 16:48]
Higher-Order Topological Superconductivity for 1T'-$MoTe_2$ / KANG Myungjun[1,6], LEE Sangyun[2,3], KIM Duk Y,[4], KIM Jihyun[2], CHO Suyeon[5], CHEON Sang Mo*[1,6], PARK Tuson[2] ([1]Department of Physics, Hanyang University, [2]Center for Quantum Materials and Superconductivity, Sungkyunkwan University, [3]Los Alamos National Laboratory, USA, [4]Agency for Defense Development, [5]Division of Chemical Engineering and Material Science, Ewha Womans University, [6]Research Institute for Natural Science and High Pressure, Hanyang University)

C10.05 [16:48 - 17:00]
Reversible hydrogenic control of the superconducting state in $La_{2-x}Ce_xCuO_4$ thin films / LEE Jaehyun[1], YANG Chan-Ho*[1] ([1]Department 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 Minwoo[2] ([1]Department of Physics, University of Seoul, [2]Natural 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] ([1]Department of Physics, University of Seoul, [2]Natural Science Research Institute, University of Seoul, [3]School of Physics, KIAS, [4]Department 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] ([1]University of Seoul, Natural Science Research Institute, University of Seoul, Natural Science Research Institute, [2]Department 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 Yong[1] ([1]Department 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)

C

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

Engineering the Phonon Transport through Phase Discontinuity in Oxide Superlattices / CHOI In Hyeok[1], JEONG Seung Gyo[2], CHOI Woo Seok[2], LEE Jong Seok[*1] ([1]Department of Physics and Photon Science, GIST, [2]Department of Physics, Sungkyunkwan University)

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

Epitaxial Growth and Electron Doping of WO_3 Thin Films by Hydrogen Annealing / KANG Min Ho[1], YANG Chan-Ho[*1] ([1]Department of Physics, KAIST)

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

Observation of hidden domain and polar structures in Bi_2WO_6 thin films and their electric properties / KWON Yong-Jun[1,3], YEO Youngki[1,3], KIM Min-Su[2], 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] ([1]Department of Physics, KAIST, [2]Center for Lattice Defectronics, KAIST, [3]Materials Science and Engineering, POSTECH, [4]Semiconductor Engineering, POSTECH, [5]Center of Van der Waals Quantum Solids, IBS)

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

Real-time measurement of structural and electrical properties of $PrBaCo_2O_{5+x}$ as a function of oxygen contents / MUN Yeongdeuk[1], HEO Yunseok[1], LEE Joon Hyuk[1], JEEN Hyoung Jeen[*1,2] ([1]Department of Physics, Pusan National University, [2]Research 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 Boram[1], LIM Ji Soo[1,2], CHO Sungjae[1], YANG Chan-Ho[*1,2,3] ([1]Department of Physics, KAIST, [2]Center for Lattice Defectronics, KAIST, [3]KAIST 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 Jun[1], LEE Jae Yeob[1], KU Minkyung[1], KIM Tae Hoon[1], NOH Taehee[1], LEE Seung Won[2], AHN Ji-Hoon[2], KANG Bo Soo[*1] ([1]Department of Applied Physics, Hanyang University, [2]Department of Materials Science and Chemical Engineering, Hanyang University)

C11.07 [17:12 - 17:24]
Temperature dependence of S=1 EMR centers in a neutron irradiated diamond / CHOH Sung Ho[*1], KIM Yong Moo[2], PARK Il-Woo[3] ([1]Department of Physics, Korea University, [2]The State University of New York, USA, [3]Department 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] ([1]School of Materials Science and Engineering, GIST)

C12.02 [16:24 - 16:48]
Material design of indium iodine compounds / KANG Chang-Jong[*1] ([1]Department of Physics, Chungnam National University)

C12.03 [16:48 - 17:12]
Machine learning for dynamical mean-field theory / GO Ara[*1] ([1]Department 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] ([1]Department 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] ([1]Department 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 ([1]CINAP, Sungkyunkwan University)

C13.03 [16:48 - 17:12]
Terahertz field-driven hydrodynamic electron fluids in topological states / PARK Byung Cheol*1 ([1]Center for Integrated Nanostructure Physics, Sungkyunkwan University)

C

C13.04 [17:12 - 17:36]
Nonlinear photocarrier transport by THz field enhancement / LEE Sang-Hun*1 ([1]Department 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 ([1]Department of Electronic Engineering, Kyung Hee University)

Ⓔ [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 ([1]Department of Physics, POSTECH)

C14.02 [16:24 - 16:48]
Quantum Interference in Optical Möbius-Strip Microcavities: Experiment vs Theory / FOMIN Vladimir M.*1 ([1]Institute for Integrated Nanoscience (IIN), Leibniz Insititute for Solid State and Materials research Dresen (IFW), Germany)

C14.03 [16:48 - 17:12]
Ballistic diffusion of hot carriers in van der Waals layered materials / KIM Ji-Hee*1 ([1]Department of Physics, Pusan National University)

C14.04 [17:12 - 17:36]
Cavity effects in perovskite nanostructures / TAYLOR Robert Andrew*1 ([1]Department 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] ([1]Department 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] ([1]University of Ulsan)

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

Interface Tailoring of Perovskite via Mesoporous Structured MoS_2 for Efficient and Photostable Perovskite Solar Cells / PARK Hyesung[*1] ([1]KU-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] ([1]Department 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] ([1]Department of Physics, KAIST)

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

Emergence of flat bands via orbital-selective electron correlations in Mn-based kagome metal / SAMANTA Subhasis[1], HWANG Jungseek[*2], CHOI Kwang Yong[*2], KIM Heung-Sik[*1] ([1]Department of Physics, Kangwon National University, [2]Department of Physics, Sungkyunkwan University)

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

Engineering flat bands in 1T-TaS_2 via atomic adsorption / JIN Kyung-hwan[*1] ([1]Center for Artificial Low Dimensional Electronic Systems, IBS)

C

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 Kyuyeong[1], LEE Kyeongpil[2] ([1]Department of Physics, Yonsei University, [2]Department 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] ([1]Sejong 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 Hun[1], ROH Youn Jung[1], PARK Inkyu[1], JANG Woojin[1] ([1]University 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 Suyong[2], YOON Inseok[1], OH Byeong Hun[1], SHIN Jihoon[1], KIM Yeonjoon[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department 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 Yechan[1], LEE Jason Sang Hun[1], ROH Youn Jung[1], WATSON Ian James[1], KIM Hyunsoo[2] ([1]University of Seoul, [2]Department 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 Jieun[1], CHOI Su Yong[1], KIM Tae Jeong[1], LIM Jongwon[1], PARK Jiwon[1], RYOU Yeonsu[1], SONG Juhee[1], YOON Soohyun[1] ([1]Department 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 Hun[1], ROH Youn Jung[1], YANG Seungjin[1], KO Byeong Hak[1], HEO Jeewon[1] ([1]University of Seoul)

D2.08* [09:54 - 10:06]
Search for the Rare Top Process t→sW in Dileptonic Top Pair Events Using Deep Learning / HEO Jeewon[1], JANG Woojin[1], LEE Jason Sang Hun[1], PARK Inkyu[1], ROH Youn Jung[1], WATSON Ian James[*1], YANG Seungjin[2] ([1]University of Seoul, [2]Department 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] ([1]Department 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] ([1]Department of Physics, Pusan National University)

D3.03 [08:54 - 09:06]
Regurgitated Dark Matter / LU Philip[*1,2], TAKHISTOV Volodymyr[2], KIM Taehun[1], MARFATIA Danny[3] ([1]Department of Physics, Seoul National University, [2]QUP, High Energy Accelerator Research Organization, KEK, Japan, [3]Physics, University of Hawaii, USA)

D3.04* [09:06 - 09:18]
Structure formation of a multi-component dark matter / LIM SeHwan[*1], KIM JeongHan[1], KONG KyoungChul[3], PARK JongChul[2] ([1]Department of Physics, Chungbuk National University, [2]Department of Physics, Chungnam National University, [3]Department 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 Liliana[1], KAR Arpan[1], BISWAS Anirban[2], KIM Hyomin[1] ([1]Department of Physics, Sogang University, [2]Department of Physics, Yonsei University)

D3.06 [09:30 - 09:42]
Characterizing the hypercharge anapole dark matter particle / CHOI Seong Youl*[1], JEONG Ingu[1], JEONG Jaehoon[2], KANG Dong Woo[3], SHIN Seodong[1] ([1]Department of Physics, Jeonbuk National University, [2]Quantum Universe Center (QUC), KIAS, [3]Department 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 Jongkuk[2] ([1]Department of Physics, Sungkyunkwan University, [2]School 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 Kimiko[2], KIM Seongsik[1] ([1]Department of Physics, Chung-Ang University, [2]Department of Physics, Ibaraki University, Japan)

D3.09* [10:06 - 10:18]
Dirac-Majorana neutrino type oscillation induced by a wave dark matter / CHOEJO YeolLin[1], LEE Hye-Sung*[1], KIM Yechan[1] ([1]Department 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] ([1]XFEL 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] ([1]XFEL 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 Junyoung[1] ([1]Department of Physics, POSTECH, [2]Center for Artificial Low Dimensional Electronic Systems, IBS, [3]Department of Physics, CALTECH, USA)

D4.04 [09:42 - 10:06]
Ultrafast and nanoscale imaging with XFELs / SONG Changyong*[1] ([1]Department of Physics, POSTECH)

D4.05 [10:06 - 10:30]
HX-2 FEL line construction plan / NAM Inhyuk*[1] ([1]PAL-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 Ajith[2], BARTLETT Rodney J.[2] ([1]Division of Convergence Technology, KFE, [2]Quantum 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 Harry[1], RICKERT Elisabeth[1,2,3], ROMERO Elisa Romero[1,2,3], LAATIAOUI Mustapha[1,2] ([1]Department of Chemistry, Johannes Gutenberg University of Mainz, Germany, [2]SHE, Helmholtz-Institut Mainz, Germany, [3]Schwerionenforschung, GSI Helmholtzzentrum, Germany, [4]Department 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 Jong[1], JO Seong Gi[1], SHIN Taeksu[1], LASSEN Jens[3], KIM Eun-San[2], TSHOO Kyoungho*[1] ([1]IBS, [2]Department of Accelerator Science, Korea University, [3]Laser 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 Jong[1], JO Seong Gi[1], LIM Chaeyoung[1,2], SHIN Taeksu[1], LASSEN Jens[3], TSHOO Kyoungho[*1] ([1]IBS, [2]Department of Accelerator Science, Korea University, [3]Laser 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 Junki[*1,2,3], LEE Eunhwi[1,2], YUM Dahyun[4], WI Jiwon[3] ([1]SAINT, Sungkyunkwan University, [2]Department of Nano Science and Technology, Sungkyunkwan University, [3]Department of Nano Engineering, Sungkyunkwan University, [4]Department of Physics, Ewha Womans University)

D5.06* [09:54 - 10:06]
Spectroscopy of a slow MgF buffer-gas beam / KWON Kikyeong[1], CHO Young Ju[1], ROH Seunghwan[1], LIM Dongkyu[1], LEE Giseok[1], LEE Yongwoong[1], JANG Hyunjun[1], CHAE Eunmi[*1] ([1]Department 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 Seunghyun[2] ([1]KENTECH, [2]KOMAC, KAERI)

D6.02 [08:54 - 09:18]
Surface Wave Plasma 기반 저손상 고효율 반도체 제조 공정 적용에 관한 연구 / 차주홍[*1] ([1]경상국립대학교 반도체공학과)

D6.03 [09:18 - 09:42]
Leveraging physics-informed neural computing for plasma transport / SEO Jaemin[*1] ([1]Department 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-Young[*2], LEE Hae June[1,3] ([1]Semiconductor Process and Equipment Contract Department, Pusan National University, [2]Utah State University, USA, [3]Department of Electrical Engineering, Pusan National University)

D

[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 Jeongsu[*1] ([1]Pusan National University)

D7.02 [08:42 - 08:54]
Multiplicity dependence of Ξ_c+ baryon production in pp collisions at $\sqrt{s}$ = 13 TeV with ALICE / CHO JaeYoon[*1] ([1]Department of Physics, Inha University)

D7.03* [08:54 - 09:06]
Observation of Υ(3S) in PbPb collisions at 5.02 TeV in CMS and sequential suppression of bottomonia / LEE Junseok[*1], HONG Byungsik[*1], LEE Soohwan[1] ([1]Department of Physics, Korea University)

D7.04* [09:06 - 09:18]
Diquarks and the production of charmed baryons / LEE Su Houng[*1], YUN Hyeongock[1], NOH Sungsik[1], LIM Sanghoon[2], SONG Taesoo[3], HONG Juhee[1], PARK Aaron[1], DöNIGUS Benjamin[4] ([1]Yonsei University, [2]Department of Physics, Pusan National University, [3]Theory Division, GSI Helmholtzzentrum, Germany, [4]Institut für Kernphysik, Johan Wolfgang Goethe-Universität, Germany)

D7.05* [09:18 - 09:30]
Heavy flavor jet tagging in ALICE using Run3 framework / KIM Beom Kyu[*1], LEE Hyungjun[1] ([1]Department 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 Nugraha[*1], LEE Soohwan[1], HONG Byungsik[*1] ([1]Department 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] ([1]RIKEN BNL Research Center, RIKEN, Japan)

D7.08* [09:54 - 10:06]
Femtoscopy with Bose-Einstein correlation at CMS / MOON Dong Ho[*1], SEO Junhu[1], DOGRA Sunil Manohar[2], MOON Changseong[2] ([1]Department of Physics, Chonnam National University, [2]Department 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 Joonsuk[1], KIM Beom Kyu[*1] ([1]Department 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] ([1]Department of Electrical Engineering, POSTECH)

D8.02 [09:06 - 09:42]
Interlayer coupling of Rydberg atom arrays / AHN Jaewook[*1], KIM Minhyuk[2] ([1]Department of Physics, KAIST, [2]Department 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-Fen[2], LEE Fang-Yu[1,2], HUANG I-Chia[1,2], LIN Yu-Ju[2], CHAN Yang-Hai[2], JEN Hsiang-Hua[2], CHEN Ying-Cheng[*1,2] ([1]Department of Physics, National Taiwan University, Taiwan, [2]Institute 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)

D

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

Fluorescence-based structural profiling for single-molecule protein sequencing / JOSHI Bhagyashree S[1], DE LANNOY Carlos[1], KIM Sung Hyun[*1,2], JOO Chirlmin[1,2] ([1]Department of Bionanoscience, Delft University of Technology, Netherlands, [2]Department 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 Yubin[2], TAKATA Kei-ichi[2,3], KIM Chanwoo[1] ([1]UNIST, [2]Center for Genomic Integrity, IBS, [3]Department of Biological Sciences, UNIST)

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

Estimating the folding 'speed limit' of helical membrane proteins / KIM Seoyoon[1], LEE Daehyo[1], WIJESINGHE Wijesinghelage Chandima Bhashini[1], MIN Duyoung[*1] ([1]School of Natural Science, UNIST)

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

Mitochondrial Transcription Dynamics Revealed by Single Molecule FRET Measurement / KIM Hajin[*1], LEE SeungWon[1], SOHN Byeong-Kwon[1], BASU Urmimala[2], SHEN Jiayu[2], PATEL Smita[2] ([1]UNIST, [2]Department 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-Seok[3], KIM Sungchul[3], HOHNG Sungchul[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Institute of Applied Physics, Seoul National University, [3]Center 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-Buem[3], PARK Jin-Sung[3], HONG Seok-Cheol[*1,3], CHO Minhaeng[2,3] ([1]Department of Physics, Korea University, [2]Department of Chemistry, Korea University, [3]Center for Molecular Spectroscopy and Dynamics, IBS)

D9.07* [09:42 - 09:54]
A hidden route of protein aging / KIM Seoyoon[1], KIM Eojin[1], PARK Mingyu[1], KIM Seong ho[1], SADONGO Victor Wedia[1], WIJESINGHE Wijesinghelage Chandima Bhashini[1], LEE Chaiheon[1], CHOI Jeong-Mo[2], KIM Byung gyu[3], KWON Tae Hyuk[1,4], MIN Seung kyu[1], MIN Duyoung[*1,4] ([1]School of Natural Science, UNIST, [2]Department of Chemistry and Chemistry Institute for Fundamental Materials, Pusan National University, [3]Center for Genomic Integrity, IBS, [4]Center 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 Gunhyoung[1], HWANG Seungha[2], YU Kilwon[2], KANG Jin Young[2], KANG Changwon[3], HOHNG Sungchul[*1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Chemistry, KAIST, [3]Department of Biological Sciences, KAIST)

[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)

D10.01 [08:30 - 09:18]
Ultrafast dynamics of correlated materials and coherent oscillations / KIM Kyungwan[*1] ([1]Chungbuk National University)

D10.02 [09:18 - 10:06]
Ultrafast X-ray spectroscopy and scattering using X-ray Free Electron Laser / JANG Hoyoung[*1] ([1]PAL-XFEL, Pohang Accelerator Laboratory)

[D11-co] Strongly Correlated Systems II

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

Room: 700B

좌장 : **황정식** 성균관대학교

Chair: HWANG Jungseek (Sungkyunkwan University)

D11.01 [08:30 - 08:42]
Tuning the phase transition of VO_2 thin films / KUMAR Manish[*1], RANI Sunita[1], LEE Hyun Hwi[1] ([1]Energy Environment Material Research, Pohang Accelerator Laboratory, POSTECH)

D11.02 [08:42 - 08:54]

Strain-driven magnetic anisotropy in $La_{0.88}Sr_{0.12}MnO_3$ thin films on (110) $NdGaO_3$ / RYU Sangkyun[1], CHO Jin Hyung[2], PARK Jucheol[3], NAM Sang-Yeol[3], PARK S.-Y.[4], KIM Younghak[4], JEEN Hyoung Jeen[*1,5] ([1]Department of Physics, Pusan National University, [2]Department of Physics Education, Pusan National University, [3]Gyeongbuk Science & Technology Promotion Center, GERI, [4]Pohang Accelerator Laboratory, POSTECH, [5]Research 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 Ul Hassan[1], JUNAID Syed Bilal[1], KO Jaehyeon[*1], HONG Jungehy[2], SHON Wonhyuk[3], LEE Seongsu[3], JUNG Jong Hoon[2] ([1]School of Nano Convergence, Hallym University, [2]Department of Physics, Inha University, [3]Advanced 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 Ina[1], JANG Bo Gyu[2], KIM Dongwook[1], SHIM Ji Hoon[*1], KOTLIAR Gabriel[3,4] ([1]Department of Chemistry, POSTECH, [2]Theoretical Division, Los Alamos National Laboratory, USA, [3]Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, USA, [4]Physics 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] ([1]Department of Physics, Kunsan National University, [2]Department 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 Hoon[2] ([1]Theory Group, Max Planck POSTECH Korea Reseach Initiative, [2]Department of Chemistry, POSTECH)

D11.07 [09:42 - 09:54]

Hall effect in quantum critical superconductor $CeCoIn_5$ / SEO Soonbeom[*1], KIM Jihyun[2], KIM Sungil[2], LEE Sangyun[3], PARK Tuson[*2] ([1]Department of Physics, Changwon National University, [2]Center for Quantum Materials and Superconductivity (CQMS), Department of Physics, Sungkyunkwan University, [3]MPA-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 Sangkook[1], BRITO Walber Hugo[2], KOTLIAR Gabriel[3,4] ([1]School of Computational Sciences, KIAS, [2]Departamento de Física, Universidade Federal de Minas Gerais, Brazil, [3]Department of Physics and Astronomy, Rutgers University, USA, [4]Condensed 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 VSe_2 on graphene substrates / KIM Jungdae*[1], KIM Ki Seok[2], CHANG Young Jun[3] ([1]Department of Physics, University of Ulsan, [2]Department of Physics, POSTECH, [3]Department of Physics, University of Seoul)

D12.02 [08:54 - 09:18]
Multiple insulating phases in a van der Waals material 1T-TaS_2 / CHO Doohee*[1] ([1]Department of Physics, Yonsei University)

D12.03 [09:18 - 09:42]
Multiband charge density waves in $NbTe_2$ / JEON Sangjun*[1] ([1]Department 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] ([1]Department 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] ([1]Department of Semiconductors, University of Ulsan)

D13.02* [08:42 - 08:54]

Negative Differential Interlayer Resistance Originating from Vertical Channel Migration of Multilayer WSe_2 / HAN Yeongseo[1], CHAE Minji[1], JOO Min-Kyu[*1] ([1]Department of Applied Physics, Sookmyung Women's University)

D13.03* [08:54 - 09:06]

P-Type Controllable Growth of Large Area MoS_2 with Vanadium Doping using Confined Space CVD / SEO Yongho[*1], MUHAMMAD Suleman[1], PARK Hyun Min[1], KIM Minwook[1] ([1]Sejong University)

D13.04* [09:06 - 09:18]

Gate dependent magnetoresistance and Hall resistance of polar semimetal WTe_2 / HWANG Eunji[1], YANG Heejun[*1] ([1]Department of Physics, KAIST)

D13.05* [09:18 - 09:30]

Multi-level magnetoresistance in multi-phase $CrPS_4$ tunneling device / YANG Heejun[*1], YOO Ho yeon[1], JOO Yanggeun[1], HONG Heemyoung[1], PANDEY Juhi[1] ([1]Department of Physics, KAIST)

D13.06* [09:30 - 09:42]

Spin-selective memtransistors with magnetized graphene / JEONG Juyeong[1], KIEM Do Hoon[1], WATANABE Kenji[4], TANIGUCHI Takashi[4], HAN Myung Joon[1], ZHENG Shoujun[2], YANG Heejun[*1] ([1]Department of Physics, KAIST, [2]School of Physics, Beijing Institute of Technology, China, [3]School of Materials Science and Engineering, Nanyang Techonological University, Singapore, [4]Material Science, National Institute for Materials Science, Japan)

D13.07* [09:42 - 09:54]

Investigating Temperature-Dependent Ferroelectric Behavior in Stacked Multi-layered MoS_2 / JOO Yanggeun[1], YANG Heejun[*1] ([1]Department of Physics, KAIST)

D13.08 [09:54 - 10:06]
Atomic-scale thermopower in TaS_2 / KIM Dohyun[1], SHIN Eui-cheol[1], LEE Yongjoon[1], LEE Young Hee[2], ZHAO Mali[3], KIM Yong-Hyun[1], YANG Heejun[*1] ([1]Department of Physics, KAIST, [2]Department of Energy Science, Sungkyunkwan University, [3]College 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] ([1]Hanyang University, [2]Department of Nanoscale Semiconudctor Engineering, Hanyang University, Hanyang University, [3]Department 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 Hee[2], LIM Hak Jun[3], CHOI In Soo[3], JOO Kyung[3], LEE Jun Ho[1], ROH Cheong Hyun[*1] ([1]IT Materials & Components R&D Division, Korea Electronics Technology Institute, [2]Department of Mechanical Engineering, Yonsei University, [3]R&D Department, Samyangceratech)

D14.03 [08:54 - 09:06]
Structure and optical porperties of $InAs/GaAs_{1-x}Sb_x$ sub-monolayer quantum dots / JO Hyun Jun[1], HA Jae Du[1], CHA Jong Won[1], KIM Jong Su[*1] ([1]Yeungnam University)

D14.04* [09:06 - 09:18]
Expanding Graphene Field-Effect Transistor (FET) Applications with Single-Layer Oxidized Graphene (SOG) / HAIDARI Mohd Musaib[1], CHOI Jin Sik[*1], 장동진[1], KIM Jin Hong[1], KO Jin-yong[1] ([1]Department 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 Jiseong[1], KANG Taein[1], HA Jae Du[1], CHA Jong Won[1], PARK Gyound Du[1], LEE Sang Jun[2] ([1]Yeungnam University, [2]Interdisciplinary 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-Yeon[1], KIM Sung-Ha[1], SOHN Tae-Hun[1], YEO Sunmog[2], YEE Ki Ju[*1] ([1]Department of Physics, Chungnam National University, [2]Korea Multi-Purpose Accelerator Complex, KAERI)

D14.07* [09:42 - 09:54]
Study of InGaAs/InAlAs digital alloy using HRXRD and photoluminescence measurements / CHA Jong Won[1], KIM Jong Su[*1], KANG Taein[1], HA Jae Du[1], RYU Mee-Yi[2], SONG Jin Dong[3] ([1]Department of Physics, Yeungnam University, [2]Department of Physics, Kangwon National University, [3]Center 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 Taein[1], GO Jiseong[1], HA Jaedu[1], LEE Sangjun[2] ([1]Yeungnam University, [2]Interdisciplinary Materials Measurement Institute, KRISS)

[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] ([1]Department 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] ([1]Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA, [2]Department of Applied Physics, Stanford University, USA, [3]Department of Physics, Stanford University, USA)

D15.03 [09:18 - 09:42]
Light-induced enhancement of piezoelectricity in $BiFeO_3$ / HEO Yooun [*1] ([1]Department of Physics, Inha University)

D15.04 [09:42 - 10:06]
Engineering electronic structures on oxide interfaces / SOHN Byungmin*1 ([1]Department 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 Jaeeun[1], YEO Hyeonwoo[1], KIM Yong-Hoon*1 ([1]School 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 Jeongwon[1], KIM Tae Hyung[1], LEE Juho[1], KIM Yong-Hoon*1 ([1]School of Electrical Engineering, KAIST)

D16.03* [08:54 - 09:06]
Carbon Substitutional Defects in Monolayer hBN and their Effects on Graphene/hBN Heterostructure / PARK Sunho[1], KWON Young-Kyun*1 ([1]Department 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 MoS_2 / SONG Ji-Yoon[1], LEE Ryong-Gyu[1], KIM Yong-Hoon*1 ([1]School of Electrical Engineering, KAIST)

D16.05 [09:18 - 09:30]
First-principles study of the sliding ferroelectricity in cellulose nanocrystals / LEE Minki[1], LEE Byeoksong[1], KANG Joongoo*1 ([1]Department of Emerging Materials Science, DGIST)

D16.06 [09:30 - 09:42]
First-principles analysis of curvature and strain energies of carbon nanotubes / LEE Jeeyong[1], CHOI Hyoung Joon*1 ([1]Department of Physics, Yonsei University)

D16.07* [09:42 - 09:54]

Exploring Tunable Magnetic Properties in Multilayerd Co/Pt Superlattices using DFT Analysis / KWON Young-Kyun[*1,2], PARK Sohee[2] ([1]Department of Physics, Kyung Hee University, [2]Department of Information Display, Kyung Hee University)

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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 ([1]Department of Physics, Konkuk University)

E2.02 [13:12 - 13:24]

Exploring local and global feature integration in Multi-Modal Deep Neural Networks / BAN Kayoung[1], PARK Myeonghun*2, PARK Seongchan*1 ([1]Department of Physics, Yonsei University, [2]School 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 Subin[1], KIM Hyung-do*1 ([1]Department 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 Jeonghyeon[1], KIM Jinheung[1], JUEID Adil[2], WANG Daohan[1] ([1]Department of Physics, Konkuk University, [2]Center 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 Yunseok[*1], KIM Kyung Kiu[1], KIM Sejin[1] ([1]College of General Education, Kookmin University)

E3.02 [13:12 - 13:24]

Prediction of Holographic Superconductor Dome / KIM Sejin[1], SEO Yunseok[*1], KIM Kyung Kiu[*1] ([1]College of General Education, Kookmin University)

E3.03 [13:24 - 13:36]

Order parameter and spectral function in holographic superconductors / GHORAI Debabrata[*1], SIN Sang Jin[*1], YUK Taewon[1] ([1]Department 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 Taewon[1] ([1]Department 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] ([1]University 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 Youngwan[1], RHO Chang Dong[2], WATSON Ian James[*1], LEE Jason Sang Hun[1] ([1]University of Seoul, [2]Department of Physics, Sungkyunkwan University)

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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 Jiwoong[1], SEO Minyeong[1], CHOI Seowon[1], ROTT Carsten[1,2] ([1]Department of Physics, Sungkyunkwan University, [2]Department 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 Minjin[1], TOENNIS Christoph[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department 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 Jaeho[1], 박도현[1], KUMAR Manoj[1], HUR Min Sup[*1] ([1]Department of Physics, UNIST)

E6.02 [13:12 - 13:24]
Intense narrow-band THz emission from a density gradient plasma / KUMAR Manoj[*1], HUR Min Sup[1] ([1]Department of Physics, UNIST)

E6.03* [13:24 - 13:36]
Heat transfer within non-equilibrium dense aluminum heated by a heavy ion beam / SONG Chiwan[1], LEE Seongmin[1], BANG Woosuk[*1] ([1]Department of Physics and Photon Science, GIST)

E6.04* [13:36 - 13:48]
Characterization of strongly coupled plasma produced in helium fluids / LEE Juho[1], YUN Gunsu[*1,2,3] ([1]Department of Physics, POSTECH, [2]Division of Advanced Nuclear Engineering, POSTECH, [3]Max Planck POSTECH/Korea Research Initiative, POSTECH)

[E7-nu] Nuclear Structure

2023. 10. 26 Thursday 13:00~13:48

Room: 607

좌장 : 김융희 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] ([1]Department of Physics and Astronomy, University of Padua, Italy, [2]Sezione di Padova, INFN, Italy, [3]Instituut voor Kern- en Stralingsfysica, KU Leuven, Belgium, [4]Center 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 Klauss[2], BUDKER Dmitry[2], NIEMEYER Thorben[2], CHAKRAVARTHY Rohan[2] ([1]Department of Physics Education, Korea National University of Education, [2]Department 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] ([1]Center for Exotic Nuclear Studies, IBS, [2]Department 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] ([1]Center 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 Fan[1], KIM Kanghuen[2], AHN Jaewook[*2], YARLOO Hadi[3], NIELSEN A.E.B[3], MøLMER Klaus[1] ([1]Niels Bohr Institute, University of Copenhagen, Denmark, [2]Department of Physics, KAIST, [3]Department 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 Kangheun[1], KIM Minhyuk[2], PARK JuYoung[1], AHN Jaewook[*1] ([1]Department of Physics, KAIST, [2]Department of Physics, Korea University)

[E9] No Session

[E10-co] Nano and Mesoscopic Physics

2023. 10. 26 Thursday 13:00~14:00

Room: 700A

좌장 : 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] ([1]Department 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 Tomer[1], ZHANG Gu[2,3], UMANSKY Vladimir[1], GORNYI Igor[3], HEIBLUM Moty[1], GEFEN Yuval[1] ([1]Department of Condensed matter Physics, Weizmann Institute of Science, Israel, [2]Division of Quantum Computation, Beijing Academy of Quantum Information Sciences, China, [3]Institute for Quantum Materials and Technologies, Karlsruhe Institute of Technology, Germany)

E10.03* [13:48 - 14:00]
PT-symmetric Non-Hermitian Hopf bundle matter / PAK Seik[1], YEOM Cheolheon[2], VERMA Sonu[3], PARK Moon Jip[*1] ([1]Department of Physics, Hanyang University, [2]Department of Physics, Konkuk University, [3]Center 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 숭실대학교

Chair: PARK Se Young (Soongsil University)

E11.01 [13:00 - 13:12]

Towards Physically Reliable Molecular Representation Learning / YI Seunghoon[1], CHO Youngwoo[2], SUL Jinhwan[1], KO Seung Woo[1], KIM Soo Kyung[3], CHOO Jaegul[2], YOON HongKee[*5], LEE Joonseok[1,4] ([1]Seoul National University, [2]KAIST, [3]Palo Alto Research Center, Stanford Research Institute, USA, [4]Google Research, USA, [5]Department of Physics, Kangwon National University)

E

E11.02* [13:12 - 13:24]

First-principles study on electronic structure changes in $MA_3Sb_2I_9$ during annealing, cooling, and reannealing / KWON Young-Kyun[*1], YOO Seungwoo[1] ([1]Department of Physics, Kyung Hee University)

E11.03* [13:24 - 13:36]

Theory of Electric Enthalpy in Electrified Interfaces / LEE Ryong-Gyu[1], LEE Juho[1], YEO Hyeonwoo[1], KIM Yong-Hoon[*1] ([1]School of Electrical Engineering, KAIST)

E11.04* [13:36 - 13:48]

Finite-bias molecular dynamics simulations of water at the electrified graphene surface / YEO Hyeonwoo[1], LEE Juho[1], LEE Ryong Gyu[1], KIM Jaeeun[1], KIM Yong-Hoon[*1] ([1]School 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 Huijun[1], PARK Yunjae[2], KIM Yohan[1], DING Feng[1,3], SHIN Hyung-Joon[*1,2] ([1]Materials Science and Engineering, UNIST, [2]Center for Multidiensional Carbon Materials, IBS, [3]Institute of Technology for Carbon Neutrality, Shenzhen Institute of Advanced Technology, China)

E12.02* [13:12 - 13:24]
Al_2O_3/ZnO 계면의 전자상태와 이차원 전자기체(2DEG) 형성에 관한 밀도범함수 연구 / JEON Jun Oh[1], JEONG Sukmin[*1], CHO Deok-Yong[1] ([1]Department of Physics, Jeonbuk National University)

E12.03* [13:24 - 13:36]
물 삼합체의 협력성을 통한 양성자 터널링 제어 / KIM Yohan[1], HAN Huijun[1], SHIN Hyung-Joon[*1] ([1]Materials Science and Engineering, UNIST)

E12.04* [13:36 - 13:48]
Unraveling in-depth recombination mechanisms in flexible kesterite thin film solar cells / PARK Ha Kyung[1], SON Dae-Ho[2], SUNG Shi-Joon[2], HWANG Dae-Kyu[2], LEE Jaebaek[2], JEON Dong-Hwan[2], CHO Yunae[1], KIM Dae-Hwan[2], KANG Jin-Kyu[2], YANG Kee-Jeong[2], JO William[*1] ([1]Department of Physics, Ewha Womans University, [2]Division 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 Jiha[2], SEO Jihyung[3], SON Eunbin[3], PARK Hyesung[*1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Graduate School of Semiconductor Materials and Devices Engineering, UNIST, [3]Materials 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 Eunbin[2], SEO Jihyung[2], PARK Hyesung[*1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Materials 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 Tam[1], JANG Joon Ik[3], SEONG Maeng-Je[2], KIM Yong Soo[*1] ([1]Department of Semiconductor Physics, University of Ulsan, [2]Department of Physics, Chung-Ang University, [3]Department of Physics, Sogang University, [4]Faculty 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 Yer[1], KIM Dohyun[1] ([1]Department 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 Wan[1], FàBREGA Cristian[2], PRADES Juan Daniel[2], JANG Jae-Won*[1] ([1]Division of Physics and Semiconductor Science, Dongguk University, [2]MIND, 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 Du[1], KANG Taein[1], JO Hyun-Jun[1], PARK Gyound Du[1], KIM Jong Su*[1], LEE Seunghyun[2], KRISHNA Sanjay[2] ([1]Yeungnam University, [2]Department 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 / 이준규[2], HUA Yongbin[2], YU Jae Su*[1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department 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 Gyound Du[1], KIM Jong Su*[1], HA Jae Du[1], KANG Taein[1], LEE Sang Jun[2] ([1]Department of Physics, Yeungnam University, [2]Division 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 $PdCoO_2$ as a hyperbolic plasmonic medium / YOON Sangmoon*1 ([1]Department of Physics, Gachon University)

E15.02 [13:24 - 13:48]

Multiferroic freestanding oxide membrane of heterogeneous integration / KANG Kyeong Tae*1 ([1]Department 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 Hyoju[1], LEE Manhee*1 ([1]Department 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 Michael[1], OTIENO Luke Oduor[1], NGUYEN Thi Thu[1], NGUYEN Thi Ngoc[1], LEE Yong Joong*1 ([1]School 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 Thu[1], OTIENO Luke Oduor[1], JUMA Oyoo Michael[1], NGUYEN Thi Ngoc[1], LEE Yong Joong*1 ([1]School of Mechanical Engineering, Kyungpook National University)

E16.04 [13:36 - 13:48]

Interaction of in-plane Drude carrier with c-axis phonon in $PdCoO_2$ / CHOI E. J.[*1], SEO Dongmin[1,7], AHN Gihyeon[2], RIMAL Gaurab[3], KHIM Seunghyun[4], CHUNG S. B.[1,5], MACKENZIE A. P.[6], OH Seongshik[3], MOON S. J.[2] ([1]Department of Physics, University of Seoul, [2]Department of Physics, Hanyang University, [3]Department of Physics and Astronomy, Rutgers University, USA, [4]Physics of Quantum Materials, Max Planck Institute for Chemical Physics of Solids, Germany, [5]School of Physics, KIAS, [6]School of Physics and Astronomy, University of St Andrews, Scottish Universities Physics Alliance, UK, [7]Department 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 Nguyen[1], TRAN Van Tam[2], CHOI Won Mook[2] ([1]Neutron Science Division, KAERI, [2]School of Chemical Engineering, University of Ulsan)

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

Ⓔ [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 / TSESMELIS 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)

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F3.08 [15:24 - 15:36]
W-algebras from non-Abelian Quiver Gauge Theories / SHIM Myungbo[*1,2,3], COMAN Ioana[2], YAMAZAKI Masahito[2,4], ZHOU Yehao[2] ([1]Yau Mathematical Sciences Center, Tsinghua University, China, [2]Kavli IPMU, The University of Tokyo, Japan, [3]Department of Physics, Kyung Hee University, [4]Trans-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-Kwon[1], YUK Taewon[1], SIN Sang Jin[*1] ([1]Department of Physics, Hanyang University)

Ⓔ [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] ([1]Commonwealth 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] ([1]InPTA 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 Keisuke[1], KOHRI Kazunori[2,3,4], TERADA Takahiro[*5] ([1]Kavli Institute for Cosmological Physics, The University of Chicago, USA, [2]Division of Science, National Astronomical Observatory of Japan and SOKENDAI, Japan, [3]Theory Center, IPNS, and QUP (WPI), KEK, Japan, [4]Kavli IPMU (WPI), UTIAS, The University of Tokyo, Japan, [5]Center 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] ([1]Department 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 Gyu[2], CHO Yong Hoon*[1] ([1]KAIST, [2]Sensor System Research Center, KIST)

F

F5.03 [14:48 - 15:12]

Strain balanced quantum cascade laser at 4700 nm wavelength / KANG Joon-Hyun*[1], LEE Won Jun[1], SHIN Jae Cheol[2], HAN Il Ki[1] ([1]Nanophotonics Research Center, KIST, [2]Division of Electronics and Electrical Engineering, Dongguk University)

F5.04* [15:12 - 15:24]

Electrically tunable single plexcitonic emitter at room temperature / LEE Hyeongwoo[1], WHETTEN Benjamin G.[2], KIM Byong Jae[3], WOO Ju Young[4], KOO Yeonjeong[1], BAE Jinhyuk[1], KANG Mingu[1], MOON Taeyoung[1], JOO Huitae[1], JEONG Sohee[3], LIM Jaehoon[3], EFROS Alexander L.[5], RASCHKE Markus B.[2], PELTON Matthew[6], PARK Kyoung-Duck*[1] ([1]Department of Physics, POSTECH, [2]Department of Physics and JILA, University of Colorado at Boulder, USA, [3]Department of Energy Science, Sungkyunkwan University, [4]Digital Transformation R&D Department, KITECH, [5]Naval Research Laboratory, USA, [6]Department 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] ([1]Department of Physics, POSTECH, [2]Division of Natural and Applied Sciences, Duke Kunshan University, China, [3]Zu 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 Kyungseung[1], HWANG SungIn[1], CHO Wosik[1], NAM Chang Hee[1,2], KIM Kyung Taec*[1,2] ([1]Center for Relativistic Laser Science, IBS, [2]Department 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 Ick*1 ([1]GIST)

F6.02 [14:36 - 15:12]

X-ray Imaging and Ionization dynamics in ultra-relativistic laser plasmas using X-ray free electron lasers / MISHCHENKO Mikhail[1], NAKATSUTSUMI Motoaki[1], BRAMBRINK Erik[1], TONCIAN Toma[2], KRAUS Dominik[7], PRENCIPE Irene[2], KLUGE Thomas[2], COWAN Thomas E[2], HUANG Lingen[2], SMID Michal[2], GARCIA Alejandro Laso[2], HOEPPNER Hauke[2], NEUMAYER Paul B[5], HUMPHRIES Oliver[1,2], KROUPP Eyal[3], STAMBULCHIK Evgeny[3], USCHMANN Ingo[4], LOETZSCH Robert[4], CHO Byoung-ick[6], LEE Gyusang[6], SOHN Jang Hyeob[6], QU ChongBing[7], ZASTRAU Ulf*1 ([1]HED Group, European X-ray Free Electron laser, Germany, [2]Institute for Radiation Physics, Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Germany, [3]Weizmann Institute of Science, Israel, [4]X-ray Optics Group, Friedrich Schiller University Jena, Germany, [5]GSI Helmholtzzentrum fuer Schwerionenforschung, Germany, [6]Department of Physics and Photon Science, GIST, [7]Institute 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 McNaughton*1, FRY Alan[2], GALTIER Eric[1], CUNNINGHAM Eric Flint[2], CURRY Chandra Brienne[2], FLETCHER Luke[3], LEE Hae Ja[1], NAGLER Bob[1], HEIMANN Philip[1], GLENZER Siegfried[3], GLEASON Arianna[3], MO Mianzen[3], MARTINEZ Mikael[2], HARDIN Corey[2], YANG Steven[2], SANDBERG Richard[4], SPINKA Thomas[5], HILL Elizabeth[6] ([1]Matter in Extreme Conditions Science, Research and Development Department of LCLS, SLAC National Accelerator Laboratory, USA, [2]The MEC-U project, SLAC National Accelerator Laboratory, USA, [3]High Energy Density Sciences Division of Fundamental Physics Directorate, SLAC National Accelerator Laboratory, USA, [4]Physics and Astronomy, Bringham Young University, USA, [5]Advanced Photon Technologies Group, NIF and Photon Sciences, Lawrence Livermore National Laboratory, USA, [6]Laser 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 ([1]Institute 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 ([1]Department of Physics, Soongsil University)

F7.03 [14:48 - 15:12]

Perturbative QCD approach to the nucleon structure at EIC / YOSHIDA Shinsuke*1 ([1]Institute 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-Il[3] ([1]Center for Extreme Nuclear Matters (CENuM), Korea University, [2]Department of Physics and Astronomy, Sejong University, [3]Department of Physics, Pukyong National University)

Ⓔ [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 ([1]PASQAL, 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 ([1]Department of Physics, KAIST, [2]Department of Physics, Korea University, [3]Research Institute, Qunova Computing Inc.)

F

F8.03 [14:48 - 15:00]
Computational complexity of integer factorization by Rydberg atoms / PARK JuYoung[1], KIM Minhyuk[2], JEONG Seok Ho[1], KIM Kangheun[1], AHN Jaewook[*1] ([1]Department of Physics, KAIST, [2]Department of Physics, Korea University)

F8.04 [15:00 - 15:36]
Floquet-tailored Rydberg interactions / LOH Huangqian[*1] ([1]Centre 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-Ju[2], CHEN Ying-Cheng[1,2] ([1]Department of Physics, National Taiwan University, Taiwan, [2]Institute 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 Hoi[1], PARK Woojun[1], KIM Jongmu[2] ([1]Korea University, [2]Mech. 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] ([1]School of Computational Sciences, KIAS)

F9.03 [14:48 - 15:12]
Decoding neural connections from activity data / JO Junghyo[*1] ([1]Department 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 Youngjai[1], MOON Joon-Young[*1] ([1]Center 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-Yoon[1], LIM Woo-chang[*1] ([1]Daegu 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] ([1]Department of Physics, KAIST)

F10.02 [14:24 - 14:48]
Topological edge modes and band-crossings from compact localized states / RHIM Jun Won[*1] ([1]Department of Physics, Ajou University)

F10.03 [14:48 - 15:12]
Topological Magnonics: Hall, Spin Hall, and Orbital Hall Effects of Magnons / KIM Se Kwon[*1], GO Gyungchoon[1] ([1]Department 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] ([1]Center 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-Hwan[2], HAN Sang-Hoon[1,3], JEONG Seung-Gyo[2] ([1]Department of Physics, Hanyang University, [2]Department of Physics, POSTECH, [3]Research Institute for Natural Science and High Pressure, Hanyang University)

Ⓔ [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 ([1]Center 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 Sun[1], LI Bin[1], WU Tianyu[1], RYU Youngjay[2], PRANKAPENKA Vitali[2] ([1]Department of Physics, Hanyang University, [2]GSECARS, Advanced Photon Source, Argonne National Laboratory, USA)

F11.03 [15:12 - 15:48]

The Wondrous World of Carbon Under High Pressure / WANG Yanbin*1 ([1]Center for Advanced Radiation Sources, The University of Chicago, USA)

Ⓔ [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 ([1]Institute of Physics, Chinese Academy of Sciences, China, [2]School 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, TAUTZ Frank Stefan[1,2,5], HEINRICH Andreas*3,4, TEMIROV Ruslan[1,2,6] ([1]Peter Grünberg Institute (PGI-3), Forschungszentrum Jülich, Germany, [2]Jülich Aachen Research Alliance (JARA), Fundamentals of Future Information

Technology, Forschungszentrum Jülich, Germany, [3]Center for Quantum Nanoscience (QNS), IBS, [4]Department of Physics, Ewha Womans University, [5]Experimentalphysik IV A, RWTH Aachen University, Germany, [6]Faculty 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 Khai[1], IOANNIDIS Ioannis[2,3], NEUHAUS-STEINMETZ Jannis[1], POSSKE Thore[2,3], WIESENDANGER Roland[1], WIEBE Jens[1] ([1]Department of Physics, University of Hamburg, Germany, [2]I. Institute for Theoretical Physics, University of Hamburg, Germany, [3]Centre for Ultrafast Imaging, CUI, Germany)

F12.04 [15:12 - 15:36]
Exploring topological superconductors and emergent quantum states / CHOI Deung-Jang*[1,2,3] ([1]Centro de Fisica de Materiales, CFM/MPC (CSIC-UPV/EHU), Spain, [2]Donostia International Physics Center (DIPC), Spain, [3]Ikerbasque, Basque Foundation for Science, Spain)

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[F13-se] Focus: Advanced Analytical Techniques for Emerging Materials and Devices

2023. 10. 26 Thursday 14:00~15:36

Room: 302

좌장 : 김성헌 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] ([1]Department of Physics, Yonsei University)

F13.02 [14:24 - 14:48]
방사광 기반 광전자분광현미경 기법의 활용 및 응용 / BAIK Jaeyoon*[1] ([1]Beamline 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] ([1]Department 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 ([1]Department 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 Won[1], PARK Keon Joo[1], CHUN Young Tea*1 ([1]Division 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 ([1]OMM, KRISS, [2]YU-KRISS Graduate University, Yonsei University, [3]Applied Measurement Science, University of Science and Technology)

F14.03 [14:48 - 15:12]
A Distinctive Persistent Photocurrent Effect in MoS_2-$LaAlO_3$ Heterostructure / NA Junhong*1 ([1]Department 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 ([1]Department 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/$MoSe_2$/Pt Vertical Assembly / IM Seongil[*1] ([1]Department of Physics, Yonsei University)

F15.02 [14:24 - 14:48]

High-Performance & Low-Power 2D Heterojunction FETs / LEE Chul-Ho[*1] ([1]Department 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] ([1]Department 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] ([1]Department of Physics, Yonsei University)

[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 Hyoung[*1] ([1]Department of Physics, Chung-Ang University)

F16.02 [14:24 - 14:48]

Resolving Surface and Electronic Ambiguities in Kagome Metal FeSn / KIM Tae-Hwan[*1] ([1]Department 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] ([1]Department of Physics, Soongsil University)

F16.04* [15:00 - 15:12]

Exotic Z_N Generalizations of 3D Z_2 Stabilizer Models / LEE Chanbeen[*1], HU Yaozong[2], CHO Gil Young[1], WATANABE Haruki[2] ([1]Department of Physics, POSTECH, [2]Department 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 Dongmin[1], RHIM Jun Won[2], MOON Kyungsun[*1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Ajou University)

F16.06 [15:24 - 15:36]

External field induced metal-to-insulator transition in disspative Hubbard model / SHIM Ji Hoon[*1,3], GOH Beomjoon[2], KIM Junwon[3] ([1]Department of Chemistry, POSTECH, [2]Department of Physics and Astronomy, Seoul National University, [3]Division of Advanced Materials Science, POSTECH)

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	김창영(서울대, 정책위원장)
• 고교 교육과정, 수능, 대학의 일반물리 교육현황	정종훈(인하대, 교육위원장)
• 교육부의 대학구조 조정 방향성과 물리학과의 대처	엄종화(세종대 부총장)
• 대학별 물리학과 운영 사례1	이현복 (강원대)
• 대학별 물리학과 운영 사례2	강병원 (충북대)
• 자유 발언	
• 자유 토론	

Ⓔ [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 ([1]Department of Physics, Hanyang University)

G2.02 [16:24 - 16:48]
The Future of ALICE / MUSA Luciano*1 ([1]CERN, Switzerland)

G2.03 [16:48 - 17:12]
The footprint of the Korean ALICE experiment team / YOON Jin-Hee*1 ([1]Department of Physics, Inha University)

G2.04 [17:12 - 17:36]
Physics at FCC / MANGANO Michelangelo*1 ([1]CERN, 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 Jeong[1] ([1]Advanced 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 Cheolhee[1] ([1]Advanced 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] ([1]Physics Education Department, Korea National University of Education)

G3.04 [16:36 - 16:48]
개념적 혼성 이론에 기초한 물리교육 연구 유형 / YOON Hye-Gyoung*[1] ([1]Science 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 Bokyung[1], SONG Jinwoong*[1] ([1]Seoul 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] ([1]Chonnam 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] ([1]University of Milano-Bicocca, Italy)

G4.02 [16:36 - 17:12]
New detection methods with PTA / PARK Chan*[1] ([1]Center 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 Kyunggoo[1], JUNG Yong Hun[1], KIM Hyesung[1], JUNG Jee yeon[2], LEE Jooyeon[3], LEE Chang Jin[1], CHU Hong[1] ([1]R&D Center, LASEROPTEK, [2]Clinical Team, LASEROPTEK, [3]M&D, LASEROPTEK)

G5.02 [16:24 - 16:48]
고출력 Yb 첨가 광섬유 레이저 광원 개발 / PARK Jong Seon*[1], JUNG Min Wan[1], JUNG Ye Ji[1], KIM Tae Woo[1], KWON Soon Tae[1], KIM Tae Wan[1], YOO Jun Sang[1], PARK Seung Hyuk[1], KIM Sang In[1], LEE Yong Soo[1], JEONG Hoon[2], KIM Ji Won[3] ([1]Laser Technologies R&D Team, Hanwha Aerospace, [2]Digital Health Care R&D, KITECH, [3]Department 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 GyeongHun[1] ([1]Optics 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-Min[2], CHOI Wonshik[2] ([1]Department of Biomedical Convergence Engineering, Pusan National University, [2]Department 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 Jiri[3], KOSHIBA Yuya[3], SIKOCINSKI Pawel[3], MOCEK Tomas[3] ([1]Hanyang University ERICA, [2]BK21 Four ERICA-ACE center, Hanyang University, [3]Thin Disk Lasers, HiLASE Centre, Institute of Physics of the Czech Academy of Sciences, Czech)

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Ⓔ [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] ([1]Department 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 Hyojeong[1], KIM Sooho[1], YU Hyungyu[1], ROH Kyungmin[1], LEE Chunghwa[1] ([1]Department of Physics and Photon Science, GIST)

G6.03 [17:12 - 17:48]
Plasma photonics at high intensities / JAROSZYNSKI Dino A[*1] ([1]Scottish 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]
Imaginig Calorimeter for the Electron-Ion Collider / LIM SangHoon[*1] ([1]Department of Physics, Pusan National University)

G7.02 [16:24 - 16:48]
Electron-Ion Collider (EIC) and the ePIC experiment / GOTO Yuji[*1] ([1]Nishina Center, RIKEN, Japan)

G7.03 [16:48 - 17:12]
QCD relations for gravitational form factors / TANAKA Kazuhiro[*1] ([1]Department 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] ([1]Yonsei 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 ([1]Ultracold 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 Toshi[1], OKAMOTO Issei[1], OZAWA Naoya[1], TAKANO Tetsushi[1], TAKASU Yosuke[1], TAKAHASHI Yoshiro[1] ([1]Division 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 LéSéLEUC Sylvain*1 ([1]Institute 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 Sub[1], HWANG Sunhwa[1] ([1]Department of Physics, KAIST)

G8.05 [17:36 - 17:48]
Slingshot throw and catch of single atoms by optical tweezers / AHN Jaewook*1, HWANG Sunhwa[1], HWANG Han Sub[1], SOEGIANTO Maynardo Pratama[2] ([1]Department of Physics, KAIST, [2]Department 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 ([1]Department of Physics, Jeonbuk National University)

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G9.02 [16:24 - 16:36]
Oscillating synchronization order parameter of the Kuramoto model with inertia / SON Seung-Woo[*1], KIM Gugyoung[1], LEE Mi Jin[1] ([1]Department 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 Seora[1], CHOI Eun Ji[1], LEE Sang Hoon[*1] ([1]Department of Physics, Gyeongsang National University)

G9.04 [16:48 - 17:00]
Decomposition and Scaling of Complex Networks / JEONG Wonhee[*1], LEE Sang Hoon[1], YU Unjong[2] ([1]Department of Physics, Gyeongsang National University, [2]Department of Physics and Photon Science, GIST)

G9.05* [17:00 - 17:12]
Percolation transitions in spatial multiplex networks with long-range links / SON Gangmin[1], HA Meesoon[*2], JEONG Hawoong[*1,3] ([1]Department of Physics, KAIST, [2]Department of Physics Education, Chosun University, [3]Center of Complex Systems, KAIST)

G9.06* [17:12 - 17:24]
Detecting breakdown nodes in power grids via Graph Neural Networks / PARK Sangjoon[1], KIM Cook Hyun[1], KAHNG Byungnam[*1] ([1]Department of Energy Engineering, KENTECH)

G9.07 [17:24 - 17:36]
Semi-supervised pruning optimization with modularity-based hierarchical clustering / KIM Young Jin[*1], LEE Jungwoo[1] ([1]Center 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 Byunggun[1], KWON Younghun[*1] ([1]Department of Applied Physics, Hanyang University ERICA)

G9.09 [17:48 - 18:00]
Knowledge Transfer and Innovation in Complex Systems / PARK A-Young[2], YOON JinJoo[1], OH Gab jin[*1] ([1]Chosun University, [2]Institute 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 Donyoung[1], LEE Hyungsuk[*1] ([1]School of Mechanical Engineering, Yonsei University)

G10.02 [16:24 - 16:48]

Engineering Microfluidic Vascularized Organ Systems for Clinical Utility / KO Jihoon[*1] ([1]Department of BioNano Technology, Gachon University)

G10.03 [16:48 - 17:12]

Functional Color Materials with Bio-Inspired Structural Colorations / LEE Seung-Jea[*1] ([1]Lighting 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 Suji[1], LEE Keel Yong[1], KIM Sean L[1], MACQUEEN Luke A[1], CHANG Huibin[1], ZIMMERMAN John F[1], JIN Qianru[1], PETERS Michael M[1], ARDOñA Herdeline Ann M.[1], LIU Xujie[2], HEILER Ann-Caroline[3], GABARDI Rudy[1], RICHARDSON Colin[1], PU William T[2], BAUSCH Andreas R[3], PARKER Kevin Kit[1] ([1]John A. Paulson School of Engineering and Applied Sciences, Harvard University, USA, [2]Department of Cardiology, Boston Children's Hospital, USA, [3]Physik Department, Technische Universität München, Germany)

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Ⓔ [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 Jay[1], OFFICER Timothy[1], XU Man[1], PRAKAPENKA Vitali[1], CHARITON Stella[1], ENG Peter[1], STUBBS Joanne[1], RIVERS Mark[1], SUTTON Steve[1], WANG Yanbin[1] ([1]Center 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 Yanbin[1], YU Tony[1], PRAKAPENKA Vitali[1], GUIGNOT Nicolas[2], KING Andrew[2], HENRY Laura[2], CHARITON Stella[1], ENG Peter[1], STUBBS Joanne[1], RIVERS Mark L.[1] ([1]Center for Advanced Radiation Sources, The University of Chicago, USA, [2]Synchrotron Soleil, L' Orme des Merisiers, France)

G11.03 [17:12 - 17:48]
Glasses and Diamond above Multi-Megabar Pressures / LEE Sung Keun[*1] ([1]School 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] ([1]Institute for Chemical Research, Kyoto University, Japan, [2]Center for Spintronics Research Network, Kyoto University, Japan)

G12.02 [16:24 - 16:48]
Universal hopping motion of skyrmion bubbles / SONG Moojune[1], YOU Mujin[1], YANG Seungmo[2], JU Tae-Seong[2], MOON Kyoung-Woong[2], HWANG Chanyong[*2], KIM Kyoung-Whan[*3], PARK Albert Min Gyu[*1], KIM Kab-Jin[*1] ([1]Department of Physics, KAIST, [2]Quantum Spin Team, KRISS, [3]Center for Spintronics, KIST)

G12.03 [16:48 - 17:12]
Three-dimensional observation of magnetic microstructures by scanning X-ray magnetic tomography / SUZUKI Motohiro[*1] ([1]School 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-Young[3] ([1]Graduate School of Semiconductor Materials and Devices Engineering & Department of Materials Science and Engineering, UNIST, [2]Department of Materials Science and Engineering, Korea National University of Transportation (KNUT), [3]Center 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] ([1]Department of Physics, Jeju National University)

G13.02 [16:24 - 16:48]

Chiral charge transport properties in topological material GdB_4 and NdAlGe / SHON Won Hyuk[*1], CHO Keunki[3], CHO Beongki[3], KIM Heon-Jung[4], KIM Kyoo[1], RHYEE Jong-Soo[2] ([1]Advanced Quantum Materials Research Center, KAERI, [2]Department of Applied Physics, Kyung Hee University, [3]School of Materials Science and Engineering, GIST, [4]Department 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] ([1]Department of Applied Physics, Kyung Hee Unviersity)

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Ⓔ [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] ([1]Department of Physics and Chemistry, DGIST)

G14.02 [16:24 - 16:48]

Electronically tunable exciton confinement probed with nonlinear spectroscopy / KASPRZAK Jacek[*1] ([1]Instituté Néel, University of Grenoble Aples, CNRS-Grenoble INP, France)

G14.03 [16:48 - 17:12]

Unprecedented exciton-polariton coupling in 6-folded microcavity for PT symmetry / SONG Hyun Gyu[2], CHO Yong Hoon[*1] ([1]KAIST, [2]Sensor System Research Center, KIST)

G14.04 [17:12 - 17:36]
Bright ultrarrow-linewidth perovskite single-photon sources / FARROW Tristan*1
([1]Department 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 CrI_3 / KIM Jae Hoon*1 ([1]Department of Physics, Yonsei University)

G15.02 [16:24 - 16:48]
Room temperature valley polarization of the B-exciton in monolayer MoS_2 / LEE Je-Ho[1], LE Chinh Tam[2], YOON Young-Gui[1], KIM Yong Soo[2], KIM Kun Woo[1], SEONG Maeng-Je*1 ([1]Department of Physics, Chung-Ang University, [2]Department of Physics, University of Ulsan)

G15.03 [16:48 - 17:12]
Sublattice pseudospin in quantum materials / KIM Keun Su*1 ([1]Department 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 Hyeok[1], JEONG Seung Gyo[2], SONG Sehwan[3], PARK Sungkyun[3], SHIN Dong Bin[1,4], CHOI Woo Seok[2], LEE Jong Seok*1 ([1]Department of Physics and Photon Science, GIST, [2]Department of Physics, Sungkyunkwan University, [3]Department of Physics, Pusan National University, [4]Center 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 Young[1], SHIM Ji Hoon[1] ([1]Department 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-Do[1], KIM Minseok[1], SHIN Kwang Woo[5], KIM Kee Hoon[5], PARK Sang-Youn[1], SHIN Hee Jun[6], BORISOV Pavel[7,8], ROSSEINSKY Matthew J.[8], JANG Dogeun[1], CHOI Hyeongi[1], EOM Intae[1], STAUB Urs[3], CHUN Sae Hwan*[1,2] ([1]XFEL Division, Pohang Accelerator Laboratory, [2]Photon Science Center, POSTECH, [3]Swiss Light Source, Paul Scherrer Institute, Switzerland, [4]SwissFEL, Paul Scherrer Institute, Switzerland, [5]Department of Physics and Astronomy, Seoul National University, [6]PLS-II, Pohang Accelerator Laboratory, [7]Department of Physics, Loughborough University, UK, [8]Department of Chemistry, University of Liverpool, UK)

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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 Jae[4], LEE Sung Yun[1,2,3], LEE Heemin[1,2,3], HEO Seungpil[1,2,3], NAM Daewoong[4], KIM Sangsoo[4], KIM Min Seok[4], EOM In Tae[4], NOH Do Young[4] ([1]POSTECH, [2]Center for Ultrafast Science on Quantum Matter, Max Planck POSTECH Korea Research Initiative, [3]Photon Science Center, POSTECH, [4]Pohang 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 AV_3Sb_5 (A = K, Rb, Cs) through X-ray Scattering / HEO Seung-Phil[1,2], LEE Heemin[1,2], LEE Byungjune[1,2], WON Choongjae[2], JANG Hoyoung[2,3], PARK Sang-Youn[3], SHIN Dong-bin[4], SONG Changyong*[1,2] ([1]POSTECH, [2]Department of Physics, Max Planck POSTECH Korea Reseach Initiative, [3]Department of Physics, Pohang Accelerator Laboratory, [4]Department of Physics and Photon Science, GIST)

G16.06 [17:12 - 17:36]

Direct measurement of electron phonon coupling with 2D spectroscopy / KIM Heejae*[1] ([1]Department of Physics, POSTECH)

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 ([1]Creative Education Development Institute, Sejong University)

H1.02 [08:42 - 08:54]
과학교사들의 실험 개발 경험 공유 / KIM Jung Bog*1 ([1]Department of Physics Education, Korea National University of Education)

H1.03 [08:54 - 09:06]
마이크로비트를 이용한 무선 데이터 자동기록 시스템 개발 및 물리탐구에의 활용 / CHEONG Yong Wook*1 ([1]Department 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-Hwa[1] ([1]Department of Physics Education, Korea National University of Education)

H1.05 [09:18 - 09:30]
과정 중심 실험 평가 방안 탐색 / JHUN Youngseok*1 ([1]Department of Science Education, Seoul National University of Education)

H1.06 [09:30 - 09:42]
특수 상대성 이론에 대한 예비 물리교사의 개념 이해와 확신도 / IM Sungmin*1 ([1]Department 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 Kihong[1], KIM Kyungho[2], SYTOV Alexei[2,3], CHO Kihyeon[*1] ([1]UST, KISTI, [2]Computational Science Team, KISTI, [3]Division 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 Seungkyu[*1], CHO Guk[1], EO Yun[1], HWANG Kyuyeong[1], JANG Haeun[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Sungwon[1], KIM Tongil[1], PARK Hyesung[1], YOO Hwidong[1], DO Hyunsuk[2], HUH Changgi[2], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Min Sang[3], KO Sanghyun[4], KWON Hyejin[4], KIM Doyeong[5], LEE Hyupwoo[5], LEE Jason[5], LEE Yunjae[5], SON Youngwan[5], KIM Dongwook[6], KWON Nahye[6], LEE Woochan[6], KIM Yongjun[7], LIM Sanghoon[7], RYU Jaehyeok[7], BAE Joonsuk[8], KIM Beomkyu[8], LEE Hyungjun[8], JANG Yoonjun[9], JEONG Jinryong[9], KIM Minsuk[9], CHOI Suyong[10], CHEON Byunggu[11] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]Center for High Energy Physics, Kyungpook National University, [4]Department of Physics, Seoul National University, [5]Department of Physics, University of Seoul, [6]Severance, Yonsei University, [7]Department of Physics, Pusan National University, [8]Department of Physics, Sungkyunkwan University, [9]Department of Physics, Gangneung Wonju National University, [10]Department of Physics, Korea University, [11]Department of Physics, Hanyang University)

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 Hwidong[*1], DO Hyunsuk[2], HUH Changgi[2], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Min Sang[2], KO Sanghyun[3], KWON Hyejin[3], KIM Doyeong[4], LEE Hyupwoo[4], LEE Jason[4], LEE Yunjae[4], SON Youngwan[4], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Haeun[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Sungwon[1], KIM Tongil[1], PARK Hyesung[1], KIM Dongwook[5], KWON Nahye[5], LEE Woochan[5], KIM Yongjun[6], LIM Sanghoon[6], RYU Jaehyeok[6], BAE Joonsuk[7], KIM Beomkyu[7], LEE Hyungjun[7], JANG Yoonjun[8], JEONG Jinryong[8], KIM Minsuk[8], CHOI Suyong[9], CHEON Byunggu[10] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]Department of Physics, Seoul National University, [4]Department of Physics, University of Seoul, [5]Medical Physics and Biomedical Engineering Lab, Yonsei University Severance, [6]Department of Physics, Pusan National University, [7]Department of Physics, Sungkyunkwan University, [8]Department of Physics, Gangneung Wonju National University, [9]Department of Physics, Korea University, [10]Department of Physics, Hanyang University)

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H2.04* [09:06 - 09:18]

Readout bundling optimization of dual-readout calorimeter for particle identification using deep learning / PARK Inkyu*[1], LEE Yunjae[1], LEE Jason Sanghun[1], LEE Hyupwoo[1], SON Youngwan[1], KIM Doyeong[1], YOO Hwidong[2], HA Seungkyu[2], JO Guk[2], EO Yun[2], HWANG Kyuyeong[2], JANG Haeun[2], JANG Seoyun[2], KIM Dongwoon[2], KIM Sungwon[2], KIM Tongil[2], PARK Hyesung[2], LEE Sehwook[3], RYU MinSang[3], DO Hyunsuk[3], HUH Changgi[3], KIM Babae[3], LEE Junghyun[3], KO Sanghyun[4], KWON Hyejin[4], KIM Beomkyu[5], BAE Joonsuk[5], LEE Hyungjun[5], PARK Hyebin[5], KIM Minsuk[6], JANG Yoonjun[6], JEONG Jinryong[6], RYU Jaehyeok[7], KIM Yongjun[7], LIM Sanghoon[7], KIM Dongwook[8], KWON Nahye[8], CHOI Suyong[9], CHEON Byunggu[10] ([1]University of Seoul, [2]Department of Physics, Yonsei University, [3]Department of Physics, Kyungpook National University, [4]Department of Physics, Seoul National University, [5]Department of Physics, Sungkyunkwan University, [6]Department of Physics, Pusan National University, [7]Department of Physics, Gangneung Wonju National University, [8]Department of Radiation Oncology, Yonsei University Health System, [9]Department of Physics, Korea University, [10]Department 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 Sungwon[1], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Haeun[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Tongil[1], PARK Hyesung[1], DO Hyunsuk[2], HUH Changgi[2], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Min Sang[3], KO Sanghyun[4], KWON Hyejin[4], KIM Doyeong[5], LEE Hyupwoo[5], LEE Jason[5], LEE Yunjae[5], SON Youngwan[5], KIM Dongwook[6], KWON Nahye[6], LEE Woochan[6], KIM Yongjun[7], LIM Sanghoon[7], RYU Jaehyeok[7], BAE Joonsuk[8], KIM Beomkyu[8], LEE Hyungjun[8], JANG Yoonjun[9], JEONG Jinryong[9], KIM Minsuk[9], CHOI Suyong[10], CHEON Byunggu[11] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]Center for High Energy Physics, Kyungpook National University, [4]Department of Physics, Seoul National University, [5]Department of Physics, University of Seoul, [6]Severance Hospital, Yonsei University, [7]Department of Physics, Pusan National University, [8]Department of Physics, Sungkyunkwan University, [9]Department of Physics, Gangneung Wonju National University, [10]Department of Physics, Korea University, [11]Department 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 Seoyun[1], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Haeun[1], KIM Dongwoon[1], KIM Sungwon[1], KIM Tongil[1], PARK Hyesung[1], LEE Sehwook[3], HUH Changgi[3], KIM Bobae[3], LEE Junghyun[3], DO Hyunsuk[3], RYU Minsang[3], KO Sanghyun[4], KWON Hyejin[4], KIM Doyeong[5], LEE Hyupwoo[5], LEE Jason[5], LEE Yunjae[5], SON Youngwan[5], KIM Dongwook[2], KWON Nahye[2], LEE Woochan[2], KIM Yongjun[6], LIM Sanghoon[6], RYU Jaehyeok[6], BAE Joonsuk[7], KIM Beomkyu[7], LEE Hyungjun[7], JANG Yoonjun[8], JEONG Jinryong[8], KIM Minsuk[8], CHOI Suyong[9], CHEON Byunggu[10] ([1]Department of Physics, Yonsei University, [2]Medical Physics and Biomedical Engineering Lab,

Yonsei University Severance, [3]Department of Physics, Kyungpook National University, [4]Department of Physics, Seoul National University, [5]Department of Physics, University of Seoul, [6]Department of Physics, Pusan National University, [7]Department of Physics, Sungkyunkwan University, [8]Department of Physics, Gangneung Wonju National University, [9]Department of Physics, Korea University, [10]Department 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 Haeun[1], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Sungwon[1], KIM Tongil[1], PARK Hyesung[1], DO Hyunsuk[2], HUH Changgi[2], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Minsang[3], KO Sanghyun[4], KWON Hyejin[4], KIM Doyeong[5], LEE Hyupwoo[5], LEE Jason[5], LEE Yunjae[5], SON Youngwan[5], KIM Dongwook[6], KWON Nahye[6], LEE Woochan[6], KIM Yongjun[7], LIM Sanghoon[7], RYU Jaehyeok[7], BAE Joonsuk[8], KIM Beomkyu[8], LEE Hyungjun[8], JANG Yoonjun[9], JEONG Jinryong[9], KIM Minsuk[9], CHOI Suyong[10], CHEON Byunggu[11] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]CHEP, Center for High Energy Physics, Kyungpook National University, [4]Department of Physics, Seoul National University, [5]Department of Physics, University of Seoul, [6]Cancer Center, Yonsei Severance Hospital, [7]Department of Physics, Pusan National University, [8]Department of Physics, Sungkyunkwan University, [9]Department of Physics, Gangneung-Wonju National University, [10]Department of Physics, Korea University, [11]Department 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 Dongwoon[1], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Haeun[1], JANG Seoyun[1], KIM Sungwon[1], KIM Tongil[1], PARK Hyesung[1], DO Hyunsuk[2], HUH Changgi[2], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU MinSang[3], KO Sanghyun[4], KWON Hyejin[4], KIM Doyeong[5], LEE Hyupwoo[5], LEE Jason[5], LEE Yunjae[5], SON Youngwan[5], KIM Dongwook[6], KWON Nahye[6], LEE Woochan[6], KIM Yongjun[7], LIM Sanghoon[7], RYU Jaehyeok[7], BAE Joonsuk[8], KIM Beomkyu[8], LEE Hyungjun[8], JANG Yoonjun[9], JEONG Jinryong[9], KIM Minsuk[9], CHOI Suyong[10], CHEON Byunggu[11] ([1]Department of Physics, Yonsei University, [2] Department of Physics, Kyungpook National University, [3]Department of Physics, CHEP(Center for High Energy Physics), [4] Department of Physics, Seoul National University, [5] Department of Physics, University of Seoul, [6]Medical Physics, Yonsei Severance, [7]Department of Physics, Pusan National University, [8]Department of Physics, Sungkyunkwan University, [9]Department of Physics, Gangneung Wonju National University, [10]Department of Physics, Korea University, [11]Department of Physics, Hanyang University)

H2.09* [10:06 - 10:18]

Data qulity monitoring procedure and analysis status of the Dual-Readout Calorimeter test beam (2023) at CERN / YOO Hwidong[*1], DO Hyunsuk[2], HUH Changgi[2], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Min Sang[3], KO Sanghyun[4], KWON Hyejin[4], KIM Doyeong[5], LEE Hyupwoo[5], LEE Jason[5], LEE Yunjae[5], SON Youngwan[5], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Haeun[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Sungwon[1], KIM Tongil[1], PARK Hyesung[1], KIM Dongwook[6], KWON Nahye[6], LEE Woochan[6], KIM Yongjun[7], LIM Sanghoon[7], RYU Jaehyeok[7], BAE Joonsuk[8], KIM Beomkyu[8], LEE Hyungjun[8], JANG Yoonjun[9], JEONG Jinryong[9], KIM Minsuk[9], CHOI Suyong[10], CHEON Byunggu[11] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]The Center for High Energy Physics, Kyungpook National University, [4]Department of Physics, Seoul National University, [5]Department of Physics, University of Seoul, [6]Severance, Yonsei University, [7]Department of Physics, Pusan National University, [8]Department of Physics, Sungkyunkwan University, [9]Department of Physics, Gangneung Wonju National University, [10]Department of Physics, Korea University, [11]Department 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] ([1]Center 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 Danho[2], KWON Ohjoon[*2], BYUN HeeSu[2], PARK Seongtae[2], KIM Jinsu[2], CHUNG Woohyun[2], SEMERTZIDIS Yannis K.[1,2] ([1]Department of Physics, KAIST, [2]CAPP, IBS)

H3.03 [08:54 - 09:06]

Data analysis for phase 2 of the CAPP-MAX experiment / AHN Saebyeok[*1] ([1]Center 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 Heesu[1], CHUNG Woohyun[1], KIM Jinsu[1], KWON Ohjoon[1], LEE Jiwon[1,2], PARK Seongtae[1], YOUM Dojun[1] ([1]Center for Axion and Precision Physics Research, IBS, [2]Department of Physics, KAIST)

H3.05 [09:18 - 09:30]

CAPP 12-Tesla experiment for axion dark matter search at 25-mK temperature / AHN Saebyeok[1], KIM Jinmyeong[1,2], IVANOV Boris[*1], UCHAIKIN Sergey V.[*1], BYUN HeeSu[1], YI Andrew Kunwoo[1], VAN LOO Arjan F[3,4], PARK SeongTae[1], KWON Ohjoon[1], NAKAMURA Yasunobu[3,4], LEE Soohyung[1], KIM Jinsu[1], LEE Kiwoong[1], OH Seonjeong[1], SEONG Taehyeon[1], MATLASHOV Andrei[1], CHUNG Woohyun[1], KO ByeongRok[1], YOUN SungWoo[1], SEMERTZIDIS Yannis K.[1] ([1]Center for Axion and Precision Physics Research, IBS, [2]Department of Physics, KAIST, [3]Center for Quantum Computing (RQC), RIKEN, Japan, [4]Department 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 Sung-Woo[*1], JEONG Junu[1], KIM Younggeun[1], BAE SungJae[1,2] ([1]Center for Axion and Precision Physics Research, IBS, [2]Department of Physics, KAIST)

H3.07 [09:42 - 09:54]

Extended search for axion dark matter using 18T HTS haloscope / YOON Hojin[1], YANG Byeongsu[2,3], LEE Youngjae[1], AHN Moohyun[2], YOO Jonghee[*1,2,3] ([1]Department of Physics, KAIST, [2]Department of Physics and Astronomy, Seoul National University, [3]CAPP, 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 Junu[1], YOUN SungWoo[*1], SEMERTZIDIS Yannis K.[1,2] ([1]Center for Axion and Precision Physics Research, IBS, [2]Department 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 Younggeun[1], YOUN SungWoo[*1], JEONG Junu[1], BAE SungJae[1,2], SEMERTZIDIS Yannis Kyriakos[1,2] ([1]Center for Axion and Precision Physics Research, IBS, [2]Department of Physics, KAIST)

[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 Eun[1], CHOI Joonyoung[2], SIM Kyung Ik[3], JO Younjung[2], KIM Jae Hoon[*1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]Center 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] ([1]Department of Physics, University of Ulsan)

H5.03 [09:18 - 09:42]

고속 시분해 테라헤르츠 분광법을 이용한 비파괴영상 및 센서 응용 / AHN Yeong Hwan[*1] ([1]Department 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 Hyosim[1], PARK Hyeong-Ryeol[1], JI Gangseon[1], JEONG Jeeyoon[2] ([1]Department of Physics, UNIST, [2]Department 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 Sik[1], KANG Chul[1] ([1]Advanced 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 Kyungtae[1], CHAI Kil-Byoung[3], YUN Gunsu[*1,2] ([1]Division of Advanced Nuclear Engineering, POSTECH, [2]Department of Physics, POSTECH, [3]Nuclear 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 Lin[1], YUN Gunsu[*1], YOON Young Dae[2] ([1]Department of Physics, POSTECH, [2]Magnetized 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-Ho[1], KWAK Donghyun[1], CHUNG Moses[*1], KIM Gi Dong[2], KWON Jangwon[2], JANG Ji Ho[2], LEE Seunghyun[3], KIM DongHwan[3], KIM Han Sung[3] ([1]Department of Physics, UNIST, [2]Institute for Rare Isotope Science, IBS, [3]Korea 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-O[1], HEO Jeong Il[1], PARK Bum Sik[1], KIM Hyung Jin[1] ([1]IRIS, 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 Inhyuk[1], KIM Gyujin[1], YANG Haeryong[1], CHO Myung Hoon[1], KWON Seong-Hoon[2], MOON Kook-Jin[1], SUNG Chang-Kyu[1], HEO Hoon[3] ([1]Accelerator Control Team, Pohang Accelerator Laboratory, [2]Linear Accelerator Team, Pohang Accelerator Laboratory, [3]XFEL 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 ρ0(770) production in pp collisions with ALICE / LIM SangHoon[*1], LIM Hyunji[1], KIM Chong[1] ([1]Department 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 Jung[1], HONG Byungsik[2], LEE Jongwon[2], KIM Jiyoung[1,2], PARK Jeonghyeok[2] ([1]Department of Physics, Inha University, [2]Department of Physics, Korea University)

H7.03* [08:54 - 09:06]
Study on the cluster size of the silicon pixel detector / CHOI Yongjun[1], WOO Kyungrim[1], KWON Minjae[2], YOO In-Kwon*[1] ([1]Department of Physics, Pusan National University, [2]Natural 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 Jaehyeok[1] ([1]Department 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] ([1]Department of Physics and Astornomy, 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 Jeongmyung[1], OH Saehanseul*[1,2] ([1]Department of Physics and Astronomy, Sejong University, [2]Nuclear Science Division, Lawrence Berkeley National Laboratory, USA)

H7.07 [09:42 - 09:54]
Overview of recent CMS heavy ion results / KIM Yongsun*[1] ([1]Sejong University)

H7.08 [09:54 - 10:06]
Production of the X(6900) meson in heavy ion collisions / CHO Sung Tae*[1] ([1]Kangwon 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 Seunghwan[1], KIM Yongsun*[1] ([1]Sejong 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] ([1]Department of Optics, Palacky University, Czech, [2]Center 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 Jun[2], BAEK Kyunghyun[1], KIM M. S.[3], NHA Hyunchul[5], KIM Jaewan[4] ([1]Quantum Technology Research Department, ETRI, [2]AI Lab, CTO Div,, LG Electronics, [3]QOLS, Blackett Laboratory, Imperial College London, UK, [4]School of Computational Sciences, KIAS, [5]Department of Physics, Texas A&M University at Qatar, USA)

H8.03 [09:42 - 10:18]

Quantum error correction in continuous time / KWON Hyukjoon[*1] ([1]School 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 Sangyun[1], KWON Hyukjoon[2], LEE Jae Sung[*1] ([1]School of Physics, KIAS, [2]School of Computer Science, KIAS)

H9.02* [08:54 - 09:06]

Active transport in a tilted periodic potential / KIM Yeongjin[1], KIM Won Kyu[*2], JEON Jae-Hyung[*1,3] ([1]Department of Physics, POSTECH, [2]School of Computational Sciences, KIAS, [3]APCTP)

H9.03* [09:06 - 09:18]
Nonequilibrium heterogeneous diffusion dynamics for active particles in disordered biopolymer network / JOO Sungmin[1], JEON Jae-Hyung[*1,2] ([1]Department of Physics, POSTECH, [2]APCTP)

H9.04* [09:18 - 09:30]
Anomalous relaxation of a Brownian particle in active bath / BAHNG Sehoon[1], GHIM Cheol-Min[*1] ([1]Department of Physics, UNIST)

H9.05 [09:30 - 09:42]
A stochastic target search by active particle / GO Byeong Guk[1], JEON Euijin[2], KIM Yong Woon[*1] ([1]Department of Physics, KAIST, [2]Department of Physics, Technion, Israel)

H9.06 [09:42 - 09:54]
The Jarzynski's equality for the microcanonical ensemble / KIM Yong Woon[*1], PARK Hyogeon[1], YI Ju Yeon[2] ([1]Department of Physics, KAIST, [2]Department 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] ([1]Department of Physics Education, Kyungpook National University)

H10.02 [08:54 - 09:18]
Oxide semiconductor $BaSnO_3$ as a new platform for perovskite oxide electronics / CHAR Kookrin[*1] ([1]Department of Physics and Astronomy, Seoul National University)

H10.03 [09:18 - 09:42]
High quality 2DEG in $BaSnO_3$ based system / KIM Bongju[*1], KIM Seonghyeon[2], GUNKEL Felix[3,4], CHO Hyeongmin[2], LEE Jaehyeok[2], CHAR Kookrin[2] ([1]Center for Correlated Electron Systems, Seoul National University, [2]Institute of Applied Physics, Department of Physics and Astronomy, Seoul National University, [3]PGI-7, Peter Gruenberg Institute, Germany, [4]JARA-FIT, Juelich-Aachen Research Alliance, Germany)

H10.04 [09:42 - 10:06]
Oxide Superlattices and Hybrid Heterostructures / CHOI Woo Seok*1 ([1]Department 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 ([1]Department 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 ([1]POSTECH)

H11.03 [09:42 - 09:54]
Superconducting diode effects in vertical van der Waals heterostructures / KIM Nam-Hee[1], JUNG Suyong*1 ([1]Interdisciplinary Materials Measurement Institute, KRISS)

H11.04 [09:54 - 10:06]
Tunable Josephson diode effects in Al/InAs SQUID / SHIN Junghyun[1], LEE Joon Sue[2], PARK Sunghun[3], RYU Younghun[4], CHA Jinwoong[5], SHIM Seung-Bo[5], SUH Junho*1 ([1]Department of Physics, POSTECH, [2]Department of Physics and Astronomy, University of Tennessee, Knoxville, USA, [3]Center for Theoretical Physics of Complex Systems, IBS, [4]Department of Physics, KAIST, [5]Quantum Technology Institute, KRISS)

[H12-ap] Focus: Magnon Spintronics I
2023. 10. 27 Friday 08:30~10:06
Room: 301
좌장 : **제승근** 전남대학교
Chair: JE Soong-Geun (Chonnam National University)

H12.01 [08:30 - 08:54]
Spin-orbit torques by magnon dissipation / HAN Dong-Soo*1 ([1]Center for Spintronics, KIST)

H12.02 [08:54 - 09:18]
Low-dissipation and ultrafast transport of antiferromagnetic magnons over nm-distances / LEE Kyusup*1 ([1]Department of Physics, Pukyong National University)

H12.03 [09:18 - 09:42]
Intrinsic Orbital Hall Effect of Magnons / GO Gyungchoon[1], AN Daehyeon[1], LEE Hyun-Woo[2], KIM Se Kwon*1 ([1]Department of Physics, KAIST, [2]Department 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 Tomas[3], LIM Jinho[4], CECIL Thomas W[5], PEARSON John E[1], DIVAN Ralu[6], KWOK Wai-Kwong[1], WELP Ulrich[1], HOFFMANN Axel[4], KIM Kab-Jin*2, NOVOSAD Valentine[1], LI Yi[1] ([1]Materials Science Division, Argonne National Laboratory, USA, [2]Department of Physics, KAIST, [3]Physics Division, Argonne National Laboratory, USA, [4]Department of Materials Science and Engineering and Materials Research Laboratory, University of Illinois, Urbana-Champaign, USA, [5]High Energy Physics Division, Argonne National Laboratory, USA, [6]Center for Nanoscale Materials, Argonne National Laboratory, USA)

H12.05 [09:54 - 10:06]
Nonlocal Relaxation of Magnons via Ballistic Acoustic Phonons / AN Kyongmo*1 ([1]Institute 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 WSe_2 field-effect transistors / KIM Sung Ha[1], LEE Seong Yeon[1], YEE Ki Ju*1 ([1]Department of Physics, Chungnam National University)

H13.02* [08:42 - 08:54]
Novel quantum states by steering ultrafast mixing of exciton and Floquet states / PARK Hyosub[1], LEE JaeDong*1 ([1]Department 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 Young[2], LEE Kang-nyeoung[3], KIM Dong Hyeon[2,3], LEE Chae Won[3], JEONG Hyung Mo[1,4], JEONG Mun Seok[*2] ([1]Department of Smart Fab. Technology, Sungkyunkwan University, [2]Department of Physics, Hanyang University, [3]Department of Energy Science, Sungkyunkwan University, [4]School of Mechanical Engineering, Sungkyunkwan University)

H13.04* [09:06 - 09:18]

Chiral transport of valley-polarized exciton-polaritons in h-BN/WS_2/h-BN waveguide cavities / JUNG Jin-Woo[1], KIM Jiyeon[1], LEE Young-Jun[1], KANG Jan-Won[2], CHO Chang-Hee[*1] ([1]Department of Physics and Chemistry, DGIST, [2]Department of Physics, Mokpo National University)

H13.05* [09:18 - 09:30]

Approach for reproducible and high-quality perovskites in workable temperature region / KIM Sung Hun[1], HEO Dong Gwon[1], LEE Hong Seok[*1] ([1]Department of Physics, Jeonbuk National University)

H13.06 [09:30 - 09:42]

Defect-related strain and doping characteristics in monolayer MoS_2 / LEE Taegeon[1], LEE Seung Won[2], AHN Ji-Hoon[2], YOON Young-Gui[3], RHO Heesuk[*1] ([1]Department of Physics, Jeonbuk National University, [2]Department of Materials Science and Chemical Engineering, Hanyang University ERICA, [3]Department of Physics, Chung-Ang University)

H13.07* [09:42 - 09:54]

Exciton-polariton condensation in perovskite microwire cavities / JEONG Hyeonjong[1], CHOI Hyeon-Seo[1], PARK Jung-Gue[2], KANG Jang-Won[2], CHO Chang-Hee[*1] ([1]Department of Physics and Chemistry, DGIST, [2]Department of Physics, Mokpo National University)

H13.08 [09:54 - 10:06]

Manipulating Rashba Excitons in Ferroelectric Two-Dimensional Perovskites / LEE Taejin[1], CHOI Hyeon-Seo[1], JEONG Hyeonjong[1], LEE Young-Jun[1], JUNG Jin-woo[1], CHO Chang-Hee[*1] ([1]Department 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 $CrPS_4$ / HONG Heemyoung[1], YANG Heejun[*1] ([1]Department of Physics, KAIST)

H14.02* [08:42 - 08:54]

Ultrathin Skin-attachable TiO_2 Synaptic Array Integrated with an Organic Proximity Sensor for Real-time Finger Gesture Recognition / CHO Haein[1], LEE Inho[2], JANG Jingon[1], KIM Jae-hyun[2], LEE Hanbee[3], PARK Sungjun[2,3], WANG Gunuk[*1,4,5] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Intelligence Semiconductor Engineering, Ajou University, [3]Department of Electrical and Computer Engineering, Ajou University, [4]Department of Integrative Energy Engineering, Korea University, [5]Center for Neuromorphic Engineering, KIST)

H14.03* [08:54 - 09:06]

Vertical ZnO Nanotubes on Graphene Films for Applications in Flexible Photonic Synapses / JO Hyerin[1], ALI Asad[2], OH Wonsuk[1], AN Sungjin[3], YI Gyu-Chul[2], OH Hongseok[*1] ([1]Department of Physics, Soongsil University, [2]Department of Physics and Astronomy, Seoul National University, [3]Department 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 Yongjun[1], JANG Seonghoon[1], JANG Jingon[1], HAM Seonggil[1], CHOI Sanghyeon[1], JEON Jihoon[3], KIM Seong Keun[3], WANG Gunuk[*1,2,4] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Integrative Energy Engineering, Korea University, [3]Electronic Materials Research Center, KIST, [4]Center for Neuromorphic Engineering, KIST)

H14.05 [09:18 - 09:30]

Artificial synaptic device utilizing 2D heterostructure of PtS_2 and CrSBr for neuromorphic applications / EOM Jonghwa[*1], KHAN Muhammad Asghar[1], ASIM Muhammad[1], YIM Seongbin[1] ([1]Department of Physics & Astronomy, Sejong University)

H14.06* [09:30 - 09:42]

Excitation Spot Size Dependence of Photonic and Exciton Polaritonic Modes in GaN Microwire / CHO Yong Hoon[*1], KIM Gwang[1], SONG Hyun Gyu[2] ([1]KAIST, [2]Department 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 $FAPbI_3/SnO_2$ Interface via Fermi Level Tuning in Highly Efficient Perovskite Solar Cells / KIM Jihyun[1], JO William[*1,2] ([1]Department of Physics, Ewha Womans University, [2]New 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] ([1]Department of Physics, UNIST, [2]Quantum Photonics Institute (QPI), UNIST, [3]Department 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 Jung[1], LEE Jin Hee[1], PARK Yejoo[2], SONG Aeran[3], CHUNG Kwun-Bum[3], WALKER Bright[2], SEO Jung Hwa[*1] ([1]Department of Physics, University of Seoul, [2]Department of Chemistry, Kyung Hee University, [3]Division 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 Younjoo[3], YOO Jisu[3], SHIN Woojin[1,2], YI Yeonjin[*3], LEE Hyun Bok[*1,2] ([1]Department of Physics, Kangwon National University, [2]Institute of Quantum Convergence Technology, Kangwon National University, [3]Department 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 Gayoung[1], ROH Kwangdong[*1] ([1]Department of Physics, Ewha Womans University)

H15.06 [09:30 - 09:42]

Practical issues on all-polymer passive daytime radiative cooling paint / HONG Dongpyo[1], LEE Yong Joon[1], LEE In-Sung[1], JEON Ok Sung[1], LEE Se Hun[1], PARK SangYoon[2], YOO Young Joon[*1] ([1]Advanced Institutes of Convergence Technology, [2]School of Electronic Engineering, Kyonggi University)

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[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 ([1]Division of Display and Semiconductor Physics, Korea University)

H16.02 [08:54 - 09:18]

Spin group and Space group: a necessary ingredient for altermagnetism / RHIM Sonny*1, PARK Minkyu[1,2], HAN GuiHyun[1] ([1]Department of Physics, University of Ulsan, [2] 양자스핀팀 Quantum Spin Team, KRISS)

H16.03 [09:18 - 09:42]

Spin Coherence Length of Antiferromagnets / LEE Kyung-Jin*1 ([1]Department of Physics, KAIST)

H16.04 [09:42 - 10:06]

Broken Kramers' Degeneracy in Altermagnetic MnTe / KIM Changyoung*1 ([1]Department of Physics and Astronomy, Seoul National University)

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 ([1]Education, Curtin University, Australia)

I1.02 [11:06 - 11:42]
Evaluating secondary student conceptual understanding of light behaviour / ADAMS Kyla Ann*1 ([1]Department 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 ([1]Department 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 ([1]Department 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 Hyun[2], KIM Yeong Gyun[4], LEE Kang Young[2], LEE Kyong Sei[3], PARK Byung Do[2], SOHN Jong Yoon[2], YOO Seong Moon*1, YOON Chun Sil[2] ([1]Department of Physics,

Sungkyunkwan University, [2]Department of Physics Education and RINS, Gyeongsang National University, [3]CENuM, Korea University, [4]Department of Science Education, Gwangju National University of Education)

I2.03 [10:54 - 11:06]
Observation of Collider Muon Neutrinos with the SND@LHC Experiment / KIM Yeong Gyun*[1], CHOI Ki-Young[2], KIM Sung Hyun[3], LEE Kang Young[3], LEE Kyong Sei[4], PARK Byung Do[3], SOHN Jong Yoon[3], YOON Chun Sil[3] ([1]Gwangju National University of Education, [2]Department of Physics, Sungkyunkwan University, [3]Department of Physics Education & Research Institute of Natural Science, Gyeongsang National University, [4]Department of Physics, Korea University)

I2.04 [11:06 - 11:18]
Status of JSNS^2-I & JSNS^2-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] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Physics, Chonnam National University, [3]Division of Science Education, Jeonbuk National University, [4]Laboratory for High Energy Physics, Dongshin University, [5]Department of Physics and Optical Science, GIST, [6]Department of Physics, Kyungpook National University, [7]Department of Physics, Kyung Hee University, [8]Department of Fire Safety, Seoyeong Univsersity, [9]School of Liberal Arts, Seoul National University of Science and Technology, [10]Department of Physics, Soongsil University)

I2.05 [11:18 - 11:30]
Status of SUB-Millicharge ExperimenT (SUBMET) / YOO Jae Hyeok*[1], WON Eunil[1], CHOI Suyong[1], CHO Sungwoong[1], MOON Hyunki[1], JEONG Hoyong[1], SEO Chang Hyun[1], HWANG Insung[1] ([1]Department of Physics, Korea University)

I2.06* [11:30 - 11:42]
Module construction and tests for SUBME / YOO Jae Hyeok*[1], WON Eunil[1], CHOI Suyong[1], CHO Sungwoong[1], MOON Hyunki[1], JEONG Hoyong[1], SEO Chang Hyun[1], HWANG Insung[1] ([1]Department of Physics, Korea University)

I2.07 [11:42 - 11:54]
Study of $B^0 \rightarrow l^+ \tau^-$ rare decay at Belle experiment / KIM Kyungho[1], CHO Kihyeon*[1,2] ([1]Computational Science Team, KISTI, [2]UST, KISTI)

I2.08 [11:54 - 12:06]
Status of BESIII experiment and Korean-BESIII group activities / CHOI Soo Kyung*[1], JANG Eunji[2], JEONG Ji Hyeok[1] ([1]CAU-HEP, Chung-Ang University, [2]Department 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 ([1]Department 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 Dojin[1] ([1]Department 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 ([1]Department 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 ([1]Department 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 Simlulation Results of a Magnetic Bottle to Offset Reduced Generation Efficiency from a Thin Target / LEE Junghyun*1, BYEON HeeJeong[1], DO HyeonSeok[1], HUH Changgi[1], KIM Bobae[1], LEE Sehwook[1], HAUPTMAN John M[2], RYU MinSang[3] ([1]Department of Physics, Kyungpook National University, [2]The Center for High Energy Physics, Kyungpook National University, [3]Department 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 Jooyoung[1], KIM Hong Joo*1 ([1]Department of Physics, Kyungpook National University)

I3.07* [11:42 - 11:54]

Efficiency analysis of GEM detector with boron converter / KIM WooJong[1], PARK Inkyu*1 ([1]University of Seoul)

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I3.08* [11:54 - 12:06]
Pulse Shape Discrimination of Organic Scintillation in a Phoswich Detector / LEE Yujin*[1], HA Chang Hyon[1], KIM Jinyoung[1] ([1]Department 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 / PARKINSON David*[1] ([1]Centre 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 Lu[3] ([1]Sogang University, [2]CQUeST, Center for Quantum Spacetime, [3]APCTP)

I4.03 [10:54 - 11:06]
Formation of the first supermassive black holes in ultralight dark matter halos / LEE Jae-Weon*[1] ([1]Department 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] ([1]Department of Physics, University of Seoul, [2]Department of Physics, University of Seoul, Natural Science Research Institute, [3]Department 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] ([1]College of General Education, Kookmin University)

I4.06 [11:30 - 11:42]
Cauchy horizon from numerical computations / YEOM Dong-han*[1] ([1]Department 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] ([1]Dongguk University)

I4.08 [11:54 - 12:06]
Steady heat flow around a black hole / KIM Hyeong-Chan[*1] ([1]School 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-Chan[3], KIM Sung-Won[4], LEE Bum-Hoon[1,2] ([1]Center for Quantum Spacetime, Sogang University, [2]Department of Physics, Sogang University, [3]School of Liberal Arts and Sciences, Korea National University of Transportation, [4]Department 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] ([1]Department of Materials Science and Engineering, Yonsei University)

I5.02* [10:54 - 11:06]
Terahertz field-induced transparency in graphene-integrated slot antennas / JI Gangseon[1], LEE Hyoung-Taek[1], KIM Hwanhee[1], KIM Dai-Sik[1], CHOI Geunchang[*2], PARK Hyeong-Ryeol[*1] ([1]Department of Physics, UNIST, [2]School 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 Seunghyun[1], JEONG Daseul[1], KESARIMANGALAM Sriram[2], WESTERLUND Fredrik[2], KIM Kyoung-Ho[1], KANG Byeongwon[1], CHEN Shang-zhi[3], JONSSON Magnus[3], KANG Evan S Hyunkoo[*1] ([1]Department of Physics, Chungbuk National University, [2]Department of Life Sciences, Chalmers University of Technology, Sweden, [3]Department of Science and Technology , Linkoping 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-Taek[1], KIM Jeonghoon[1], PARK Hyeong-Ryeol[*1] ([1]Department of Physics, UNIST)

I5.05* [11:30 - 11:42]
Electron-hole decoherence accessed by high harmonic generation in monolayer MoS_2 / BAE Gimin[1], LEE JaeDong[*1] ([1]Department of Physics and Chemistry, DGIST)

I5.06 [11:42 - 11:54]
Effective design of scattering-based reservoir computing for efficient real-time intelligence / KIM Geon[1], LEE KyeoReh[1], PARK YongKeun[*1] ([1]Department of Physics, KAIST)

I5.07* [11:54 - 12:06]
Terahertz Wave Applications via Electrically Tunable Graphene Metasurface / JEONG Sodam[1], PARK Hyunwoo[1], PARK Hyeongi[1], BAEK Soojeong[2], KIM Teun-Teun[*1] ([1]Department of Physics, University of Ulsan, [2]Mechanical 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] ([1]Korea University, Sejong)

I6.02 [10:54 - 11:18]
KOMAC MeV-grade Accelerators and their Applications / KIM Han Sung[*1] ([1]KOMAC, 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] ([1]PAL-XFEL, Pohang Accelerator Laboratory)

I6.04 [11:42 - 12:06]
Industrial applications using small-scale electron accelerators / CHAE Moon-sik[*1], LEE Jaehyun[1], PARK Jae Yeon[1], KIM Yujong[1] ([1]Radiation Fusion Technology Research Division, KAERI)

[I7-nu] Nuclear reaction and Hadron physics

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

Room: 607

좌장 : **천명기** 숭실대학교

Chair: CHEOUN Myung Ki (Soongsil University)

I7.01 [10:30 - 10:42]

Suppression of the elastic scattering cross section for ^{17}Ne + ^{208}Pb system / HEO Kyoungsu[*1], CHEOUN Myung Ki[1], SO Woon Young[2], CHOI Ki-Seok[3], KIM Kyungsik[3] ([1]Department of Physics, Soongsil University, [2]Department of Radiological Science, Kangwon National University, [3]School of Liberal Arts and Science, Korea Aerospace University)

I7.02* [10:42 - 10:54]

Status of isospin dependency of collective flow in ^{129,124}Xe + ^{124,112}Sn collisions at 100AMeV / NAM Seon Ho[1], HONG Byungsik[*1] ([1]Department of Physics, Korea University)

I7.03 [10:54 - 11:06]

Cross sections for ^{nat}Zr(n,xn)^{88}Zr and ^{nat}Zr(n,xn)^{89}Zr reactions at neutron energies from 29 to 42 MeV / CHAVAN Vivek Raghunath[2], MOON Dalho[2], HAM Cheolmin[1], OH Seyong[3], PARK Byunghyun[4], BHORASKAR Vasant[2], HONG Seung Woo[*1,2] ([1]Rare Istope Science Project, IBS, [2]Department of Physics, Sungkyunkwan University, [3]KIRAMS, The Korean Institute of Radiological and Medical Sciences, [4]Cooperative 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 YoungJun[1], AHN Jung Keun[*1] ([1]Department of Physics, Korea University)

I7.05 [11:18 - 11:30]

Probing multi-chance fission in proton induced fission of thorium / CHAVAN Vivek Raghunath[2], MOON Dalho[2], OH Seyong[3], PARK Byunghyun[4], BHORASKAR Vasant[2], HONG Seung Woo[*1,2] ([1]Rare Istope Science Project, IBS, [2]Department of Physics, Sungkyunkwan University, [3]KIRAMS, The Korean Institute of Radiological and Medical Sciences, [4]Cooperative Center for Research Facilities , Sungkyunkwan University)

I7.06 [11:30 - 11:42]

Excitation energy of primary fragment in projectile fragmentation / KIM Kyungil[*1] ([1]Institute for Rare Isotope Science, IBS)

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I7.07 [11:42 - 11:54]
Low-energy K^+N scattering experiment at J-PARC / KIM Shin Hyung[1], AHN Jung Keun[*1] ([1]Department of Physics, Korea University)

I7.08 [11:54 - 12:06]
Low-energy $K^-p \to \Lambda\eta$ reactions with the J-PARC E72 detector / YANG Seongbae[*1], TANIDA Kiyoshi[2], HAYAKAWA Shuhei[3], AHN Jung Keun[1], LEE Haein[1] ([1]Department of Physics, Korea University, [2]Advanced Science Research Center, Japan Atomic Energy Agency, Japan, [3]Department of Physics, Tohoku University, Japan)

I7.09* [12:06 - 12:18]
Cross-section Measurement for $K^-p \to K^+\Xi(1535)^-$ Reactions at $\sqrt{s}$ = 2.15 GeV/c² / AHN Jung Keun[*1], KANG Byungmin[1] ([1]Department 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] ([1]Center for Superconducting Quantum Computing System, KRISS)

I8.02 [11:06 - 11:42]
Initial qubit operation runs performed in linear 5-qubit devices in ^{28}Si/SiGe / KIM Dohun[*1] ([1]Department 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] ([1]SAINT, 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 Heejun[2], ESENER Yildiz[2], MCCALL Terika[3,4] ([1]Scientific Computing, Pukyong National University, [2]Department of Information Science, University of North Texas, USA, [3]Department of Biostatistics, Yale School of Public Health, USA, [4]Section 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 JuSeong[2], KIM Kwangsu[3], SON Seung-Woo[1,2] ([1]Department of Applied Physics, Hanyang University, [2]Department of Applied Artificial Intelligence, Hanyang University, [3]Department of Scientific Computing, Pukyong National University)

I9.03* [10:54 - 11:06]

Inter-country Relations Based on Content Consumption Trends in Netflix / LEE Nahyeon[1], LIM Jongsoo[2], JEONG Hyeong-Chai[*1] ([1]Department of Physics and Astronomy, Sejong University, [2]Department 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] ([1]Department of Physics, Pukyong National University, [2]Department of Scientific Computing, Pukyong National University)

I9.05* [11:18 - 11:30]

Population density reveals core-periphery structure in commuting mobility networks / OH Seongkyeong[1], EOM Young-Ho[*1] ([1]Department 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 Yunwoo[1], JUNG Jung-Hoon[1], EOM Young-Ho[*1] ([1]Department of Physics, University of Seoul)

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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 Minjin[2], CHEON SangHyun[3], SON Seung-Woo[*1,5], LEE Mi Jin[*1], LEE Sungmin[4] ([1]Department of Applied Physics, Hanyang University, [2]Research Center for Small Businesses Ecosystem, Inha University, [3]Department of Urban Planning and Design, Hongik University, [4]R&D Center, PhamCADD Co., [5]Department 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] ([1]Sogang 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] ([1]Department of Physics, Pusan National University)

I10.02 [10:54 - 11:18]
Evolution of half-metallic ferromagnetism in (111)-oriented manganite superlattices / FABRIZIO Cossu[1], IGOR Di Marco[2], KIM Heung-Sik[*1] ([1]Department of Physics, Kangwon National University, [2]Institute 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] ([1]Department 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] ([1]Department 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] ([1]Department of Nano Engineering, Sungkyunkwan University, [2]SAINT, Sungkyunkwan University)

I11.03 [11:42 - 11:54]
Solving Crosstalk Problem in Multi-JPA Amplifiers for Axion Search Experiments / UCHAIKIN Sergey V.[*1], KIM Jinmyeong[2], KO Minsu[1,2], IVANOV Boris I.[1], VAN LOO Arjan F.[3,4], NAKAMURA Yasunobu[3,4], OH Seonjeong[1], SEMERTZIDIS Yannis K.[1,2] ([1]Center for Axion and Precision Physics Research, IBS, [2]Department of Physics, KAIST, [3]Center for Quantum Computing (RQC), RIKEN, Japan, [4]Department 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 Jonginn[1], SON Suhan[1,2], SHIN Jeacheol[1], PARK Giung[1,2], ZHANG Kaixuan[1,2], SHIN Young Jae[3], PARK Je-Geun[*1,2], KIM Dohun[*1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Quantum Materials, Seoul National University, [3]SC Devices, PsiQuantum, USA)

I11.05* [12:06 - 12:18]
Observation of bimodal switching current distributions in topological Josephson junctions made of Cd_3As_2 Dirac semimetal nanowire / KIM Rak-Hee[1], JANG Yeongmin[1], MAL Priyanath[1], CHOI Seungkyu[1], WANG Bob Minyu[2], YU Dong[2], DOH Yong-Joo[*1] ([1]Department of Physics and Photon Science, GIST, [2]Department 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] ([1]Seoul National University)

I12.02 [10:54 - 11:18]
Magnonic Characteristics of Epitaxial Cr/Fe Bilayers / KIM Sanghoon*[1] ([1]Department 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-Hee[1], VAN Phuoc Cao[2], JEONG Jong Ryul[2] ([1]Department of Physics, KAIST, [2]Department 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 Mujin[1], SONG Moojune[1], PARK Albert Min-Gyu[1], LEE Donghyeon[2], KIM Sanghoon[2], KIM Kab-Jin*[1] ([1]Department of Physics, KAIST, [2]Department 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 Bojong[1], KIM Junyoung[1], JEON Haechan[1], KIM Sang-Koog*[1] ([1]Seoul 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] ([1]Electronic 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 Junsik[1], KIM Hyun-Joon[1], HONG Seog Woo[1], PARK Joon-Yong[1], KIM Dong Kyun[1], KIM Dongho[1], SONG Sanghoon[1], JEONG Jonghyun[2], KIM Yongchan[3], YEOM Min Jae[3], YU Min-Chul[1], KIM Joosung[1], PARK Younghwan[1], SHIN Dong-Chul[1], KANG Sungjin[1], SHIN Jai-Kwang[1], YOON Euijoon[4], LEE Hojin[3], YOO Geonwook[3], JEONG Jaewook[2] ([1]Device Research Center, Samsung Advanced Institute of Technology, [2]School of Information and Communication Engineering, Chungbuk National University, [3]School of Electronic Engineering, Soongsil University, [4]Department 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 ([1]EUV 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 ([1]Pixel Development Team, Samsung System LSI)

I13.05 [12:06 - 12:30]
Artificial sensory system for personal care products / LEE Jeong Yu*1, JEONG Seong Min[1], NAM Jin[1] ([1]Basic Research & Innovation Division, Amorepacific R&I Center)

[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 ([1]KIST)

I14.02 [11:06 - 11:42]
Next Generation Spintronic Device / HWANG Chan Yong*1 ([1]Institute of Quantum Technology, KRISS)

I14.03 [11:42 - 12:18]
Probabilistic computing based on random MTJs for invertible logics / LEE Ouk-Jae*1, HONG Seokmin[1] ([1]KIST)

[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 Jaeyong[1], KIM Yeeun[1], JUNG Young-Kwang[2], AHN Heebeom[1], KIM Inha[1], REO Youjin[3], LIM Hyungbin[1], LEE Changjun[1], LEE Jonghoon[1], KIM Yongjin[4], STRANKS Samuel D.[2,5], SIRRINGHAUS Henning[5], NOH Yong-Young[3], KANG Keehoon[4], LEE Takhee[*1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Chemical Engineering and Biotechnology, University of Cambridge, UK, [3]Department of Chemical Engineering, POSTECH, [4]Department of Materials Science and Engineering, Seoul National University, [5]Cavendish 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 Chanhui[3], CHA Eunseo[3], KANG Donghee[1,2], PARK Jeehong[1,2], BLUMSTENGEL Sylke[4], MORALES Nicolas Zorn[4], LIST-KRATOCHVIL Emil J.W.[4], CHO Sang Wan[1], LEE Hyunbok[*5], PARK Soohyung[*3], YI Yeonjin[*1,2] ([1]Department of Physics, Yonsei University, [2]Van der Waals Materials Research Center, Yonsei University, [3]Advanced Analysis and Data Center, KIST, [4]Humboldt-Universität zu Berlin, Institute für Physik, Institute für Chemie & IRIS Adlershof, Germany, [5]Department of Physics, Kangwon National University)

I15.03 [10:54 - 11:06]

A Graphene Neuron based Spiking Neural Network / KIM Chang-Hyun[*1], UDAYA MOHANAN Kannan[1] ([1]School 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 Suredra[1], YOO Hocheon[1], KIM Chang-Hyun[*1] ([1]School 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] ([1]Department of Mechanical Engineering, MIT, USA)

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

Drop-based microfluidics / WEITZ David A*[1] ([1]Department of Physics and SEAS, Harvard University, USA)

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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 ([1]Department of Physics Education, Kyungpook National University)

J1.02 [13:36 - 14:12]
물리교육론 수업에 대한 반성과 개선방안 모색 / JI Young Rae*1 ([1]Department of Physics Education, Sunchon National University)

J1.03 [14:12 - 14:48]
이론/연구와 수업 실행간 연결을 위한 물리교육 교과활동 / PARK Jong Won*1 ([1]Chonnam 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 Svetlana[3], BARYSHEVSKY Vladimir[3], SYTOV Alexei*[1,2] ([1]Computational Science Team, KISTI, [2]Ferrara Division, INFN, Italy, [3]Laboratory 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 Yun[1], CHO Guk[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Haeun[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Sungwon[1],

KIM Tongil[1], PARK Hyesung[1], DO Hyunsuk[2], HUH Changgi[2], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Min Sang[3], KO Sanghyun[4], KWON Hyejin[4], KIM Doyeong[5], LEE Hyupwoo[5], LEE Jason[5], LEE Yunjae[5], SON Youngwan[5], KIM Dongwook[6], KWON Nahye[6], LEE Woochan[6], KIM Yongjun[7], LIM Sanghoon[7], RYU Jaehyeok[7], BAE Joonsuk[8], KIM Beomkyu[8], LEE Hyungjun[8], PARK Hyebin[8], JANG Yoonjun[9], JEONG JinYong[9], KIM Minsuk[9], CHOI Suyong[10], CHEON Byunggu[11] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]Center for High Energy Physics, Kyungpook National University, [4]Department of Physics, Seoul National University, [5]Department of Physics, University of Seoul, [6]Severance, Yonsei University, [7]Department of Physics, Pusan National University, [8]Department of Physics, Sungkyunkwan University, [9]Department of Physics, Gangneung Wonju National University, [10]Department of Physics, Korea University, [11]Department 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 Laura[2], CHO Kihyeon[*1] ([1]UST, KISTI, [2]Ferrara, INFN, Italy, [3]Computational Science Team, KISTI)

J2.04* [13:36 - 13:48]

KOTO 실험의 표본형 열량계 전산모사 연구 / PARK Jeongwoo[1], KIM Eun Joo[*1], LIM Geiyoub[2] ([1]Division of Science Education, Jeonbuk National University, [2]IPNS, KEK, Japan)

J2.05 [13:48 - 14:00]

Lineshape analysis of a new narrow peak structure near the Λη threshold in the pK^- system at Belle / YANG Seongbae[*1], TANIDA Kiyoshi[2], AHN Jung Keun[1] ([1]Department of Physics, Korea University, [2]Advanced Science Research Center, Japan Atomic Energy Agency, Japan)

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[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 Hall[2] ([1]High Energy Physics Center, Chung-Ang University, [2]Department 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 Taeyeong[1] ([1]Department of Physics, Chungnam National University)

J3.03 [13:24 - 13:36]
Dark Z boson and the W boson mass anomaly / DAVOUDIASL Hooman[1], ENOMOTO Kazuki*[2], LEE Hye-Sung[2], LEE Jiheon[2], MARCIANO William Joseph[1] ([1]Department of Physics, Brookhaven National Lab, USA, [2]Department of Physics, KAIST)

J3.04 [13:36 - 13:48]
Uncovering doubly charged scalars with dominant three-body decays using machine learning / FLACKE Thomas*[1] ([1]Center 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] ([1]Department 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 Sik[3], LEE Chang Hyeon[4], SHIN Chang Sub*[4] ([1]Theory Division, Fermilab, USA, [2]Department of Physics, University of Illinois at Chicago, USA, [3]Department of Physics, Pusan National University, [4]Department 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] ([1]Center for Theorerical 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] ([1]Department 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] ([1]CQUeST, Sogang University)

J4.03* [13:24 - 13:36]
Atomic structure characterization of potential coating material of A+LIGO using ePDF and FEM / KIM Minhyo[1], LEE Kyung-ha[*1] ([1]Department of Physics, Sungkyunkwan University)

J4.04 [13:36 - 13:48]
Classification and Analysis of KAGRA Glitch / JUNG Kihyun[*1], KIM Young-Min[2], KWAK Kyujin[1] ([1]College of Natural Science / Department of Physics, UNIST, [2]이론천문센터, 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] ([1]Department 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 Maryam[1], KIM Seyong[1] ([1]Department of Physics and Astronomy, Sejong University)

J4.07 [14:12 - 14:24]
Detecting Gravitational Wave Background by Electromagnetic Cavity / PARK Chan[*1], IM Sang Hui[1], AHN Danho[2] ([1]Center for Theoretical Physics of the Universe, IBS, [2]Center for Axion and Precision Physics Research, IBS)

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[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 Jaeyong[1] ([1]Pohang Light Source, POSTECH)

J6.02 [13:24 - 13:48]
Real-Time XAFS beamline at Korea-4GSR and its applications / KWON Ik Seon*[1] ([1]Beamline 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] ([1]4GSR 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 joo[1], KIM Ki Jeong[2], SHIN Seung Hwan*[1] ([1]Korea University, Sejong, [2]Pohang 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 spctroscopy projects at CENS / KIM Yung Hee*[1] ([1]Center 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 Byungmin[1], KIM Young Jin[2], LEE Hyo Sang[2], LEE Chung Soo[2] ([1]Department of Physics, Korea University, [2]Rare 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 Jeongsu[1], KIM Yongjun[1] ([1]Department of Physics, Pusan National University)

J7.04 [13:36 - 13:48]
Module assembly of segmented sampling calorimeter for the KOTO experiment / LIM SangHoon[*1], KIM MinJae[1], CHOI Changhwan[1], PARK Jinhyun[1], HONG Yoonha[1] ([1]Department of Physics, Pusan National University)

J7.05* [13:48 - 14:00]
Early investigation of the MVTX commissioning / KIM Jaehyun[1], KWON Youngil[*1] ([1]Department 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 SangHoon[2], OH JongHo[2], KIM Beomkyu[3], LEE Hyungjoon[3], BAE Joonsuk[3] ([1]Inha University, [2]Department of Physics, Pusan National University, [3]Department of Physics, Sungkyunkwan University)

J7.07* [14:12 - 14:24]
DPTS test beam analysis for ALICE ITS3 / LIM SangHoon[*1], JANG Hangil[1] ([1]Department of Physics, Pusan National University)

J7.08* [14:24 - 14:36]
Development tracking algorithm of AT-TPC at HIMAC / KIM Yongsun[*1], CHEON Yechan[1], LEE Seunghwan[1], HWANG Seonggeun[1] ([1]Sejong University)

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[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 Chan[1], GWAK Geunhee[1], YOON Young-Do[1], RA Young-Sik[*1] ([1]Department of Physics, KAIST)

J8.02 [13:36 - 14:12]
Quantum computation using Rydberg atom graphs / AHN Jaewook[*1] ([1]Department of Physics, KAIST)

J8.03 [14:12 - 14:48]
Progress of neutral atom quantum computing at KRISS / MUN Jongchul[*1] ([1]KRISS)

[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 Cook[1], KAHNG Byungnam[*1] ([1]Department of Energy Engineering, KENTECH)

J9.02 [13:12 - 13:24]
Renormalization Group-Motivated Data Anaysis / JHO Yong Seok[*1], LEE YeongKyu[1] ([1]Department 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 YeongKyu[1], JHO Yong Seok[*1] ([1]Department of Physics, Gyeongsang National University)

J9.04 [13:36 - 13:48]
Cargo velocity hauled by multiple kinesins in crowded environments / HUANG Ya-Ting[1], JUN Yonggun[*1] ([1]Department 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] ([1]Department 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] ([1]Center 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 U[1], KIM Jaeup[*1] ([1]Department 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 $TaCoTe_2$ / SHON Won Hyuk[*1], JI Sungdae[1], LEE Seongsu[1], KIM Kyoo[1], KIM Jaewook[1], KO Kyung-tae[2], KIM Jeong-kyu[3] ([1]Advanced Quantum Materials Research Center, KAERI, [2]Multipurpose Synchrotron Radiation Construction Project, KBSI, [3]Center for Complex Phase Materials, Max Planck Korea/POSTECH)

J10.02 [13:12 - 13:24]

Using Cr_2X_3 (X= S, Se, Te) a non-vdW material as a base material for discovery of new magnetic materials / BERHE Yisehak Gebredingle[1], KIM Nammee[*1], KIM Heesang[*1] ([1]Department 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] ([1]IBS-CINAP, Sungkyunkwan University)

J10.04 [13:36 - 13:48]

Observation of unconventional room-temperature carriers in the triangular-lattice Mott insulator $TbInO_3$ / JUNG TaekSun[2], XU Xianghan[3], KIM Jaewook[1], KIM Beom Hyun[4], SHIN Hyun Jun[2], CHOI Young Jai[2], MOON Eun-Gook[*5], CHEONG Sang-Wook[3], KIM Jae Hoon[*2] ([1]Advanced Quantum Materials Research Center, KAERI, [2]Department of Physics, Yonsei University, [3]Department of Physics and Astronomy, Rutgers University, USA, [4]School of Computational Sciences, KIAS, [5]Department 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-Sung[1], LEE Seonghyub[1], CHANG Jun-Young[1], KIM Minhwan[1], YOON Jaesung[1], SHIN Jiho[1], SHIM Wooyoung[1] ([1]Department of Physics, Seoul National University)

J10.06 [14:00 - 14:12]

Electronic structures and spin-defect states in quasi-one-dimensional $MoBr_3$ / PILLALA Karuna Kumari[2], PARK Se Young[*1] ([1]Department of Physics, Soongsil University, [2]Department of Physics and Origin of Matter and Evolution of Galaxies (OMEG) Institute, Soongsil University)

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J10.07 [14:12 - 14:24]
Investigation of Magnetic and Optical properties of intrinsic bulk $Ga_{0.50}V_{0.50}As$ for Transparent Spintronics Applications / KHAN Imran*[1], HONG Ji Sang*[1] ([1]Department 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 Wooin[1], KIM Dowook[1], KIM Min Joong[1], HER Sung-Hyuk[4], KIM Kyoo[3], CHOI Si-Young[4], KIM Tae-Hwan[1], KIM Jae-Young[2], YEOM Han Woong[1,2], KIM Jun Sung*[1,2] ([1]Department of Physics, POSTECH, [2]Center of Artificial Low Dimensional Electronic Systems, IBS, [3]KAERI, KAERI, [4]Department 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 Haechan[1], KIM Bojong[1], KIM Junyoung[1], BHOI Biswanath[1], KIM Sang-Koog*[1] ([1]Seoul National University)

J11.03 [13:24 - 13:36]
Order-Disorder Charge Density Wave Phase Transition in the Kagome Metal CsV_3Sb_5 / WANG Chongze[1], LIU Liangliang[2], WANG Bing[3], LI Guoqiang[3], BAI Ying[3], JIA Yu[2], CHO Jun Hyung*[1] ([1]Department of Physics, Hanyang University, [2]Key Laboratory for Special Functional Materials of the Ministry of Education, Henan University, China, [3]School 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 Choongjae[2], KIM Jimin[1,2], KANG Min Gu[3], PARK Jae-Hoon*[1,2] ([1]Department of Physics, POSTECH, [2]Center for Complex Phase of Materials, Max Planck POSTECH Korea Reseach Initiative, [3]Department of Physics, MIT, USA)

J11.05* [13:48 - 14:00]
Ultrafast dynamics of charge ordered states in $Ir(Te,Se)_2$ / GAO Hongchen[1], SINGH Palwinder[1], RULI Fardiman[1], OH Yoon Seok[2], WON Choongjae[3], CHEONG Sang-Wook[4],

KIM Kyungwan*1 ([1]Chungbuk National University, [2]Department of Physics, UNIST, [3]Department of Physics, POSTECH, [4]Department of Physics, Rutgers University, USA)

J11.06* [14:00 - 14:12]
Interplay between linear and nonlinear couplings in non-equilibrium steady states / PARK Geonsu[1], MOON Eun-Gook*1 ([1]Department 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 Taewon[1], SUKARKAN Supalert[1] ([1]Department of Physics, Hanyang University)

J11.08 [14:24 - 14:36]
Emergent inductance from spin fluctuations in strongly correlated magnets / OH Taekoo*1, NAGAOSA Naoto[1] ([1]Center 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)

J

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 ([1]Department of Physics, Ajou University, [2]Department 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 Uijin[1], LEE Jaewook[1], PARK Taejoon[1], SEO Hosung*1 ([1]Department 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 Jieun[1], LEE Hye In[1], KIM Hyerin[1], KIM Hyunsoo[1], YUM Dahyun[1], CHOI Taeyoung*1 ([1]Department of Physics, Ewha Womans University)

J12.04* [13:36 - 13:48]
Studies of polarization-dependent cooling of trapped Yb ions / KIM Hyunsoo[1], LEE Hye In[1], KIM Hyerin[1], YOO Jieun[1], YUM Dahyun[1], CHOI Taeyoung[*1] ([1]Department of Physics, Ewha Womans University)

J12.05* [13:48 - 14:00]
Optimization for Optical Setup for Trapping Yb^{171+} in a Blade Trap / CHOI Taeyoung[*1], LEE Hyein[1], KIM Hyerin[1], KIM Hyunsoo[1], YOO Jieun[1] ([1]Department 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 Hyeonsu[1] ([1]Department of Physics, Ajou University)

J12.07* [14:12 - 14:24]
Qubit manipulation of trapped Yb^{+} ions / CHOI Taeyoung[*1], KIM Hyerin[1], YOO Jieun[1], KIM Hyunsoo[1], LEE HYE IN[1] ([1]Department of Physics, Ewha Womans University)

J12.08 [14:24 - 14:36]
Nano-gravimetry for soft matter by using Quartz Tuning Fork sensor / KIM Dong-won[1], LEE Manhee[*1] ([1]Department 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] ([1]Surface & Nano Materials Division, KIMS)

J14.02 [13:36 - 14:12]
Quantum optical quantum computerors and simulators / KIM Yong-Su*1 ([1]Center 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 Soo[1], CHOI Sung-wook[1], NAWAZ Muhammad Mahmood[1], KIM Jooheun[1], KIM Jaeseung[1], KIM Jiseong[1], HIEU Ngo Minh[1], DEVI Uma[1], IRFAN Rana Muhammad[1], KIM Sunam[2], EOM Intae[2], PARK Jaeku[2], SONG Sanghoon[3], CHA Wonsuk[4], JO Wonhyuk[5], PUDELL Jan-Etienne[5], MAD-SEN Anders[5], KIM Hyunjung*1 ([1]Department of Physics, Sogang University, [2]PAL-XFEL, Pohang Accelerator Laboratory, [3]Linac Coherent Light Source, SLAC Nationla Accelerator Laboratory, USA, [4]Advanced Photon Source, Argonne National Laboratory, USA, [5]Materials Imaging and Dynamics, European XFEL)

J15.02* [13:12 - 13:24]
Raman and infrared spectroscopic studies of oxygen defects in $CoNb_2O_6$ / PARK Joohee[1], KO Sojeong[1], LEE Songhee[2], BAE Soungmin[3], KIM Myunghwa[2], YOON Seokhyun*1 ([1]Department of Physics, Ewha Womans University, [2]Department of Chemistry and Nanoscience, Ewha Womans University, [3]Laboratory 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 Sojeong[1], PARK Joohee[1], KIM Myung Hwa[2], KIM Yejin[2] ([1]Department of Physics, Ewha Womans University, [2]Department 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 Yeongjun[1], LEE Dooyong[2], LEE Jisung[1,3], SONG Sehwan[4], LIM Si-Heon[5], HAN Seongheoon[1], KIM Hyun-Ho[5], PARK Sungkyun*1 ([1]Pusan National University, [2]Department of Physics Education, Kyungpook National University, [3]Center for Scientific Instrumentation, Korea Basic Science Institute, [4]Quantum Spin Team, Quantum Technology Institute, KRISS, [5]Department of Energy Engineering Convergence & School of Materials Science and Engineering, Kumoh National Institute of Technology)

J

J15.05 [13:48 - 14:00]
Optoelectronic Synapse Behaviors in Tb^{3+}/Al^{3+} Co-doped $CaSnO_3$ with long persistent luminescence / WI Sang Won[*1], LEE Yun Sang[1] ([1]Department of Physics, Soongsil University)

J15.06* [14:00 - 14:12]
Raman Spectroscopic Study of NZP Family Ceramics at Low Temperatures / KO Seoyeon[1], BAE Soungmin[2], MOCHIZUKI Yasuhide[3], YOON Seokhyun[*1] ([1]Department of Physics, Ewha Womans University, [2]Laboratory for Materials and Structures, Tokyo Institute of Technology, Japan, [3]Department 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 Hyunju[1] ([1]KRICT)

[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 Reseach 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 YoungJun[1], KANG Seoung-Hun[2] ([1]Department of Physics, Kyung Hee University, [2]Materials Science and Technology Division, Oak Ridge National Laboratory, USA)

J16.02* [13:12 - 13:24]
Phonon Decoupling in Brownmillerite $SrFeO_{2.5}$ and $CaFeO_{2.5}$ / JIN Yeongrok[1], LEE Jaekwang[*1] ([1]Department of Physics, Pusan National University)

J16.03 [13:24 - 13:36]
Superconductivity of metastable LaH_2 with partial occupation at ambient pressure / KIM Heejung[1], PARK Ina[2], SHIM J.H.[2], KIM Duckyoung[*3,4] ([1]MPPHC-CPM, Max Plank POSTECH/Korea Research Initiative, [2]Department of Chemistry, POSTECH, [3]Shanghai Branch , Center for High Pressure Science and Technology Advanced Research, China, [4]Division 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 Dameul[1], YOON Mina[2], KWON Young-Kyun[*1] ([1]Department of Physics, Kyung Hee University, [2]Materials 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 Wonzee[1,2], LIM Suim[1,3], YOUN Yong[1], KIM Kihwan[4] ([1]Computational Science and Engineering Laboratory, KIER, [2]Department of Physics, Chungnam National University, [3]Department of Mechanical Engineering, Chungnam National University, [4]Photovoltaics Research Department, KIER)

J16.06 [14:00 - 14:12]

Unconventional hidden Rashba effects in two-dimensional InTe / LEE Sangmin[1,2], KIM Miyoung[2], KWON Young-Kyun[*1] ([1]Department of Physics, Kyung Hee University, [2]Department of Materials Science & Engineering, Seoul National University)

J16.07* [14:12 - 14:24]

Density-functional-based investigation of the electronic structures of $LaInO_3$/$BaSnO_3$ heterostructures / OH Minsik[1,2], CHOI Min Chul[1,2,3], PARK Se Young[*1,2,3] ([1]Department of Physics, Soongsil University, [2]Origin of Matter and Evolution of Galaxies (OMEG) Institute, Soongsil University, [3]Integrative Institute of Basic Sciences, Soongsil University)

J16.08* [14:24 - 14:36]

First-Principles Investigation of Phonon Transport Properties of Monolayer Fluorographene / HAN Seungbin[1], LEE DongKyu[1], LEE Sungwoo[1,2], LEE Gun-Do[1,2], JANG Hyejin[*1,2] ([1]Materials Science and Engineering, Seoul National University, [2]Research Institute of Advanced Materials, Seoul National University)

J

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 ([1]Emerging 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 ([1]Department 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] ([1]Department 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] ([1]Department of Physics, Chungbuk National University)

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

Collider Phenomenology Tutorial – Hands-on / KANG Dong Woo[*1,2], SHIN Seodong[2], PARK Chan Beom[3] ([1]School of Physics, Korea Institue for Adcanced Study, [2]Department of Physics, Jeonbuk National University, [3]Department of Physics, Chonnam National University)

[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 ([1]Sungkyunkwan University)

[TT10-TT16] No session

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] ([1]기초과학연구원 지하실험연구단 부연구단장)

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

물리학자의 청각, AI 그리고 스타트업 / 안강현[*1,2] ([1]충남대학교 물리학과, [2]주식회사 딥히어링 대표이사)

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(APCTP과학문화위원, KAIST 물리학과 교수)
  황정아(APCTP 과학문화위원, KASI 책임연구원)

2023 October 26(Thu) 10:30-11:18

Ⓔ **[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 Hakbeom[1], JEEN Hyoung Jeen[2], LEE Joon Hyuck[2], MOON Yeongdeuk[2], KIM HyunJung[2], CHO Jin Hyung[3] ([1]Research institute, NEXTRON, [2]Department of Physics, Pusan National University, [3]Department of Physics Education, Pusan National University)

P1-ap.102*
Giant hole-doping in 2H-WSe_2 by Ta substitution / CHOI Woojin[1], HWANG Jinwoong[*1] ([1]Department 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 Jungtae[1], LEE Gil Yong[1], LEE Dong Yun[1] ([1]Department of Physics and Astronomy, Sejong University)

P1-ap.104*
Study on ReS_2 homo-bilayers with various structures using optical spectroscopy / JANG Hajung[1], PARK Je Myoung[1], OH Siwon[1], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University)

P1-ap.105*
Influence of AlO_xN_y overlayer on Mobility in 2D FET Channels / NAM Sangwoo[1,2], PARK Beomjin[1], GU Minseon[1], AHN Hanyeol[1], IM Jaehui[1,2], CHANG Young Jun[1,2], HAN Moonsup[*1] ([1]Department of Physics, University of Seoul, [2]Department of Smart Cities, University of Seoul)

P1-ap.106
Ferroelectric $HfZrO_2$-based atomically-thin two-dimensional semiconductor MoS_2 field effect transistor working at low temperature. / SUH Dongseok[*1], JUNG Moonyoung[2] ([1]Department of Physics, Ewha Womans University, [2]Department of Energy Science, Sungkyunkwan University)

P1-ap.107

Research and development of rapid chemical vapor deposition of graphene for efficient production / LEE Dong Yun[1], NAM Jungtae[1], LEE Gil Yong[1], JANG A-Rang[*2], KIM Keun Soo[*1] ([1]Department of Physics and Astronomy, Sejong University, [2]Division of Electrical, Electronic and Control Engineering, Kongju National University)

P1-ap.108*

Te-deficiency induced hidden phase in 1T-$TaTe_2$ thin film / HWANG Jieun[1], HWANG Jinwoong[*1] ([1]Department of Physics, Kangwon National University)

P1-ap.109*

Thickness dependence and laser thinning of $CrPS_4$ / JANG Hyeonseo[1], CHO Suyeon[2], CHO Deok-Yong[*1] ([1]Department of Physics, Jeonbuk National University, [2]Department of Chemical Engineering and Materials Science, Ewha Womans University)

P1-ap.110*

Photoluminescence Excitation Measurements on Quantum Emitters in hBN / LIM Seungjae[1], LEE Jae-Ung[*2] ([1]Department of Physics and Energy Systems Research, Ajou University, [2]Department of Physics, Ajou University)

P1-ap.111*

Enhanced Trapped-Charge Memory Effect in Graphene Field Effect Transistor with Al_2O_3/SiO_2 Gate Insulator Stack / LEE Saehee[2], SONG Wonho[3], HYUN Eunseok[1], PARK Jinyoung[1], JO Jaehyeong[1], KIM Jiwan[1], PARK Kibog[*1,2,4] ([1]Department of Physics, UNIST, [2]Graduate School of Semiconductor Materials and Devices Engineering, UNIST, [3]Medium OLED Panel Design Team, LG Display, [4]Department of Electrical Engineering, UNIST)

P1-ap.112*

Optical Characterization of MoS_2 Transistor by Hyperspectral Imaging / LEE Wooseok[1], LEE Jae-Ung[*1] ([1]Department of Physics, Ajou University)

P1-ap.113*

Optical frequency doubling in WS_2 nanoscroll / HAN Seungman[1], LEE Jae-Ung[*2] ([1]Department of Energy Systems Research, Ajou University, [2]Department 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-Hyeon[1], LIU Yang[2], JI Xiaoqin[2], MAO Lingling[2], JANG Joon Ik[*1] ([1]Department of Physics, Sogang University, [2]Department of Chemistry, Southern University of Science and Technology, China)

P1-ap.115

Direct Visualization of Charge Density Wave Domains in Rippled $GdTe_3$ Using Transmission Electron Microscope / YEON Jieun[1], JANG Myeong Jin[1], LEE Kihyeon[1], KIM Kwanpyo[*1] ([1]Department 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] ([1]Jeju National University)

P1-ap.117*

Optical spectroscopy of MoS_2-WSe_2 heterostructures / CHENDA Vong[1], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University)

P1-ap.118*

Investigation of Electrical Properties of SiP-based Field-Effect Transistor / KIM Taeyeon[1], LEE Yangjin[1], YUN Taekeun[1], KIM Kwanpyo[*1] ([1]Department of Physics, Yonsei University)

P1-ap.119*

Characterization of Atomically Thin HfX_2 (X=S, Se) by Using Low-Frequency Raman Spectroscopy / LY Chhor Yi[1,2], VONG Chenda[1], CHEONG Hyeonsik[*1], SRIV Tharith[2] ([1]Department of Physics, Sogang University, [2]Graduate 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 Jay[1], KIM Wansun[4], PARK Sang Hwa[5], KIM Jaeyeon[4], RHEE Tae Gyu[1,2,3], LEE In Hak[6], KIM Hyuk Jin[1], YANG Sang Mo[5], SOHN Hyunchul[4], CHANG Young Jun[*1,2,3] ([1]Department of Physics, University of Seoul, [2]Department of Smart Cities, University of Seoul, [3]Department of Intelligent Semiconductor Engineering, University of Seoul, [4]Department of Material Science and Engineering, Yonsei University, [5]Department of Physics, Sogang University, [6]Center for Spintronics, KIST)

P1-ap.202*

Ferroelastic phase transition as the origin of Rashba-like band splitting in $MAPbBr_3$ / PARK Joon Woo[1], PARK Jee Hong[1], KIM Kitae[1,2], PARK Soohyung[2], YI Yeonjin[*1] ([1]Department of Physics, Yonsei University, [2]Advanced Analysis Center, KIST)

P1-ap.203

Morphological and Optoelectronic Properties of 2D Semiconductor AgSePh Grown on Varying Substrates / CHUNG Kwang Hyun[1], PARK Joon Woo[1], KIM Junho[1], PARK Jeehong[1], YI Yeonjin[*1] ([1]Department of Physics, Yonsei University)

P1-ap.204

The Analysis of Hole Injection Improvement when Utilizing Metal Fluorides(BiF_3) on Hole Injection Layer / NOH Hyunjung[1], PARK Joonwoo[1], KIM Junho[1], PARK Jeehong[1], YI Yeonjin[*1] ([1]Department of Physics, Yonsei University)

P1-ap.205*

In situ electrical aging system designed for precise research of interfacial layers of optoelectronic devices / ZHAO Yuehuan[1], YI Yeonjin[*1], PARK Jeehong[1], LEE Donggyu[1] ([1]Department of Physics, Yonsei University)

P1-ap.206*

Fabrication of circular and hexagonal shapes of nanotubes by anodic aluminum oxide / KIM Eun-Young[1], CHO Sam Yeon[1], BU Sang Don[*1] ([1]Department of Physics, Jeonbuk National University)

P1-ap.207*

Unraveling the Electronic structure of the 2D/3D Perovskite Heterostructure with halogenated organic spacer cations / LEE Donggyu[1], PARK Jeehong[1], KIM Kitae[1], YI Yeonjin[*1] ([1]Department of Physics, Yonsei University)

P1-ap.208

First-principles study of remote epitaxy through 2D materials on GaN and GaAs wafers / SUNG Dongchul[1], KIM Hyunseok[2], KIM Jeehwan[2], HONG Suklyun[*1] ([1]Department of Physics and Astronomy, Sejong University, [2]Department of Mechanical Engineering, Massachusetts Institute of Technology, USA)

P1-ap.209

Application and Development of Boron Nitride Porous Materials / KIM Hyeonkwang[1], KIM Junghwan[*1] ([1]Department of Materials System Engineering, Pukyong National University)

P1-ap.210

Multicomponent X-ray Shielding Using Sulfated Cerium Oxide and Bismuth Halide Composites / MAHALINGAM Shanmugam[1], KWON Dae-Seong[1], KANG Seok-Gyu[1], KIM Junghwan[*1] ([1]Department of Materials System Engineering, Pukyong National University)

P1-ap.211

Cu_2O나노 구조체의 구조적, 광학적 특성 연구 / CHEON Miyeon[1,2], PARK Sang Eon[1], KIM Maengsuk[1], KIM Hyun Jung[1], PARK Hongjun[1], LEE Kyeongmin[1], JEONG Se Young[*1,3] ([1]Quantum Matter Core-Facility, Pusan National University, [2]Department of Physics, Pusan National University, [3]Department of Optics and Mechatronics Engineering, Pusan National University)

P1-ap.212

SPEM-based Study of Contact Hole Connectivity for 3D Semiconductor Inspection / GU Minseon[1], JANG Hansol[2], AHN Hanyeol[1], KIM Hyuk Jin[1], HYUN Moon Seop[3], BAIK Jaeyoon[4], SHIN Hyun-Joon[2], HAN Moonsup[1], PARK Yun Chang[3], KIM Gyungtae[3], CHANG Young Jun[*1,5,6] ([1]Department of Physics, University of Seoul, [2]Department of Physics, Chungbuk National University, [3]Department of Measurement and Analysis, National NanoFab Center, [4]Beamline Division, Pohang Accelerator Laboratory, [5]Department of Smart Cities, University of Seoul, [6]Department of Intelligent Semiconductor Engineering, University of Seoul)

P1-ap.213

Gd-MOF based Bismuth Halide Composite for Efficient X-ray Shielding Application / HOSSAIN Nazmul[1], KIM Junghwan[*1] ([1]Department of Materials System Engineering, Pukyong National University)

P1-ap.214*

Two Full-Spectrum Responsive Catalysts: $SnFe_2O_4$ QDs and Heterojunction $SnFe_2O_4/\gamma-Fe_2O_3$ QDs. / LIU Chun Li[*1], LIU Lei[1] ([1]Department 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 Hoon[1], SUH Dongseok[*2] ([1]Department of Energy Science, Sungkyunkwan University, [2]Department of Physics, Ewha Womans University)

P1-ap.216*

Lightweight, high electrically conductive CNT/Cu Hybrid yarn / WANG Feng[1], YUN Yoojoo[1], SUH Dongseok[*2] ([1]Department of Energy Science, Sungkyunkwan University, [2]Department of Physics, Ewha Womans University)

P1-ap.217

용액증발 기반 3차원 프린팅 기술을 이용한 QD혼합 미세구조 제작 및 광학 분석 / HEO Damoon[*1], LEE Jongmin[*1], LEE Yewon[1], GU Seonhwa[1], KIM Jaemin[1] ([1]반도체 전공, Hallym University)

P1-ap.218*

Structural identification of $GeSe_{2-x}Te_x$ nanowires: interlayer twist and twinning / KIM Kwanpyo[*1], KIM Donggyu[1], KANG Hani[1], LEE Kihyun[1], LEE Yangjin[1], JUNG Joong-Eon[1], JANG MyeongJIn[1] ([1]Department of Physics, Yonsei University)

P1-ap.219

Binder-free supercapacitors for reducing leakage currents / SELVARAJ David[1], KAHNG Yung Ho[*1] ([1]Department of Physics Education, Chonnam National University)

P1-ap.220

Effects of ionic impurities on leakage currents of graphene-based supercapacitors / LIM Gil Hwan[1], CHO Sang Rhye[1], KAHNG Yung Ho[*1] ([1]Department 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 Hanyeol[1], PARK Hyunsu[1], NAM Sangwoo[1,2], JANG Won[1], PARK Beomjin[1], GU Minseon[1], CHANG Young Jun[1,2], HAN Moonsup[*1] ([1]Department of Physics, University of Seoul, [2]Department 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 Yun[1], CHOI Woo Jun[1], KAHNG Yung Ho[*1] ([1]Department of Physics Education, Chonnam National University)

P1-ap.223

역광전자 분광기술을 이용한 유기 태양 전지의 전압 손실 측정 / 김영환[*1], 이규현[1], 맹민재[1], 이규명[1], 홍종암[1], 박용섭[1,2] ([1]Department of Physics, Kyung Hee University, [2]Department 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 Kiryang[1], HUR Junhyeok[1], CHOI Jae Yoon[*1] ([1]Department of Physics, KAIST)

P1-at.002*
Towards Degenerate Fermi Gases of Ultracold Lithium-6 / LEE Deok-Young[1], JANG Byeong Joo[1], YU Yong Soo[1], CHOI Jae Yoon[*1] ([1]Department of Physics, KAIST)

P1-at.003*
Quantum Kelvin-Helmholtz instability in a ferromagnetic superfluid / HWANG Samgyu[1], HUH Seungjung[1], YUN Gabin[1], CHOI Jae Yoon[*1] ([1]Department of Physics, KAIST)

P1-at.004*
Towards the Creation of Degenerate Fermionic / Bosonic NaK Molecular Gases with Long-range Dipolar Interactions / KIM Yoonsoo[1], LEE Sungjun[1], CHANG Jaeryeong[1], JANG Seokmin[1], LIM Younghoon[1], KIM Sooshin[1], PARK Jee Woo[*1] ([1]Department of Physics, POSTECH)

P1-at.005*
Hydrodynamic approaches to spin turbulent Bose-Einstein condensate / SHIN Yong-il[*1], LEE Junghoon[1], KIM Jongmin[1], JUNG Jong Heum[1], LEE Kyuhwan[1], KIM Taehoon[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-at.006
Floquet engineering of a one-dimensional optical lattice system with resonant shaking / PARK Junyoung[1], BAE Dalmin[1], KIM Myeonghyeon[1], KWAK Haneul[1], KWON Junhwan[1], SHIN Yong-il[*1] ([1]Department 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 Kyungmin[1], JEON Honggi[2,3] ([1]Research & Development Center, Alsemy Inc., [2]Department of Physics and Astronomy, Seoul National University, [3]Computer Science and Engineering, Seoul National University, [4]Automation and System Research Institute, Seoul National University, [5]Inter-university Semiconductor Research Center, Seoul National University, [6]Institute of Computer Technology, Seoul National University, [7]Institute of Applied Physics, Seoul National University)

P1-at.008*

루비듐 원자를 이용한 광집게 배열 실험 진행 상황 / PARK Byung-Tak[1], HA Taegyu[1], LEE Dowon[1], KIM Donggeon[1], LEE Ki-Se[1], LEE Moonjoo[*1] ([1]Department 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 Sungryul[5], IM Donghawn[1,4], KO Byungsan[1,4], KIM Junki[1,3,4] ([1]SAINT, Sungkyunkwan University, [2]Seoul National University, [3]Department of Nano Science and Technology, Sungkyunkwan University, [4]Department of Nano Engineering, Sungkyunkwan University, [5]Department of Physics, UNIST)

P1-at.010*

극저온 이온 포획 시스템의 개발과정 / CHO Junhee[1], KIM Myunghun[1], HONG Jungsoo[1], KWON Sehyun[1], KIM Geumhyeon[1], LEE Hyegoo[1], LEE Moonjoo[*1] ([1]Department of Electrical Engineering, POSTECH)

P1-at.011*

Simulating the energy levels of optical trapped-ion qubit / LEE Hyegoo[*1], KIM Keumhyun[1], JEONG Noa[1], SHIN Yongha[1], KIM Myunghun[1], CHO Junhee[1], LEE Moonjoo[1] ([1]Department of Electrical Engineering, POSTECH)

P1-at.012*

Exploring third-order exceptional point in an ion-cavity system / HA Taegyu[*1], KIM Jinuk[2], LEE Dowon[1], KIM Donggeon[1], LEE Ki-Se[1], WON Jongcheol[1], MOON Youngil[1], LEE Moonjoo[1] ([1]Department of Electrical Engineering, POSTECH, [2]Department 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 Dowon[1], HA Taegyu[1], LEE Ki-Se[1], LEE Moonjoo[1] ([1]Department of Electrical Engineering, POSTECH)

P1-at.014*

Room-temperature transduction and amplification of infrared photons into visible photons / SON Gibeom[1], OH Seunghoon[1], AN Kyungwon[*1] ([1]Department of Physics and Astronomy, Seoul National University)

Poster Exposure Period : October 25, 12:00~19:30
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P1-bp.101*

Prism-based spectral analysis for single-molecule FRET measurement / LEE Jiyoon[1], GANG Geunwon[2], JOO Chirlmin[1,3], LEE Sanghwa[2], KIM Sung Hyun[*1,3] ([1]Department of Physics, Ewha Womans University, [2]Department of Medical Life Science, The Catholic University of Korea, [3]Department 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 Iljoo[3], PARK Keonhyeok[3], LEE Kangmin[1,5], LEE Seungchul[4], CHOI Jee Hyun[*1], PARK Choonsu[*3] ([1]KIST, [2]Linguistics, Seoul National University, [3]Safety Measurement Institute, KRISS, [4]Department of Mechanical Engineering, POSTECH, [5]Department 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 Mahbub[1], CHOI Jong Gu[1] ([1]Department of Digital Healthcare Engineering, Sangji University)

P1-bp.104*

GIGANTEA phase separation modulates thermosensitive flowering in Arabidopsis thaliana / KIM Jinkwang[1], GWAK Eunha[1], LEE Jong-Chan[*1,2] ([1]Department of New Biology, DGIST, [2]New Biology Research Center, DGIST)

P1-bp.105*

CRISPR RNP Transfection for Live-Cell Imaging of Heterochromatin under DNA Damage Response / IM Jae-Kyeong[1], CHAUDHARY Narendra[1], PARK Eui-Jin[1], NHO Si-Hyeong[1], NAM Kihyeon[1], KIM Hajin[*1] ([1]UNIST)

P1-bp.106*

Visualizing PABPC1-mRNA Interaction: Investigating the Spatiotemporal Dynamics of Translation Initiation in Live Cells / SEOL Jincheol[1], KIM Byungju[2], PARK Yeonkyoung[3], KIM Yoon Ki[3], LEE Jong-Bong[*1,2] ([1]School of Interdisciplinary Bioscience & Bioengineering, POSTECH, [2]Department of Physics, POSTECH, [3]Creative Research Initiatives Center for Molecular Biology of Translation, KAIST)

P1-bp.107

Monitoring open-ended tunneling nanotubes using photoactivatable motor protein / OH Song-Mi[2], KIM Byungju[1], LEE Jong-Bong[*1,2] ([1]Department of Physics, POSTECH, [2]School 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 Eunha[1], KIM Jinkwang[1] ([1]Department of New Biology, DGIST, [2]New Biology Research Center, DGIST)

P1-bp.109*

Two-color single-molecule cryo-fluorescence microscopy / YU Phil-Sang[1], LIM Seon-Woo[2], KIM Chae-Un[2], LEE Jong-Bong[*1,3] ([1]Department of Physics, POSTECH, [2]Department of Physics, UNIST, [3]Interdisciplinary Bioscience and Bioengineering, POSTECH)

P1-bp.110*

Exonuclease-independent DNA mismatch repair / YANG Keunsang[1], JUANI Ropez[2], JAMES A. London[2], SAMIR M. Hamdan[3], RICHARD Fishel[2], LEE Jong-Bong[*1,4] ([1]Shool of Interdisciplinary Bioscience & Bioengineering, POSTECH, [2]Department of Cancer Biology and Genetics, The Ohio State University Wexner Medical Center, USA, [3]Division of Biological and Environmental Sciences and Engineering, KAUST, Saudi Arabia, [4]Department 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] ([1]Department of Physics and Astronomy, Seoul National University, [2]Institute 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 Sugarjav[1], LEE Jong-Chan[*1] ([1]Department of New Biology, DGIST)

P1-bp.113

Single-molecule studies of translesion DNA synthesis: the role of PAF15 / LEE Jinseob[1], YANG Keunsang[1], SAMIR Hamdan M.[3], ALFREDO Biasio De[3], FRANCISCO Blanco[4], LEE Jong-Bong[*1,2] ([1]School of Interdisciplinary Bioscience & Bioengineering, POSTECH, [2]Department of Physics, POSTECH, [3]Division of Biological and Environmental Sciences and Engineering, KAUST, Saudi Arabia, [4]Structural Biology Unit, CIC bioGUNE, Spain)

P1-bp.114

DNA hanger: novel surface-free/multiplexed single-molecule blotting platform / SEOL Jincheol[2], KIM Byungju[1], KIM Daehyung[1], JEONG Cherlhyun[3], LEE Jong-Bong[*1,2] ([1]Department of Physics, POSTECH, [2]School of Interdisciplinary Bioscience & Bioengineering, POSTECH, [3]Center for Theragnosis, Biomedical Research Institute, KIST)

P1-bp.115

High-speed force-fluorescence setup for studying single-molecule dynamics under load / JUNG Jaehun[1], RAH Sang-Hyun[1], YANG Taehyun[1], SHON Min Ju[*1,2] ([1]Department 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 Zhipeng[2], JUNG Shin[1,2] ([1]Medical School/Department of Neurosurgery, Chonnam National University, [2]Department 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 Suhyun[1], YOON Hyun Jung[1], WU Sangwook[*1] ([1]Department of Physics, Pukyong National University)

P1-bp.118

Efficient labeling of vesicles with lipophilic fluorescent dyes via salt-change method / CHA Minkwon[1], JEONG Sang Hyeok[1], BAE Seoyoon[2], PARK Jun Hyuk[1], BAEG Yoonjin[3], HAN Dong Woo[3], KIM Sang Soo[2], SHIN Jaehyeon[1], PARK Jeong Eun[3], OH Seung Wook[3], GHO Yong Song[2], SHON Min Ju[*1,4] ([1]Department of Physics, POSTECH, [2]Department of Life Sciences, POSTECH, [3]Biodrone Research Institute, MDimune Inc., [4]School of Interdisciplinary Bioscience and Bioengineering, POSTECH)

P1-bp.119*

High-Speed Magnetic Tweezers for Nanomechanical Measurements on Force-Sensitive Elements / PARK Celine[1], YANG Taehyun[1], RAH Sang-Hyun[1], KIM Hyun Gyu[3,4], YOON Tae-Young[3,4], SHON Min Ju[*1,2] ([1]Department of Physics, POSTECH, [2]School of Interdisciplinary Bioscience and Bioengineering, POSTECH, [3]School of Biological Sciences, Seoul National University, [4]Institute for Molecular Biology and Genetics, Seoul National University)

P1-bp.120*

Role of Histone Tails in Inter-Nucleosome Stacking Interaction / NHO Sihyeong[1], AN Soyeong[2], AHN Seungmin[3], KIM Seoyoon[3], LEE Hongsoo[1], SOHN Byeongkwon[1], PARK Chanho[1], KIM Kipom[4], KEE Jungmin[3], MIN Duyoung[3], LEE Jayil[2], KIM Hajin[*1] ([1]Department of Biomedical Engineering, UNIST, [2]Department of Biological Sciences, UNIST, [3]Department of Chemistry, UNIST, [4]Korea Brain Research Institute)

P1-bp.121*

SUPER-RESOLVED HETEROCHROMATIN STRUCTURE DURING DNA DAMAGE RESPONSE REVEALED BY CRISPR IMAGING / KIM Hajin[*1,2], PARK Eui-Jin[1], CHAUDHARY Narendra[1,2], JEPSON Tyler[3], XU Ke[3], MYUNG Kyungjae[1,2] ([1]Department of Biomedical Engineering, UNIST, [2]Center for Genomic Integrity, IBS, [3]Department of Chemistry, UC Berkeley, USA)

P1-bp.122*

Single-molecule ubiquitination / BU Gayun[1], LEE Jong-Bong[*1,2] ([1]Department of Physics, POSTECH, [2]School of Interdisciplinary Bioscience & Bioengineering, POSTECH)

Poster Exposure Period : October 25, 12:00~19:30
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P1-bp.201

Investigating Autophagosome Motion through Single Particle Tracking by Employing Clustering Methods / JEON Hyeonjun[1,2], PARK Jin-Sung[1], LEE MinHyeong[3], KIM Chungho[3], HONG Seok-Cheol[*1,2], CHO Minhaeng[1,4] ([1]Center for Molecular Spectroscopy and Dynamics, IBS, [2]Department of Physics, Korea University, [3]Department of Life Sciences, Korea University, [4]Department 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 Jaemin[1], YOO Jejoong[*1] ([1]Department of Physics, Sungkyunkwan University)

P1-bp.203*

MegaFold: Multi-GPU Implementation of AlphaFold2 / KIM Minsoo[1], JOO Keehyoung[2], YOO Jejoong[*1] ([1]Department of Physics, Sungkyunkwan University, [2]Center for Advanced Computation, KIAS)

P1-bp.204*

수지상세포의 이동 경로에 기계학습을 적용하는 분석 방법에 대한 고찰 / SONG Taegeun[*1], HAN Seunghee[1] ([1]Department of Data Information and Physics, Kongju National University)

P1-bp.205*

췌장의 항상성 모델을 통한 랑게르한스섬의 크기에 따른 인슐린 분비능 고찰 / KIM Yun Gyeom[1], SONG Taegeun[*1] ([1]Department 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 Hyeongtark[1], JEON Jae-Hyung[*1,2] ([1]Department of Physics, POSTECH, [2]APCTP)

P1-bp.207*

Molecular Dance with CUFIX-AMBER Forcefield: Leading-edge Coarse-Graining Illuminates Protein Binding & Phase Separations / YUK Seongho[1], YOO Jejoong[*1] ([1]Department of Physics, Sungkyunkwan University)

P1-bp.208

A computational model of basal ganglia circuitry: neuronal dynamics and network properties / YOON Wooseung[1,2], WOO Junhyuk[1], CHOI Da-Eun[1], GARCIA-LOPEZ Daniela[1,3], KIM Chong-Hyun[*1,3], HAN Kyungreem[*1,3] ([1]Brain Science Institute, KIST, [2]Department of Physics and Astronomy, Seoul National University, [3]Neuroscience 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 Changbeom[1], LEE Jeongmin[2], JEONG Cherlhyun[3], JEON Jae-Hyung[*1,4] ([1]Department of Physics, POSTECH, [2]Department of Life Sciences, Korea University, [3]Chemical and Biological Integrative Research Center, KIST, [4]APCTP)

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] ([1]KIST, [2]Bio and Brain engineering, KAIST, [3]Institute for Advanced Studies, University of Strasbourg, [4]Theoretical Neuroscience Group, Aix-Marseille Université, France)

Poster Exposure Period : October 25, 12:00~19:30
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P1-co.101

Terahertz spectroscopic measurements of Molybdenum-Rhenium alloy superconductors / SEOK Jieun[1], LEE Ji Eun[1], KIM Bongkeon[2], DOH Yong-Joo[2], KIM Jae Hoon*[1] ([1]Department of Physics, Yonsei University, [2]Department of Physics and Photon Science, GIST)

P1-co.102

Optical properties of $CrPS_4$. / KIM Hanyeop[1], KIM Jae Hoon*[1], PARK Je-Geun*[2], PARK Gi Ung[2] ([1]Department of Physics, Yonsei University, [2]Department 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 Han[1], HAN Yoonseok[2], SONG Jaegu[2], IM Hyunsoo[1], PARK Tuson[2], JUNG Soon-Gil*[3], SEO Soonbeom*[1] ([1]Department of Physics, Changwon National University, [2]Center for Quantum Materials and Superconductivity (CQMS), Department of Physics, Sungkyunkwan University, [3]Department of Physics Education, Sunchon National University)

P1-co.104*

Exploring Superconductivity in $Pb_{10-x}Cu_x(PO_4)_6O$: Comprehensive Investigations without Cu_2S Impurity / OK Jong Mok*[1], KIM Huiwon[1], KONG Minsik[1], KIM Seohee[1] ([1]Department 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-Ah*[1], CHO Hyeyoung[1], SALK Sung-Ho S.[2] ([1]National Supercomputing Center, Korea Institute of Science and Technology Information, [2]Department of Physics, POSTECH)

P1-co.106*

High Entropy Alloy (HEA) superconductor : optical characteristics and the effects of ion irradiation / HWANG Jungseek[*1], PANDA Chandan Kumar[1], JUNG Soon-Gil[2], LEE Hong gu[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department of physics education, Sunchon National University)

P1-co.107*

Synthesis and physical properties of $Pb_{10-x}Cu_x(PO_4)_6O$ / PARK Tuson[*1], PAEK Seung-Yeop[1], LEE Taehee[1], HAN Yoonseok[1], RHIE Junwon[1], SONG Jaegu[1], CHOI Seokmin[1], KANG Won Nam[1], LEE Hanoh[1], PARK Sung Min[1] ([1]Department of Physics, Sungkyunkwan University)

P1-co.108

LK-99, The Attempt of Synthesis & Measuring Physical Properties / CHO Beopgil[1], PARK Jaemun[1], PARK Keeseong[*1] ([1]Department of Emerging Materials Science, DGIST)

P1-co.109*

Single crystal growth of topological superconductor candidate Ti_3Sb / KIM Seohee[1], OK Jong Mok[*1], KONG Minsik[1], KIM Min Jae[1], KIM Youngwook[2], KIM Dohun[2], LEE Ho Nyung[3], PARK Yunkyu[3], BENJAMIN Shermane M[4] ([1]Department of Physics, Pusan National University, [2]Department of Physics and Chemistry, DGIST, [3]Materials Science and Technology Division, Oak Ridge National Lab, USA, [4]Condensed 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 Hui[1], MAENG Jin Young[1], SONG Jong Hyun[*1] ([1]Department of Physics, Chungnam National University)

P1-co.111*

Thermal transport experiment on quasi-one-dimensional spin chain $NiTe_2O_5$ / KIM Jin Ho[1], YANG Heejun[2], PARK Je-Geun[2], OH Yoon Seok[*1] ([1]Department of Physics, UNIST, [2]Department of Physics and Astronomy, Seoul National University)

P1-co.112*

Thermoelectric Properties of the Mn_3Sn-based Heterostructures / KIM Sanghoon[*1], ULLAH Asif[1], LEE Siha[1], JEONG Dongchan[1], SEO Sungbin[1], IM Eunji[1], CHOI Wonyeong[1], LEE Nyung Jong[1] ([1]Department of Physics, University of Ulsan)

P1-co.113*

저온에서 증착된 준강자성 (001) $NiCo_2O_4$ 박막의 자기적 및 전기적 특성 / PARK Jiseok[1], DHO Joonghoe[*1] ([1]Department of Physics, Kyungpook National University, [2]Kyungpook National University)

P1-co.114*

Enhancing Spin Lifetime of Fe Atoms on Ag(111) through an Aromatic Molecule / OH Jeongmin[2,1], BORODIN Dmitriy[2], KOT Piotr[2], TAUTZ Frank Stefan[3], TEMIROV Ruslan[3], ESAT Taner[3], HEINRICH Andreas[2,1], BAE Yujeong[*2] ([1]Department of Physics, Ewha Womans University, [2]Center for Quantum Nanoscience, IBS, [3]Department of Physics, Forschungszentrum Jülich, Germany)

P1-co.115*

Electric and magnetic properties of $Fe_{1.1-x}Mn_xSb_{0.9}$ / HUR Namjung[*1], CHOI Yeonguk[1] ([1]Department of Physics, Inha University)

P1-co.116*

Generation of ferromagnetism in $CaRuO_3/Sr_2RuO_4$ superlattices / HWANG Jimin[1], LEE SANG A[1], HWANG Jae-Yeol[*1] ([1]Department of Physics, Pukyong National University)

P1-co.117*

ARPES study on the ferromagnetic transition in 2H-$Mn_{1/3}TaS_2$ / PARK Kyoungree[1], RYU Hyejin[2], HWANG Choongyu[3], HWANG Jinwoong[*1] ([1]Department of Physics, Kangwon National University, [2]Center for Spintronics, KIST, [3]Department of Physics, Pusan National University)

P1-co.118

Magnetic Anisotropy of the perpendicular spin states in $Fe_{1-x}Co_xSn$ / PARK Jaemun[1], CHO Beopgil[1], PARK Keeseong[*1] ([1]Department 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 Gyuseung[1] ([1]Department 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 Tak[1] ([1]Department of Physics, POSTECH)

P1-co.121*

Ultra-thin 2D Fe_3GaTe_2 rare-earth free permanent magnet at finite temperatures / MARFOUA Brahim[1], HONG Ji Sang[*1] ([1]Department 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 Hak[3], KHIM Yeong Gwang[1,2], CHANG Young Jun[*1,2,4] ([1]Department of Physics, University of Seoul, [2]Department of Smart Cities, University of Seoul, [3]Center for Spintronics, KIST, [4]Department of Intelligent Semiconductor Engineering, University of Seoul)

P1-co.123*

Proximity-induced Ferromagnetism in hBN/Graphene/$CrPS_4$ Heterostructure / KIM Ja-Yeon[1], SHIN Inseob[*1], LEE Gil-Ho[*1] ([1]Department of Physics, POSTECH)

P1-co.124*

위상 준금속 $NdSb_{0.5}Te_{1.5}$의 온도와 자기장에 따른 전기저항 특성 연구 / JEONG Minju[1], PLOKHIKH Igor[2], PARK Tuson[3], SEO Soonbeom[*1] ([1]Department of Physics, Changwon National University, [2]Laboratory for Multiscale Materials Experiments, Paul Scherrer Institute, Switzerland, [3]Center for Quantum Materials and Superconductivity (CQMS), Department of Physics, Sungkyunkwan University)

P1-co.125

High-frequency ESR study of anisotropic triangular antiferromagnet $Cu_2(OH)_3NO_3$ / BAN Gyungbin[*1], CHOI Kwangyoung[*1], POVAROV Kirill[2], WOSNITZA Joachim[2], ZVYAGIN Sergei[2] ([1]Department of Physics, Sungkyunkwan University, [2]Dresden 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 Jin[1], HUANG Wen-Juan[2], CHEN Xiang-Bai[2], LEE Young Jin[1], KIM Seung[1], YOON Seokhyun[1], YANG In-Sang[*1] ([1]Department of Physics, Ewha Womans University, [2]Hubei 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 Sangwon[4], LEE Oukjae[1], JANG Chaun[1] ([1]Center for Spintronics, KIST, [2]Department of Physics, Kyung Hee University, [3]Department of Information Display, Kyung Hee University, [4]Quantum 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 Emanuel[2], URDANIZ Maria Corina[2], HOMMEL Caroline[2], WOLF Christoph[2], LUNGERICH Dominik[3], HEINRICH Andreas[1,2], COLAZZO Luciano[2] ([1]Department of Physics, Ewha Womans University, [2]IBS - Center for Quantum Nanoscience, Ewha Womans University, [3]Soft Organic Materials, In-Situ Electron Microscopy, Yonsei University)

P1-co.129*

Co 입자 형상과 물성과의 상관관계 연구 / PARK Sungkyun[*1], 박강진[1], 손영준[1], 송세환[2], 이지성[1,3], 주태성[1], 이두용[4], 한승훈[1], 김송길[5] ([1]Department of Physics, Pusan National University, [2]한국표준과학연구원 양자기술연구소, 양자스핀, [3]한국기초과학지원연구원 연구장비개발부, [4]경북대학교 물리교육과, [5]부산대학교 기계공학부)

Poster Exposure Period : October 25, 12:00~19:30
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Room: Exhibition Hall I

P1-co.201

Characterization on Lead-Free Hybrid Perovskite $[NH_3(CH_2)_5NH_3]CuCl_4$: Thermodynamic Properties and Molecular Dynamics / PARK Sanghyeon[1], NA Yeji[1], LIM Ae Ran[*1,2] ([1]Graduate School of Carbon Convergence Engineering, Jeonju University, [2]Department of Science Education, Jeonju University)

P1-co.202

Effect of Cation Incorporation on the Structural Distortions and Phase Transitions in $MA_xFA_{1-x}PbCl_3$ Perovskite Single Crystals / KO Jaehyeon[*1], NAQVI Syed Furqan Ul Hassan[1], JUNAID Syed Bilal[1], LEE Seongsu[2], SHON Wonhyuk[2] ([1]School of Nano Convergence, Hallym University, [2]Advanced Quantum Material Research Section, KAERI)

P1-co.203

Crystal structure, phase transition, thermodynamics, and molecular dynamics of organic-inorganic hybrid crystal $[NH(CH_3)_3]_2ZnCl_4$ / NA Changyub[1], KIM A Young[1], LIM Ae Ran[*1,2] ([1]Graduate School of Carbon Convergence Engineering, Jeonju University, [2]Department of Science Education, Jeonju University)

P1-co.204

Multifunctionality of Bismuth Ferrite and Barium Titanate Solid Solution by Samarium Oxide Doping Effects / CHOI Hai In[1], LEE Myanghwan[1], KIM Won Jeong[2], SONG Tae Kwon[*1] ([1]School of Materials Science and Engineering, Changwon National University, [2]Department of Physics, Changwon National University)

P1-co.205

Exploration of VO_2 thin films with oxygen deficiency / RANI Sunita[1], KUMAR Manish[*1], LEE Hyun Hwi[1] ([1]Energy Environment Material Research, Pohang Accelerator Laboratory, POSTECH)

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Origin of morphotropic phase boundary in thin-film $Hf_{0.5}Zr_{0.5}O_2$ on the TiN electrode / YU Jaejun[*1], LEE Ilyoung[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-co.207*

Optical properties of film $LaFeO_3$ on $SrTiO_3$ / LEE Hong Gu[1], JUNG Eil Ho[1], KIM Minjae[1], OH Jin Young[1], JEONG Seung Gyo[1], SONG Sehwan[2], LEE Tae Yoon[3], CHAE Seung Chul[3], PARK Sungkyun[2], CHOI Woo Seok[1], HWANG Jungseek[*1] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Physics, Pusan National University, [3]Department of Physics Education, Seoul National University)

P1-co.208*

Optimization of Substrate Treatment for (001)-oriented Nb-doped $SrTiO_3$ Substrate / SON Min Jae[1], KANG Kyeong Tae[*1] ([1]Department of Physics, Kyungpook National University)

P1-co.209*

Self-assembled vertically aligned nanocomposites of strontium cobalt oxide / BONG Hyungkun[1], KANG Kyeong Tae[*1] ([1]Department of Physics, Kyungpook National University)

P1-co.210*

Improvement in Conductance Characteristics of Ferroelectric Synaptic Transistor by Logarithmic Incremental Pulse Scheme / LEE Jae Yeob[1], KIM Cheol Jun[1], KIM Tae Hoon[1], NOH Taehee[1], LEE Seung Won[2], AHN Ji-Hoon[2], KANG Bo Soo[*1] ([1]Department of Applied Physics, Hanyang University, [2]Department of Materials Science and Chemical Engineering, Hanyang University)

P1-co.211

Hard piezoelectric properties of lead-free $BiFeO_3$-$BaTiO_3$ ceramics / LEE Myang Hwan[1], CHOI Hae In[1], KIM Da Jeong[2], KIM Ji Su[2], SONG Tae Kwon[*1,2] ([1]School of Materials Science and Engineering, Changwon National University, [2]Department 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 Jisu[2], LEE Myanghwan[1], KIM Da Jeong[2], CHOI Hai In[1], SONG Tae Kwon[*1,2] ([1]School of Materials Science and Engineering, Changwon National University, [2]Department of Materials Convergence and System Engineering, Changwon National University)

P1-co.213*

X-ray micro-diffraction study of structural change in $(1-x)BaTiO_3$-$xCaZrO_3$ / SEO Jiwoo[1], WI Sang Won[1], LEE Yun Sang[1], CHUNG Jin Seok[*1] ([1]Department of Physics, Soongsil University)

P1-co.214*

Pulsed laser epitaxy of Mo(d^2)-doped SrRu(d^4)O_3 thin films / PRASETIYAWATI Rahma Dhani[1], LEE Taehee[1], PARK Tuson[1], CHOI Woo Seok[*1] ([1]Department of Physics, Sungkyunkwan University)

P1-co.215*

Collective Control of Potential-constrained Oxygen Vacancies in $LaAlO_3/SrTiO_3$ Heterostructures for Analog Resistive Switching Applications / LEE Hyungwoo[*1,2], KIM Doyeop[2] ([1]Department of Physics, Ajou University, [2]Department of Energy System Research, Ajou University)

P1-co.216

The temperature dependent electronic structures of CeB_4 : DMFT(Dynamical Mean Field Theory) study / SHIM Ji Hoon[*1,2], KIM Junwon[2], GOH Beomjoon[1], MIN Byung Il[3] ([1]Department of Chemistry, POSTECH, [2]Division of Advanced Materials Science, POSTECH, [3]Department of Physics, POSTECH)

P1-co.217*

P-31 NMR study in a $NiPS_3$ single crystal. / HWANG Jun Ik[1], PARK Sung Hoon[1], BYUN Seok Hyun[1], KIM Junghyun[2], PARK Je-Geun[2], BAEK Seung-Ho[*1] ([1]Department of Physics, Changwon National University, [2]Department of Physics and Astronomy, Seoul National University)

P1-co.218*

Direct Investigation of Valence State in Kondo lattice $YbCuAs_2$ Using Resonant X-ray Emission Spectroscopy / LEE Heemin[1,3,4], HEO Seung-Pil[1,3,4], MUN Eundeok[2], SONG Changyong[*1,3,4] ([1]Department of Physics, POSTECH, [2]Department of Physics, Simon Fraser University, Canada, [3]Center for Ultrafast Science in Quantum Matter, Max Planck POSTECH Korea Research Initiative, [4]Photon Science Center, POSTECH)

P1-co.219*

Optical study of a new kagome metal $Ni_3M_2S_2$ (M = In, Tl) / NAM Hyungwon[1], KIM Dong Wook[1], KIM Kwang-Tak[2], KIM Sangjin[2], KIM Kee Hoon[2], MOON Soonjae[*1] ([1]Department of Physics, Hanyang University, [2]Department of Physics and Astronomy, Seoul National University)

P1-co.220*

Melting unidirectional charge density waves across twin domain boundaries / CHO Doohee[*1], KIM Eunseo[1], LEE Sanghun[1], BANG Junho[1], WULFERDING Dirk[*2,3], KIM Changyoung[2,3], PARK Jongho[2,3] ([1]Department of Physics, Yonsei University, [2]Center for Correlated Electron Systems, IBS, [3]Department of Physics and Astronomy, Seoul National University)

P1-co.221

Investigation of Charge Density Wave (CDW) Order parameters in kagome metal (K, Rb)V_3Sb_5 using X-ray scattering / CHOI Jungchan[1,2], HEO Seung Phil[1,2], WON Choongjae[2], NOH Woo-suk[2], HA Seung-Hyeok[1,3], KIM Hyun-Woo[1,3], SONG Changyong[*1,2] ([1]Department of Physics, POSTECH, [2]Department of Physics, Max Planck POSTECH Korea Research Initiative, [3]Department of Physics, IBS)

P1-co.222

Optical study of kagome metal $Cs(Ti_{1-x}V_x)_3Sb_5$ / KIM Dongwook[1], NAM Hyungwon[1], SUR Yeahan[2], KIM Kwang-Tak[2], KIM Kee Hoon[2], MOON Soonjae[*1] ([1]Department of Physics, Hanyang University, [2]Center 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-$TaSe_2$ / LEE Hyobeom[1], IM Hayoon[2], HWANG Choongyu[2], HWANG Jinwoong[*1] ([1]Department of Physics, Kangwon National University, [2]Department of Physics, Pusan National University)

P1-co.224

Controlling Pulse Laser Annealing to observe Resistance Switching Behavior in $LaAlO_3$/$SrTiO_3$ Heterostructure Memristors / KIM Yeonghun[1], MAENG Jinyoung[1], SONG Jong Hyun[*1] ([1]Department 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 Sehyeon[2], CHOI Eunji[2], YANG Yerim[2], KO Changhyun[*1,2] ([1]Department of Materials Physics, Sookmyung Women's University, [2]Department of Applied Physics, Sookmyung Women's University)

P1-co.226*

Fabrication of antiperovskite Sr_3SnO thin films using sputtering technique / NAM Kideuk[1], OH Ju Hyun[1], KIM Donghyeon[2], LEE Dongik[1], PARK Jihun[3], PANT Rohit[3], KANG Mijeong[2], TAKEUCHI Ichiro[3], LEE Seunghun[*1] ([1]Department of Physics, Pukyong National University, [2]Department of Optics and Mechatronics Engineering, Pusan National University, [3]Department of Materials Science and Engineering, University of Maryland, USA)

P1-co.227

Transition of temperature-dependent resistivity behavior in superlattices: Influence of $SrIrO_3$ film thickness and presence of $SrTiO_3$ capping layer / HWANG Seon Ha[1], CHOI Jeong Chan[1], MAENG Jin Young[1], SONG Jong Hyun[*1] ([1]Department of Physics, Chungnam National University)

P1-co.228*

Influence of ion-implantation on the metal insulator transition of VO_2 / HWANG In-Hui[1], YEO Sunmog[2], PARK Young-Woo[3], HAN Sang-Wook[*3] ([1]Advanced Photon Source, Argonne National Laboratory, USA, [2]Korea Multi-Purpose Accelerator Complex, Korea Atomic Energy Research Institute, [3]Department of Physics Education, Jeonbuk National University)

P1-co.229

Reduction of nickelate by pulsed laser annealing / MAENG Jin Young[1], KIM Young Hun[1], HWANG Seon Ha[1], HAN Dong Hee[1], SONG Jong Hyun[*1] ([1]Department of Physics, Chungnam National University)

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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 EunyoungG[1,2,3], LEE Su Yong[5], KIM Seongseop[6], LEE Jinwoo[7], SONG Changyong[*1,2,3] ([1]Department of Physics, POSTECH, [2]Photon Science Center, POSTECH, [3]Center for Ultrafast Science on Quantum Matter, Max Planck POSTECH Korea Reseach Initiative, [4]Department of Materials Science and Engineering, POSTECH, [5]PLS-II Beamline Department, Pohang Accelerator Laboratory, [6]Clean Energy Research Center, Jeonbuk National University, [7]Department of Chemical and Biomolecular Engineering, KAIST)

P1-co.302*

Observation of self-induced strain and suppression of Metal-Insulator Transition in V_2O_3 thin film using In-situ X-ray Diffraction / KANG Sae Hyun[1], YUN Youngmin[1], OH Ho Jun[1], CHOI Sukjune[1], PARK Sang-Youn[3], SONG Sehwan[4], NOH Do Young[1], KANG Hyon Chol[*2] ([1]Department of Physics and Photon Science, GIST, [2]Department of Materials Science and Engineering, Chosun University, [3]Beamline Department, Energy Enviroment Research Team, Pohang Accelerator Laboratory, [4]Department of Physics, Pusan National University)

P1-co.303

Development of a multiplex imaging chamber to investigate ultrafast phenomena at PAL-XFEL / NAM Daewoong[*1] ([1]XFEL 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 Mahmood[1], HA Sung Soo[1], CHOI Sungwook[1], KIM Jaeseung[1], OH Jiseong[1], HIEU Ngo Minh[1], IRFAN Rana Muhammad[1], DEVI Uma[1], LEE Su Yong[2], KIM Sunam[2], PARK Jaeku[2], EOM Intae[2], CHA Wonsuk[3], SONG Sanghoon[4] ([1]Department of Physics, Sogang University, [2]PAL-XFEL & PLS-II, Pohang Accelerator Laboratory, [3]Argonne National Laboratory, Advanced Photon Source, USA, [4]LCLS, SLAC Nationla 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 Sangsoo[5], AHN Je-Young[4], SHIM Jihoon[3,4], KIM Minseok[5], EOM Intae[3,5], SONG Changyong[*1,2,3] ([1]Department of Physics, POSTECH, [2]Center for Ultrafast Science on Quantum Matter, Max Planck POSTECH Korea Research Initiative, [3]Photon Science Center, POSTECH, [4]Department of Chemistry, POSTECH, [5]Beamline Division, Pohang Accelerator Laboratory)

P1-co.306*

Scanning microscopy for single diamond nitrogen vacancy centers / KIM Kiwoong[*1], SUB Shin Jun[1] ([1]Department 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 Daewoong[3], KIM Sangsoo[3], KIM Min Seok[3], EOM In Tae[3], NOH Do Young[4], SONG Changyong[*1,2] ([1]Department of Physics, POSTECH, [2]Center for Ultrafast Science on Quantum Matter, Max Plank POSTECH/Korea Research Initiative, [3]Pohang Accelerator Laboratory, Pohang Accelerator Laboratory, [4]Department 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 ([1]Department of Physics Education, Chungbuk National University)

P1-nu.002*

$\pi \to \pi\pi$ transition GPDs and the non-diagonal DVCS / SON Sangyeong*1, SEMENOV-TYAN-SHANSKIY Kirill[1], SON Hyeon-Dong[2] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Inha University)

P1-nu.003

The Evaluating Inevstigation on Using Helium and Oxygen Ion Beam for Radiation Therapy / WOO Jong-Kwan*1, LIU Dong[2] ([1]Department of Physics, Jeju National University, [2]Medical Physics Laboratory, Jeju National University)

P1-nu.004

Exactly Separable X(5) Potential in $^{152-164}$Dy / LEE Su-youn*1 ([1]Division 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 Cheong[1], BAE Yunseul[1], SEO Junhu[1], MOON Dong Ho[1], HWANG Jaein[2], HONG Byungsik[2], KIM Young Jin[3], LEE Hyo Sang[3], LEE Cheongsoo[3] ([1]Department of Physics, Chonnam National University, [2]Department of Physics, Korea University, [3]Rare Isotope Science Project, IBS)

P1-nu.006*

Characterization of $CeBr_3$:^{228}Ra scintillation crystal / CHOI Eunjin[1], JEONG Dongwoo[1], LEE Doohyeok*1, LEE Hyun Su[2], SO Jung Ho[2], KIM Hong Joo[1], PARK Hwanbae[1] ([1]Department of Physics, Kyungpook National University, [2]Center for Underground Physics, IBS)

P1-nu.007

Characteristics of radiography system based on CMOS camera / NGUYEN Duc Ton[1], DANIEL D. Joseph[1], KIM Hong Joo[*1] ([1]Department 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 Tan[1], NGUYEN Luan Thanh[1], LEE Hyun Su[2] ([1]Department of Physics, Kyungpook National University, [2]Center for Underground Physics, IBS)

P1-nu.009

Cooling Performance Evaluation of Atmospheric Neutron Target Mockup with Tantalum / JANG Yongsik[*1], KANG Nam-woo[1], LEE Pilsoo[1], KIM Suk-Kwon[2], HWANG Ji Su[3] ([1]Accelerator development and research division, KAERI, [2]Nuclear physics application research division, KAERI, [3]Virtural Rx, Inc.)

P1-nu.010*

Simulation study on charged-particle production as a function of transverse activity classifier in proton-proton collisions / SHIN Seokhwan[1], NASSIRPOUR Adrian Fereydon[1], OH Saehanseul[*1,2] ([1]Department of Physics and Astronomy, Sejong University, [2]Nuclear Science Division, Lawrence Livermore National Laboratory, USA)

P1-nu.011*

Feasibility study of K_1 measurement in pp collisions with ALICE / LIM Sanghoon[*1], JI Sujeong[1] ([1]Department of Physics, Pusan National University)

P1-nu.012*

Investigating new methods for high-purity phi-meson identification in hadron-hadron collisions / OH Changhyun[1], NASSIRPOUR Adrian Fereydon[1], OH Saehanseul[*1,2] ([1]Department of Physics and Astronomy, Sejong University, [2]Nuclear 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 Sieun[2] ([1]Department of Physics, Pusan National University, [2]Department 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 Changhwan[1] ([1]Department 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 Jinhyun[1]
([1]Department of Physics, Pusan National University)

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P1-pa.001*

Performance Tests of Pure $LaCl_3$ Scintillation Crystal / PARK Hwanbae[*1], NGUYEN Luan Thanh[1], KIM Hong Joo[1], AHN Seon Woo[1], HWANG Yong Seok[2], NAM Uk-Won[3], CHOI Eunjin[1] ([1]Department of Physics, Kyungpook National University, [2]Korea Multi-purpose Accelerator Complex, Korea Atomic Energy Research Institute, [3]Space Science Division, Korea Astronomy and Space Science Institute)

P1-pa.002*

Design and optimization of KAPAE phase II detector and trigger / JEONG Dongwoo[1], PARK Hyeoung Woo[1], LEE Doohyeok[1], BANG Inha[1], KIM Hong Joo[*1] ([1]Department of Physics, Kyungpook National University)

P1-pa.003

Measurements of concentration of Gd in Gd-loaded LAB-based Liquid Scintillators / YEO Insung[*1], JEONG Dabin[2], JOO Kyungkwang[2] ([1]Laboratory for High Energy Physics, Dongshin University, [2]Department of Physics, Chonnam National University)

P1-pa.004

Vertex Reconstruction with Deep Learning based on GNN in KNO Detector / GOH Junghwan[*1], YOO Changhyun[1], JANG Jee-Seung[2], SEO Jiwoong[3], KWON Eunhyang[3], LEE Minwoo[3], KIM Hyunsoo[4] ([1]Department of Physics, Kyung Hee University, [2]Department of Physics and Optical Science, GIST, [3]Department of Physics, Sungkyunkwan University, [4]Department 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 Hyelim[2], LEONARD Douglas S[2], GILEVA Olga[2], LEE Kyungbeom[3] ([1]Department of Physics, Chung-Ang University, [2]Center for Underground Physics, IBS, [3]Radioactivity 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 Saebyeok[2], BAE Sungjae[1,2], GKIKA Violeta[2], IVANOV Boris[2], JEONG Junu[2], LEE Soohyung*[2], UCHAIKIN Sergey V.[2], YOUN Sungwoo[2], VAN LOO Arjan F.[3,4], NAKAMURA Yasunobu[3,4], SEMERTZIDIS Yannis K.[1,2] ([1]Department of Physics, Korea Advanced Institute of Science and Technology, [2]Center for Axion and Precision Physics Research, IBS, [3]Center for Quantum Computing (RQC), RIKEN, [4]Department of Applied Physics, Graduate School of Engineering, The University of Tokyo, Japan)

P1-pa.007*

Data classification for KAEM using Quantum Machine Learning / DO Hyeonseok*[1], LEE Sehwook[1], HAUPTMAN John[1], RYU Minsnag[1], HUH Changgi[1], KIM Bobae[1], LEE Junghyun[1], BYEON Heejeong[1] ([1]Department of Physics, Kyungpook National University)

P1-pa.008*

Development of 16-channel switching system for testing of Hyper-Kamiokande readout electronics / LEE Yuno[1], KIM Hong Joo*[1], LEE Jik[1], JOO Kyung Kwang[2], YOO Jonghee[3] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Chonnam National University, [3]Department of Physics, Seoul National University)

P1-pa.009

Estimation of the background and sensitivity for AMoRE-II / SEO Jeewon*[1], JEON Eun Ju*[1] ([1]CUP, IBS)

P1-pa.010

Feasible study of ratio LAB and DIN-based LS using SiO_2 core-shell perovskite QDs Perovskite / OH Hyun Soo[1,2], CHOI Ji Young*[3], JOO Kyung Kwang*[1], KIM Ha Sul[1] ([1]Department of Physics, Chonnam National University, [2]Division of Frontier Photonics Research, APRI, [3]Department of Fire Safety, Seoyeong University)

P1-pa.011*

Fast Neutron Monitoring System for the COSINE-100 Experiment / KIM Jinyoung*[1], HA Chang Hyon[1], YU Gyunho[2] ([1]Department of Physics, Chung-Ang University, [2]Department of Physics, Sungkyunkwan University)

P1-pa.012*

Event selection status in the NEON experiment for coherent elastic neutrino-nucleus scattering signal detection / KOH Byoung-cheol*[1] ([1]Department of Physics, Chung-Ang University)

P1-pa.013

RENE Prototype Design / HWANG Hyunho[1], GOH Junghwan[*1], KIM Sang Yong[2], MOON Dongho[2], YOO Jonghee[3], KIM Dojin[3], LEE Wonjun[3], YANG Byeongsu[3] ([1]Department of Physics, Kyung Hee University, [2]Department of Physics, Chonnam National University, [3]Department of Physics, Seoul National University)

P1-pa.014

A study to improve performance for AMoRE-II Detectors / KIM Yeongduk[*1], KIM Wootae[1], KIM Seungcheon[1], BIJAYA Sharma[1] ([1]IBS Center for Underground Physics, IBS)

P1-pa.015*

Study of the reflectivity in the water Cherenkov detector / KIM Seeun[1,2], CHOI Koun[*2] ([1]Department of Physics, Chungnam National University, [2]Center for Underground Physics, IBS)

P1-pa.016*

The performance test of 20 inch PMT for RENE experiment / OH Junkyo[*1], JANG Jee-Seung[2], YUN Eungyu[1], JOO Kyung Kwang[1] ([1]Department of Physics, Chonnam National University, [2]Department of Physics and Photon Science, GIST)

P1-pa.017

Simulation of neutron on A WIMP Detector using GEANT4 / KO Jew U.[*1], KO Young Joon[1], HWANG Jongseok[1], WOO Jong-Kwan[1] ([1]Jeju National University)

P1-pa.018

Investigating the Potential of Perovskite Nanocrystal-Doped Liquid Scintillator: A Feasibility Study / LEE Hyungi[1], KIM Nari[*1], JOO Kyungkwang[1] ([1]Department of Physics, Chonnam National University)

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P1-se.101

Hexagonal Ge-AlN core-shell microneedles: Growth method and mechanism / MUN Suhyun[1], PARK Seonwoo[1], KIM Kyoung Hwa[1], AHN Hyung Soo[*1], LEE Jae Hak[1,2], YANG Min[1], CHUN Young Tea[1], YI Sam Nyung[1], LEE Won Jae[3], KOO Sang-Mo[4] ([1]Department of Nano-Semiconductor Engineering, Korea Maritime and Ocean University, [2]LNBS Co., Ltd., [3]Department of Advanced Materials Engineering, Dong-Eui University, [4]Department of Electronic Materials Engineering, Kwangwoon University)

P1-se.102

Characterization of hexagonal Si epilayers grown on 4H-SiC substrates / PARK Seonwoo[1], MUN Suhyun[1], KIM Kyoung Hwa[1], SHIN Myeong-Cheol[2], AHN Hyung Soo[*1], LEE Jae Hak[1,3], YANG Min[1], CHUN Young Tea[1], YI Sam Nyung[1], LEE Won Jae[4], KOO Sang-Mo[2] ([1]Department of Nano-Semiconductor Engineering, Korea Maritime and Ocean University, [2]Department of Electronic Materials Engineering, Kwangwoon University, [3]LNBS Co., Ltd, [4]Department of Advanced Materials Engineering, Dong-Eui University)

P1-se.103*

Effects of RF power on oxygen content and surface morphology of $ZnSnN_2$ grown by reactive RF magnetron sputtering / KIM Dohyun[1], HWANG Juchan[1], PARK Kwangwook[*1] ([1]Advanced Materials Engineering, Jeonbuk National University)

P1-se.104*

다목적 응용을 위한 희토류 도핑된 $NaKLaNbO_5$ 형광체의 합성 및 발광 특성 / XIANG Weiwei[2], HUA Yongbin[2], YU Jae Su[*1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department of Electronic and Information Convergence Engineering, Kyung Hee University)

P1-se.105*

Al_2O_3-passivation layer as a route to prevent oxidation of HfS_2 in ambient condition / PARK Kwangwook[*1], HWANG Juchan[1], LEE Ki-Tae[1], KIM Dohyun[1] ([1]Advanced Materials Engineering, Jeonbuk National University)

P1-se.106*

Structural and electrical characteristics of Pt thin films fabricated by oblique-angle deposition / KIM Daeju[1], CHO Jaehee[*1] ([1]Department of Semiconductor Science & Technology, Jeonbuk National University)

P1-se.107*

Thickness-dependent Reflectance and RGB color on Optical image of Perovsktie microplate / PARK Jung-Gyu[1], KIM Moses[1], KIM Tae-Gwang[1], SONG Jung Hoon[1], KANG Jang-Won[*1] ([1]Department 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 Minkyeong[1], OH Hyun Soo[1], KIM Ha Sul[*1] ([1]Chonnam National University)

P1-se.109*

Estimation of effective refractive index of colloidal quantum dot thin film using optical contrast spectroscopy / KIM Tae-Gwang[1], PARK Junggyu[1], KIM Moses[1], SONG Jung Hoon[*1], KANG Jang-Won[*1] ([1]Department of Semiconductor and Applied Physics, Mokpo National University)

P1-se.110

Enhanced stability of perovskite nanocrystals by the microwave-assisted method / HAN Inah[1], KWAK Seoyoung[1], SHIM Jahyun[1], LEE Minhyuk[1], KIM Jungyun[1], CHO Sangeun[1], NOH Samkyu[1], KIM Hyungsang[1], IM Hyun Sik[*1] ([1]Dongguk University)

P1-se.111

Au Buffer Layer Effects on Fabrications of $LiNbO_3$ on ZnO:Al Double Layers by Using the RF Magnetron Sputter Depositions / JUN Byeong-Eog[*1], KIM Sun-Jae[2], CHANG Howon[2], JUNG Yoosoo[2], PARK Chul Hong[3] ([1]Department of Physics and Earth Science, Korea Science Academy, [2]Korea Science Academy, [3]Department of Physics Education, Pusan National University)

P1-se.112

Theoretical study of electronic structure and thermal properties of phase change materials: $Cr_2Ge_2Te_6$ and $Ge_2Sb_2Te_5$ / HONG Suklyun[*1], SON Shinwon[1] ([1]Department 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 Sarjerao[1], ZEINALVANDFARZIN Behnam[1], LEE Sang Jun[2] ([1]Yeungnam University, [2]Division of Interdisciplinary Materials Measurement Institute, KRISS)

P1-se.114*

Contactless electro-reflectance study of optical properties for InGaAs/InAlAs digital alloy / DO Jongwoong[1], CHA Jong Won[1], KIM Jong Su[*1], JO Hyun Jun[1], RYU Mee-Yi[2], SONG Jin Dong[3] ([1]Yeungnam University, [2]Department of Physics, Kangwon National University, [3]Center 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 Soonchul[1], CHO Hyunmin[1], IM Seong Il[*1] ([1]Department 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 Taeyoung[1], KOO Yeonjeong[1], LEE Hyeongwoo[1] ([1]Department of Physics, POSTECH)

P1-se.117

Photocurrent and Responsivity of InGaAsP Semiconductor-based Metal-Semiconductor-Metal Near-Infrared Photodetector / SOHN Tae-Hun[1], LEE Seong-Yeon[1], YEE Ki-Ju[*1] ([1]Department of Physics, Chungnam National University)

P1-se.118*

Optical and electrical properties in 2-D semiconductors with varying layer numbers / KIM Jae Joon[1], HAN Ju Young[1], CHOI Soo Bong[*1] ([1]Department 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 Suk[2], CHOI Hansol[2], JEON Young Woo[2], LEE Hyunho[1,2], LEE Sang-Shin[1,2] ([1]Nano Device Application Center, Kwangwoon University, [2]Department of Electronic Engineering, Kwangwoon University)

P1-se.120*

질화 붕소 중간 계면층 사용으로 암전류를 감소시켜 성능이 향상된 그래핀/실리콘 / SHIN Donghee[*2], 서민기[1] ([1]Department of Physics , Andong National University, [2]Department of Smart Sensors Engineering, Andong National University)

P1-se.121*

$LaVO_3$ / 다공성 실리콘 광대역 자가발전 광 검출기 소자 / SHIN Donghee[*1], 최보규[2], 이호선[3] ([1]Department of Smart Sensors Engineering, Andong National University, [2]Department of Physics, Andong National University, [3]Department of Applied Physics , Kyung Hee University)

P1-se.122

Graphene Oxide forming directly on MLG via UV-O_3 treatment for resistive switching memory / SHIN Beomkyu[1], KIM Jong Yun[2], GWON Ohhun[1], KANG Seok-Ju[2], BYUN Hye Ryung[2], JANG Seo Gyun[1], YU Young-Jun[*1,2] ([1]Department of Physics, Chungnam National University, [2]Institute of Quantum Systems, Chungnam National University)

P1-se.123

MoO_x-incorporated PEDOT:PSS hole transport layer for organic solar cells / GWAK Donghun[1], CHOI Jin Woo[*1] ([1]Data 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] ([1]Department of Semiconductor and Applied Physics, Mokpo National University, [2]Semiconductor 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] ([1]Department of Semiconductor and Applied Physics, Mokpo National University, [2]Semiconductor 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 Sujeong[1], LEE Hyeongwoo[1], EOM Seonhye[2], JI Gangseon[2], JOO Huitae[1], CHOI Soo Ho[3], KIM Ki Kang[3], PARK Hyeong-Ryeol[2], PARK Kyoung-Duck[*1] ([1]Department of Physics, POSTECH, [2]Department of Physics, UNIST, [3]Center for Integrated Nanostructure Physics, Sungkyunkwan University)

P1-se.202*

Effect of precursor ratio on carrier dynamics in colloidal CdSe quantum dots / HEO Dong Gwon[1], KIM Sung Hun[1], LEE Hong Seok[*1] ([1]Department of Physics, Jeonbuk National University)

P1-se.203*

과포화 재결정법을 이용한 페로브스카이트 나노 결정의 상온 합성과 광학적 특성 연구 / HEO Jun Yeong[1], KIM Sung Hun[1], HEO Dong Gwon[1], LEE Hong Seok[*1] ([1]Department of Physics, Jeonbuk National University)

P1-se.204*

Optical characterization of cubic and pyramidal $MAPbBr_3$ film formed by perovskite nano-seed / KIM Taehoon[1], JEONG Hyeon Jun[1], SUNG Jae-Hyun[1], KIM Yejin[2], KO Seoyeon[2], SONG Jungeun[2], KIM Dong-Wook[2], YOON Seokhyun[2], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University, [2]Department of Physics, Ewha Womans University)

P1-se.205*

Unveiling Trap Charges Crucial for the Operation of MoS_2-based Field-Effect Transistor / CHOI Deogkyu[1], LEE Juchan[1], LEE Chae Won [1], JO Jieun[1], KWON Chan[1], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University)

P1-se.206*

Manipulation of optical properties of 0D/2D heterostructures / RYU Chang Hyeok[1], LEE Taegeon[1], KIM Sung Hun[1], LEE Hong Seok[1], RHO Heesuk[*1] ([1]Department of Physics, Jeonbuk National University)

P1-se.207*

Oxidation of freestanding monolayer Transition metal dichalcogenides on Zinc Oxide nanorods / JO Jieun[1], CHO Ga Hyun[1], JEONG Hyun[1], PARK Hyeon Jung[1], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University)

P1-se.208*

Tip-enhanced Förster resonance energy transfer spectroscopy in monolayer $MoSe_2$ / KIM Yongbin[1], LEE Hyeongwoo[1], KIM Byong Jae[2], CHOI Soo Ho[3], CHAE Sang Hoon[4], LIM Jaehoon[2], KIM Ki Kang[3], PARK Kyoung-Duck[*1] ([1]Department of Physics, POSTECH, [2]Energy Science, Sungkyunkwan University, [3]Energy Science, Sungkyunkwan University, [4]Electrical 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 Seok[2], SEONG Seungho[3], KANG J.-S.[3] ([1]Basic Science Research Institute, University of Ulsan, [2]Convergence Research Institute, DGIST, [3]Department 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 Chaewon[1], PARK Dae Young[1], CHOI Incheol[2] ([1]Department of Physics, Hanyang University, [2]Department 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 Wooyoung[1], KIM Dohyeong[1], BANG Seungho[1] ([1]Department of Physics, Hanyang University)

P1-se.212*

Interfacial charge trapping of monolayer MoS_2 for optoelectronic nonvolatile memory / KIM Dohyeong[1], KANG Wooyoung[1], BANG Seungho[1], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University)

P1-se.213*

Transition metal dichalcogenides / Gold nanoparticle plasmonic structure through reversible phase transition / LEE Dohyeon[1], KIM Taehoon[1], SUH Hyeongchan[1], PARK Dae Young[1], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University)

P1-se.214

Measurement of $MoSe_2$ carrier dynamics using pump-probe microscopy / JEONG Jin Young[1], CHOI Soo Bong[*1] ([1]Department of Physics, Incheon National University)

P1-se.215*

The Effects of Thermal Annealing on the Electrical and Optical Properties of Lignin / KWON Chan[1], JEONG Hyun[1], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University)

P1-se.216*

Correlation Between Raman and Photoluminescence Spectra in Single- and Few-Layer MoS_2/AuNPs Hybrid Structures Under Resonant Excitation / NAM Kiin[1], CHOI Soo Bong[*1] ([1]Department of Physics, Incheon National University)

P1-se.217*

Optical properties of monolayer WSe_2 on honeycomb patterned gold template / CHO Ga Hyun[1], JEONG Hyun[1], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University)

P1-se.218*

Controllable Synthesis of Topological Quantum Materials Based on Platinum and Tellurium Using Laser Irradiation / HWANG June[1], PARK Hyeon Jung[1], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University)

P1-se.219*

Valley and spin filtering with magnetic proximity effects on a bowtie-shaped monolayer WS_2 / YOU Suejeong[1], KIM Heesang[1], KIM Nammee[*1] ([1]Department of Physics, Soongsil University)

P1-se.220*

Nonlinear Hall Effect in 2D Tellurene under Time-Reversal-Symmetric Conditions / KIM Giheon[1], BAHNG Jaeuk[2], KIM Youngkuk[3], LIM Seong Chu[*1,2] ([1]Department of Energy Science, Sungkyunkwan University, [2]Department of Smart Fabrication Technology, Sungkyunkwan University, [3]Department of Physics, Sungkyunkwan University)

P1-se.221

Electrical and Thermoelectric Transport Properties of Tellurene / BAHNG Jaeuk[1], KIM Giheon[2], LIM Seong Chu[*1,2] ([1]Department of Smart Fabrication Technology, Sungkyunkwan University, [2]Department 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 Yong[1], SUH Hyeongchan[1], KIM Dong Hyeon[1,2], KIM Ji-hong[1], JEONG Mun Seok*[1] ([1]Department of Physics, Hanyang University, [2]Department of Energy Science, Sungkyunkwan University)

P1-se.223*

Quantative model of raman peak shift in a monolayer MoS_2 under bending strain and temperature change / KIM Ji-hong[1], SUH Hyeongchan[1], KIM Dong Hyeon[1,2], LEE Da Yong[1], JEONG Mun Seok*[1] ([1]Department of Physics, Hanyang University, [2]Department 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 chul[1] ([1]Department of Physics, Soongsil University)

P2-ap.102*
The enhancement of tunneling electroresistance effect of ferroelectric tunnel junction by using conductive filament formation / LEE Jae Heon[1], YOON Chan Soo[2], LEE Sang Woo[1], PARK Yu Bin[1], AN Sang Won[1], YANG Sang Mo*[1] ([1]Department of Physics, Sogang University, [2]Department of Physics, Konkuk University)

P2-ap.103*
Fabrication of self-rolled-up SiO/SiO_2 microtube / RAHMAT Roni[1], CHO Yong Hoon*[1] ([1]KAIST)

P2-ap.104*
Metal-Insulator Phase Transition Characteristics of Vanadium Dioxide Thin Films Tailorable by Substitutional Doping Gradation / CHOI Eunji[2], AHN Sehyeon[2], SHIN Eunbi[2], KO Changhyun*[1,2,3] ([1]Department of Materials Physics, Sookmyung Women's University, [2]Department of Applied Physics, Sookmyung Women's University, [3]Institute 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 Hyeonwoo[1], YEO Junyeob*[1] ([1]Department of Physics, Kyungpook National University)

P2-ap.106*
Electrocaloric cooling with triboelectric nanogenerator / JUNG Jong Hoon*[1], HU Ying Chieh[1] ([1]Department of Physics, Inha University)

P2-ap.107
Er이온을 첨가한 $K_5Y(P_2O_7)_2$의 구조 및 광학 특성 연구 / LEE Caeyeon[1], JEONG Minjae[1], LEE Yun Sang*[1] ([1]Department of Physics, Soongsil University)

P2-ap.108*

Photomodulation of Two-dimensional Electron Gases at $LaAlO_3/SrTiO_3$ Heterointerfaces enabled by Surface Deprotonation / LEE Hyungwoo[*1,2], KIM Youngmin[2] ([1]Department of Physics, Ajou University, [2]Department 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 Jaeho[1], LEE Yun Sang[*1] ([1]Department of Physics, Soongsil University)

P2-ap.110*

Investigation of surface chemical state of $SrFeO_{2.5}$ films during topotactic transition by ambient pressure X-ray photoelectron spectroscopy / KIM Hyeonyu[2], KIM Yunzyne[2], SON Minjae[2], BONG Hyungkun[2], SIM Hyunbo[1], SON Yeongjun[3], KANG Kyeong Tae[2], JEONG Beomgyun[4], CHOI Woo Seok[5], PARK Sungkyun[3], LEE Dooyong[*1] ([1]Department of Physics Education, Kyungpook National University, [2]Department of Physics, Kyungpook National University, [3]Department of Physics, Pusan National University, [4]Research Center for Materials Analysis, KBSI, [5]Department of Physics, Sungkyunkwan University)

P2-ap.111*

Synthesis and characterization of SnO_2 thin films based ultraviolet photodetectors / KIM Seongeun[1], KANG Hyon Chol[*1] ([1]Department of Materials Science and Engineering, Chosun University)

P2-ap.112*

Investigation of Ferroelectricity and Switching Dynamics of $Hf_{0.5}Zr_{0.5}O_2$ Thin Films Depending on Annealing Temperatures / YANG Sang Mo[*1], AN Sang Won[1], BAE Sung Bin[1], KIM Beom Jun[1], KIM Yoon Ki[1], JUNG Tae Hyun[1], KIM Jae Seung[1], LEE Jae Heon[1], LEE Sang Woo[1], PARK Yu Bin[1], KIM Hyun Jung[1], YOO Hyo Bin[1] ([1]Department of Physics, Sogang University)

P2-ap.113

Investigation on photoluminescence and photochromism in Eu^{3+} doped $(Ba_{1-x}Ca_x)TiO_3$ / LEE Dong Jae[1], LEE Yun Sang[*1] ([1]Department of Physics, Soongsil University)

P2-ap.114*

Mechanically stable and highly crystalline $LaNiO_3$ flexible thin film electrode / AHN Hyunsoo[1], CHOI Yeonguk[1], JUNG Jong Hoon[*1] ([1]Department of Physics, Inha University)

P2-ap.115*

Phase separation of Indium gallim oxide thin films grown by powder sputtering method in a reducing atmosphere / LIM Hyomi[1], KANG Hyon Chol[*1] ([1]Department 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 Gibaek[1] ([1]Department of Information Display, Kyung Hee University)

P2-ap.202*

Anomalous Raman spectrum of 1L-$NiPS_3$ in anti-ferromagnetic $NiPS_3$/$FePS_3$ heterostructures / NGUYEN Manh Hong[1], PARK Jeana[2], PARK Je-Geun[2], CHEONG Hyeonsik*[1] ([1]Department of Physics, Sogang University, [2]Department of Physics and Astronomy, Seoul National University)

P2-ap.203*

Raman Study of low frequency magnons in $NiPS_3$ / CHEONG Hyeonsik*[1], OH Siwon[1], NA Woongki[1], PARK Pyeongjae[2,3], KIM Junghyun[2], SCHEIE Allen[4], TENNANT David Alan[5], PARK Je-Geun[2] ([1]Department of Physics, Sogang University, [2]Department of Physics and Astronomy, Seoul National University, [3]Materials Science and Technology Division, Oak Ridge National Laboratory, USA, [4]MPA-Q, Los Alamos National Laboratory, USA, [5]Department of Physics and Astronomy, University of Tennessee, Knoxville, USA)

P2-ap.204

Inverse Spin Hall Effects in Noncollinear Magnetic System $IrMn_3$/Co / DO T. Nga[1], PHAM Trang Huyen Cao[1], NGUYEN Chi Dan[1], SONG Sehwan[2], PARK Sungkyun[2], HWANG Chan Yong[3], KIM Tae Hee*[1] ([1]Department of Physics, Ewha Womans University, [2]Department of Physics, Pusan National University, [3]Quantum Spin Team, KRISS)

P2-ap.205*

Study on magnetodynamics of different CoGd structures using ferromagnetic resonance (FMR) / KIM Se Eun[1], KIM Yejin[1], LEE Kyungjae[3], KIM Ji Min[2], LEE Sanghoon[3], CHUNG Sunjae*[1] ([1]Department of Physics Education, Korea National University of Education, [2]Department of Technology Education, Korea National University of Education, [3]Department of Physics, Korea University)

P2-ap.206*

Tetragonal distortion inducing magneto-crystalline anisotropy in bcc-Fe and fcc-Ni / YOO Minjae[1], KIM Gyeonghye[1], NGUYEN Quynh Anh Thi[1], RHIM Sonny[*1] ([1]Department of Physics, University of Ulsan)

P2-ap.207*

Magneto-crystalline anisotropy of cubic Fe_4N via tetragonalization / LEE Hyunju[1], KIM Gyeonghye[1], NGUYEN Quynh Anh Thi[1], RHIM Sonny[*1] ([1]Department of Physics, University of Ulsan)

P2-ap.208*

Deep-Learning-Based Optical Design Optimization of Multilayer Thin Films / KIM Jungho[*1], JUNG Uijun[1] ([1]Department of Information Display, Kyung Hee University)

P2-ap.209*

Spin-orbit torque switching of $L1_0$ FePt granular film / JEONG Dongchan[1], LIM Eunji[1], CHOI Wonyeong[1], LEE Siha[1], SEO Seongbin[1], LEE Nyunjong[1], KIM Sanghoon[*1] ([1]Department of Physics, University of Ulsan)

P2-ap.210*

Efficient Workflow of First-principles Calculations via Machine Learning / RYU Wonseok[1], HONG Suklyun[*1] ([1]Department of Physics and Astronomy, Sejong University)

P2-ap.211*

$Mn_{3+x}Sn_{1-x}$ 박막에서 조성에 따른 자성특성의 결정학적 연구 / LEE Siha[1], CHOI Wonyeong[1], ULLAH Asif[1], IM Subin[2], LEE Nyun Jong[1], KIM Sanghoon[*1] ([1]Department of Physics, University of Ulsan, [2]SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University)

P2-ap.212*

K-point convergence of total energy in density functional theory calculation / BYUN Jinyoung[1], PARK Ji-Sang[*2] ([1]Department of Nano Engineering, Sungkyunkwan University, [2]SKKU 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 Minwoong[1], JEONG Seong-Hoon[2], LEE Han-Koo[2] ([1]Radiation Research Division, KAERI, [2] Pohang Accelerator Laboratory, POSTECH)

P2-ap.214

Prediction of Ferromagnetic Phase of Fe_xO_y using Generative Adversarial Network

/ HONG Suklyun[*1], KIM Yunjae[1], RYU Wonseok[1] ([1]Department 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 Hongrae[1], KIM Chang-Hyun[*1] ([1]School of Electronic Engineering, Gachon University)

P2-ap.302*
The Post-annealing Induced Enhancement of Vacuum Deposited Green Perovskite Light-emitting Diode / KIM Junho[1], JUNG Na Eun[1], CHOI Nagyeong[1], PARK Jeehong[1], YI Yeonjin[*1] ([1]Department of Physics, Yonsei University)

P2-ap.303
Nanostructure engineering in organic semiconductor devices toward interface matching / BOK Moonjeong[1,2], WANG SHAOCHUAN[1], WAN XINYUE[1], JEONG Jun-Ho[2], LIM EunJu[*1] ([1]Department of Creative Convergent Manufacturing Engineering, Dankook University, [2]Nano 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 Minji[1], KIM Hyunwoo[2], KIM Kyoung-Ho[*1] ([1]Department of Physics, Chungbuk National University, [2]Drug Discovery Platform Research Center, KRICT)

P2-ap.305
TiO_2를 활용한 폴리우레탄 폼의 내황변성 개선 연구 / YOO Jihoon[3], HONG Woo Tae[2], BHARAT Lankamsetty Krishna[2], JUNG Jae Yong[2], PARK JinYoung[1], YANG Hyun Kyoung[*1,2,3] ([1]Interdisciplinary Graduate Program of Artificial Inteligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, [2]Marine-Bionics convergence technology center, Pukyong National University, [3]Department 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-Ho[*1], JEONG Daseul[1], JAHNG Junghoon[2] ([1]Department of Physics, Chungbuk National University, [2]Hyperspectral 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 Santhosh[1], LIU Xuewen[1], LEE Eun-Cheol[*1] ([1]Department of Physics, Gachon University)

P2-ap.308*

NIR 대역 PPG, BFI 신호 기반 비침습적 혈중 글루코스 농도 예측 모델 개발 / LEE Kijoon[*1], KIM Junho[1], KANG Gwanghwi[1], CHUNG Haelk[1], RHEE Taeseong[1], PARK Jaeyoon[1] ([1]Department 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 Xuewen[1] ([1]Department 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 Wonsik[1], KWON Namhee[1], SHIN Dongguen[3], YI Yeonjin[2,4], PARK Soohyung[*1] ([1]Advanced Analysis Center, KIST, [2]Department of Physics, Yonsei University, [3]Department of Physics, Chonnam National University, [4]Van der Waals Materials Research Center, Yonsei University)

P2-ap.311

Fabrication and investigation of optical properties of In_2Se_3 thin films / KIM Young Dong[*1], KIM Tae Jung[1], NGUYEN Xuan Au[1], LE Van Long[2] ([1]Department of Physics, Kyung Hee University, [2]Institute of Materials Science, Vietnam Academy of Science and Technology, Vietnam)

P2-ap.312

Variational Quantum Eigensolver Implementation with a SKKU Superconducting Qubit Device / KIM Youngdu[1], YEO Hwan-seop[1], CHOI Beomgyu[1], WOO Seungwook[1], PARK Jongwon[1], CHO Dongki[1], KIM Jeongwon[1], CHONG Yonuk[*1] ([1]Department of Nano Engineering, Sungkyunkwan University)

P2-ap.313

Predicting Qubit Parameters from Room-temperature Characterization / CHOI Beomgyu[1], KIM Youngdu[1], PARK Jongwon[1], CHOI Gahyun[2], CHOI Jiman[2], WOO Seungwook[1], KIM Jeongwon[1], CHO Dongki[1], YEO Hwan-Seop[1], LEE Yong-Ho[2], CHONG Yonuk[*1] ([1]Department of Nano Engineering, Sungkyunkwan University, [2]Center 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 Jeongwon[1], WOO Seungwook[1], KIM Dongho[2], CHONG Yonuk[*1] ([1]Department of Nano Engineering, Sungkyunkwan University, [2]AINano Engineering, POSCO holdings)

P2-ap.315*

Ion-gel gate induced molecular level modulation in mixed molecular vertical junctions / KIM Donguk[1], 이창준[1], SONG Minwoo[1], NAM Jongwoo[1], LEE Hyemin[1], LEE Takhee[*1] ([1]Department 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 Yooleemi[1] ([1]Department of Physics, Kunsan National University)

P2-ap.317

Luminescent behavior of Mn^{4+} doped Mg_2TiO_4 deep-red emitting phosphors for LED and latent fingerprint visualization application / PARK Jinyoung[1], YOO Jihoon[2], HONG Woo Tae[3], BHARAT Lankamsetty Krishna[3], JUNG Jae Yong[3], YANG Hyun Kyoung[*1,2,3], MOON Byung Kee[4] ([1]Department of Electrical, Electronics and Software Engineering, Pukyong National University, [2]Interdisciplinary Graduate Program of Artificial Inteligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, [3]Marine-Bionics convergence technology center, Pukyong National University, [4]Department 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 Krishna[1], YOO Jihoon[2], HONG Woo Tae[1], JUNG Jae Yong[1], PARK Jinyoung[3], YANG Hyun Kyoung[*1,2,3], MOON Byung Kee[4] ([1]Marine-Bionics Convergence Technology Center, Pukyong National University, [2]Interdisciplinary Graduate Program of Artificial Inteligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, [3]Department of Electrical, Electronics and Software Engineering, Pukyong National University, [4]Department 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 Tung[2], BUI Xuan Khuyen[2], VU Dinh Lam[4] ([1]Alpha ADT, [2]Institute of Materials Science, Vietnam Academy of Science and Technology, Vietnam, [3]Hanyang University, [4]Graduate University of Science and Technology, Vietnam Academy of Science and Technology, Vietnam, [5]Department 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 Seungyun[1], PAK Sooyeon[1], KIM Kitae[1,2,4], KIM Wonsik[1], KWON Namhee[1], KIM Seunghwan[1,2], SHIN Dongguen[3], PARK Soohyung[*1] ([1]Advanced Analysis Center, KIST, [2]Department of Physics, Yonsei University, [3]Department of Physics, Chonnam National University, [4]Van der Waals Materials Research Center, Yonsei University)

P2-ap.321*

Hyper Raman scattering in two-dimensional halide perovskite $(C_6H_5C_2H_4NH_3)_2PbI_4$ under resonant two-photon excitation / JANG Joon Ik[*1], SHIN Seunghan[1] ([1]Department of Physics, Sogang University)

P2-ap.322*

Measurement of OLED AC impedance and modeling of equivalent circuits / PARK Joon hyung[1], SHIN Ye Ji[1], JEON Yongmin[1], KIM Chang-Hyun[*1] ([1]School 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 Eunki[1], HA Aelim[1], KIM Kitae[1,2,4], KIM Wonsik[1], KWON Namhee[1], KIM Seunghwan[1,2], SHIN Dongguen[3], PARK Soohyung[*1] ([1]Advanced Analysis Center, KIST, [2]Department of Physics, Yonsei University, [3]Department of Physics, Chonnam National University, [4]Van der Waals Materials Research Center, Yonsei University)

P2-ap.324*

Integration of In-situ Core/Shell Perovskite for Improved Photodetection Performance of MoS_2 photodetector / SIM Jinwoo[1], RYOO Sunggyu[1], KIM JooSung[2], JANG Juntae[1], LEE Tae-Woo[*2], LEE Takhee[*1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department 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 Gun[1], KIM Won Tae[1], SHIN Myung Woo[1], CHOI Jong Gu[1], HASAN Mahbub[1] ([1]Department of Digital Healthcare Engineering, Sangji University)

P2-ap.326*

Simulation and Experiment of Organic Anti-Ambipolar Transistor / KIM Yeoeun[1], KIM Chang-Hyun[*1] ([1]School of Electronic Engineering, Gachon University)

P2-ap.327*

Advancing OFETs on SiO_2 Substrates through Inkjet Printing / BAE Jisuk[1], KIM Chang-Hyun[*1] ([1]School of Electronic Engineering, Gachon University)

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P2-as.001

Antarctic ice simulation studies of ice properties using IceCube Upgrade camera system / LEE Jiwoong*[1], ROTT Carsten[1,2], TOENNIS Christoph[1], CHOI Seowon[1], SEO Minyeong[1], SHIN Minji[1], OH Yubin[1], KIM Yoonyoung[1], RODAN Steve[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department 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 Christoph[1], RODAN Steven Thomas[1], LEE Jiwoong[1], SEO Minyeong[1], SHIN Minji[1], KIM Yoonyoung[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department 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 Christoph[1], RODAN Steven[1], CHOI Seowon[1], LEE Jiwoong[1], SEO Minyeong[1], OH Yubin[1], KIM Yoonyoung[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department 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 Toennis[1], RODAN Steven Thomas[1], LEE Jiwoong[1], CHOI Seowon[1], SHIN Minji[1], OH Yubin[1], KIM Yoonyoung[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department 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 Toennis[1], RODAN Steven Thomas[1], LEE Jiwoong[1], CHOI Seowon[1], SEO Minyeong[1], SHIN Minji[1], OH Yubin[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Physics and Astronomy, University of Utah, USA)

P2-as.006

Visualization of trajectories in gravitational fields as geodesic: Focused on Kepler problems / CHO Suho[1], KANG Hyosang[*1], KIM Hyeongjun[1], KIM Jaeseok[1], KIM Mingeun[1], SUNG Hyungue David[1] ([1]School of Undergraduate Studies, DGIST)

Poster Exposure Period : October 26, 09:00~17:00
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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 Ul[1], NOH Heung-ryoul[2], KIM Jin-Tae[*1] ([1]Department of Photonic Engineering, Chosun University, [2]Department 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 ^{87}Rb atoms with respect to varying hyperfine spacings / HASSAN Aisar Ul[1], NOH Heung-Ryoul[2], KIM Jin-Tae[*1] ([1]Department of Photonic Engineering, Chosun University, [2]Department of Physics, Chonnam National University)

P2-at.003
Modulation Transfer Spectroscopy for D1 transition of Rb atoms / KHAN Shabraz[1], HASSAN Aisar-ul[1], NOH Heung-ryoul[2], KIM Jin-Tae[*1] ([1]Department of Photonic Engineering, Chosun University, [2]Department of Physics, Chonnam National University)

P2-at.004*
Towards Laser Cooling of MgF Molecules: Building a Hermetic 2nd Repump Laser / LEE Giseok[1], YOO Changhyuk[1], CHAE Eunmi[*1] ([1]Department of Physics, Korea University)

P2-at.005*
Laser frequency stabilization in the 10^{-14} Level by optimizing Modulation Transfer Spectroscopy on the ^{87}Rb D_2 Line / LEE Sang Bum[*1], LEE Sanglok[1,2], MOON Geol[2], PARK Sang Eon[1], HONG Hyun-Gue[1], LEE Jae Hoon[1], KWON Taeg Yong[1], SEO Sangwon[1] ([1]Center for Time and Frequency, KRISS, [2]Department of Physics, Chonnam National University)

P2-at.006*

Numerical study of a hybrid superradiant optical clock with zero frequency pulling coefficient / JEON Mingyu[1], AN Kyungwon[*1] ([1]Department of Physics and Astronomy, Seoul National University)

P2-at.007*

Photon-counting heterodyne spectroscopy of a superradiant laser / HA Junseo[1], OH Seunghoon[1], AN Kyungwon[*1] ([1]Department of Physics and Astronomy, Seoul National University)

P2-at.008

Study of anharmonic and resonance effects in IR spectra of atmospheric gas complexes / BHARTI Swati[1], PARK Young Choon[1], SONG Mi Young[*1] ([1]KFE)

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 Harry[1], RICKERT Elisabeth[1,2,3], ROMERO Elisa Romero[1,2,3], LAATIAOUI Mustapha[1,2] ([1]Department of Chemistry, Johannes Gutenberg University of Mainz, Germany, [2]SHE, Helmholtz-Instut Mainz, Germany, [3]Schwerionenforschung, GSI Helmholtzzentrum, Germany, [4]Department of Chemistry, UNIST)

P2-at.010

Mode-hop assisted single beam all-optical atomic magnetometer / JIHOON Yoon[1], JEONG Taek[*1], LEE Sangkyung[1], YIM Sin Hyuk[1], HONG Sanghyuk[1] ([1]Quantum Physics Technology Directorate, Agency for Defense Development)

P2-at.011

Optimization of Saddle Coil for Uniform Magnetic Field in Atomic Magnetometer Experiment / HONG Sanghyuk[1], JEONG Taek[*1], LEE Sangkyung[1], YIM Sin Hyuk[1], YOON Ji Hoon[1] ([1]Quantum 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 Jaeuk[1,2], PARK Sanghyun[1,2], MOON Geol[*1,2] ([1]Department of Physics, Chonnam National University, [2]Center for Quantum Technologies, Chonnam National University, [3]Time 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] ([1]Department of Physics, Chonnam National University, [2]Center for Quantum Technologies, Chonnam National University)

P2-at.014*

Polarization-selective four-wave mixing signals in degenerate multi-level system of ^{85}Rb cooling transition line / BAEK Jaeuk[1,2], PARK Sanghyun[1,2], LEE Minhwan[1,2], MOON Geol[*1,2], NOH Heung Ryoul[*1,2] ([1]Department of Physics, Chonnam National University, [2]Center for Quantum Technologies, Chonnam National University)

P2-at.015*

Trap parameters measurement of ^{133}Cs cold atoms / KHAN Sibghat Ullah[1,2], BAEK Jaeuk[1,2], PARK Sanghyun[1,2], LEE Minhwan[1,2], MOON Geol[*1,2] ([1]Department of Physics, Chonnam National University, [2]Center for Quantum Technologies, Chonnam National University)

P2-at.016*

Low-frequency electric field measurement using Rydberg Stark spectroscopy / PARK Seonghyeon[*1], KIM Kiwoong[*1] ([1]Department of Physics, Chungbuk National University)

P2-at.017*

광펌핑 원자 자력계 Free Induction Decay 신호의 고속 주파수 계수법 개발 / YUN Seha[1], KIM Kiwoong[*1] ([1]Department of Physics, Chungbuk National University)

P2-at.018

Towards quantum-enhanced sensing: generation of two-mode squeezed light from four-wave mixing in hot ^{85}Rb vapor / SIM Gisung[1], KIM Heewoo[1], MOON Han Seb[*1] ([1]Pusan National University)

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P2-co.101*
Polarization-optimized tip-enhanced strong coupling of single quantum dots / BAE Jinhyuk[1], LEE Hyeongwoo[1], KIM Byoung Jae[2], JEONG Sohee[2], LIM Jaehoon[2], PARK Kyoung-Duck[*1] ([1]Department of Physics, POSTECH, [2]Department of Energy Science, Sungkyunkwan University)

P2-co.102
Nb Josephson junctions fabricated using helium ion beam / KIM Jisu[1], KIM Younghyun[1], KIM Taeheui[2], AN Sung Jin[1,2], KIM Hakseong[3], BAE Myung-Ho[3], SEO Jungpil[1], JUNG Minkyung[*2,4] ([1]Department of Physics and Chemistry, DGIST, [2]Department of Nanotechnology, DGIST, [3]KRISS, [4]Department of Interdisciplinary Engineering, DGIST)

P2-co.10
Gate-dependent transport properties near the electrical phase transitions in $Mo_{0.67}W_{0.33}Se_2$ devices with dual gates / KIM Wusin[*1], KIM Minsik[2], BAE Myungho[2], KIM Ju Jin[1] ([1]Department of Physics, Chonbuk National University, [2]Division of Physical Metrology, KRISS)

P2-co.104*
Gate-tunable supercurrent in Ti nanowire / KIM Pyeong Kang[1], JANG Yeongmin[1], KIM Nam-Hee[1], DOH Yong-Joo[*1] ([1]Department 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 Hyeonwoo[1], WATANABE Kenji[2], TANIGUCHI Takashi[2] ([1]Department of Physics, POSTECH, [2]Material science, NIMS)

P2-co.106
Waveguide in Strained Zigzag Graphene Nanoribbon / JUN Seunghyun[1], MYOUNG Nojoon[*1] ([1]Department of Physics Education, Chosun University)

P2-co.107

Degenerated energy states induced by geomatical symmetry in a rectangular quantum dot / SEON Woo Hyeon*[1], PARK Gyutae*[1], KIM Uhjin[2], LEE Seokyeong[3], CHUNG Yun Chul[1], CHOI Hyoungsoon[3], CHOI Hyungkook[2] ([1]Department of Physics, Pusan National University, [2]Department of Physics, Jeonbuk National University, [3]Department 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-Ho[2], KIM Ju Jin[1] ([1]Department of Physics, Jeonbuk National University, [2]Division of Physical Metrology, KRISS)

P2-co.109

박막에서 쌍결정 경계 (twin boundary)의 조절 연구 / KIM Su Jae[2], LEE Yousil[3], KIM Nahee[1], JANG Insu[1], JEONG Se Young*[1] ([1]Department of Optics and Mechatronics engineering, Pusan National University, [2]Crystal Bank Research Institute, Pusan National University, [3]주식회사 씨아이티 기업부설연구소)

P2-co.110*

Orientation-dependent structural properties of CoO films studied using polarized XAFS / HAN Sang-Wook*[3], HWANG In-Hui[1], STAN Liliana[2], YU Chae-Hyun[3], KANG Joon-Ho[3], SUN Cheng-Jun[1] ([1]X-ray Science Division, Advanced Photon Source, Argonne National Laboratory, USA, [2]Center for Nanoscale Materials, Argonne National Laboratory, USA, [3]Department of Physics Education, Jeonbuk National University)

P2-co.111*

Collapse of 2 x 1 insulating dimer state in monolayer 1T-$IrTe_2$ by Rb dosing / LEE Mingyung[1], HWANG Jinwoong*[1] ([1]Department of Physics, Kangwon National University)

P2-co.112

Effects of post annealing on phase of $PbTiO_3$ nanotubes / CHO Sam Yeon[1], KIM Eun-Young[1], BU Sang Don*[1] ([1]Department of Physics, Jeonbuk National University)

P2-co.113

Surface and Interface Characterization of Thin Films by Neutron Reflectivity / LEE June Hyuk*[1] ([1]Neutron Science Division, KAERI)

P2-co.114*

Surface photovoltaic effect on pristine and K adsorbed MoS_2 surface / LEE Wonhui[1], LEE Sangsoo[1], LEE Geun Seop*[1] ([1]Department of Physics, Inha University)

P2-co.115

Sample preparation in UHV for STM measurements / HOMMEL Caroline[*1], SPREE Lukas Emanuel[1], CHOI Dasom[1], COLAZZO Luciano[1] ([1]Center 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-Jeong[1], CHANG Min Hui[1], KAHNG Se-Jong[*1] ([1]Department of Physics, Korea University)

P2-co.117*

Dirac cone in 1T-VS_2 single crystals / KHIM Min Cheol[1,2], KIM Hyuk Jin[1], CHOI Byoung Ki[3], RHEE Tae Gye[1,2], LEE Sunghun[4], CHANG Young Jun[*1,2,5] ([1]Department of Physics, University of Seoul, [2]Department of Smart Cities, University of Seoul, [3]Advanced Light Source, Lawrence Berkeley National Lab, [4]Department of Physics and Astronomy, Sejong University, [5]Department of Intelligent Semiconductor Engineering, University of Seoul)

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P2-co.201
Investigations of thermoelectric properties of different gallium nitride polytypes through first-principles approach / UL HAQ Bakhtiar[1], KHADKA I.B.[1], KIM Se-Hun[*1] ([1]Jeju National University)

P2-co.202*
Magnetic Order Classification of Pyrochlore Iridates by Machine Learning / JANG Yerin[1], KIM Choong Hyun[2,3], GO Ara[*1] ([1]Department of Physics, Chonnam National University, [2]Center for Correlated Electron Systems, IBS, [3]Department 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 Kwanhong[1], LEE Byeongho[1], KIM Sungmoon[1], HWANG Seungjae[1], SHIN Mujin[1], HWANG Jaejin[1], JIN Yeongrok[1], LEE Jaekwang[*1] ([1]Department of Physics, Pusan National University)

P2-co.204
Electronic structures of graphene/MoSSe/hBN heterostructure using First-Principle Calculation / YUN Junho[1], KIM Yunjae[1], SUNG Dongchul[1], HONG Suklyun[*1] ([1]Department 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 Kumar[1], LECONTE Nicolas[1], SHAIFULLAH Md[1,2] ([1]Department of Physics, University of Seoul, [2]Department 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 Youngju[1], LECONTE Nicolas[1], JHARAPLA Prathap Kumar[1], SHAIFULLAH Md[1,2], JUNG Jeil[*1,2] ([1]Department of Physics, University of Seoul, [2]Department 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] ([1]Department of Physics, University of Seoul, [2]Department 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 Jeonghyeok[1], KIM Heung-Sik[*1] ([1]Department of Physics, Kangwon National University)

P2-co.209

Thermoelectric properties of a novel half-Heusler compounds NbRuX (X = Sb and Bi) / YUN Won Seok[*1], LEE Hyeon-Jun[1], KIM June-Seo[1], LEE Myoung-Jae[1], HAN Sang Wook[2] ([1]Division of Nanotechnology, Convergence Research Institute, DGIST, [2]Basic Science Research Institute and EHSRC, University of Ulsan)

P2-co.210

Revisiting $LaMnO_3$: density functional theory study / LEE Juhyeon[1], KIM Bongjae[*1] ([1]Department of Physics, Kunsan National University)

P2-co.211*

Crystal structures of bismuth oxides in varying oxidation states: a first-principles study / KWON Young-Kyun[*1], SONG Jihoon[1] ([1]Department of Physics, Kyung Hee University)

P2-co.212*

Systematic first-principles study of magnetism in 2D monolayer transition metal dichalcogenides family / CHA Yuhyun[1], KIEM Do Hoon[1], HAN Myung Joon[*1] ([1]Department of Physics, KAIST)

P2-co.213*

Ab initio study on the electronic structures of multi-layered graphene with various stacking sequences / KWON Young-Kyun[*1], KANG Seoung-Hun[2], KIM Sangwan[1] ([1]Department of Physics, Kyung Hee University, [2]Materials Science and Technology Division, Oak Ridge National Laboratory)

P2-co.214*

Supervised machine learning approach for the detection of multiple nanobubbles in graphene / KIM Subin[1], MYOUNG Nojoon[2], GO Ara[*1] ([1]Department of Physics, Chonnam National University, [2]Department of Physics Education, Chosun University)

P2-co.215*

Bath parameter fitting of hybridization function: database construction for machine learning / KIM Taeung[1], GO Ara[*1] ([1]Department of Physics, Chonnam National University)

P2-co.216*

Machine-learning models for band gap of kesterite materials based on hybrid density functional theory / LEE Donggeon[2], KIM Sooran[*1], PARK Ji-Sang[*3] ([1]Department of Physics Education, Kyungpook National University, [2]Department of Physics, Kyungpook National University, [3]SKKU Advanced Institute of Nanotechnology (SAINT) and Department of Nano Engineering, Sungkyunkwan University)

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P2-op.001
커 렌징 효과를 이용한 Yb:CALGO 펄스 레이저 제작 및 특성 분석 / SON Sang-Cheol[1], YEE Ki-Ju[*1] ([1]Department of Physics, Chungnam National University)

P2-op.002*
Design of fs Ti:sapphire laser oscillator with LD pumping / GO Namseok[1], YEO Junyeob[1], NAM Inhyuk[*2], KWON Seong-Hoon[*2] ([1]Department of Physics, Kyungpook National University, [2]PAL-XFEL, Pohang Accelerator Laboratory)

P2-op.003
이중 파장대역을 이용한 초분광 단층 영상 / KIM Hyun Seong[1], LEE Seung Seok[1], CHOI Eun Seo[*1] ([1]Department of Physics, Chosun University)

P2-op.004*
바이오 리액터 모니터링 시스템을 위한 소구경 현미경 광학계 개발 / PARK Doo Jae[*1], BYUN Dong Hu[1], SONG Jin Ha[1], LIM Ga Hyun[1], JUNG Jun Yeong[1] ([1]School of Nano Convergence Technology, Hallym University)

P2-op.005*
Thickness Characterization of SiO_2/Si Wafers Using a Rotating Compensator-Type Spectroscopic Ellipsometer / LEE Heewoo[1], CHOI Soo Bong[*1] ([1]Department of Physics, Incheon National University)

P2-op.006*
Phase shifting lateral scanning white light interferometry / CHOI Soo Bong[*1], IM Jaeseung[1] ([1]Department of Physics, Incheon National University)

P2-op.007
PEDOT:PSS Film with Brij C10-additive Characterized by THz-TDS / SONG Sujin[1], CHOI Seungsun[1], JEONG Jeeyoon[*1] ([1]Department of Physics, Kangwon National University)

P2-op.008

mutilcycle 15 THz generation from lithium-niobate wafers using 150TW laser / KIM Hyeongmun[1,2], ROH Yulan[1], KIM Sang Beom[1], JANG Dogeun[3], KIM Young-Ill[1], KIM Gyeong-Ryul[1], BARK Hyeon Sang[1], KEE Chul Sik[1], LEE Joogn Wook[2], KIM Ki Yong[4], KANG Chul[*1] ([1]Advanced Photonics Research Institute, GIST, [2]Department of Physics, Chonnam National University, [3]XFEL beamline, Pohang Accelerator Laboratory, [4]Institute 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 Inhee[1], JI Young Bin[2], BARK Hyeon Sang[3] ([1]YUHS-MCRI, Yonsei University Health System, [2]Gimhae Biomedical Center, Gimhae Biomedical Industry Promotion Agency, [3]Advanced Photonics Research Institute, GIST)

P2-op.010

Terahertz microcavities for studies on interaction between excitons and phonon-polaritons / JEONG Jeeyoon[*1], HO SUNG Jeong[1] ([1]Department of Physics, Kangwon National University)

P2-op.011*

Terahertz metamaterial lens by 3D printing / JANG Dahye[1], RYU Heonseong[1], LEE Sang-Hun[*1] ([1]Department of Optical Engineering, Kumoh National Institute of Technology)

P2-op.012*

Nanostructuring PEDOT using maskless photolithography / YEO Sebin[1], LEE Seung Hyun[1], CHOI Min[1], LEE Hyun Seok[1], KANG Evan S Hyunkoo[*1] ([1]Department of Physics, Chungbuk National University)

P2-op.013

Ultrastrong Phonon-Photon Coupling in Terahertz Nano-Slots with Dual Resonances / CHAE Min Jun[1], JEONG Jeeyoon[*1] ([1]Department of Physics, Kangwon National University)

P2-op.014

Surface Lattice Resonance using Organic Excitonic Nanoantennas / JEON Inho[1], KANG Evan S Hyunkoo[*1] ([1]Department 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], 송유리[2], 선상범[1], 이준희[1], 이병근[1], 이기원[1,2], 김용기[1,2] ([1]Department of Physics, Kongju National University, [2]Department 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 Dohyeong[1], SUK Daewon[2] ([1]Department of Physics, KAIST, [2]Graduate School of Nanoscience and Technology, KAIST)

P2-op.017

Optical spin Hall effect in out-of-plane refraction / LEE Yeon Ui*[1], PARK Dong Hee[1], JOO Bin Chan[1] ([1]Department of Physics, Chungbuk National University)

P2-op.018*

Anomalus double peaks in non-coupled organic films with Fabry-Perot cavity / JEONG Yeojun[1], LEE Hojun[1], KANG Evan S Hyunkoo*[1] ([1]Department of Physics, Chungbuk National University)

P2-op.019*

Strong plasmon-exciton coupling using Ag nanodisk array and TDBC / LEE Hojun[1], KANG Evan S Hyunkoo*[1] ([1]Department of Physics, Chungbuk National University)

P2-op.020

자율주행 자동차용 LiDAR기기 개발에 응용을 위한 광위상배열 소자 연구 / SON Seong-Jin[1], YU Nan Ei*[1] ([1]APRI, GIST)

P2-op.021

1차원 센서를 사용하는 D-ToF 방식 Mechanical type LiDAR 수신부 광학계의 Ghost 분석 / PARK Hyemi*[1], KIM Taekyung[1], KIM Daeguen[1], KIM Hoyoung[1] ([1]Convergence components Lab, LG Innotek)

P2-op.022

Correlation between wettability and core thickness and contact lens tensile strength / HA Byungho[1], KIM Ki Hong*[1] ([1]Department of Optometry & Vision Science, Daegu Catholic University)

P2-op.023*

Single Photon Emitters of Chemical Treated WSe_2 / JANG Junwon[1], LEE Jae-Ung*[1] ([1]Department of Physics, Ajou University)

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P2-pa.001*

Development of Jet-based MET correction at Level-1 trigger for the CMS Phase-II upgrade / GOH Junghwan[*1], OH Junwon[1], MOON Chang-Seong[2], HONG Jieun[2], HERWIG Christian[3] ([1]Department of Physics, Kyung Hee University, [2]Department of Physics, Kyungpook National University, [3]FNAL, Fermilab, USA)

P2-pa.002*

Development of the antiproton buncher test system for Antiproton trap of the GBAR experiment and its SIMION simulation. / WON Donghwan[1], KIM Sun Kee[*1], KIM Bongho[2], LEE Byungchan[1], PARK Kwanhyung[1], JANG Sangcheol[1], CHUNG Moses[3], YU Kyunghoon[3], KIM Eun San[4], LIM Eunhoon[4] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Underground Physics, IBS, [3]Department of Physics, UNIST, [4]Department of Accelerator Science, Korea University)

P2-pa.003*

Study of characteristics of Low Gain Avalanche Detector (LGAD) sensors / MOON Chang-Seong[*1], KIM Jongyeob[1], NAM Hogyeong[1], LEE Jaewon[1], HONG Byeongjin[2], YOO Jaehyeok[2], LEE Kyungmin[2] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Korea University)

P2-pa.004

KDAR neutrino search in JSNS[2] / YEO Insung[2], 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] ([1]Department of Physics and Photon Science, GIST, [2]Laboratory for High Energy Physics, Dongshin University, [3]Department of Physics, Chonnam National University, [4]Division of Science Education, Jeonbuk National University, [5]Department of Physics, Kyungpook National University, [6]Department of Physics, Kyung Hee University, [7]Department of Fire Safety, Seoyeong University, [8]School of Liberal Arts, Seoul National University of Science and Technology, [9]Department of Physics, Soongsil University, [10]Department 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 Jihun[1], KWON Youngjoon[*2], KIM Yongkyu[2] ([1]Department of Physics, Soongsil University, [2]Department of Physics, Yonsei University)

P2-pa.006*

Non thermal leptogenesis in PQ Higgs pole inflation / LEE Hyun Min[*1], SONG Jun Ho[1], MENKARA Adriana Guerrero[1], SEONG Myeong Joong[1] ([1]Department of Physics, Chung-Ang University)

P2-pa.007*

Event generation for millicharged particle search at Fermilab / YOO Jae Hyeok[*1], HWANG Insung[1], TSAI Yu-Dai[2] ([1]Department of Physics, Korea University, [2]Department of Physics, UC Irvine, USA)

P2-pa.008

Development of MC generation on HPC for LHC / BANG Junhyeong[1], GOH Junghwan[*1] ([1]Department of Physics, Kyung Hee University)

P2-pa.009

Analysis of lithium pollution reduction of lithium charge stripper by using skimmer / KANG Tae Uk[*1], KIM Hee Reyoung[1] ([1]Department of Nuclear Engineering, UNIST)

P2-pa.010

Pomeron-CQM Model of J/psi photoproduction including the final-state interaction / KIM Hong Joo[*1], S Sakinah[1] ([1]Department of Physics, Kyungpook National University)

P2-pa.011*

Pre-Kicker study in JSNS[2] experiment / PARK Hyeon Woo[*1], HWANG Wonsang[2], 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] ([1]Department of physics, Chonnam National University, [2]Department of Physics, Kyung Hee University, [3]Division of Science Education, Jeonbuk National University, [4]Laboratory for High Energy Physics, Dongshin University, [5]Department of Physics and Optical Science, Gwangju Institute of Science and Technoloogy, [6]Department of Physics, Kyungbook National University, [7]Department of Fire Safety, Seoyeong University, [8]School of Liberal Arts, Seoul Naional University of Science and Technology, [9]Department of Physics, Soongsil University, [10]Department of Physics, Sungkyunkwan University)

P2-pa.012

Monitoring PMT gain with dark hits in the JSNS^2 experiment / PARK Ryeonggyoon[*1], JOO K. K.[1], KIM Jae Yool[1], LIM In Taek[1], MOON D. H.[1], PARK H. W.[1], KIM Eun Joo[2], CHOI J. H.[3], PAC Myoung Youl[3], YEO Insung[3], JANG Jee-Seung[4], KIM Wooyoung[5], PARK Jungsic[5], GOH Junghwan[6], HWANG Wonsang[6], YOO Chang Hyun[6], JANG H. I.[7], CHOI Ji Young[7], KANG S. K.[8], CHEOUN Myung Ki[9], LEE C. Y.[9], JUNG Da Eun[10], YU Intae[10] ([1]Department of Physics, Chonnam National University, [2]Division of Science Education, Jeonbuk National University, [3]Laboratory for High Energy Physics, Dongshin University, [4]Department of Physics and Optical Science, Gwangju Institute of Science and Technology, [5]Department of Physics, Kyungbook National University, [6]Department of Physics, Kyung Hee University, [7]Department of Fire Safety, Seoyeong University, [8]School of Liberal Arts, Seoul Naional University of Science and Technology, [9]Department of Physics, Soongsil University, [10]Department 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 Sungbo[1] ([1]Department of Physics, Chung-Ang University)

P2-pa.014*

PQ inflation and axion quality problem / LEE Hyun Min[*1], SEONG Myeong Jung[1], SONG Jun ho[1], MENKARA Adriana Guerrero[1] ([1]Department of Physics, Chung-Ang University)

P2-pa.015

MC study of $D^0 \rightarrow V$ gamma decays at Belle II experiment / KIM Jaeyoung[1], KWON Youngjoon[*1] ([1]Department 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] ([1]Department of Physics, Hanyang University)

P2-pa.017*

Study of D decays to invisible final states in Belle II experiment / KWON Youngjoon[*1], KIM Chanho[1] ([1]Department of Physics, Yonsei University)

P2-pa.018*

Identification of ttH(bb) from ttbb events using Spiking Neural Network on Loihi neuromorphic chip / RYOU Yeon Su[*1], KIM Tae Jeong[1] ([1]Department of Physics, Hanyang University)

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P2-pl.101
Effect of microwave power on the formation of the crystalline diamond by CVD deposition method / TRUONG Hien Thi[*1], OH Sangwon[1] ([1]Quantum Technology Research Department, KRISS)

P2-pl.102
레이저 흡수 분광법을 이용한 헬륨 유도 결합 플라즈마내 준안정 준위 밀도 측정 / JUNG Jaehoon[1], LEE Wonwook[*1], OH Cha-Hwan[1] ([1]Department of Physics, Hanyang University)

P2-pl.103
Investigating AC loss in low current ramp rates of KSTAR superconducting PF magnets / KIM Mu-yong[1], LEE Hyun Jung[*1], KWON Gi-il[1], NAM Seokho[1], KIM Hyun Wook[1], YONEKAWA Hirofumi[1], KIM Kwang Pyo[1], PARK Kaprai[1] ([1]KFE)

P2-pl.104
충돌-방사 모델을 이용한 아르곤 유도 결합 플라즈마의 물성 진단 / WE Changhyeon[1], LEE Wonwook[*1], OH Cha-Hwan[1] ([1]Department 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 June[*1], JEON Sang Un[1], WAN Kim Jae[1] ([1]Department 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 Jinseok[*1] ([1]KSTAR, KFE, [2]Plasma and Nuclear fusion, UST)

P2-pl.107*
Particle-in-Cell 플라즈마 시뮬레이션에서 Super particle 비율이 미치는 영향 / LEE Hae June[*1], KIM Dongyoung[1], BAEK Geon U[1], SHIN Ji Hyun[1] ([1]Department 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 U[1] ([1]Department of Electrical Engineering, Pusan National University)

P2-pl.109
Simulation studies on effect of target configuration on laser-ablated plasma scale length / YU Hyungyu[1], LEE Chunghwa[1], LEE Hyojeong[1], SUK Hyyong[*1] ([1]Department 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 Hyunsuk[1], HUR Min Sup[*1] ([1]Department of Physics, UNIST)

P2-pl.111*
Plasma generation from Processed Low Reflectance Aluminum Using Femtosecond Laser pulses / SUK Hyyong[*1], 김수호[1] ([1]Department of Physics and Photon Science, GIST)

P2-pl.112*
Al Plasma Diagnostics with a Nomarski Interferometer Using a Frequency-tripled Ti:sapphire Laser / LEE Hyojeong[1], ROH Kyungmin[1], KIM Suho[1], SUK Hyyong[*1] ([1]Department of Physics and Photon Science, GIST)

P2-pl.113*
다중 펌프레이저를 이용한 라만 산란 증폭 빔 결합기 / PARK Dohyun[1], LEE Jaeho[1], HUR Min Sup[*1] ([1]Department of Physics, UNIST)

P2-pl.114*
High-Density-Gradient laser-produced plasma diagnostics using a double-grating differential interferometer / ROH Kyungmin[1], LEE Hyojeong[1], JEON Seongjin[1], KANG Keekon[1], SUK Hyyong[*1] ([1]Department of Physics and Photon Science, GIST)

P2-pl.115*
플라즈마 확산 메커니즘을 통한 고밀도 플라즈마 생성에 대한 연구 / KIM Seungyun[1], HUR Min Sup[*1] ([1]Department 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 Changhoo[1] ([1]Department 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 Kyungbae[1], LEE Changhoo[1,3], KANG Gyeongbo[1,3], SOHN Janghyeob[1], LEE Gyusang[1,3], LEE Hyungjin[1], BAE Leejin[1,2], KIM Chul Min[1,2,3], CHO Byoung Ick[*1,3] ([1]GIST, [2]Advanced Photonics Research Institute, APRI, [3]Center for Relativistic Laser Science, IBS)

P2-pl.118

플라즈마 cut-off frequency 이용한 Thz 생성 및 증폭 / LEE Yun Gyu[1], HUR Min Sup[*1] ([1]Department of Physics, UNIST)

P2-pl.119*

High energy resolution off-resonant spectroscopy to probe electronic structures using self-seeded XFEL beams / SOHN Janghyeob[1], KANG Gyeongbo[1,2], LEE Gyusang[1,2], LEE Changhoo[1,2], CHUN Sae Hwan[3], PARK Jaeku[3], CHOI Tae-Kyu[3], CHO Byoung Ick[*1,2] ([1]Department of Photon and Physics, GIST, [2]Center for Relativistic Laser Science, IBS, [3]XFEL Division, Pohang Accelerator Laboratory)

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P2-pl.201
Generation of Soft X-Ray Attosecond Free Electron Laser using Non-Resonant Laser Modulator / MOON Kook-Jin*[1], CHO Myung Hoon[1], SHIM Chi Hyun[1], YANG Haeryong[1], KWON Seong-Hoon[1], NAM Inhyuk[1] ([1]Accelerator Control Team, Pohang Accelerator Laboratory)

P2-pl.202
Commissioning of 6.5MeV electron Beam of Microtron for Thz FEL system / KIM Keon Ho[1], CHO Hee Jin[1], JEONG Young Uk[2], BAE Sang Yoon[2], PARK Seong Hee*[1] ([1]Department of Accelerator Science, Korea University, [2]KAERI)

P2-pl.203
Development of a capillary gas-cell with plasma density gradient for LWFA experiment / JEONG Junyeong*[1], NAM Inhyuk[2], CHUNG Moses[1] ([1]Department of Physics, UNIST, [2]XFEL, 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-Kyu[1], MIN Chang-Ki[1], CHUNG Moses[2] ([1]PAL-XFEL, Pohang Accelerator Laboratory, [2]Deparatment of Physics, UNIST)

P2-pl.205
알라닌과 Gafchromic 필름을 이용한 가속기 시설 내 선량 평가 방법 / KIM Kye-Ryung*[1], CHO Yong-Sub[1], LEE Seunghyun[1], YUN Sang pil[1], KIM Han Sung[1] ([1]Korea Multi-purpose Accelerator Complex, KAERI)

P2-pl.206*
Round beam generation and Emittance exchange studies using difference resonance coupling with Korea-4GSR lattice / KIM JunHa[1], CHUNG Moses*[1] ([1]Department 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 Cheolmin[2], TSHOO Kyoungho[2], KIM Gi Dong[2], WOO Hyung Joo[2], SHIN Taeksu[2] ([1]Department of Physics, UNIST, [2]Rare Isotope Science Project, IBS)

P2-pl.208

Research for orbit correction at RAON SCL2 / JIN Hyunchang[*1], HAN Jang-Min[1] ([1]IRIS, IBS)

P2-pl.209

Improvement of an image segmentation routine specialized for texture processing / GIL Kyehwan[*1] ([1]Pohang 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 Tongnyeol[2], KWON Jae-Min[2], YOON Eisung[1] ([1]Department of Nuclear Engineering, UNIST, [2]Division of Integrated Simulation, KFE)

P2-pl.211*

아르곤 제어개스 주입에 의한 KSTAR H-mode 플라즈마에서의 열속 감소 효과의 SOLPS-ITER 전산모사 / LEE Chanyeong[2], SHIN Haewon[1], HWANG Junghoo[2], HAN Yoonseong[2], CHOE Wonho[*2] ([1]Nuclear and Quantun Engineering, KAIST, [2]Nuclear 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-Hee[2], SHIN Haewon[2], CHAI Kil-Byoung[2], CHOE Wonho[*1] ([1]Department of Nuclear and Quantum Engineering, KAIST, [2]Department 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 Ho[1] ([1]Nuclear Physics Application Research Division, KAERI)

P2-pl.214

크립톤 개스 주입에 의한 KSTAR 플라즈마 열속 감소의 SOLPS-ITER 전산모사 / YOON Junhyeok[1], HWANG Junghoo[1], SHIN Haewon[2], HAN Yoonseong[1], LEE Hyeongho[3], YOON Siwoo[3], CHOE Wonho[*1] ([1]Department of Nuclear and Quantum Engineering, KAIST, [2]Korea Atomic Energy Reserach Institute, [3]Korea Institute of Fusion Energy)

P2-pl.215*

SOLPS-ITER 전산모사를 활용한 KSTAR 플라즈마내 중수소 개스 주입 및 플라즈마 드리프트 영향 분석 / HWANG Junghoo[1], PARK Jae-Sun[2], PITTS Richard A[3], JUHN June-Woo[4], HAN Yoon Seong[1], LEE Hyungho[4], BAK Jun-Gyo[4], HONG Suk-Ho[5], CHOE Wonho[*1] ([1]Department of Nuclear and Quantum Engineering, KAIST, [2]Oak Ridge National Laboratory, USA, [3]ITER Organization, France, [4]KFE, [5]General Atomics, USA)

P2-pl.216*

Gaussian process tomography 방법을 이용한 토카막 내 불순물 수송계수 획득 알고리즘 개발 및 GUI 적용 / HAN Yoonseong[1], YOON Junhyeok[1], LEE Hyunghoo[2], YOON Siwoo[2], CHOE Wonho[*1] ([1]Department of Nuclear and Quantum Engineering, KAIST, [2]Korea Institute of Fusion Energy, KFE)

P2-pl.217*

Bayesian Neural Network for predicting disruption using 0D parameters and 1D profiles in KSTAR / KIM Jinsu[1], NA Yong Su[*1] ([1]Department of Nuclear Engineering, Seoul National University)

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P2-se.001*

Formation of amorphous Ga_2O_3 thin films on metal substrates by MOCVD and characteristics of diodes / AHN Namjune[1], AN Jang Beom[1], KIM Kyoung Hwa[1], AHN Hyung Soo[1], YANG Min[*1] ([1]Electronic Material Engineering, Korea Maritime and Ocean University)

P2-se.002*

온도에 따른 ITO 박막의 물성변화 연구 / HAN Seonghoon[1], SON Yeongjun[1], SONG Sehwan[1,2], LEE Jisung[3], BAE Jong-seong[4], PHAM Anh Tuan Thanh[5], PHAN Thang Bach[5], PARK Sungkyun[*1] ([1]Pusan National University, [2]양자기술연구소 양자스핀팀, KRISS, [3]연구장비개발부, KBSI, [4]부산센터, KBSI, [5]INOMAR, Vietnam National University, Vietnam)

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한국물리학회 회보 제41권 제2호

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센터 목적

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반데르발스계 신구조 및 신물질 구현
새로운 물리 현상 발견 및 물성 제어
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센터 비전

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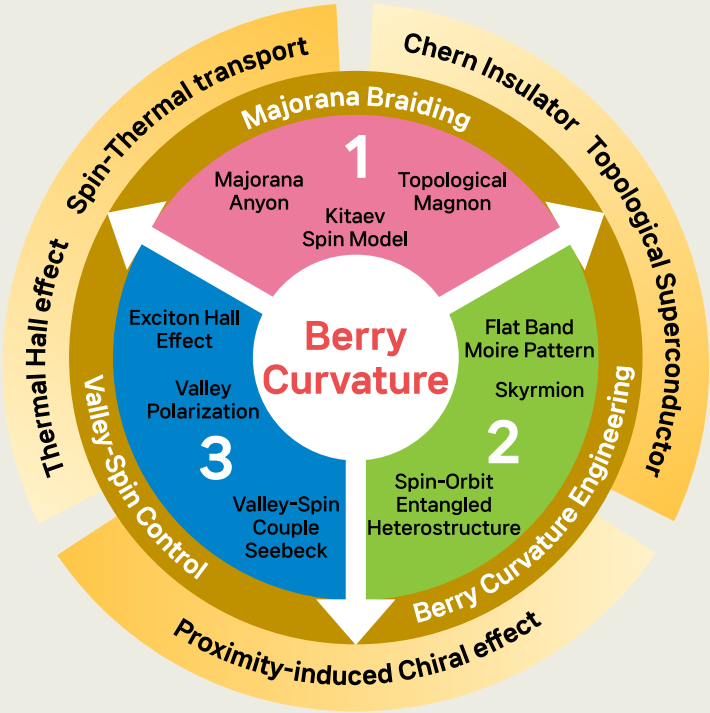
선도연구센터(SRC)

센터장: 성맹제 (중앙대)



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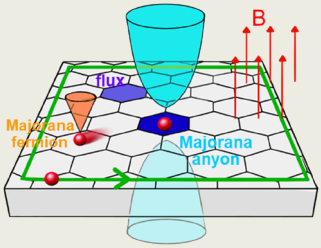

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