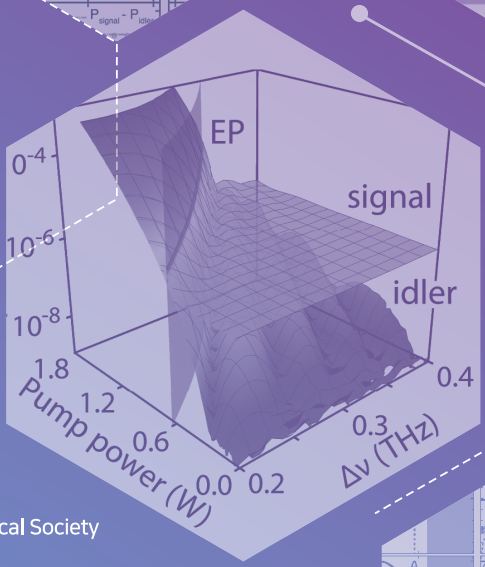


- 2022.04 제40권 제1호
- Bulletin of the Korean Physical Society
- 한국물리학회 회보

2022년 봄 학술논문발표회 및 임시총회

2022 KPS Spring Meeting

2022년 4월 20일(수) ~ 22일(금)

Virtual Conference

KPS 한국물리학회 The Korean Physical Society

Contents

이번 호의 표지는 박세배(제1저자), 이동진(제1저자), 박경득, 신희득(교신저자), 최영선, 윤재웅 회원의 최근 논문 Optical Energy-Difference Conservation in a Synthetic Anti-PT-Symmetric System, PRL Vol. 127, 083601 (2021)에서 모티브를 채택했다. 이 논문에서는 광섬유를 이용하여 합성차원에서 반-PT 대칭성 광학계를 구현했고, 에너지-차이 보존과 동기화된 광파워 진동을 광학계 최초로 연구하였다. 이번 봄 학술논문발표회 H16-op 세션에서 신희득 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

Category		Fee (KRW)	Category		Fee (KRW)
Registration	Fellow/Regular member	150,000	JKPS Subscription	Fellow (membership fee waived)	150,000
	Student member	70,000			
	Nonmember (general)	320,000		Regular Member (membership fee waived)	100,000
	Nonmember (invited speaker or student)	170,000			
Membership	Fellow	120,000		Student member	40,000
	Regular member	70,000			
	Student member	20,000	Enrolling fee	New member	10,000

3. Virtual Conference Rooms

Division	Oral sessions (Zoom rooms)	Poster sessions	Special sessions (Zoom rooms)
Particle and Field Physics	01, 02	Virtual poster exposure (Apr. 18~Apr. 22) Metaverse presentation (mandatory): Apr. 20, 18:10-19:30 & Apr. 21, 17:10-18:30	• Plenary Lecture: 01 • Zurich Instruments: 21 • 교육위원회 특별세션: 21 • 임시총회 & 평의원회: 21 • APCTP 저자강연-빛의 핵심: 21 • Focus: Low-carbon energy alternatives: 21 • 정책 세션-기초연구사업: 21 • 여성위원회 특별 북 토크: 21 • 새로운 대형연구시설의 국내 건설 필요성과 계획: 21 • 출연연 세션-연구기관에서의 물리학 연구: 21 • Open KIAS: 21
Nuclear Physics	03		
Condensed Matter Physics	05, 06, 07, 08, 09		
Applied Physics	10, 11, 12		
Statistical Physics	13		
Physics Teaching	14		
Plasma Physics	15		
Optics and Quantum Electonics	16		
Atomic and Molecular Physics	17		
Semiconductor Physics	18, 19		
Astrophysics	04		
Biological Physics	20		

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

- All oral sessions will be essentially virtual meetings and conducted via Zoom.
- If you selected 'pre-record video presentation' in the process of abstract submission, you should pre-record your video presentation and upload the mp4 file(see submission guideline), which will be broadcasted online during the scheduled time. (Q&A will be conducted in real time.) It is highly recommended if you are a student who have little experience of oral presentation. If you are an invited speaker, has an option to deliver his/her presentation in real time.)
- If you selected 'real-time presentation' in the process of abstract submission, you are supposed to be familiar with Zoom meeting and deliver your presentation in real time by sharing presentation matarial via Zoom by yourself. In this case, you don't have to pre-record your video presentation. (An invited speaker is considered to deliver his/her presentation in real time if there is no notification of pre-recorded video option.)
- 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, 60) minutes for an invited talk.

6. Poster Presentations

- All poster sessions will be essentially virtual meetings and are accessible online at the KPS homepage during the Conference (April 18, 12:00 ~ April 22, 18:00).
- All presenters are required to attend the assigned Metaverse Poster Presentation Sessions on ZEP platform.

(i) Poster presenters must prepare PCs or laptops with presentation equipment such as webcams, speakers and microphones before joining the metaverse platform.

(ii) You can find the session code, 'P1-co.1' for example, on the 'Poster Sessions' menu. (Program > Entire Programs > Poster Sessions)

(iii) If your code starts with P1 (P2), then your 'Metaverse Poster Presentation' time is April 20, 18:10~19:30 (April 21, 17:10~18:30).

Session	Date and Time	Presentation Method
e-Poster Release	April 18(Mon.) - April 22(Fri.)	Poster presenters daily check the comments on their presentation.
Metaverse Poster Presentation (P1)	April 20(Wed.) 18:10-19:30	Poster presenters for P1 must access and attend the metaverse poster P1 sessions to explain their research achievements and reply to the questions.
Metaverse Poster Presentation (P2)	April 21(Thu.) 17:10-18:30	Poster presenters for P2 must access and attend the metaverse poster P2 sessions to explain their research achievements and reply to the questions.

(iv) You must join in the metaverse 5 minutes before your 'Metaverse Poster Presentation Session' begins. You can access the metaverse system by clicking the button 'virtual conference' on the program webpage of any poster sessions.

(v) During the session, you can proceed to make a presentation and answer questions from other participants or judges as in the real poster room.

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 online discussion.
- Every awardee will be posted in the KPS homepage for recognition just after the Conference and a certificate will be mailed to the presenter according to the mailing address of the corresponding author.

8. No-Show Policy

- Presenters who do not submit the presentation materials within the deadline or do not present at the session without a call to cancel (contact info: abstracts@kps.or.kr, 02-556-4737(ext. 3)) are considered No-Show.
- 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.


KPS
한국물리학회
The Korean Physical Society

Program for 2022 KPS Spring Meeting

Virtual Conference (April 20-22, 2022)

	Division / Session	Particle phys		Nuclear phys	Astrophys	Condensed matter phys					Applied phys			Statistical phys	Physics teaching	Plasma phys	Optical phys	Atomic& molecular phys	Semiconductor phys		Biological physics	Special Sessions and KPS Events
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21
Apr. 20 (Wed.)	Tutorial 09:00~10:48	T1-pa [T] Quantum Computing						T2-co Supercond Quant Dev							T3-te [T] Physicist's School Science				T4-se [T] DLTS 반도체 결함분석	T5-se [T] Excitons in Semiconductors	T6-bp [T] Protein nanotubes	AA21-or Zurich
	Break 10:48~11:10																					
	Session A 11:10~12:58	A1-pa Accelerator I	A2-pa Field and String Theory	A3-nu Nucl. Exp. I		A5-co Supercond/ Magnetism	A6-co [F] Materials function I	A7-co [F] Supercond Quant Dev I	A8-co Computational I			A11-ap [F] Magnonics toward quantum		A13-st Nonlinear Dynamics			A16-op THz Photonics	ⒺA17-at [P] Ultrafast phenomena I	A18-se Low-D 0 1 2	A19-se [F] Nanoscale Interface Engineering I	A20-bp Molecular Biological Physics I	
	Lunch Break 12:58~14:00																					
	Session B 14:00~15:48	B1-pa Accelerator II	B2-pa Particle Phenomenology I	B3-nu Nucl. Exp. II		B5-co [F] Supercond compounds	B6-co [F] Materials function II	ⒺB7-co [P] Inter Surf Funct Mater I	ⒺB8-co [P] Artificial Surf Spins I	B9-co [F] Supercond Quant Dev II	B10-ap 2D Materials I	B11-ap [F] Ferroelectricity and ferromagnetism I	B12-ap [F] Organic Materials	B13-st Complex Systems I			B16-op [F] Opt for quantum inform.	ⒺB17-at [P] Ultrafast phenomena II	B18-se [F] Next-Generation Optoelectronics	B19-se [F] Nanoscale Interface Engineering II	B20-bp [F] Frontiers in Computational Biophysics	
	Break 15:48~16:10																					
	Session C 16:10~17:58	C1-pa Accelerator III	C2-pa Particle Phenomenology II	C3-nu Nucl. Reac.			ⒺC6-co [P] Kitaev topo magnet I	ⒺC7-co [P] Inter Surf Funct Mater II	ⒺC8-co [P] Artificial Surf Spins II	C9-co Dielectric/ Functional	C10-ap 2D Materials II	C11-ap [F] Ferroelectricity and ferromagnetism II	C12-ap Photonics, Bio, and Quantum				C16-op [F] Bio- opt and elect devices		C18-se [F] Quantum Information Technologies	C19-se Next Semiconductor Quantum	C20-bp Cellular Biological Physics	ⓀC21-or 일반물리학의 현대화
	Break 17:58~18:10																					
	Session P1 18:10~19:30	Author Presentation (Metaverse)																				
	Session W1 19:00~21:00																					ⓀW1-or APCTP 저자강연 19:00~
Apr. 21 (Thu.)	Session D 09:00~10:48	D1-pa Accelerator IV	D2-pa Non-accelerator I	ⒺD3-nu [P] RAON I		D5-co Magnetism I	ⒺD6-co [P] Kitaev topo magnet II	ⒺD7-co [P] Moiré quantum mater I	D8-co Computational II	ⒺD9-co [P] Quantum flatbands I	D10-ap Nano / Surface	D11-ap [F] Topology in magnetization	ⒺD12-ap [P] Non-Equilibrium I	D13-st Complex Systems II		D15-pl Accelerator & Beam			ⒺD18-se [P] Exciton-Polaritons for Photonics I	ⒺD19-se [P] 2D van der Waals Heterostructures I	D20-bp Molecular Biological Physics II	
	Break 10:48~11:00																					
	Session PL 11:00~12:00	ⒺPL1-or Plenary Lecture																				
	Lunch Break 12:00~13:00																					
	Session E 13:00~14:48		ⒺE2-pa [F] Dark Matter, Baryogenesis	ⒺE3-nu [P] RAON II	ⒺE4-as [F] Black Hole I	ⒺE5-co [P] Orbitronics I	E6-co [F] Kagome metals I	ⒺE7-co [P] Moiré quantum mater II	E8-co [F] Quasipart correlat I	E9-co [F] Ultrafast mater propert I	E10-ap [F] 2D Materials	E11-ap [F] Electromechanical Materials I	E12-ap [F] Optical nanodevices I	E13-st Nonequilibrium Systems		E15-pl Special Session	ⒺE16-op [P] Soft Matter Phy & Opt I	E17-at AMP I	ⒺE18-se [P] Exciton-Polaritons for Photonics II	ⒺE19-se [P] 2D van der Waals Heterostructures II	E20-bp [F] The future of genome editing	E21-or [F] Low-carbon energy
	Break 14:48~15:10																					
	Session F 15:10~16:58	F1-pa Accelerator V	F2-pa Non-accelerator II	ⒺF3-nu [P] EOS I	F4-as [F] Black Hole II	ⒺF5-co [P] Orbitronics II	F6-co [F] Kagome metals II	F7-co [F] Ultrafast mater propert II	F8-co [F] Quasipart correlat II	ⒺF9-co [P] Quantum flatbands II	F10-ap [F] Straintronics in graphene	F11-ap [F] Electromechanical Materials II	ⒺF12-ap [P] Non-Equilibrium II			F15-pl [F] Next-generation accelerators	ⒺF16-op [P] Soft Matter Phy & Opt II	F17-at AMP II	F18-se [F] Perovskites for Optoelectronics	F19-se [P] Korea-Vietnam Joint Workshop I	F20-bp [F] Frontiers in Biophysics	ⓀF21-or 기초연구사업
	Break 16:58~17:10																					
	Session P2 17:10~18:30			ⒺFF3-nu [P] EOS II	Author Presentation (Metaverse)															FF19-se [P] Korea-Vietnam Joint Workshop II		
	Session W2 19:00~21:00																					ⓀW2-or 여성위원회 북토크
Apr. 22 (Fri.)	Session G 09:00~10:48	ⒺG1-pa [P] Black Hole Information I	ⒺG2-pa [P] Dark Matter and Neutrino I	G3-nu Nucl. Astrophys. & Nucl. Str.	G4-as Astrophysics I	ⒺG5-co [P] Correlat Topo Matter I	G6-co Other cond mater/Instru	G7-co Nano-meso/Surf-interf	ⒺG8-co [P] Hund strange metal I	G9-co Correlated Systems I	ⒺG10-ap [P] Novel Nanomaterials I	G11-ap Spin and Oxide	G12-ap [F] Optical nanodevices II		G14-te Physics teaching I	G15-pl Nuclear Fusion	G16-op Nanophotonics I	G17-at [F] OYRA winner I	ⒺG18-se [P] Semiconductor Sensors I	G19-se Energy & Device		ⒺG21-or Open KIAS
	Break 10:48~11:10																					
	Session H 11:10~12:58	ⒺH1-pa [P] Black Hole Information II	ⒺH2-pa [P] Dark Matter and Neutrino II	H3-nu HIC	H4-as Astrophysics II	ⒺH5-co [P] Correlat Topo Matter II	H6-co Magnetism II	H7-co Surface/Interf/ Nanomater	ⒺH8-co [P] Hund strange metal II	H9-co Correlated Systems II	ⒺH10-ap [P] Novel Nanomaterials II	H11-ap Energy and Computational			H14-te [F] Physics Subject Content	H15-pl Basic Plasma Phenomena	H16-op Nanophotonics II	H17-at [F] OYRA winner II	ⒺH18-se [P] Semiconductor Sensors II			ⓀH21-or 대형연구시설 part II
	Lunch Break 12:58~14:00																					
	Session I 14:00~15:48			I3-nu Had. Phys. I						ⒺI9-co [P] Rheology/ Fluids I					I14-te [F] Physics Curriculum		I16-op Biophotonics		I18-se [F] Novel Energy Materials			ⓀI21-or 연구기관에서의 물리학연구
	Break 15:48~16:10																					
	Session J 16:10~17:58			J3-nu Had. Phys. II						ⒺJ9-co [P] Rheology/ Fluids II					J14-te Physics teaching II				J18-se [F] Triboelectric Materials & Systems			

e-Poster Session

Particle physics | Nuclear physics | Astrophysics | Condensed matter physics | Applied physics | Statistical physics | Physics teaching

Plasma physics | Optics and quantum electronics | Atomic & molecular physics | Semiconductor physics | Biological physics | Special session and KPS Events

Poster Program for 2022 KPS Spring Meeting Virtual Conference (April 20-22, 2022)

Session P1

- Poster Exposure Period : **April 18, 12:00 ~ April 22, 18:00**
- Metaverse Presentation (mandatory) : **April 20, 18:10-19:30**

P1-pa Accelerator-based particle physics experiments	**P1-nu** Nuclear physics	**P1-co.1** Magnetism/ Superconductivity	**P1-co.2** Condensed Matter Computational Physics	**P1-co.3** Instrumentation and Big Facilities	**P1-ap.1** 2D materials	**P1-ap.2** Nano materials and surfaces	**P1-st** Statistical Physics
P1-op Optics and Quantum Electronics	**P1-se.1**	**P1-se.2**	**P1-bp** Biological Physics				

Session P2

- Poster Exposure Period : **April 18, 12:00 ~ April 22, 18:00**
- Metaverse Presentation (mandatory) : **April 21, 17:10-18:30**

P2-pa Non-accelerator Experiments and Particle Physics Theory	**P2-co.1** Strongly Correlated/ Dielectrics/ Functional Oxides	**P2-co.2** Nano-Meso/ Surface-Interface	**P2-ap.1** Spin / Oxide / Energy / Computational	**P2-ap.2** Photonics / Organic / Quantum / Bio	**P2-te** Physics teaching and education	**P2-pl.1** Basic, Accelerator & Beam, Nuclear Fusion	**P2-pl.2** Laser and Plasm Application
P2-at Atomic and Molecular Physics	**P2-as** Astrophysics						

Particle physics
Plasma physics
Special session
Nuclear physics
Optics and quantum electronics
Condensed matter physics
Atomic & molecular physics
Applied physics
Semiconductor physics
Statistical physics
Astrophysics
Physics teaching
Biological physics

Program at a glance

Date	Time	Program		Special Sessions & KPS Events
April 20 (Wed)	09:00~10:48	Tutorial	e-Poster (Apr. 20 ~ 22)	취리히인스트루먼트 솔루션 세션
	11:10~12:58	Session A		
	12:58-14:00	Lunch Break		
	14:00-15:48	Session B		
	15:48-16:10	Break		
	16:10-17:58	Session C		교육위원회 (일반물리학의 현대화)
	17:58-18:10	Break		
	18:10~19:30	Poster Presentation I (Metaverse)		임시총회 & 평의원회 (18:00-18:30)
	19:00~21:00	Session W1		APCTP 저자강연
April 21 (Thu)	09:00-10:48	Session D		
	10:48-11:00	Break		
	11:00~12:00	Plenary		
	12:00-13:00	Lunch Break		
	13:00-14:48	Session E		[F] Low-carbon energy
	14:48-15:10	Break		
	15:10-16:58	Session F		정책세션 (기초연구사업)
	16:58-17:10	Break		
	17:10~18:30	Poster Presentation II (Metaverse)	Session FF (17:10-18:58)	
	19:00~21:00	Session W2		여성위원회 북 토크
April 22 (Fri)	09:00-10:48	Session G		ⓔG21-or Open KIAS
	10:48-11:10	Break		
	11:10-12:58	Session H		대형연구시설 Part II
	12:58-14:00	Lunch Break		
	14:00-15:48	Session I		출연연 세션 : 연구기관
	15:48-16:10	Break		
	16:10-17:58	Session J		

Plenary

Tutorial sessions

Sessions organized by KPS committees

List of Award Winners' Presentations

A: April 20(Wed) 11:10-12:58

AA: April 20(Wed) 09:00-10:48

B: April 20(Wed) 14:00-15:48

C: April 20(Wed) 16:10-17:58

D: April 21(Thu) 09:00-10:48

E: April 21(Thu) 13:00-14:48

F: April 21(Thu) 15:10-16:58

FF: April 21(Thu) 17:10-18:58

G: April 22(Fri) 09:00-10:48

H: April 22(Fri) 11:10-12:58

I: April 22(Fri) 14:00-15:48

J: April 22(Fri) 16:10-17:58

PL: April 21(Thu) 11:00-12:00

T: April 20(Wed) 09:00-10:48

W1: April 20(Wed) 19:00-21:00

W2: April 21(Thu) 19:00-21:00

P1: Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
Metaverse Presentation (mandatory): April 20, 18:10-19:30

P2: Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
Metaverse Presentation (mandatory): April 21, 17:10-18:30

구두발표논문 시간표

Oral Session Schedule

기조강연 Plenary Lecture

Ⓔ [PL1-or] Plenary Lecture: Individual atoms as clocks and bits

2022. 04. 21 Thursday 11:00~12:00

Room: 01

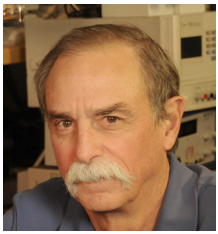
좌장 : **김재완** 고등과학원

Chair: KIM Jaewan (KIAS)

PL1.01 [11:00 - 12:00]

Individual atoms as clocks and bits / WINELAND David*1 ([1]Phillip H. Knight Distinguished Research Chair, University of Oregon)

ABSTRACT:



Atoms absorb electromagnetic radiation at precise discrete frequencies. Knowing this, a recipe for making an atomic clock is simple to state: we first need an oscillator to produce the radiation and a device that fixes the radiation frequency for maximum atomic absorption. We then simply count cycles of the oscillator; the duration of a certain number of cycles defines a unit of time, e.g., the second. Today, the most accurate clocks count cycles of radiation corresponding to optical wavelengths, around a million billion per second. At this level, many interesting effects, including those due to Einstein's relativity, must be accounted for.

Atoms can also be used to store bits information. For example, we can label the atom's lowest energy state a "0" and a state of higher energy a "1." However, quantum systems such as atoms can also exist in "superposition" states, thereby storing both states of the bit simultaneously, a situation that makes no sense in our ordinary-day experience. Superposition leads to an exponential increase in memory and processing capacity. It would enable a quantum computer to simulate the action of other important quantum systems in cases where such a simulation would be intractable on a conventional computer.

Experiments in which laser-beam-manipulated "trapped" atomic ions are used to realize atomic clocks and the elements of a quantum computer will be described.

Tutorial Sessions

Ⓚ [T1-pa] Tutorial: Introduction to Quantum Computing

2022. 04. 20 Wednesday 09:00~10:35

Room: 01

좌장 : **박명훈** 서울과학기술대학교

Chair: PARK Myeonghun (Seoul National University of Science and Technology)

[SCOPE]
입자물리학에서 실험데이터를 효율적으로 분석하기 위해, 그리고 현상론의 복잡한 모델을 처리하게 위해 인공지능을 포함한 다양한 고급 컴퓨팅 기법들이 활용되고 있다. 최근에는 연구자들이 양자컴퓨터를 사용할 수 있게 되면서 이를 활용한 다양한 연구활동들이 진행되고 있다. 본 강연에서는 양자컴퓨터의 기본 이론 및 실제 구현에 대한 강의들을 제공하여, 젊은 연구자들이 최신 양자컴퓨팅 기법을 연구에 적용할 수 있는 발판을 마련해 주려한다.

T1.01 [09:00 - 10:00]
양자컴퓨팅 기법 소개 / 권혁준*1 ([1]고등과학원)

T1.02 [10:00 - 10:36]
양자컴퓨팅 기법 소개 (Introduction to Quantum Computing) / 이용해*1 ([1]한국과학기술원)

Ⓚ [T2-co] Tutorial: Superconducting Quantum Device

2022. 04. 20 Wednesday 09:00~10:00

Room: 07

좌장 : **김준성** 포항공과대학교

Chair: KIM Jun Sung (POSTECH)

[SCOPE]
중첩, 얽힘 등의 양자현상을 활용할 수 있는 유용한 양자소자에 대한 연구가 활발히 진행되고 있다. 그 중 거시적 양자현상을 보이는 초전도체를 이용한 초전도 양자소자가 있다. 본 튜토리얼 강의에서는 초전도 기반 양자소자 중 대표적인 조셉슨 접합의 예를 중심으로 양자컴퓨터 및 양자센서 활용에 대해 논의하고자 한다.

T2.01 [09:00~10:00]
초전도 양자소자의 활용 / LEE Gil-Ho*1 ([1]Department of Physics, POSTECH)

Ⓚ [T3-te] Tutorial: A Physicist's School Science Study: Focusing on Elementary and Secondary Physics Subjects

2022. 04. 20 Wednesday 09:00~10:00

Room: 14

좌장 : 박상우 청주교육대학교

Chair: PARK Sang Woo (Cheongju National University of Education)

[SCOPE]
본 튜토리얼에서 강연자이신 현동걸교수님은 물리학자의 시각에서 오랜 기간 학교과학(특히, 초중등 물리교과)을 탐구해오신 과정과 주요 결과를 소개할 예정이다. 특히, 교대와 사범대학에서 물리교과내용학을 담당하시는 교수님들께 귀중한 배움의 시간이 될 것이다.

T3.01 [09:00 - 10:00]
한 물리학자의 학교과학 탐구: 초중등 물리교과를 중심으로 / 현동걸*1 ([1]제주대학교 교육대학 초등과학교육전공)

Ⓚ [T4-se] Tutorial: Analysis of Defects in Semiconductors with Deep Level Transient Spectroscopy

2022. 04. 20 Wednesday 09:00~10:00

Room: 18

좌장 : 정문석 한양대학교

Chair: JEONG Mun Seok (Hanyang University)

[SCOPE]
Deep level transient spectroscopy(DLTS)는 반도체의 결함 농도 및 캐리어 결합 에너지를 분석할 수 있는 연구 장비이다. 본 튜토리얼에서는 DLTS 연구 분야 최고의 전문가를 모시고 기초 물리부터 반도체 물질의 분석까지 DLTS 를 이용하여 탐구할 수 있는 모든 영역에 대하여 공부할 수 있는 기회를 가진다.

T4.01 [09:00~10:00]
Analysis of Defects in Semiconductors with Deep Level Transient Spectroscopy / KIM Eun Kyu*1 ([1]Department of Physics, Hanyang University)

Ⓚ [T5-se] Tutorial: Excitons in Semiconductors: Light-matter interactions

2022. 04. 20 Wednesday 09:00~10:00

Room: 19

좌장 : 류미이 강원대학교

Chair: RYU Mee-Yi (Kangwon National University)

[SCOPE]
본 튜토리얼 세션을 통해 다양한 차원의 반도체에서 나타나는 엑시톤 상태의 기본적인 특성에 대해 알아보고자 한다. 또한 공간적으로 구속된 빛과 엑시톤의 상호작용에 의해 나타나는 준입자 상태의 물리적 특성 및 응용소자에 대한 최근 연구동향에 대해서도 살펴보고자 한다.

T5.01 [09:00~10:00]
Excitons in semiconductors: Light-matter interactions / CHO Chang-Hee*1 ([1]Department of Physics and Chemistry, Daegu Gyeongbuk Institute of Science and Technology (DGIST))

Ⓚ [T6-bp] Tutorial: Molecular switches regulating structures and interactions of protein nanotubes

2022. 04. 20 Wednesday 09:00~10:00

Room: 20

좌장 : 정철현 한국과학기술연구원

Chair: JEONG Cherlhyun (KIST)

[SCOPE]
세포분열과 세포물질수송에 중요한 역할을 담당하는 Microtubules의 구조와 동역학을 제어하는 molecular driving force의 이해와 응용에 관한 Tutorial 세션을 진행하고자 한다.

T6.01 [09:00 - 10:00]
Molecular switches regulating structures and interactions of protein nanotubes / CHOI Myung Chul*1 ([1]Department of Bio and Brain Engineering, KAIST)

학회주관세션 Sessions organized by KPS Committees

[AA21-or] Zurich Instruments Quantum Computing & Photonics Solution

2022. 04. 20 Wednesday 09:00~10:30

Room: 21

좌장 : **염일남** 취리히 인스트루먼츠 한국지점

Chair: YEOM Il-Nam (Zurich Instruments Korea)

취리히인스트루먼트의 QCCS(Quantum Computing Control System) 중 최근 발표한 SHFQC 양자컴퓨터 제어시스템에 대하여 소개합니다. 그리고 취리히인스트루먼트의 락인앰플리파이어를 활용한 광학포토닉스분야 신호분석 솔루션에 대하여 소개합니다.

[프로그램]

인사말 및 세션소개 / 염일남 (Country Manager South Korea, Zurich Instruments)

AA21.01 [09:00 - 10:00]

A Fast and Integrated Qubit Control System / BENHELM Jan[1], THIELE Tobias[2] ([1]CMO, Zurich Instruments, [2]Product Manager, Zurich Instruments)

AA21.02 [10:00 - 10:30]

Optimize the Signal Acquisition for Optics and Photonics Measurements / 이인구*[1] ([1]Application Scientist, Zurich Instruments Korea)

Ⓚ [C21-or] 일반물리학의 현대화를 위한 방향 및 방안 탐색

2022. 04. 20 Wednesday 16:10–17:22

Room: 21

좌장 : **오원근** 충북대학교

Chair: OH Won Kun (Chungbuk National University)

물리학 연구의 최전선과 달리 대학 일반물리학 과목에서 다루는 내용들은 고전 물리 위주로 구성됩니다. 실제 수업에서는 교재의 현대물리 관련 내용도 상당 수 생략되어 다루어지는 경우가 많습니다. 이런 현실에 대해, 일반물리학 과목에서 현대물리 강화 방향 및 방안에 대해 논의를 모아보고자 합니다. 또한 MBL 실험의 도입 이후 큰 변화가 없었던, 일반물리학 실험 과목의 개선방향에 대해서도 논의하고자 합니다. 대학의 물리교육 개선에 관심을 갖는 많은 회원님들의 관심을 기대합니다.

[프로그램]

인사말 / 오원근 (교육위원회 위원장, 충북대 교수)

C21.01 [16:10 - 16:28]
일반물리학에서 현대물리를 어떻게 가르칠 것인가 / LEE Kang Young*1 ([1]Department of Physics Education, Gyeongsang National University)

C21.02 [16:28 - 16:46]
<빅뱅 우주 속의 우리> 사이버 교양과목 개발 사례 / LEE Chang Hwan*1 ([1]Pusan National University, Department of Physics)

C21.03 [16:46 - 17:04]
일반물리학 실험의 지향점 / SOHN Changhee*1 ([1]Department of Physics, UNIST)

C21.04 [17:04 - 17:22]
New approaches in general physics lab classbased on current IT technology / OH Won Kun*1 ([1]Dept. Physics Education, Chungbuk National University)

[E21-or] Focus: Low-carbon energy alternatives
2022. 04. 21 Thursday 13:00–14:36
Room: 21
좌장 : **박승남** 한국표준과학연구원
Chair: PARK Seung-nam (KRISS)

탄소중립 시대의 새로운 에너지원으로 여러 가지 신재생 에너지들이 제안되고 개발되어 왔습니다. 이 세션에는 이러한 신재생 에너지들뿐만 아니라 원자력 및 핵융합 발전의 전망들도 함께 살펴봄으로 미래 에너지원에 대한 전반적인 담론을 가지는 기회를 마련하고자 합니다.

E21.01 [13:00 - 13:24]
주요국가의 핵융합 연구개발 동향 / 장한수*1 ([1]한국핵융합에너지연구원)

E21.02 [13:24 - 13:48]
Global Trends on Non-Electric Application using SMR for Carbon Neutrality / KIM Chan Soo*1 ([1]Nuclear Hydrogen Research Team, korea Atomic Energy Research Institute)

E21.03 [13:48 - 14:12]
Catalyst Designs and Nanoarchitecture for Hydrogen and Fuel Cell Applications / YOO Sung Jong*1 ([1]Korea Institute of Science and Technology, Hydrogen·Fuel Cell Research Center)

E21.04 [14:12 - 14:36]
태양광 미래 기술 / 윤재호*1 ([1]한국에너지공과대학교 에너지공학부)

Ⓚ [F21-or] 기초연구사업 정책세션

2022. 04. 21 Thursday 15:10~16:20

Room: 21

좌장 : 강세종 고려대학교

Chair: KAHNG Se-Jong (Korea University)

이번 봄 학술대회에서는 연구재단 자연과학단 단장님을 모시고 기초연구사업비의 최근 현황과 향후 전망에 대해 설명을 듣고, 이에 관해 회원 각자의 의견을 개진하는 자리를 갖겠습니다.

[프로그램]

[15:10 – 15:15]	**인사말** / 노태원 (한국물리학회장, IBS/서울대) 김현정 (정책위원장, 서강대)
[15:15 – 15:40]	**기초연구사업 현황 및 향후 계획** / 이준엽 단장 (한국연구재단 자연과학단)
[15:40 – 16:00]	**패널 의견 제시**
[16:00 – 16:20]	**질의 및 응답**
[16:20]	**폐회사**

Ⓔ [G21-or] Open KIAS: Quantum Computing and Quantum Networking in High Energy Physics

2022. 04. 22 Friday 09:00~11:00

Room: 21

좌장 : 고병원 KIAS

Chair: KO Pyungwon (KIAS)

봄 Open KIAS 특강의 주제는 "양자전산과 고에너지 물리학"입니다. Richard Feynman이 양자 전산 가능성을 제시한 지 어느덧40년이 지났습니다. 그 동안 양자전산 관련 이론, 기술 양면에서 많은 발전이 있었습니다. 이번 Open KIAS 특강에서는 페르미 연구소 부소장인 Joe Lykken 박사 등을 모시고, 양자 전산의 지난 역사와 현주소, 그리고 미래에 대한 조망과 더불어, 현재 양자전산 그리고 이와 관련된 여러 전산기법들이 고에너지 물리학에 어떻게 이용되고 있는지에 대한 강연을 들을 예정입니다.

[프로그램]

G21.01 [09:00 - 10:00]

Quantum Computing for High Energy Physics / LYKKEN Joseph D.*1 ([1]Deputy Director for Research, Fermi National Accelerator Laboratory)

G21.02 [10:00 - 11:00]

Quantum Networking and High Energy Physics / SPIROPULU Maria*1 ([1]The Division of Physics, Mathematics and Astronomy, California Institute of Technology, USA)

Ⓚ [H21-or] 새로운 대형연구시설의 국내 건설 필요성과 계획, part II

2022. 04. 22 Friday 11:10~12:58

Room: 21

좌장 : 박승일 한국원자력연구원

Chair: PARK J. M. Sungil (KAERI)

LHC와 같은 대형연구시설은 물리학에 있어서 가장 강력한 도구 중 하나입니다. 그러나 대형연구시설은 건설하고 운영하는데 막대한 예산을 사용하므로, 학계에서 충분히 논의를 거친 후 건설하는 것이 바람직합니다. 또한 건설 후에는 제대로 운영되고 있는 지도 잘 감시해야 할 것입니다. 이와 같은 취지에서2021년 가을 물리학회에 이어 2022년 봄 물리학회에서는 국내에 새로운 대형연구시설을 건설하고자 하는 연구자들의 열망을 회원 여러분과 공유하는 자리를 마련했습니다. 이와 같은 시도가 향후 대형연구시설 전반에 관한 건설적인 논의로 이어지는 계기가 되었으면 합니다다.

[프로그램]

- **인사말** / 박승일 (대형연구시설 소위원회 위원장, 한국원자력연구원)
- **PAL 4세대 방사광가속기 빔 라인 추가** / 강흥식 (포항가속기연구소)
- **초고속 전자회절장치 이용자 시설** / 정영욱 (한국원자력연구원)

Ⓚ [I21-or] 연구기관에서의 물리학연구

2022. 04. 22 Friday 14:00~16:00

Room: 21

좌장 : 김재영 기초과학연구원

Chair: KIM Jae-Young (IBS)

출연연 특별위원회에서는 물리학을 전공하고 공공 연구기관에서 일하고 있는 분들의 연구 활동을 소개하는 세션을 준비하였습니다. 공공 연구기관의 연구 분위기를 물리학회에 소개함으로써, 학계 및 산업계와의 상호 이해를 도모하고 연구협력하는 계기를 만들고자 하며, 또한 청년 물리인들의 미래 전망 모색에도 도움을 드리고자 합니다. 금번 2022년 봄 세션에서는 한국표준연구원, 포항가속기연구소, 그리고 한국과학기술연구원의 연구자들을 소개하고자 합니다.

I21.01 [14:00 - 14:24]

Toward Quantum Force Standard Traceable to Redefined SI / CHOI Jae Hyuk*[1] ([1]Division of Physical Metrology, KRISS)

I21.02 [14:24 - 14:48]

10^{-18} Accuracy Optical Clocks: Future Time Standard and Applications / YU Dai-Hyuk*[1], KIM Huidong[1], HEO Myoung Sun[1], PARK Chang Yong[1], LEE Won-Kyu[1] ([1]Division of Physical Metrology, Korea Research Institute of Standards and Science)

I21.03 [14:48 - 15:12]

Synchrotron X-ray projection imaging and computed tomography at the Pohang Light Source-II / LIM Jae-Hong*[1], KIM Seob-Gu[1], KWAK Ho Jae[1], KIM Jong Hyun[1] ([1]Pohang Accelerator Laboratory, Pohang)

I21.04 [15:12 - 15:36]
Ultrafast X-ray science at PAL-XFEL / JANG Hoyoung*[1] ([1]PAL-XFEL, Pohang Accelerator Laboratory)

I21.05 [15:36 - 16:00]
Neuroscience questions with physics reasoning / CHOI Jee H*[1] ([1]Korea Institute of Science and Technology, Korea)

Ⓚ [W1-or] APCTP 선정, 올해의 과학도서 저자 강연
(Ten Science Books of 2021 – Authors Lectures)
2022. 04. 20 Wednesday 19:00~21:00
Room: 21
좌장 : 손승우 한양대학교
Chair: SON Seung-Woo (Hanyang University)

아시아태평양이론물리센터에서는 매년 10권을 선정하고 저자 강연을 진행하고 있습니다. 이번 세션에서는 2021 올해의 과학도서 중 고재현 교수의 〈빛의 핵심〉을 주제로 강연과 대화의 장을 마련하고자 합니다. 저자 강연 후 APCTP의 과학문화위원과의 질의응답 시간도 준비되어 있습니다.

[프로그램]
- 사회자 : 황정아 (APCTP 과학문화위원, KASI 책임연구원)
- 강연자 : 고재현 (한림대학교 나노융합스쿨)
- 패 널 : 이은희(과학커뮤니케이터), 이정원(Pebblous)

Ⓚ [W2-or] 여성위원회 특별 북 토크- The gender gap in science
2022. 04. 21 Thursday 19:00~21:00
Room: 21
좌장 : 이현정 한국핵융합에너지연구원
Chair: LEE Hyun Jung (KFE)

여성위원회에서는 이번 봄학술대회 프로그램으로 gender 관련 서적 "겸손한 목격자들"과 "나는 대한민국 여성 과학자입니까?"를 소개하고 그 저자들을 만나보고자 합니다.

[프로그램]
- **"겸손한 목격자들"** / 김연화(포스텍 박태준미래전략연구소), 성한아(한국과학기술원 인류세연구센터), 임소연(숙명여대), 장하원(서울대 기초연구원)
- **"나는 대한민국 여성 과학자입니까?"** / 홍정숙(서울대 고분자 나노 융합소재 가공기술센터)
- **패널** / 정우성(포항공대), 김계령(한국원자력연구원)

[2022 성봉물리학상 수상자 발표 (2022 Seongbong Award)]

G15.01 2022. 04. 22 Friday 09:00 – 09:24 Room: 15

G15.01 [09:00 - 09:24]

E x B Shear Flow Dynamics in a Magnetic Island / HAHM Taik Soo*[1], CHOI Gyung Jin[1] ([1]Seoul National University)

[2022 백천물리학상 수상자 발표 (2022 Bae-Cheon Award)]

B2.01 2022. 04. 20 Wednesday 14:00 – 14:12 Room: 02

B2.01 [14:00 - 14:12]

Dark gauge boson production from neutron stars vis nucleon-nucleon bremsstrahlung / SHIN Chang Sub*[1], YUN Seokhoon[2] ([1]Department of Physics, Chungnam National University, [2]Dipartimento di Fisica e Astronomia, Università degli Studi di Padova)

[2022 용봉상 수상자 발표 (2022 Yongbong Award)]

B13.07 2022. 04. 20 Wednesday 15:36 – 15:48 Room: 13

B13.07 [15:36 - 15:48]

Hypergraph modeling based on international trade data / YI Sudo*[1], LEE Deok-Sun[1] ([1]School of Computational Sciences, KIAS)

[2022 융문반도체논문상 수상자 발표 (2022 Yongmun Semiconductor Award)]

A18.08 2022. 04. 20 Wednesday 12:34 – 12:46 Room: 18

A18.08* [12:34 - 12:46]

Complete trion conversion and waveguiding in atomically thin semiconductors / LEE Hyeongwoo*[1], KUMAR Shailabh[2], KOO Yeonjeong[1], JEONG Yunjo[4], CHOI Soo Ho[5], KANG Mingu[1], KIM Ki Kang[5,3], AN Sangmin[4], CHOO Hyuck[2,6], PARK Kyoung-Duck[1] ([1]Department of physics, POSTECH, [2]Department of Medical Engineering, Caltech, [3]Department of Physics, Jeonbuk National University, [4]Center for Integrated Nanostructure Physics, IBS, [5]Department of Energy Science, Sungkyunkwan University, [6]Device & System Research Center, SAIT)

[2022 영운상 수상자 발표 (2022 Youngwun Award)]

D2.04 2022. 04. 21 Thursday 09:36 – 09:48 Room: 02

D2.04 [09:36 - 09:48]

Search for Bosonic Super-WIMP at COSINE-100 / KO Young Ju*[1] ([1]Center for Underground Physics, Institute for Basic Science)

[2022 보산핵물리학상 수상자 발표 (2022 Bo-San Nuclear Physics Award)]

G3.06 2022. 04. 22 Friday 10:00 – 10:12 Room: 03

G3.06 [10:00 - 10:12]

Hint of shape evolution in ^{110}Sn from Coulomb excitation / PARK Joochun[1], HAHN Kevin Insik*[1] ([1]Center for Exotic Nuclear Studies, IBS)

Sessions AA

2022 April 20(Wed) 09:00-10:48

[AA21-or] Zurich Instruments Quantum Computing & Photonics Solution

2022. 04. 20 Wednesday 09:00~10:30

Room: 21

좌장 : **염일남** 취리히 인스트루먼츠 한국지점

Chair: YEOM Il-Nam (Zurich Instruments Korea)

[프로그램]

인사말 및 세션소개 / 염일남 (Country Manager South Korea, Zurich Instruments)

AA21.01 [09:00 - 10:00]

A Fast and Integrated Qubit Control System / BENHELM Jan[1], THIELE Tobias[2] ([1]CMO, Zurich Instruments, [2]Product Manager, Zurich Instruments)

AA21.02 [10:00 - 10:30]

Optimize the Signal Acquisition for Optics and Photonics Measurements / 이인구*[1] ([1]Application Scientist, Zurich Instruments Korea)

Sessions A

2022 April 20(Wed) 11:10-12:58

[A1-pa] Accelerator-based Particle Physics Experiments I

2022. 04. 20 Wednesday 11:10~12:46

Room: 01

좌장 : **유휘동** 연세대학교

Chair: YOO Hwidong (Yonsei University)

A1.01 [11:10 - 11:22]

Status of JSNS[2] and JSNS[2]-II / JEON Sanghoon*[1], JUNG Da Eun[1], YU I.[1], KIM S.B.[1], ROTT C.[1], JEON H.[1], GOH J.[2], HWANG W.[2], YOO C.[2], KIM J.Y.[3], PARK Y.G.[3], SHIN C.D.[3], LIM I.T.[3], MOON D.H.[3], JOO K.K.[3], JANG J.S.[4], PAC M.Y.[5], CHOI J.H.[5], YEO I.S.[5], KANG S.K.[6], KIM W.[7], PARK J.S.[7], KIM E.J.[8], JANG H.I.[9], CHEOUN M.G.[10], LEE C.Y.[10] ([1]Physics Department, Sungkyunkwan University, [2]Department of Physics, Kyung Hee University, [3]Department of Physics, Chonnam National University, [4]Department of Physics and Optical Science,

GIST, [5]Laboratory of High Energy Physcis, Dongshin University, [6]School of Liberal Arts, Seoul National University of Science and Technology, [7]Department of Physics, Kyungpook National University, [8]Division of Science Education, Jeonbuk National University, [9]Department of Fire Safety, Seoyeong Univsersity, [10]Department of Physics, Soongsil University)

A1.02 [11:22 - 11:34]
Status of the KDAR neutrino search with JSNS[2] / JEON Hyoungku[*1], JEON S.H[1], JUNG D.E[1], KIM S.B[1], ROTT C[1], YU I.T[1], JOO K.K[2], KIM J.Y[2], LIM I.T[2], MOON D.H[2], SHIN C.D[2], PARK R.G[2], KIM E.J[10], PAC M.Y[3], CHOI J.H[3], YEO I.S[3], JANG J.S[4], KIM W[5], PARK J.S[5], GOH J[6], HWANG W[6], YOO C[6], JANG H.I[7], KANG S.K[8], CHEOUN M.G[9] ([1]department of physics, Sungkyunkwan University, [2]Department of Physics, Chonnam National University, [3]Laboratory for High Energy Physics, Dongshin University, [4]Department of Physics, GIST, [5]Department of Physics, Kyungpook National University, [6]Department of Physics, Kyung Hee University, [7]Department of Fire Safety, Seoyeong Univsersity, [8]School of Liberal Arts, Seoul National University of Science and Technology, [9]Department of Physics, Soongsil University, [10]Division of Science Education, Jeonbuk National University)

A1.03* [11:34 - 11:46]
Measurement of the HCAL hit time at CMS / YOO Jae Hyeok[*1], PADMANABAN Jayashri[1] ([1]Physics, Korea University)

A1.04* [11:46 - 11:58]
Status of CMS LGAD Sensor Testing in Korea / YOO Jae Hyeok[*1], HONG Byeong Jin[1] ([1]Physics, Korea University)

A1.05 [11:58 - 12:10]
Implementation of MHT trigger algorithm on the FPGA for CMS Phase-2 Level-1 trigger / MOON Chang-Seong[*1], AN Soyun[1] ([1]Department of Physics, Kyungpook National University)

A1.06 [12:10 - 12:22]
The CMS Muon High Level Trigger with Machine Learning for the High Luminosity LHC / OH Minseok[*1], YOO Hwidong[*2] ([1]Department of Physics, Seoul National University, [2]Department of Physics, Yonsei University)

A1.07 [12:22 - 12:34]
An optimal way of exploiting collider variables using machine learning / CHO Won Sang[*1], HAN Subin[1], KIM Hyung-do[1] ([1]Department of Physics and Astronomy, Center for Theoretical Physics, Seoul National University)

A1.08 [12:34 - 12:46]
Physics Analysis Tools in the Python ecosystem for the HL-LHC / CHOI KyungEon[*1] ([1]Department of Physics, University of Texas at Austin)

[A2-pa] Field and String Theory

2022. 04. 20 Wednesday 11:10~12:58

Room: 02

좌장 : 윤정기 아시아 태평양이론 물리학센터

Chair: YOON Junggi (Asia-Pacific Center for Theoretical Physics(APCTP))

A2.01 [11:10 - 11:22]

Cubic Closed String Field Theory on a Double Layer / LEE Tae Jin*[1] ([1]Department of Physics, Kangwon National University)

A2.02 [11:22 - 11:34]

2d (0,2) gauge theories and families of toric Calabi-Yau 4-folds / GHIM Dongwook*[1], SEONG Rak-Kyeong[2] ([1]School of Physics, KIAS, [2]Department of Mathematical Sciences, UNIST)

A2.03* [11:34 - 11:46]

Perturbative Gravity from Double Field Theory / KIM Kwangeon*[1], LEE KANGHOON[2] ([1]Department of Physics, Yonsei University, [2]Junior Research Group, Asia-Pacific Center for Theoretical Physics(APCTP))

A2.04 [11:46 - 11:58]

Dynamical Symmetry and the Thermofield State at Large N / YOON Junggi*[1], JEVICKI Antal[2], LIU Xianlong[2], ZHENG Junjie[2] ([1]Junior Research Group, Asia-Pacific Center for Theoretical Physics(APCTP), [2]Department of Physics, Brown University)

A2.05* [11:58 - 12:10]

Hydrodynamics with dynamical gauge fields and holography / AHN Yongjun[2], BAGGIOLI Matteo[2], HUH Kyoung Bum[1], JEONG Hyun-Sik[3], KIM Keun Young*[1], SUN Ya-Wen[3] ([1]Physics, GIST, [2]Physics and Astronomy, Shanghai Jiao Tong University, [3]Physics, Kavli Institute for Theoretical Sciences)

A2.06* [12:10 - 12:22]

Holographic teleportation with conservation laws: diffusion on traversable wormholes / AHN Byoungjoon[1], BAK Sang-Eon[1], JAHNKE Viktor[1], KIM Keun Young*[1] ([1]Physics, GIST)

A2.07* [12:22 - 12:34]

Multilayed graphenes in holography / SIN Sang Jin*[1], SEO JeongWon[1] ([1]physics department, Hanyang University)

A2.08* [12:34 - 12:46]

Holographic Realization of Lieb Lattice and Its Gapping / HAN Young-Kwon[1], SIN Sang Jin*[1] ([1]physics department, Hanyang University)

A2.09* [12:46 - 12:58]
Revisited "photoemission experiments in holographic superconductors" : Superconducting Dome from holographic spectral function / YUK Taewon[1], SIN Sang Jin[*1] ([1]physics department, Hanyang University)

[A3-nu] Nuclear Experimental Method and Instrumentation I
2022. 04. 20 Wednesday 11:10~12:46
Room: 03
좌장 : 김용선 세종대학교
Chair : KIM Yongsun (Sejong University)

A3.01 [11:10 - 11:22]
Present status of the ISOL beam lines of Rare Isotope Science Project / HASHIMOTO Takashi[*1], YIM Hee Joong[1], KIM Jae Hong[1], PARK Young Ho[1], HEO Seongjin[1], YU Kyoung Hoon[1], LEE Jin ho[1] ([1]Rare Isotope Science Project, IBS)

A3.02 [11:22 - 11:34]
Status of LAMPS Start Counter / KWEON Min Jung[*1], BOK Jeongsu[1] ([1]Inha University)

A3.03* [11:34 - 11:46]
Developement of time-of-flight detector in LAMPS at RAON / AHN Jung Keun[*1], KANG Byungmin[1], KIM Shin Hyung[1], LEE Sungjune[1], LEE Haein[1], YANG Hyunmin[1] ([1]Department of Physics, Korea University)

A3.04* [11:46 - 11:58]
Development of an Active Target Time Projection Chamber for low-energy rare isotope beam experiments / KIM Geunwoo[1], KIM Yongsun[*1] ([1]Sejong University)

A3.05* [11:58 - 12:10]
Simulation of an Active Target Time Projection Chamber for low-energy rare isotope beam experiment / LEE Seunghwan[1], KIM Yongsun[*1] ([1]Sejong University)

A3.06 [12:10 - 12:22]
Multi-gap RPCs for measurement of beam-induced photons / LEE Kyong Sei[*1], KANG Minho[1,2], JO Youngmin[1,2], RAMOS Dayron[3] ([1]Korea University, +Institute of Basic Science, University of Seoul, [3]presso Dipartimento di Fisica, INFN Sezione di Bari)

A3.07* [12:22 - 12:34]
Cosmic-ray Muon Spectrometer (COSMUS) / LEE Haein[*1], AHN Jung Keun[*1] ([1]Department of Physics, Korea University)

A3.08 [12:34 - 12:46]
Opportunity of Korean GEM manufacturing infrastructure for building MPGD at EIC / YOON Inseok*1 ([1]Department of Physics and Astronomy, Seoul National University)

[A4] No session

[A5-co] Superconductivity + Magnetism
2022. 04. 20 Wednesday 11:10~12:10
Room: 05
좌장 : 조연정 경북대학교
Chair: JO Youn Jung (Kyungpook National University)

A5.01 [11:10 - 11:22]
Pair-breaking effect of magnetic field on Nb thin films studied with terahertz time-domain spectroscopy / LEE Ji Eun[1], CHOI Joonyoung[2], JUNG Taek Sun[1], 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, Institute for Basic Science)

A5.02 [11:22 - 11:34]
Enhancement of critical current density and strong vortex pinning in high entropy alloy superconductor $Ta_{1/6}Nb_{2/6}Hf_{1/6}Zr_{1/6}Ti_{1/6}$ synthesized by spark plasma sintering / JIN HEE Kim[1], HIDAYATI Rahmatul[1], SOON-GIL Jung[2], YUSUF Salawu Adeyemi[3], HEON-JUNG Kim[3], JAE HYUN Yun[1], RHYEE Jong-Soo*1 ([1]Dept. of Applied Physics, Kyung Hee University, [2]Dept. of Physics, Sungkyunkwan University, [3]Dept. of Physics, Daegu University)

A5.03* [11:34 - 11:46]
Large Enhancement of Spin Hall Conductivities in W-N Alloys / RHIM Sonny*1, NGUYEN Quynh Anh Thi[1], DO Duc Cuong[1], HONG Soon Cheol[1] ([1]Department of Physics, University of Ulsan)

A5.04 [11:46 - 11:58]
Unprecedented lattice dynamics in a primary insulator-metal transition magnet $NiS_{2-x}Se_x$ / LEE Suheon[1], HAN Ga Ram[2], KIM Changyoung[2], CHOI Sungkyun*1 ([1]Center for Integrated Nanostructure Physics (CINAP), Institute of Basic Science (IBS), Sungkyunkwan University, [2]Center for Correlated Electron Systems (CCES), Institute of Basic Science (IBS), Seoul National University)

A5.05* [11:58 - 12:10]
Development of Sagnac interferometer for magneto-optical measurement and its applications to superconductivity and magnetism / HEO Hyeokjun[1,2], CHOI Won Beom[1,2], HA Sangwook[1,2], KIM Taeho[1], JEONG Yungi[1,2], PARK Hangyeol[1,2], JANG Joonho[*1,2]
([1]Department of Physics, Seoul National University, [2]Center for Correlated Electron Systems, CCES, IBS)

[A6-co] Focus: Materials design for novel correlated properties and functionalities I
2022. 04. 20 Wednesday 11:10~12:58
Room: 06
좌장 : 이형우 아주대학교
Chair: LEE Hyungwoo (Ajou University)

A6.01 [11:10 - 11:34]
Switchable Ferroelectric Bias and Ternary Polar States / OH Yoon Seok[*1] ([1]Department of Physics, UNIST)

A6.02 [11:34 - 11:58]
Magnatic Skyrmion-Based Spintronic Device / JE Soong-Geun[*1] ([1]Department of Physics, Chonnam National University)

A6.03 [11:58 - 12:22]
Design of flat band materials / RHIM Jun Won[*1] ([1]Department of Physics, Ajou University)

A6.04 [12:22 - 12:46]
Rational Molecular Design for Triboelectric Materials Toward Efficient Triboelectric Energy Harvesting / LEE Minbaek[*1] ([1]Department of Physics, Inha University)

A6.05* [12:46 - 12:58]
Systematical analysis of $SrTiO_3$/$SrRuO_3$ superlattice by vertical transport study / KIM Hyeonbeom[1], JEONG Seung Gyo[2], HONG Sung Ju[3], CHOI Woo Seok[*2], SUH Dongseok[*1] ([1]Department of Energy Science, Sungkyunkwan University, [2]Department of Physics, Sungkyunkwan University, [3]Division of Science Education, Kangwon National University)

[A7-co] Focus: Superconducting Quantum Devices I

2022. 04. 20 Wednesday 11:10~12:58

Room: 07

좌장 : **도용주** 광주과학기술원

Chair: DOH Yong-Joo (GIST)

A7.01 [11:10 - 11:46]

Development of a superconducting quantum computer : 5 qubits and more / CHONG Yonuk*1 ([1]SAINT, Sungkyunkwan University)

A7.02 [11:46 - 12:22]

High-fidelity iToffoli gate for fixed-frequency transmon qubits / KIM Yosep*1,2 ([1]Center for Quantum Information, KIST, [2]Computational Research Division, Lawrence Berkeley National Lab)

A7.03 [12:22 - 12:58]

Superconducting qubits with epitaxially-grown nitride Josephson junctions / KIM Sunmi*1, TERAI Hirotaka[1], YAMASHITA Taro[2], QIU Wei[1], FUSE Tomoko[1], YOSHIHARA Fumiki[1], ASHHAB Sahel[1], INOMATA Kunihiro[3], SEMBA Kouichi[1] ([1]National Institute of Information and Communications Technology (NICT), Japan, [2]Nagoya University, Japan, [3]National Institute of Advanced Industrial Science and Technology, Japan)

[A8-co] Condensed-matter Computational Physics I

2022. 04. 20 Wednesday 11:10~12:10

Room: 08

좌장 : **김봉재** 군산대학교

Chair: KIM Bongjae (Kunsan National University)

A8.01 [11:10 - 11:22]

Prediction of the ground structure based on majority voting / PARK Ji-Sang*1 ([1]Physics, Kyungpook National University)

A8.02* [11:22 - 11:34]

A cost-effective hybrid density functional theory calculation for defect calculation: an application to diamond Si / SONG Youbin[1], PARK Seyeon[1], PARK Ji-Sang*1 ([1]Physics, Kyungpook National University)

A8.03 [11:34 - 11:46]

Ab initio Tight-binding Model of Monolayer Transition Metal Dichacogenides without Mirror Reflection Symmetry / KIM Sejoong*1 ([1]UST)

A8.04* [11:46 - 11:58]
Accelerating density functional theory calculations by predicting charge density using convolutional neural networks / LEE Ryong-Gyu[1], KIM Yong-Hoon*[1] ([1]School of Electrical Engineering, KAIST)

A8.05 [11:58 - 12:10]
Electrolyte-mediated nanograin intermetallic formation enables superionic conduction and electrode stability in rechargeable batteries / LEE Hosik*[1] ([1]School of Energy and Chemical Engineering, UNIST)

[A9-A10] No session

[A11-ap] Focus: Magnonics toward quantum
2022. 04. 20 Wednesday 11:10~12:46
Room: 11
좌장 : **김덕호** 한국과학기술연구원
Chair: KIM Duck-Ho (Korea Institute of Science and Technology (KIST))

A11.01 [11:10 - 11:34]
Camera based Lock-in detection of magnetic field using an ensemble of nitrogen vacancy in Diamond / OH Sangwon*[1], LEE Seong-Joo[1], SHIM Jeong Hyung[1], SONG Nam Woong[1], TRUONG Hien[1], KWON SeongMin[1] ([1]Ultra-low magnetic field team, KRISS)

A11.02 [11:34 - 11:58]
Photon-magnon coupling in YIG/ISRR hybrid systems / KIM Sang-koog*[1] ([1]Department of Materials Science and Engineering, Seoul National University)

A11.03 [11:58 - 12:22]
반도체 점결함을 이용한 스핀-광자 인터페이스 연구 / LEE Sang-Yun*[1] ([1]Department of Physics and Photon Science, Gwangju Institute of Science and Technology)

A11.04 [12:22 - 12:46]
Magnon-photon coupling and magnon entanglement in compensated ferrimagnets / LEE Kyung-Jin*[1], SHIM Jaechul[1,2] ([1]Department of Physics, KAIST, [2]Semiconductor R&D Center, Samsung Electronics)

[A12] No session

[A13-st] Nonlinear Dynamics and Soft Matters

2022. 04. 20 Wednesday 11:10~11:58

Room: 13

좌장 : 김철민 울산과학기술원

Chair: GHIM Cheol-Min (UNIST)

A13.01 [11:10 - 11:22]

Revised Michaelis-Menten rate law and its application to time-varying biomolecules / LIM Roktaek[1], MARTIN Thomas[1], CHAE Junghun[2], KIM WooJoong[2], KIM Haneul[2], KIM Pan-Jun[1], GHIM Cheol-Min*[2] ([1]Department of Biology, Hong Kong Baptist University, [2]Department of Physics, UNIST)

A13.02 [11:22 - 11:34]

인공지능을 통한 가치 발굴: 헤도닉 가격 모형과 머신러닝 / AN Sihyun[1,2], SONG Yena[3], JANG Hanwool[4], AHN Kwangwon*[1,2] ([1]Department of Industrial Engineering, Yonsei University, [2]Center for Finance and Technology, Yonsei University, [3]Department of Geography, Chonnam National University, [4]Department of Finance, Accountancy and Risk, Glasgow Caledonian University)

A13.03 [11:34 - 11:46]

Energy-threshold-based dynamical stability of power-grid systems / LEE Daekyung[1], LEE Sang Hoon[3], SON Seung-Woo[2], LEE Mi Jin[2], KIM Heetae*[1] ([1]Department of Energy Technology, KENTECH, [2]Department of Applied Physics, Hanyang University ERICA, [3]Department of Physics, Gyeongsang National University)

A13.04* [11:46 - 11:58]

Motion of self-propelled particles in vibrated granular matter close to jamming / CHOE Yunsik*[1], SON Kyungmin[2], KWON Euijoon[1], RIGON Leonardo Garibaldi[1], BAEK Yongjoo*[1], KIM Ho-Young[2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Mechanical Engineering, Seoul National University)

[A14-A15] No session

[A16-op] Terahertz Photonics

2022. 04. 20 Wednesday 11:10~12:46

Room: 16

좌장 : **박영미** 인천대학교

Chair: BAHK Young-Mi (Incheon National University)

A16.01 [11:10 - 11:34]

Terahertz metasurfaces for electro-photonic nano-tweezers and their applications / SEO Minah*1 ([1]Sensor System Research Center, KIST)

A16.02 [11:34 - 11:58]

테라헤르츠 메타물질을 이용한 고민감도 생체조직 이미징 / LEE Sang-Hun[1], SEO Minah*2 ([1]Department of Optical engineering, Kumoh National Institute of Technology, [2]Sensor System Research Center, KIST)

A16.03 [11:58 - 12:22]

Terahertz spectroscopy on nanoconfined molecules using metallic nano-trenches / JEONG Jeeyoon*1 ([1]Department of Physics, Kangwon National University)

A16.04* [12:22 - 12:34]

Terahertz generation using a two-color laser pulse in a gaseous medium / SHRESTHA Rajaram[1,2], SHIN Jeong-uk[1,2], CHO Wosik[2], KIM Yang Hwan[2], KIM Kyungseung[2], KIM Ki-yong[1,2], KIM Kyung Taec*[1,2] ([1]Department of Physics and Photon Science, GIST, [2]Center for Relativistic Laser Science, IBS)

A16.05 [12:34 - 12:46]

Analysis of the Low-Temperature Terahertz Response of Red Lead Pigment / KIM Jae Hoon*[1], BAEK Na Yeon[1], LEE Ji Eun[1], KIM Jae Ha[1] ([1]Department of Physics, Yonsei University)

Ⓔ [A17-at] Pioneer: Ultrafast phenomena in atoms and molecules I

2022. 04. 20 Wednesday 11:10~12:58

Room: 17

좌장 : **김경택** 광주과학기술원

Chair: KIM Kyung Taec (GIST)

A17.01 [11:10 - 11:46]

Simulating Strong Field Physics using Attosecond Pulses / DIMAURO Louis F.*[1], PIPER Andrew[1], GARIBAY Abraham Camacho[1], TANG Yaguo[1], LIU Qiaoyi[1], SCHAFER Ken[2] ([1]Department of Physics, The Ohio State University, USA, [2]Department of Physics & Astronomy, Louisiana State University, USA)

A17.02 [11:46 - 12:22]
Sampling Few-Cycle Laser Waveforms in Space and Time / CHINI Michael*[1] ([1]University of Central Florida, USA)

A17.03 [12:22 - 12:58]
Ultrafast spectroscopy of materials via high-order harmonic generation / GHIMIRE Shambhu*[1] ([1]Stanford PULSE Institute, SLAC National Accelerator Laboratory and Stanford University, USA)

[A18-se] Low-dimensional(0D, 1D, 2D) materials
2022. 04. 20 Wednesday 11:10~12:58
Room: 18
좌장 : **김지희** 성균관대학교 에너지과학과
Chair: KIM Ji-Hee (Sungkyunkwan University)

A18.01* [11:10 - 11:22]
Blue-green emitting $CsPb_{1-x}Cd_xBr_3$ nanocrystals with tunable shape and phase control / KIM Sung Hun[1], JO Yong-Ryun[2], YIM Sang-Youp[2], LEE Hong Seok*[1] ([1]Department of Physics, Jeonbuk National University, [2]Advanced Photonics Research Institute, GIST)

A18.02* [11:22 - 11:34]
Optical and Electrical Benefits of Au-Nanopillar Electrodes for MoS_2-Based Optoelectronic Devices / SONG Jungeun[1], KWON Soyeong[1], JEONG Hyunjeong[1], CHOI Hyeji[1], NGUYEN Anh Thi[1], PARK Ha Kyung[1], JO William[1], LEE Sang Wook[1], KIM Dong-Wook*[1] ([1]Department of Physics, Ewha Womans University)

A18.03* [11:34 - 11:46]
Vacancy doping effects on MoS_2 nanoflakes in various shapes and vacancy concentrations / YOU Suejeong*[1], KIM HEESANG[1], KIM Nammee[1] ([1]Physics, Soongsil University)

A18.04 [11:46 - 11:58]
The observation and identification of charge transfer exciton in hydrothermally synthesized 2D Tellurium / JEONG Mun Seok*[3], CHOI In Cheol[1], PARK Dae Young[3], LEE Kang-Nyeoung[2] ([1]Department of Smart Fab. Technology, Sungkyunkwan University, [2]Department of Energy Science, Sungkyunkwan University, [3]Department of Physics, Hanyang University)

A18.05* [11:58 - 12:10]
Reversal of anomalous Hall conductivity by perpendicular electric field in 2D WSe_2/VSe_2 heterostructure / HONG Ji Sang*[1], MARFOUA Brahim[1] ([1]Physics, Pukyong National University)

A18.06* [12:10 - 12:22]
Optical property investigation of two-dimensional transition metal dichalcogenide defect sites using tip-enhanced spectroscopy / JEONG Mun Seok*[1], KIM Dong Hyeon[1,2], JEONG Byeong Geun[1,2], KIM Sung Hyuk[1,2], SUH Hyeong Chan[1], WON Yo Seob[2], KIM Ki Kang[2] ([1]Department of Physics, Hanyang University, [2]Department of Energy science, Sungkyunkwan University)

A18.07* [12:22 - 12:34]
Enhanced Physical Properties of Transition Metal Dichalcogenides by Passivating the Surface Defects of Substrate / SUH HyeongChan[1], PARK Dae Young[1], LEE Juchan[1], JEONG Mun Seok*[1] ([1]Department of Physics, Hanyang University)

A18.08* [12:34 - 12:46]
Complete trion conversion and waveguiding in atomically thin semiconductors / LEE Hyeongwoo*[1], KUMAR Shailabh[2], KOO Yeonjeong[1], JEONG Yunjo[4], CHOI Soo Ho[5], KANG Mingu[1], KIM Ki Kang[5,3], AN Sangmin[4], CHOO Hyuck[2,6], PARK Kyoung-Duck[1] ([1]Department of physics, POSTECH, [2]Department of Medical Engineering, Caltech, [3]Department of Physics, Jeonbuk National University, [4]Center for Integrated Nanostructure Physics, IBS, [5]Department of Energy Science, Sungkyunkwan University, [6]Device & System Research Center, SAIT)

A18.09 [12:46 - 12:58]
Role of h-BN encapsulation in excitonic properties of 2D semiconductors / CHO Chang-Hee*[1], JUNG Jin-Woo[1], CHOI Hyeon-Seo[1], LEE Young-Jun[1], KIM Dohun[1], KIM Youngwook[1] ([1]Department of Physics and Chemistry, DGIST)

[A19-se] Focus: Nanoscale Interface Engineering of Low-dimensional Materials for Performance Enhancements I

2022. 04. 20 Wednesday 11:10~12:22

Room: 19

좌장 : 유영준 충남대학교

Chair: YU Young-Jun (Chungnam National University)

A19.01 [11:10 - 11:34]
Surface/Interface Engineering of 2D Materials via Chemical Functionalization / SON Jangyup*[1,2] (1Functional Composite Materials Research Center, KIST, [2]Division of Nano and Information Technology, KIST School UST)

A19.02 [11:34 - 11:58]
Giant 2D Single-Crystalline Metallic Nanosheets: Synthesis and Applications / KIM Tae-Wook*[1] ([1]Departement of Flexible and Printable Electronics, Jeonbuk National University)

A19.03 [11:58 - 12:22]
Substitutional doping approaches for the functionality tuning in two-dimensional $SnSe_2$ / LEE Kimoon*1 ([1]Department of Physics, Kunsan National University)

[A20-bp] Molecular Biological Physics I
2022. 04. 20 Wednesday 11:10~12:46
Room: 20
좌장 : 이종찬 대구경북과학기술원
Chair: LEE Jong-Chan (DGIST)

A20.01 [11:10 - 11:34]
A new proteomics tool for uncovering putative proteins associated with protein-mutation linked diseases / 박경민*1 ([1]대구가톨릭대학교 의과대학, 생화학교실)

A20.02 [11:34 - 11:58]
Physics and Chemistry of Water Molecules at Heterogeneous Interfaces / LEE Jae Kyoo*1 ([1]Department of Applied Bioengineering, Seoul National University)

A20.03 [11:58 - 12:22]
Single-molecule FRET approach to develop more potently engineered CRISPR-Cas12a genetic scissor / LEE Sanghwa*1 ([1]Advanced Photonics Research Institute, GIST)

A20.04 [12:22 - 12:34]
The Michaelis-Menten Rate Law beyond the Steady State and Its Application to Circadian Dynamics / LIM Roktaek[2], MARTIN Thomas[2], CHAE Junghun[1], KIM WooJoong[1], KIM HaNeul[1], GHIM Cheol-Min*[1], KIM Pan-Jun[2] ([1]Department of Physics, UNIST, [2]Department of Biology, Hong Kong Baptist University)

A20.05* [12:34 - 12:46]
Alternation of replication protein A binding mode on single-stranded DNA by NSMF potentiates RPA phosphorylation by ATR kinase / KANG Yujin[1], HAN Ye Gi[1], KHIM Keon Woo[1], CHOI Jang Hyun[1,2], KIM Hongtae[1,2], LEE Ja Yil*[1,2] ([1]Department of Biological Sciences, UNIST, [2]Institute of Basic Science Center for Genomic Integrity (IBS-CGI), UNIST)

[B1-pa] Accelerator-based Particle Physics Experiments II

2022. 04. 20 Wednesday 14:00~15:48

Room: 01

좌장 : 문창성 경북대학교

Chair: MOON Chang-Seong (Kyungpook National University)

B1.01 [14:00 - 14:12]

Readout DAQ system of a dual-readout calorimeter of Test Beam 2022 for future e^+e^- collider / RYU Min Sang[*1], HUH Changgi[2], JO Hyon-Suk[2], KIM Bobae[2], LEE Changhui[2], LEE Junghyun[2], LEE Sehwook[2], CHO Kuk[3], EO Yun[3], HA Seungkyu[3], HWANG Kyuyoung[3], JANG Seoyun[3], KIM Dongwoon[3], KIM Sungwon[3], KIM Tongil[3], WATANUKI Shun[3], YOO Hwidong[3], KIM Doyeong[4], LEE Hyupwoo[4], LEE Jason[4], LEE Yunjae[4], SON Youngwan[4], WATSON Ian[4], KO Sanghyun[5], KIM Yongjun[6], RYU Jaehyeok[6], LIM Sanghoon[6], CHEON Yechan[7], KIM Yongsun[7], KIM Beomkyu[8] ([1]Center for High Energy Physics, Kyungpook National University, [2]Dept. of Physics, Kyungpook National University, [3]Dept. of Physics, Yonsei University, [4]Dept. of Physics, University of Seoul, [5]Dept. of Physics, Seoul National University, [6]Dept. of Physics, Pusan National University, [7]/Dept. of Physics, Sejong University, [8]Dept. of Physics, Sungkyunkwan University)

B1.02* [14:12 - 14:24]

Status of energy reconstuction performance study of the dual-readout calorimeter / YOO Hwidong[*1], KIM Sungwon[1], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Tongil[1], WATANUKI Shun[1], HUH Changgi[2], JO Hyonsuk[2], KIM Bobae[2], LEE Changhui[2], LEE Junghyun[2], LEE Sehwook[2], RYU Minsang[2], KIM Yongjun[3], LIM Sanghoon[3], RYU Jaehyeok[3], CHEON Yechan[4], KIM Yongsun[4], KO Sanghyun[5], KIM Doyeong[6], LEE Hyupwoo[6], LEE Jason[6], LEE Yunjae[6], SON Youngwan[6], WATSON Ian[6], KIM Beomkyu[7] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]Department of Physics, Pusan National University, [4]Department of Physics, Sejong University, [5]Department of Physics, Seoul National University, [6]Department of Physics, University of Seoul, [7]Department of Physics, Sungkyunkwan University)

B1.03* [14:24 - 14:36]

Hadronic Tau Identification for the Dual-Readout Calorimeter using Vision Transformer with Hyperparameter optimization / LEE Jason Sang Hun[*1], SON Youngwan[1], LEE Hyupwoo[1], WATSON Ian James[1], LEE Yunjae[1], KIM Doyoung[1], SONG Donghyun[1], LEE Sehwook[2], RYU Min Sang[2], KIM Bobae[2], LEE Junghyun[2], HUH Changgi[2], KO Sanghyun[3], YOO Hwidong[4], HA Seungkyu[4], KIM Kyungho[4], WATANUKI Shun[4], CHO Guk[4], KIM Dongwoon[4], HWANG Kyuyeong[4], EO Yun[4], KIM Sungwon[4], KIM Tongil[4], KIM Jaeyoung[4], KIM

Youngsun[5], CHEON Yechan[5], LIM Sanghoon[6], KIM Yongjoon[6], RYU Jaehyeok[6] ([1]Department of Physics, University of Seoul, [2]Department of Physics, Kyungpook National University, [3]Department of Physics & Astronomy, Seoul National University, [4]Department of Physics, Yonsei University, [5]Department of Physics and Astronomy, Sejong University, [6]Department of Physics, Pusan National University)

B1.04* [14:36 - 14:48]

Reconstruction of 3D shower shape with the dual-readout calorimeter / YOO Hwidong*[1], KO Sanghyun[2], HUH Changgi[3], JO Hyon-Suk[3], KIM Bobae[3], LEE Changhui[3], LEE Junghyun[3], LEE Sehwook[3], RYU Minsang[3], KIM Doyeong[4], LEE Hyupwoo[4], LEE Jason Sang Hun[4], LEE Yunjae[4], SON Youngwan[4], WATSON Ian[4], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Tongil[1], WATANUKI Shun[1], CHEON Yechan[5], KIM Yongsun[5], KIM Yongjun[6], LIM Sanghoon[6], RYU Jaehyeok[6], KIM Beomkyu[7] ([1]Department of Physics, Yonsei University, [2]Department of Physics & Astronomy, Seoul National University, [3]Department of Physics, Kyungpook National University, [4]Department of Physics, University of Seoul, [5]Department of Physics, Sejong University, [6]Department of Physics, Pusan National University, [7]Department of Physics, Sungkyunkwan University)

B1.05* [14:48 - 15:00]

DAQ system commission of the dual-readout calorimeter modules / YOO Hwidong*[1], KIM Dongwoon[1], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], JANG Seoyun[1], KIM Sungwon[1], KIM Tongil[1], WATANUKI Shun[1], KO Sanghyun[2], KIM Doyeong[3], LEE Hyupwoo[3], LEE Jason[3], LEE Yunjae[3], SON Youngwan[3], WATSON Ian[3], HUH Changgi[4], JO Hyonsuk[4], KIM Bobae[4], LEE Changhui[4], LEE Junghyun[4], LEE Sehwook[4], RYU Minsang[4], CHEON Yechan[5], KIM Yongsun[5], KIM Yongjun[6], LIM Sanghoon[6], RYU Jaehyeok[6], KIM Beomkyu[7] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Seoul National University, [3]Department of Physics, University of Seoul, [4]Department of Physics, Kyungpook National University, [5]Department of Physics, Sejong University, [6]Department of Physics, Pusan National University, [7]Department of Physics, Sungkyunkwan University)

B1.06* [15:00 - 15:12]

Module assembly R&D of the Dual-Readout Calorimeter for future e^+e^- colliders / YOO Hwidong*[1], LEE Sehwoo[2], RYU Min Sang[2], KIM Bobae[2], LEE Junghyun[2], HUH Changgi[2], KO Sanghyun[3], LEE Jason[4], WATSON Ian[4], LEE Hyupwoo[4], LEE Yunjae[4], KIM Doyoung[4], SONG Donghyun[4], SON Youngwan[4], HA Seungkyu[1], KIM Kyungho[1], WATANUKI Shun[1], CHO Guk[1], KIM Dongwoon[1], HWANG Kyuyeong[1], EO Yun[1], KIM Sungwon[1], KIM Tongil[1], KIM Youngsun[5], CHEON Yechan[5], LIM Sangh[6], KIM Yongjoon[6], RYU Jaehyeok[6] ([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]Department of Physics, Sejong University, [6]Department of Physics, Pusan National University)

B1.07* [15:12 - 15:24]

Update of calibration and EM/jet energy resolution study with 4pi dual-readout calorimeter / YOO Hwidong[*1], HWANG Kyuyeong[1], GUK Cho[1], YUN Eo[1], HA Seungkyu[1], JANG Seoyun[1], KIM Dongwoon[1], KIM Sungwon[1], KIM Tongil[1], WATANUKI Shun[1], KO Sanghyun[2], HUH Changgi[3], JO Hyon-Suk[3], KIM Bobae[3], LEE Changhui[3], LEE Junghyun[3], LEE Sehwook[3], RYU Min Sang[3], KIM Doyeong[4], LEE Hyupwoo[4], LEE Jason[4], LEE Yunjae[4], SON Youngwan[4], WATSON Ian[4], CHEON Yechan[5], KIM Yongsun[5], KIM Yongjun[6], RYU Jaehyeok[6], LIM Sanghoon[6], KIM Beomkyu[7] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Seoul National University, [3]Department of Physics, Kyungpook National University, [4]Department of Physics, University of Seoul, [5]Department of Physics, Sejong University, [6]Department of Physics, Pusan National University, [7]Department of Physics, Sungkyunkwan University)

B1.08 [15:24 - 15:36]

Design 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]/Dept. of Physics, Kyungpook National University)

B1.09 [15:36 - 15:48]

Progress Report of SND@LHC Experiment / YOON Chun Sil[*1], KIM Sung Hyun[1], LEE Kang Young[1], PARK Byung Do[1], SOHN Jong Yoon[1], LEE Kyong Sei[2], KIM Yeong Gyun[3], CHOI Ki-Young[4] ([1]Department of Physics Education and RINS, Gyeongsang National University, [2]CENuM, Korea University, [3]Department of Science Education, Gwangju National University of Education, [4]Department of Physics, Sungkyunkwan University)

[B2-pa] Particle Physics Theory I

2022. 04. 20 Wednesday 14:00~15:36

Room: 02

좌장 : **박완일** 전북대학교

Chair: PARK Wan Il (Jeonbuk National University)

B2.01 [14:00 - 14:12]

Dark gauge boson production from neutron stars vis nucleon-nucleon bremsstrahlung / SHIN Chang Sub[*1], YUN Seokhoon[2] ([1]Department of Physics, Chungnam National University, [2]Dipartimento di Fisica e Astronomia, Università degli Studi di Padova)

B2.02 [14:12 - 14:24]

Models for self-resonant dark matter / LEE Hyun Min[*1], KIM Seongsik[1], ZHU Bin[2] ([1]Department of Physics, Chung-Ang University, [2]School of Physics, Yantai University)

B2.03 [14:24 - 14:36]
Phenomenology of a two-component dark matter model / KIM Yeong Gyun[1], LEE Kang Young[2], NAM Soo-hyeon*[3] ([1]Department of Science Education, Gwangju National University of Education, [2]Department of Physics Education, Gyeongsang National University, [3]Department of Physics, Korea University)

B2.04 [14:36 - 14:48]
Reheating and Dark Matter Freeze-in in the Higgs-R2 Inflation Model / LEE Hyun Min*[1], AOKI Shuntaro[1], MENKARA Adriana Guerrero[1], YAMASHITA Kimiko[1] ([1]Department of Physics, Chung-Ang University)

B2.05 [14:48 - 15:00]
Inflation and reheating in Higgs-sigma models / LEE Hyun Min*[1], AOKI Shuntaro[1], YAMASHITA Kimiko[1], MENKARA Adriana[1] ([1]Department of Physics, Chung-Ang University)

B2.06* [15:00 - 15:12]
Gravitational Waves and PBHs from Tachyonic Instability in Higgs-R^2 Inflation / PARK Seongchan*[1], CHEONG Dhong Yeon[1] ([1]Yonsei University)

B2.07 [15:12 - 15:24]
Reheating in Models with Non-minimal Coupling in metric and Palatini formalisms / PARK Seongchan*[1], LEE Sung Mook[1], CHEONG Dhong Yeon[1] ([1]Yonsei University)

B2.08* [15:24 - 15:36]
Non-minimally assisted chaotic inflation / PARK Seongchan*[1], HYUN Sang Chul[1], TAKAHASHI Tomo[2], KIM Jinsu[3] ([1]Yonsei University, [2]Department of Physics, Saga University, [3]Theoretical Physics Department, CERN)

[B3-nu] Nuclear Experimental Method and Instrumentation II
2022. 04. 20 Wednesday 14:00~15:24
Room: 03
좌장 : 안정근 고려대학교
Chair : AHN Jung Keun (Korea University)

B3.01* [14:00 - 14:12]
Analysis of test beam data for ALICE ITS3 / LIM SangHoon*[1], JANG Hangil[1] ([1]Physics Department, Pusan National University)

B3.02 [14:12 - 14:24]
Development of the STARK Silicon Detector Array at CENS / BAE Sunghan[1], AHN Sunghoon[1], CHA Soomi[1], CHAE Kyungyuk[2], HAHN Insik*[1], KIM Dahee[1], KIM Minju[1,2], 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)

B3.03 [14:24 - 14:36]
Development and characterization of new position-sensitive silicon strip detectors at CENS / PEREIRA-LOPEZ Xesus Pereira*[1], AHN Sunghoon[1], BAE Sunghan[1], CHA Soomi[1], AHN Deuk Soon[1], KIM Dahee[1], KIM Minju[1,2], MOON Byul[1], PARK Chaeyeon[1,3] ([1]Center for Exotic Nuclear Studies (CENS), IBS, [2]Department of Physics, Sungkyunkwan University, [3]Department of Physics, Ewha Womans University)

B3.04 [14:36 - 14:48]
Active Target TPC development in CENS / CHA S. M.[1], HAHN Insik*[1], AHN S.[1], BAE S.H.[1], CHAE K.Y.[2], GU G.M.[2], KIM C.H.[2], KIM D.[1], KIM M.J.[1,2], KIM S.H.[2], KIM Y.H.[1], PARK C.Y.[1,3] ([1]Center for Exotic Nuclear Studies, IBS, [2]Department of Physics, Sungkyunkwan University, [3]Department of Physics, Ewha Womans University)

B3.05* [14:48 - 15:00]
A New Analysis Method of the TexAT Experimental Data at High Beam Intensity / PARK Chaeyeon[1,2], HAHN Insik*[2], AHN Sunghoon[2] ([1]Department of Physics, Ewha Womans University, [2]Center for Exotic Nuclear Studies, IBS)

B3.06* [15:00 - 15:12]
Track Reconstruction in the Active-Target Time Projection Chamber using Machine Learning Methods / AHN Jung Keun*[1], YANG Hyunmin[1] ([1]Department of Physics, Korea University)

B3.07* [15:12 - 15:24]
Analysis Improvement of Active Target Time Projection Chamber Data Using Deep Learning Methods / KIM Chanhee*[1], CHAE Kyungyuk[1], AHN Sunghoon[2], ROGACHEV Gregory[3] ([1]Physics Department, Sungkyunkwan University, [2]CENS, IBS, [3]Physics & Astronomy Department, Texas A&M University)

[B4] No session

[B5-co] Focus: Superconductivity in transition metal compounds

2022. 04. 20 Wednesday 14:00~16:00

Room: 05

좌장 : **박승룡** 인천대학교

Chair: PARK Seung Ryong (Incheon National University)

B5.01 [14:00 - 14:24]

Coupling between electrons and charge density wave fluctuation and its role on superconductivity / KIM Yeong Kwan*[1] ([1]Physics, KAIST)

B5.02 [14:24 - 14:48]

Strong antiferromagnetic proximity coupling in a heterostructured superconductor $Sr_2VO_{3-\delta}FeAs$ / OK Jong Mok*[1], KWON Chang Il[2], KIM Jun Sung[2] ([1]Department of Physics, Pusan National University, [2]Department of Physics, POSTECH)

B5.03 [14:48 - 15:12]

Spectroscopic and transport studies of CsV_3Sb_5 under pressure and chemical doping / LEE Hanoh*[1], JANG Harim[1], YOUSUF Saqlain[1], SONG Jaegu[1], PARK Tuson[1] ([1]Physics, Sungkyunkwan University)

B5.04 [15:12 - 15:36]

Abnormal pressure-induced quantum phase transition from superconducting to charge-density wave state in $LuPd_2In$ and LuPtPdIn / KIM Heejung*[1,2], SHIM Ji Hoon[3], KIM Sooran[4], PARK Jae-Hoon[2,6], KIM Kyoo[5], MIN BYUNG IL[2] ([1]MPPHC-CPM, Max Plank POSTECH/Korea Research Initiative, [2]physics, POSTECH, [3]chemitry, POSTECH, [4]Physics Education, Kyungpook National University, [5]Physics, Korea Atomic energy Research Institute, [6]Division of Advanced Materials Science, POSTECH)

B5.05 [15:36 - 16:00]

Theory of superconductivity in doped quantum paraelectrics / CHUNG Suk Bum*[1,2], YU Yue[3], RAGHU Srinivas[3], HWANG Harold[3] ([1]Department of Physics, University of Seoul, [2]Natural Science Research Institute, University of Seoul, [3]Department of Physics, Stanford University)

[B6-co] Focus: Materials design for novel correlated properties and functionalities II

2022. 04. 20 Wednesday 14:00~15:48

Room: 06

좌장 : 양승열 삼성종합기술원

Chair: YANG Sung-ryul (Samsung Advanced Institute of Technology)

B6.01 [14:00 - 14:24]

Flexoelectricity in a ferromagnetic metal / LEE Daesu*1 ([1]Department of Physics, POSTECH)

B6.02 [14:24 - 14:48]

Magnetotransport at the interface between heavy metal and antiferromagnetic oxide / LEE Jin Hong*1, VAROTTO Sara[2], GLOTER Alexandre[3], VARIGNON Julien[4], BRéHIN Julien[2], AESCHLIMANN Raphaël[2], MARCANO Lourdes[6], MAWASS Mohamad-Assaad[5], LUO Chen[5], RADU Florin[5], VALENCIA Sergio[5], BIBES Manuel[2] ([1]Center for Spintronics, KIST, [2]Unité Mixte de Physique, CNRS/Thales, [3]Laboratoire de Physique des Solides, CNRS, Université Paris-Saclay, [4]Laboratoire CRISMAT, ENSICAEN, Normandie Université, [5]Materialien und Energie, Helmholtz-Zentrum Berlin, [6]Dpto. Electricidad y Electrónica, Universidad del Pais Vasco-UPV/EHU)

B6.03 [14:48 - 15:12]

Inhibition of atomic interdiffusion in heteroepitaxy system via a graphene interlayer / KIM Sungkyu*1 ([1]Department of Nanotechnology and Advanced Materials Engineering, Sejong University)

B6.04 [15:12 - 15:36]

Microspectroscopy Study of Atomically Thin Optical Materials / LEE Jae-Ung*1 ([1]Department of physics, Ajou University)

B6.05* [15:36 - 15:48]

Direct observation of interfacial charge trapping in $SrRuO_3$/$SrTiO_3$ heterostructures through noise spectroscopy / LEE Hyungwoo*1,2, JEON Jaeyoung[1,2] ([1]Department of Physics, Ajou University, [2]Department of Energy Systems Research, Ajou University)

Ⓔ [B7-co] Pioneer: Exploring Interfaces and Surfaces in Functional Materials I

2022. 04. 20 Wednesday 14:00~15:36

Room: 07

좌장 : 양용수 한국과학기술원

Chair: YANG Yongsoo (KAIST)

B7.01 [14:00 - 14:24]

Correlated study of physical properties and atomic structures in 2D materials with Atomic Electron Tomography / TIAN Xuezeng*1 ([1]Institute of Physics, Chinese Academy of Sciences (IOP, CAS))

B7.02 [14:24 - 14:48]

Operando Transmission Electron Microscopy Investigation on Domain Dynamics in 2D Ferroelectric Materials / YOO Hyobin*1 ([1]Department of Physics, Sogang University)

B7.03 [14:48 - 15:12]

Surface inhomogeneity examined by spatially-resolved ARPES / IWASAWA Hideaki*1 ([1]National Institutes for Quantum Science and Technology, Japan)

B7.04 [15:12 - 15:36]

Probing catalytic reactions of single molecules on TiO_2 surface with STM / SHIN Hyung-Joon*1 ([1]Department of Materials Science and Engineering, UNIST)

Ⓔ [B8-co] Pioneer: Coherent manipulation of artificial surface quantum spins I

2022. 04. 20 Wednesday 14:00~15:48

Room: 08

좌장 : 박수현 기초과학연구원

Chair: PHARK Soo-hyon (IBS)

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

Decoherence of nitrogen-vacancy spin ensembles in a dipolar spin bath in diamond / SEO Hosung*1, PARK Huijin[1], LEE Junghyun[2], HAN Sangwook[2,3], OH Sangwon[4] ([1]Physics, Ajou University, [2]Center for Quantum Information, KIST, [3]Division of Nano and Information Technology, KIST School, Korea University of Science and Technology, [4]양자자기이미징팀, KRISS)

B8.02 [14:36 - 15:12]
Probing Spin Casimir Force with Scanning Tunneling Microscopy / CHOI Mahn-Soo*[1], FANG Yinan[1], CHESI Stefano[1] ([1]Department of Physics, Korea University)

B8.03 [15:12 - 15:48]
A simulation tool for all-electric electron spin resonance using non-equilibrium Green's functions / LORENTE Nicolás*[1] ([1]Centro de Física de Materiales, CFM/MPC (CSIC-UPV/EHU), 20018 Donostia-San Sebastián, Spain; Donostia International Physics Center (DIPC), 20018 Donostia-San Sebastián, Spain)

[B9-co] Focus: Superconducting Quantum Devices II
2022. 04. 20 Wednesday 14:00~15:24
Room: 09
좌장 : **심흥선** 한국과학기술원
Chair: SIM Heung-Sun (KAIST)

B9.01 [14:00 - 14:36]
Superconducting Nanoelectromechanics for Sensing and Transduction / CHA Jin-woong*[1] ([1]Quantum Technology Institute, KRISS)

B9.02 [14:36 - 15:12]
Twisted van der Waals Josephson junction based on high-T_c superconductor / LEE Gil-Ho*[1] ([1]Department of Physics, POSTECH)

B9.03 [15:12 - 15:24]
Error Mitigation for Quantum State Tomography of Fixed-frequency Superconducting Transmon Qubits / YEO Hwan-Seop[1], CHOI Gahyun[2], LEE Sun Kyung[2], CHOI Jiman[2], SONG Woon[2], WOO Seungwook[1], KIM Jeongwon[1], KIM Youngdu[1], CHOI Beomgyu[1], CHONG Yonuk*[1] ([1]SAINT, Sungkyunkwan University, [2]Quantum Technology, KRISS)

[B10-ap] 2D Materials I
2022. 04. 20 Wednesday 14:00~15:12
Room: 10
좌장 : **류혜진** 한국과학기술연구원
Chair: RYU Hyejin (KIST)

B10.01* [14:00 - 14:12]
Electrical Improvement using $PtSe_2$/$PtTe_2$ Edge Contact Synthesized by Molecular Beam Epitaxy / KIM Hyeon-Sik[2], JEONG Jaehun[2], KWON Gi-Hyeon[2], CHO Mann Ho*[2,3] ([1]Yonsei University, [2]Department of Physics, Yonsei University, [3]Department of System Semiconductor Engineering, Yonsei University)

B10.02* [14:12 - 14:24]
Deep learning potentials: Application to the h-BN growth on Pt(111) / YEO Kangmo[1], PARK Karam[1], JEONG Sukmin*[1] ([1]Department of Physics, Jeonbuk National University)

B10.03* [14:24 - 14:36]
Manipulating Optical Propeties of Monolayer Tungsten Disulfide by Stoichiometry / KIM Taewan[1], HEO Yoonseong[1], JO Dongin[1], LEE Jae-Ung*[2] ([1]department of energy system, Ajou University, [2]Department of physics, Ajou University)

B10.04* [14:36 - 14:48]
Mechanical behaviors of graphene nano-mechanical resonator under strain in different directions / JE Yugyeong[1], SHIN Dong Hoon[2], JEONG Hyunjeong[1], JEONG Hyeonhui[1], LEE Sang-Wook*[1] ([1]Department of Physics, Ewha Womans University, [2]Kavli Institute of Nanoscience, Delft University of Technology)

B10.05* [14:48 - 15:00]
Capacitive graphene gas sensing device and its principle of peration / JU Wonbin[1], LEE Sungbae*[1] ([1]Dept. of Physics and Photon Science, GIST)

B10.06 [15:00 - 15:12]
화학기상증착법에 의한 야누스 이차원 소재의 합성 및 기초물성 연구 / KIM Keun Soo*[1], NAM Jungtae[1], LEE Gil Yong[1], KO Yong-il[1], SHIN June Hee[1], NOH Yoon Seok[1] ([1]Department of Physics & Astronomy, Sejong University)

[B11-ap] Focus: Computational study of ferroelectricity and ferromagnetism for device applications I

2022. 04. 20 Wednesday 14:00~15:36

Room: 11

좌장 : **이재광** 부산대학교

Chair: LEE Jaekwang (Pusan National University)

B11.01 [14:00 - 14:24]
Correlated normal state and topological superconductivity in UTe_2 / YANG Bohm Jung*[1] ([1]Department of Physics and Astronomy, Seoul National University)

B11.02 [14:24 - 14:48]
Nonvanishing anomalous Hall effect in Mn_3Al - compensated ferrimagnetic Heusler compound / RHIM S.H.*[1], PARK Minkyu, HAN Guihyun ([1]Department of Physics, University of Ulsan)

B11.03 [14:48 - 15:12]
Fe_3GeTe_2 : A site-differentiated Hund metal / HAN Myung Joon*1 ([1]Department of Physics, KAIST)

B11.04 [15:12 - 15:36]
Coherent magnetic exciton in Ni-based van der Waals magnets / KIM Beom Hyun*1 ([1]School of Computational Sciences, KIAS)

[B12-ap] [F] Organic Material Properties and Device Application
2022. 04. 20 Wednesday 14:00~15:36
Room: 12
좌장 : 이태우 서울대학교
Chair: LEE Tae-Woo (Seoul National University)

B12.01 [14:00 - 14:24]
Organic/inorganic hybrid light emitting transistors for backplane/driver-free display applications / SEO Jung Hwa*1 ([1]Physics, University of Seoul)

B12.02 [14:24 - 14:48]
Ferroelectric Organic Artificial Synapses for Neuromorphic Electronics / WANG Gunuk*1 ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University)

B12.03 [14:48 - 15:12]
A study of defect control for high performance perovskite LEDs / LEE Bo Ram*1 ([1]Physics, Pukyong National University)

B12.04 [15:12 - 15:36]
Resistive switching behaviour in metal-halide perovskite unipolar memory devices probed by current noise spectra / KANG Keehoon*1, AHN Heebeom[2], LEE Takhee[2] ([1]Materials Science and Engineering, Seoul National University, [2]Department of Physics & Astronomy, Seoul National University)

[B13-st] Complex Systems I
2022. 04. 20 Wednesday 14:00~15:48
Room: 13
좌장 : 백승기 부경대학교
Chair: BAEK Seung Ki (Pukyong National University)

B13.01 [14:00 - 14:24]
The dynamics of faculty hiring networks / LEE Eun*1, CLAUSET Aaron[2], LARREMORE Daniel[2] ([1]Pukyong National University, [2]University of Colorado Boulder, USA)

B13.02 [14:24 - 14:48]
Vacancies in growing habitats promote the evolution of cooperation / PARK Hye Jin[*1], HILBE Christian[2], NOWAK Martin A.[3], KIM Beom Jun[4], JEONG Hyeong-Chai[5] ([1]Department of Physics, Inha University, [2]Dynamics of Social Behavior, Max Planck Institute for Evolutionary Biology, [3]Program for Evolutionary Dynamics, Harvard University, [4]Department of Physics, Sungkyunkwan University, [5]Department of Physics and Astronomy, Sejong University)

B13.03 [14:48 - 15:00]
Effect of The Adult-Born Immature Granule Cells on The Winner-Take-All Competition in The Hippocampal Dentate Gyrus / KIM Sang-Yoon[1], LIM Woochang[*1] ([1]Daegu National University Of Education)

B13.04 [15:00 - 15:12]
Critical-to-Insulator Transitions and Fractality Edges in Perturbed Flatbands / LEE Sanghoon[*1,2], ANDREANOV Alexei[1,2], FLACH Sergej[1,2] ([1]Basic Science Program (IBS School), UST, [2]Center for Theoretical Physics of Complex Systems, IBS)

B13.05 [15:12 - 15:24]
Flat Band Induced Metal-Insulator Transitions for Weak Magnetic Flux and Spin-Orbit Coupling Disorder / KIM Yeongjun[*1,2], CADEZ Tilen[1], ANDREANOV Alexei[1,2], FLACH Sergej[1,2] ([1]Basic Science Program (IBS School), UST, [2]Center for Theoretical Physics of Complex Systems, IBS)

B13.06 [15:24 - 15:36]
Optimal synchronization of Kuramoto oscillators in a growing complex network / PARK Jong-Min[2], LEE Daekyung[1], KIM Heetae[*1] ([1]Department of Energy Technology, KENTECH, [2]School of Physics, KIAS)

B13.07 [15:36 - 15:48]
Hypergraph modeling based on international trade data / YI Sudo[*1], LEE Deok-Sun[1] ([1]School of Computational Sciences, KIAS)

[B14-B15] No session

[B16-op] Focus: Optics and Photonics for quantum information

2022. 04. 20 Wednesday 14:00~15:24

Room: 16

좌장 : 이광걸 한양대학교

Chair: LEE Kwang-Geol (Hanyang University)

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

Quantum optics with photons from warm atomic ensemble / MOON Han Seb*[1] ([1]Department of Physics, Pusan National University)

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

Reconfigurable optical imaging interfaces for quantum technologies / KIM Dong-gyu*[1] ([1]Physics, KAIST)

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

Large-scale & low power programmable photonic circuits for quantum photonics / HAN Sangyoon*[1] ([1]Department of Robotics Engineering, Daegu Gyeongbuk Institute of Science and Technology (DGIST))

B16.04* [15:12 - 15:24]

Attention neural network for analyzing electron-nuclear spin interactions with varying interaction time / JUNG Kyunghoon[1], YUN Jiwon[1], KIM Dohun*[1] ([1]Department of Physics and Astronomy, Seoul National University)

Ⓔ [B17-at] Pioneer: Ultrafast phenomena in atoms and molecules II

2022. 04. 20 Wednesday 14:00~15:48

Room: 17

좌장 : 김동언 POSTECH

Chair: KIM Dong Eon (POSTECH)

B17.01 [14:00 - 14:36]

Single-shot time-resolved visualization of ultrafast high-intensity laser-matter / SHIM Bonggu*[1] ([1]Department of Physics, Applied Physics and Astronomy, Binghamton University, State University of New York)

B17.02 [14:36 - 15:12]

Ultrafast X-ray Spectroscopy of Solvated Molecules at PAL-XFEL / KIM Tae Kyu*[1] ([1]Department of Chemistry, Yonsei University)

B17.03 [15:12 - 15:48]

Attosecond photoemission dynamics from molecules, clusters and liquids / WöRNER Hans Jakob*[1] ([1]Laboratory of Physical Chemistry, ETH Zurich, Switzerland)

[B18-se] Focus: Next-Generation Optoelectronic Materials and Device Application Research

2022. 04. 20 Wednesday 14:00~16:00

Room: 18

좌장 : **이현석** 충북대학교

Chair: LEE Hyun Seok (Chungbuk National University)

B18.01 [14:00 - 14:24]
Defect and interface effects in optoelectronic properties of 2D van der Waals semiconductors / LEE Hyun Seok*1 ([1]Department of Physics, Chungbuk National University)

B18.02 [14:24 - 14:48]
모노리식 풀컬러 질화물계 발광다이오드 / LEE Sung-Nam*1 ([1]Department of Nano & Semiconductor Engineering, Korea Polytechnic University)

B18.03 [14:48 - 15:12]
Fabrication of Transferable Metal oxide nanostructures and applications to optoelectronic devices / PARK Jinsub*1 ([1]Department of Electronic Engineering, Hanyang University)

B18.04 [15:12 - 15:36]
태양전지 효율향상을 위한 복사냉각구조 도입 / SONG Young Min*1 ([1]School of Electrical Engineering and Computer Science, GIST)

B18.05 [15:36 - 16:00]
LED기반 고체조명 응용을 위한 희토류족 없는 형광체 물질 합성 및 발광특성 연구 / YU Jae Su*1 ([1]Department of Electronic Engineering, Kyung Hee University)

[B19-se] Focus: Nanoscale Interface Engineering of Low-dimensional Materials for Performance Enhancements II

2022. 04. 20 Wednesday 14:00~15:12

Room: 19

좌장 : **손장엽** 한국과학기술연구원

Chair: SON Jangyup (KIST)

B19.01 [14:00 - 14:24]
Quantum Acoustics: single-electron quantum dots moving in surface-acoustic waves minima / SON Seok-Kyun*1 ([1]Department of Semiconductor & Applied Physics, Mokpo National University)

B19.02 [14:24 - 14:48]
Toward Large-Scale Production of Single Crystal 2D Materials / MOON Ji-Yun[1], KIM Seung-Il[1], LEE Jae-Hyun*[1] ([1]Department of Materials Science and Engineering, Ajou University)

B19.03 [14:48 - 15:12]
Synthesis and Property Control of Nano Carbon and Its Composite Materials / BAE Sukang*[1] ([1]Functional Composite Materials Research Center, KIST)

[B20-bp] Focus: Frontiers in Computational Biophysics
2022. 04. 20 Wednesday 14:00~15:48
Room: 20
좌장 : 유제중 성균관대학교
Chair: YOO Jejoong (Sungkyunkwan University)

B20.01 [14:00 - 14:36]
Research beyond AlphaFold: Development of Artificial Intelligence for Drug Discovery and Design / PARK Hahnbeom*[1] ([1]Brain Science Institute, Korea Institute of Science Technology (KIST))

B20.02 [14:36 - 15:12]
A Machine Learning Study on the Glass Transitions and Their Structural Order / CHUN Dong Jae[1], PARK Chung Bin[1], KIM Euncheol[1], SUNG Bong June*[1] ([1]Department of Chemistry, Sogang University)

B20.03 [15:12 - 15:48]
Computational approach to discover potent neutralizing antibody against all SARS-CoV-2 variants / OH Byung-Ha*[1] ([1]Therazyne Co. Ltd. / Department of Biological Sciences, KAIST)

2022 April 20(Wed) 16:10-17:58

[C1-pa] Accelerator-based Particle Physics Experiments III

2022. 04. 20 Wednesday 16:10~17:58

Room: 01

좌장 : 고정환 경희대학교

Chair: GOH Junghwan (Kyung Hee University)

C1.01* [16:10 - 16:22]

Search for leptophobic Z' resonances decaying to charginos in the dilepton plus missing transverse momentum final state at the HL-LHC / KWON Hyejin*1 ([1]physics and astronomy, Seoul National University)

C1.02 [16:22 - 16:34]

Observation and Measurement of the electroweak production of Z_γ (W_γ) and two jets in pp collisions at $\sqrt{s}$ = 13TeV and constraints on anomalous gauge couplings / YANG Yu Chul*1, KIM JiWoong[1], LEE DongYup[1], KIM DongHee[1] ([1]Department of Physics, Kyungpook National University)

C1.03* [16:34 - 16:46]

Di-lepton pair identification with highly boosted signature in the CMS experiment / YOO Hwidong*1, KO Sanghyun[2] ([1]Department of Physics, Yonsei University, [2]Department of Physics & Astronomy, Seoul National University)

C1.04* [16:46 - 16:58]

Search for excited leptons in llγ final states at 13 TeV / KIM Bobae*1, HA Seungkyu[2], KIM Minsuk[4], LEE Sehwook[1], NAM Kyungwook[3], YOO Hwidong[2] ([1]Kyungpook National University, [2]Department of physics, Yonsei University, [3]Department of physics, Kansas State University, [4]Department of physics, Gangneung Wonju National University)

C1.05 [16:58 - 17:10]

Prospect of gravity-mediated dark matter search from the dileptonic decay of $t\bar{t}$ at the high luminosity large hadron collider / OH Young Do*1, KIM DongHee*1, KIM Tai-woo[1] ([1]Department of Physics, Kyungpook National University)

C1.06* [17:10 - 17:22]

Calculation of PDF + α_s uncertainties and the NNLO k-factor for W′ search at $\sqrt{s}$ = 14TeV / TAE Bongho*1, LEE JeongEun*2, KIM DongHee[1], OH Young Do[1], YANG Yu Chul[1] ([1]Kyungpook National University, [2]Physics, Seoul National University)

C1.07* [17:22 - 17:34]
Search for new physics inside jets using non-isolated leptons / LEE Joon-Bin[1], YANG Un-ki*[1] ([1]Department of physics and astronomy, Seoul National University)

C1.08* [17:34 - 17:46]
A study of initial state radiation on the Drell-Yan events at $\sqrt{s}$ = 13TeV / YANG Un-ki*[1], KIM Junho[1], CHOI Junho[1], LEE Haneol[1], SEO Hyunsan[1], JUN Won[1], KIM Jihoon[1], LEE Sangeun[1] ([1]Department of physics and astronomy, Seoul National University)

C1.09* [17:46 - 17:58]
Measurement of Noise term in JER using random cones method at CMS detector / 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)

[C2-pa] Particle Physics Theory II
2022. 04. 20 Wednesday 16:10~17:34
Room: 02
좌장 : 신서동 전북대학교
Chair: SHIN Seodong (Jeonbuk National University)

C2.01 [16:10 - 16:22]
Seesaw lepton masses and muon g-2 from heavy vector-like leptons / LEE Hyun Min*[1], YAMASHITA Kimiko[1], SONG Jiseon[1] ([1]Department of Physics, Chung-Ang University)

C2.02 [16:22 - 16:34]
Far-forward tau neutrinos at the LHC / BAI Weidong[1], DIWAN Milind[2], GARZELLI Maria Vittoria[3], JEONG Yu Seon*[4], KUMAR Karan[5], RENO Mary Hall[6] ([1]School of Physics, Sun Yat-sen University, [2]., Brookhaven National Laboratory, [3]Institut für Theoretische Physik, Universität Hamburg, [4]High Energy Physics Center, Chung-Ang University, [5]Department of Physics and Astronomy, Stony Brook University, [6]Department of Physics and Astronomy, University of Iowa)

C2.03 [16:34 - 16:46]
Update on the quarkonium spectral function calculation from lattice NRQCD at non-zero temperature / KIM Se Yong*[1] ([1]Department of Physics, Sejong University)

C2.04 [16:46 - 16:58]
Comprehensive study of the light charged Higgs boson in the type-I two-Higgs-doublet model / KIM JINHEUNG*[1] ([1]Department of physics, Konkuk University)

C2.05 [16:58 - 17:10]
Phenomenology of unusual top partners in composite Higgs models / CACCIAPAGLIA Giacomo[1], FLACKE Thomas[*2], KUNKEL Manuel[3], POROD Werner[3] ([1]CNRS/IN2P3, IPNL, Univ Lyon, Universite Lyon 1, [2]Center for AI and Natural Sciences, KIAS, [3]Institut fuer Theoretische Physik und Astrophysik, Uni Wuerzburg)

C2.06* [17:10 - 17:22]
Portraying Double Higgs at the Large Hadron Collider / PI Jun Seung[1], KIM Jeong Han[*1] ([1]Department of Physics, Chungbuk National University)

C2.07 [17:22 - 17:34]
Status of preparation of dual-readout calorimeter module for 2022 test beam / HA Seungkyu[*4], HUH Changgi[1], JO Hyon-Suk[1], KIM Bobae[1], LEE Changhui[1], LEE Junghyun[1], LEE Sehwook[1], RYU Min Sang[1], KO Sanghyun[2], KIM Doyoung[3], LEE Hyupwoo[3], LEE Jason[3], LEE Yunjae[3], SON Youngwan[3], WATSON Ian[3], CHO Guk[4], EO Yun[4], HWANG Kyuyeong[4], JANG Seoyun[4], KIM Dongwoon[4], KIM Sungwon[4], KIM Tongil[4], WATANUKI Shun[4], YOO Hwidong[4], CHEON Yechan[6], KIM Yongsun[6], KIM Yongjun[5], LIM Sanghoon[5], RYU Jaehyeok[5], KIM Beomkyu[7] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Seoul National University, [3]Department of Physics, University of Seoul, [4]Department of Physics, Yonsei University, [5]Department of Physics, Pusan National University, [6]Department of Physics, Sejong University, [7]Department of Physics, Sungkyunkwan University)

[C3-nu] Nuclear Reaction
2022. 04. 20 Wednesday 16:10~18:10
Room: 03
좌장 : 이영욱 한국원자력연구원
Chair : LEE Young Ouk (KAERI)

C3.01 [16:10 - 16:22]
Quasielastic Charged-Current Neutrino-Nucleus Scattering with Non-Relativistic Nuclear Energy Density Functionals / KIM Kyungsik[1], GIL Hana[2], HYUN Chang Ho[*3] ([1]School of Liberal Arts and Science, Korea Aerospace University, [2]CENuM, Korea University, [3]Daegu University)

C3.02 [16:22 - 16:34]
Neutrino reactions on 12C by KDAR neutrino / CHEOUN Myung Ki[*1], KIM Kyungsik[1] ([1]Department of Physics, Soongsil University)

C3.03 [16:34 - 16:46]
Monoenergetic neutrons from the ^{9}Be(p,n)^{9}B reaction induced by 35, 40 and 45 MeV protons / CHAVAN Vivek Raghunath[1], HAM Cheolmin[2], BAK Sang-In[1], GORE

Vrushalee[1], IN Eun-Jin[2], MOON Dalho[1], OH Seyoung[3], PARK Byunghyun[4], PARK Tae-sun[5], BHORASKAR Vasant[1], HONG Seung Woo[*1] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Energy Science, Sungkyunkwan University, [3]Division of Applied RI, The Korean Institute of Radiological and Medical Sciences, [4]Cooperative Center for Research Facilities, Sungkyunkwan University, [5]Center for Exotic Nuclear Studies, Institute of Basic Sciences)

C3.04* [16:46 - 16:58]
Measurement of the cross sections for the ^{209}Bi(n,4n)^{206}Bi and ^{232}Th(n,6n)^{227}Th reactions by using monoenergetic neutrons generated by the ^{9}Be(p,n)^{9}B reaction / MOON Dal-Ho[1], CHAVAN Vivek Raghunath[1], HONG Seung Woo[*1] ([1]Department of Physics, Sungkyunkwan University)

C3.05 [16:58 - 17:10]
Evaluations of neutron induced reaction cross sections for ^{35,36,37}Cl / LEE Jeong Yeon[*1], CHIBA Satoshi[1] ([1]Laboratory for Advanced Nuclear Energy, Tokyo Institute of Technology)

C3.06* [17:10 - 17:22]
The elastic scattering of 10C with dynamic polarization potentials / HEO Kyoungsu[1], CHEOUN Myung Ki[*1], CHOI Ki-Seok[2], KIM K. S.[2], SO W. Y.[3] ([1]Department of Physics, Soongsil University, [2]School of Liberal Arts and Science, Korea Aerospace University, [3]Department of Radiological Science, Kangwon National University)

C3.07 [17:22 - 17:34]
Study of alpha transfer at energies near Coulomb barrier using DNS model / MUN Myeong Hwan[*1], CHEOUN Myung Ki[1], HEO Kyoungsu[1] ([1]Soongsil University)

C3.08 [17:34 - 17:46]
Chiral nuclear force up to NNLO with vector mesons / PARK Tae-Sun[*1] ([1]Center for Exotic Nuclear Studies (CENS), Institute for Basic Science)

C3.09 [17:46 - 17:58]
Bound-to-continuum approach for keV-energy nucleon radiative capture reaction / BUI Minh-Loc[*1], NGUYEN Le-Anh[2] ([1]Center for Exotic Nuclear Studies, Institute for Basic Science, [2]Department of Physics, Ho Chi Minh City University of Education)

C3.10 [17:58 - 18:10]
우라늄 동위원소에 대한 중성자 입사 핵반응 단면적 평가 / KIM Hyeong Il[*1], 김도헌[1] ([1]Nuclear Physics Application Research Division, KAERI)

[C4-C5] No session

Ⓔ [C6-co] Pioneer: Recent advancements of Kitaev and topological magnetism I

2022. 04. 20 Wednesday 16:10~17:46

Room: 06

좌장 : 지성대 한국원자력연구원

Chair: JI Sungdae (Korea Atomic Energy Research Institute)

C6.01 [16:10 - 16:34]

Some recent progress on topological magnons / MCCLARTY Paul*1 ([1]Max Planck Institute for the Physics of Complex Systems, Noethnitzer Strasse 38, 01187 Dresden)

C6.02 [16:34 - 16:58]

Topological Dirac magnons in Cr-based honeycomb ferromagnets: Dzyaloshinkii-Moriya versus Kitaev exchanges / CHUNG Jae Ho*1 ([1]Department of Physics, Korea University)

C6.03 [16:58 - 17:22]

Thermal Hall effect of Kitaev quantum spin liquid candidate materials / HESS Christian*1,2, HONG Xiaochen[1,2], GILLIG Matthias[2], HENTRICH Richard[2], KOCSIS Vilmos[2], WOLTER Anja U. B.[2], BüCHNER Bernd[2], ISAEVA Anna[3], DOERT Thomas[3], YAO Weilian[4], AFFILIATION Yuan Li[4] ([1]Experimentelle Festkörperphysik, Bergische Universität Wuppertal, [2]Institute for Solid State Research, IFW Dresden, [3]Inorganic Chemistry, Technische Universitaet Dresden, [4]International Center for Quantum Materials, Peking University)

C6.04 [17:22 - 17:46]

New Kitaev spin liquid candidate materials; ruthenium trihalides RuX_3 (X = Br, I) / IMAI Yoshinori*1 ([1]Department of Physics, Graduate School of Science, Tohoku University)

Ⓔ [C7-co] Pioneer: Exploring Interfaces and Surfaces in Functional Materials II

2022. 04. 20 Wednesday 16:10~17:46

Room: 07

좌장 : 문봉진 광주과학기술원

Chair: MUN Bongjin Simon (GIST)

C7.01 [16:10 - 16:34]

Nanoscale Probing and Utilizing Surface Plasmon-driven Hot Carriers / PARK Jeong Young*1,2, LEE Hyunhwa[2] ([1]Department of Chemistry, KAIST, [2]Center for Nanomaterials and Chemical Reactions, Institute for Basic Science)

C7.02 [16:34 - 16:58]
An efficient numerical method for finding a common supercell between two similar crystalline surfaces / LEE Jung-Hoon*1, LEE Weon-Gyu[1] ([1]Computational Science Research Center, KIST)

C7.03 [16:58 - 17:22]
Ab Initio Simulations of Water/Metal Interfaces and Perspective on Electric Double Layer Modeling / SAKONG Sung*1, GROβ Axel[1] ([1]Institute of Theoretical Chemistry, Ulm University, 89069 Ulm, Germany)

C7.04 [17:22 - 17:46]
Formation of stable PdO films on alloys for oxidation catalysis / EDSTRöM Helen[1], SCHAEFER Andreas[2], SCHAEFER John Andersson[2], JACOBSE Leon[3], HAGMAN Benjamin[1], STIERLE Andreas[3], CARLSSON Per-Anders[2], GUSTAFSON Johan*1 ([1]Department of Physics, Lund University, Sweden, [2]Department of Chemistry and Chemical Engineering, Chalmers University of Technology, Sweden, [3]DESY NanoLab, DESY, Germany)

Ⓔ [C8-co] Pioneer: Coherent manipulation of artificial surface quantum spins II

2022. 04. 20 Wednesday 16:10~17:46

Room: 08

좌장 : 조두희 연세대학교

Chair: CHO Doohee (Yonsei University)

C8.01 [16:10 - 16:34]
New driving mechanisms for STM-ESR / FERRON Alejandro*1 ([1]Instituto de Modelado e Innovación on Tecnológica – IMIT CONICET-UNNE, Corrientes, Argentina)

C8.02 [16:34 - 16:58]
Understanding the magnetic behavior of molecules with spin functionalities deposited on Superconductors / SERRANO Giulia*1 ([1]Department of Industrial Engineering and INSTM Research Unit, University of Florence, Italy)

C8.03 [16:58 - 17:22]
Electron Spin Resonance of Individual Atomic and Molecular Spins on Surfaces / WILLKE Philip*1 ([1]Physikalisches Institut, Karlsruhe Institute of Technology, Karlsruhe, Germany)

C8.04 [17:22 - 17:46]
Electron-electron double resonance in an ESR-STM / WOLF Christoph*1 ([1]IBS center for Quantum Nanoscience, IBS)

[C9-co] Dielectrics/Functional Oxides

2022. 04. 20 Wednesday 16:10~17:58

Room: 09

좌장 : 김태헌 울산대학교

Chair: KIM Tae Heon (University of Ulsan)

C9.01 [16:10 - 16:22]

Interfacial Phonon Modes of Ferroelastic WO_3 Twin Wall / YANG Chan-Ho*[1], SEO Jeongdae[1], NAHM Ho-Hyun[1], PARK Heung-Sik[1], YUN Shinhee[2], LEE Jin Hong[3], KIM Yong-Jin[1], KIM Yong-Hyun[1] ([1]Physics, KAIST, [2]Department of Energy Conversion and Storage, Technical University of Denmark, [3]Center for Spintronics, Korea Institute of Science and Technology)

C9.02* [16:22 - 16:34]

Rotation-induced metastable polar structures in perovskite $CaSnO_3$: a first-principles study / CHOI Min-chul[1,2], PARK Se Young*[1,2] ([1]Department of physics, Soongsil University, [2]Origin of Matter and Evolution of Galaxies (OMEG) Institute,, Soongsil University)

C9.03* [16:34 - 16:46]

Defect-assisted phase transition near magnetic Néel temperature in La substituted $BiFeO_3$ thin films / YANG Chan-Ho*[1], YEO Youngki[1] ([1]Physics, KAIST)

C9.04 [16:46 - 16:58]

Ab initio study for electron-phonon coupling of Nb-doped $SrTiO_3$ with Jellium model / PARK Minwoo[1], CHUNG Suk Bum*[1] ([1]Department of Physics, University of Seoul)

C9.05 [16:58 - 17:10]

Characterization of polar-chiral magnetic material doped Ni_3TeO_6 systems. / WON Choong Jae*[1,2], CHEONG Sangwook[3], HASKEL Daniel[4] ([1]Center for Complex phase materials, Max Planck POSTECH/Korea Research Initiative, [2]Department of Physics, POSTECH, [3]Department of Physics and astronomy, Rutgers University, [4]Advanced Photon Source, Argonne National Laboratory)

C9.06 [17:10 - 17:22]

Dynamic Mechanical Writing of Ferroelectric Nanobubble-like Domains / KIM Jae-gyu[1], YEO Youngki[1], YANG Chan-Ho*[1,2,3] ([1]Physics, KAIST, [2]Center for Lattice Defectronics, KAIST, [3]KAIST Institute for the NanoCentury, KAIST)

C9.07* [17:22 - 17:34]

Electrocatalytic activity of $BaRuO_3$ thin films depending on the crystalline quality / NAM Seung Hyun[1], LEE Jegon[1], LEE Sang A[2], CHOI Woo Seok*[1] ([1]Physics, Sungkyunkwan University, [2]Physics, Pukyong National University)

C9.08* [17:34 - 17:46]
Studies on the roughnesses of the color boundaries in electrocoloration in an oxide thin film / PARK Heung-Sik[1,2], LIM Ji Soo[1,2], SUH Jeonghun[1,2], YANG Chan-Ho*[1,2,3] ([1]Physics, KAIST, [2]Center for Lattice Defectronics, KAIST, [3]KAIST Institute for the NanoCentury, KAIST)

C9.09 [17:46 - 17:58]
Interfacial Structure of Pt Nanoparticles and Metal oxide Supports / HAN Sang Wook*[1], JEONG Eun-Suk[2], HWANG I.-H.[3] ([1]Department of Physics Education, Jeonbuk National University, [2]Department of Physics Education and Institute of Fusion Science, Jeonbuk National University, [3]X-ray Science Division, Advanced Photon Source, Argonne National Laboratory)

C

[C10-ap] 2D Materials II
2022. 04. 20 Wednesday 16:10~17:46
Room: 10
좌장 : 김종환 포항공과대학교
Chair: KIM Jonghwan (POSTECH)

C10.01* [16:10 - 16:22]
Avalanche multiplication in ambipolar WSe_2 field-effect transistors analyzed through channel length modulation / KIM Jaeyoung[1], CHO Kyungjune[2], PAK Jinsu[1], LEE Woocheol[1], SEO Junseok[1], KIM Jae-Keun[1], SHIN Jiwon[1], JANG Juntae[1], BAEK Kyeong-Yoon[1], LEE Jonghoon[1], CHUNG Seungjun[2], KANG Keehoon[3,4], LEE Takhee*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Soft Hybrid Materials Research Center, KIST, [3]Department of Materials Science and Engineering, Seoul National University, [4]Research Institute of Advanced Materials, Seoul National University)

C10.02* [16:22 - 16:34]
Visualization of stacking angle distribution in twisted bilayer WS_2 / HEO Yoon Seong[1], KIM Tae Wan[1], JO Dong-In[1], LEE Jae-Ung*[2] ([1]Department of Energy Systems Research, Ajou University, [2]Department of physics, Ajou University)

C10.03* [16:34 - 16:58]
Exciton-Polaritons in Exfoliated WS_2 Multilayer Flakes / NGUYEN Anh Thi[1], KWON Soyeong[1], SONG Jungeun[1], CHO Eunseo[1], KIM Hyohyeon[1], KIM Dong-Wook*[1] ([1]Department of Physics, Ewha Womans University)

C10.04* [16:58 - 17:10]
Electrically controllable neuromodulation emulated by 2D weight-tunable memristor for neuromorphic application / HUH Woong[1], JANG Seonghoon[1], SO Jae-Pil[2], KIM

Jong Chan[3], LEE Donghun[1], KIM Yeon Ho[1], PARK Hong-Gyu[2], JEONG Hu Young[3], WANG Gunuk[1,4], LEE Chul-Ho[*1,4] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Physics, Korea University, [3]School of Material Science and Engineering, UNIST, [4]Department of Integrative Energy Engineering, Korea University)

C10.05* [17:10 - 17:22]
Effects of Ultrathin Interlayer on Magnetotransports in Graphene-based Heterostructure / NGA T. Do[1,2], JANG Youngrok[3], HWANG Chan Yong[4], KIM Tae Hee[*1] ([1]Department of Physics, Ewha Womans University, [2]IBS Center for Quantum Nanoscience, Ewha Womans University, [3]Department of Physics, Incheon National University, [4]Quantum Spin Team, KRISS)

C10.06 [17:22 - 17:34]
The correlation between the composition of the Cu-doped In_2Se_3 thin films and their optical properties / MOHAMED Ahmed Yousef[1], HAN Byung Gun[1], CHO Deok-Yong[*1] ([1]Department of Physics, Jeonbuk National University)

C10.07 [17:34 - 17:46]
게이트 전압으로 제어 가능한 광 검출기 및 양극성 트랜지스터 / OH Gwang Taek[1], PARK Bae Ho[*1], AHN Yeong Hwan[2] ([1]Department of Physics, Konkuk University, [2]Department of Physics and Department of Energy Systems Research, Ajou University)

[C11-ap] Focus: Computational study of ferroelectricity and ferromagnetism for device applications II

2022. 04. 20 Wednesday 16:10~17:22

Room: 11

좌장 : **방준혁** 충북대학교

Chair: BANG Junhyeok (Chungbuk National University)

C11.01 [16:10 - 16:34]
Giant Nonlinearity and On/Off Ratio in HfO_2-based Ferroelectric Tunnel Junction / LEE Jaekwang[*1] ([1]Department of Physics, Pusan National University)

C11.02 [16:34 - 16:58]
Ferroelectricity-driven phonon Berry curvature and nonlinear phonon transports / JIN Hosub[*1] ([1]Department of Physics, Ulsan National Institute of Science and Technology)

C11.03 [16:58 - 17:22]
Atomic-level insights into ferroelectric switching and preferred orientation of ultrathin hafnia / CHOE Duk-Hyun[*1], LEE Hyangsook[1], KIM Sunghyun[1], MOON Taehwan[1], JO Sanghyun[1], BAE Hagyoul[1], NAM Seung-Geol[1], LEE Yun Seong[1], LEE Eunha[1], HEO Jinseong[1] ([1]Device Center, Samsung Advanced Institute of Technology)

[C12-ap] Photonics, Bio, and Quantum

2022. 04. 20 Wednesday 16:10~17:10

Room: 12

좌장 : **최태영** 이화여자대학교

Chair: CHOI Taeyoung (Ewha Womans University)

C12.01* [16:10 - 16:22]

Molecular-scale photo-responsive heterojunction device with two-dimensional semiconductor / SHIN Jaeho[1], YANG Seunghoon[1], EO Jung Sun[1], JEON Takkyeong[1], LEE Chul-Ho[1,2], WANG Gunuk[*1,2] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Integrative Energy Engineering, Korea University)

C12.02* [16:22 - 16:34]

Tailoring the interfacial band offset by the molecular dipole orientation for a molecular heterojunction selector / EO Jung Sun[1], SHIN Jaeho[1], YANG Seunghoon[1], LEE Jaeho[1], CHOI Sanghyeon[1], LEE Chul-Ho[1], WANG Gunuk[*1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University)

C12.03* [16:34 - 16:46]

Improvement of interface carrier recombination in band gap graded Cu(In,Ga)Se_2 thin film solar cells / PARK Ha Kyung[1], CHO Yunae[1], KIM Kihwan[2], JEONG Inyoung[2], YUN Jae Ho[2], GWAK Jihye[2], JO William[*1] ([1]Department of Physics, Ewha Womans University, [2]Photovoltaic Laboratory, KIER)

C12.04* [16:46 - 16:58]

Deposit patterns from coffee and milk / BEIGTAN Mohadese[1], HWANG Yohan[2], WEON Byung Mook[*1] ([1]School of Advanced Materias Science and Engineering SKKU Advanced Institute of Nanotechnology (SAINT, Sungkyunkwan University, [2]College of General Education, Seoul Women's University)

C12.05* [16:58 - 17:10]

Fluorescent spectroscopy and Doppler imaging of Yb atomic gas via 399nm / CHOI Taeyoung[*1], KIM Hyerin[1], YUM Dahyun[1], YOU Jieun[1], LEE Hyein[1], KIM Minjae[1] ([1]Department of Physics, Ewha Womans University)

[C13-C15] No session

[C16-op] Focus: Biomaterial-based optical and electrical devices and its interface with cells

2022. 04. 20 Wednesday 16:10~17:22

Room: 16

좌장 : 김성환 아주대학교

Chair: KIM Sunghwan (Ajou University)

C16.01 [16:10 - 16:34]

Multimodal imaging system for quantifying optical properties of biological tissue via structured illumination / YOON Jonghee*[1] ([1]Department of Physics, Ajou University)

C16.02 [16:34 - 16:58]

Keratin-based sustainable electronics / PEROTTO Giovanni*[1], CATALDI Pietro[1], ATHANASSIOU Athanassia[1] ([1]Smart Materials, Istituto Italiano di Tecnologia, via Morego 30, 16163, Genova, Italy)

C16.03 [16:58 - 17:22]

실크 단백질에 기반한 광학, 전자소자 연구 / KIM Sunghwan*[1,2] ([1]Physics, Ajou University, [2]Department of Energy Systems Research, Ajou University)

[C17] No session

[C18-se] Focus: Solid-State Quantum Information Technologies

2022. 04. 20 Wednesday 16:10~17:46

Room: 18

좌장 : 송진동 한국과학기술연구원

Chair: SONG JIN DONG (KIST)

C18.01 [16:10 - 16:34]

First-principles theory of extending the spin qubit coherence time in hexagonal boron nitride / SEO Hosung*[1], LEE Jaewook[1], PARK Huijin[1] ([1]Physics, Ajou University)

C18.02 [16:34 - 16:58]

Semiconductor spin-based training of optical microscopes / KIM Donggyu*[1] ([1]Physics, KAIST)

C18.03 [16:58 - 17:22]

Single photon emission from defects in GaN and AlN / JEONG Kwang-yong*[1] (1Depart. of Physics, Jeju National University)

C18.04 [17:22 - 17:46]
Nanofabrication of single-crystal diamond for quantum information technology / SOHN Young-Ik*1 ([1]School of Electrical Engineering, Korea Advanced Institute of Science and Technology)

[C19-se] Next-generation semiconductors toward quantum devices
2022. 04. 20 Wednesday 16:10~17:46
Room: 19
좌장 : 장준익 서강대학교
Chair: JANG Joon Ik (Sogang University)

C19.01* [16:10 - 16:22]
Spatially inhomogeneous operation of phase-change memory / KIM Dasol[1], HWANG Soobing[1], JUNG TaekSun[1], AHN Min[1], JEONG Jae Hun[1], PARK Hanbum[1], PARK Juhwan[2], KIM Jae Hoon[1], CHOI Byung Joon[2], CHO Mann Ho*1 ([1]Yonsei University, [2]Materials Science and Engineering, Seoul National University of Science and Technology)

C19.02* [16:22 - 16:34]
Ultrafast phase-change materials with resolved complexity, $Sn_{15}Sb_{70}Te_{15}$ / JANG Taehun[3], KIM Dasol[3], HWANG Soobin[3], LIM Hyeonwook[3], LEE Changwoo[3], KWON Hoe-don[3], CHO Mann Ho*2 ([1]Yonsei University, [2]Department of System Semiconductor Engineering, Yonsei University, [3]Department of physics, Yonsei University)

C19.03* [16:34 - 16:46]
Schottky Barrier Lowering Induced by Ultrathin Aluminum Oxynitride Interlayer in Metal/SiC Junctions / KIM Junhyung[1], EUN SEOK Hyun[1], SONG Wonho[1], PARK Jin-Young[1], JO Jaehyoung[1], KIM Jiwan[1], PARK Hyunjae[1], JUN Myong-Chul[2], YEO Im-Gyu[2], SEO Han Seok[2], CHOI Gahyun[3], PARK Kibog*1,4 ([1]Department of Physics, Ulsan National Institute of Science and Technology (UNIST), [2]Materials & Processing Research Laboratory, RIST, [3]Quantum Technology Institute, KRISS, [4]Department of Electrical Engineering, Ulsan National Institute of Science and Technology)

C19.04 [16:46 - 16:58]
Particle Filtering for Suppressing Nuclear Spin Noise in GaAs Singlet-Triplet Spin Qubit / JANG Hyeongyu[1], KIM Jehyun[1], JANG Wonjin[1], KIM Jinwoong[1], SOHN Hanseo[1], KANG Hanrim[1], SONG Youngwook[1], YUN Jonginn[1], SHIM Sangwoo[1], CHO Min-Kyun[1], CHUNG Hwanchul[2], UMANSKY Vladimir[3], KIM Dohun*1 ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Physics, Pusan National University, [3]Department of Condensed Matter Physics, Weizmann Institute of Science)

C19.05* [16:58 - 17:10]
Approaching ideal visibility in singlet-triplet qubit operations using energy-selective tunneling-based Hamiltonian estimation / KIM Jehyun[1], JANG Wonjin[1], JANG Hyeongyu[1], PARK Jaemin[1], SONG Youngwook[1], CHO Min-Kyun[1], YUN Jongin[1], SHIM Sangwoo[1], SOHN Hanseo[1], JUNG Hwanchul[2], UMANSKY Vladimir[3], KIM Dohun*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Physics, Pusan National University, [3]Braun Center for Submicron Research, Department of Condensed Matter Physics, Weizmann Institute of Science)

C19.06* [17:10 - 17:22]
Exciton complexes in gate-tuned transition metal dichalcogenides / LEE Young-Jun[1], JUNG Jinwoo[1], KIM Ji-Yeon[1], CHO Chang-Hee*[1] ([1]Department of Physics and Chemistry, DGIST)

C19.07* [17:22 - 17:34]
Thru-hole epitaxy of GaN over stacked graphene multiple transferred onto a sapphire substrate / LEE Hyunkyu[3], JANG Dongsoo[2], KIM Chinkyo*[1] ([1]Dept. of Physics, Dept. of Information Display, Kyung Hee University, [2]Dept. of Physics, Kyung Hee University, [3]Dept. of Information Display, Kyung Hee University)

C19.08 [17:34 - 17:46]
Exciton-Polaritons with MOCVD-grown GaAs Microcavity / CHOI Daegwang[1], PARK Min[1], SUNG Chan-Young[1], CHOI Hyoungsoon[1], CHO Yong Hoon*[1] ([1]KAIST)

[C20-bp] Cellular Biological Physics
2022. 04. 20 Wednesday 16:10~17:22
Room: 20
좌장 : 김병철 인천대학교
Chair: KIM Byoung Choul (Incheon National University)

C20.01 [16:10 - 16:34]
Mechanoadaptive Reorganization of Stress Fiber Subtypes in Alveolar Epithelial Cells under Cyclic Stretches / ROSHANZADEH Amir[1], PARK Sangwoo[2], LEE Seongsoo[2], LEE Bong-Kee[3], KIM Eung-Sam*[1,4] ([1]School of Biological Sciences and Biotechnology, Chonnam National University, [2]Gwangju Center, Korea Basic Science Institute (KBSI), [3]Department of Mechanical Engineering, Chonnam National University, [4]Department of Biological Sciences, Research Center of Ecomimetics and Center for Next Generation Sensor Research and Development, Chonnam National University)

C20.02 [16:34 - 16:58]
Topology of mammalian transcription / CHO Won-Ki*[1] ([1]Department of Biological Sciences, KAIST)

C20.03 [16:58 - 17:22]
Characterization of invadopodia formation and maturation by mechanical activation of α5β1 integrin / KIM Kyung Ah[1], VELLAMPATTI Srivithya[1], HWANG Sun Ha[1], KIM Byoung Choul*[1] ([1]Department of Bioengineering and Nano-Bioengineering, Incheon National University)

Ⓚ [C21-or] 일반물리학의 현대화를 위한 방향 및 방안 탐색
2022. 04. 20 Wednesday 16:10~17:22
Room: 21
좌장 : 오원근 충북대학교
Chair: OH Won Kun (Chungbuk National University)

[프로그램]
인사말 / 오원근 (교육위원회 위원장, 충북대 교수)

C21.01 [16:10 - 16:28]
일반물리학에서 현대물리를 어떻게 가르칠 것인가 / LEE Kang Young*[1] ([1]Department of Physics Education, Gyeongsang National University)

C21.02 [16:28 - 16:46]
<빅뱅 우주 속의 우리> 사이버 교양과목 개발 사례 / LEE Chang Hwan*[1] ([1]Pusan National University, Department of Physics)

C21.03 [16:46 - 17:04]
일반물리학 실험의 지향점 / SOHN Changhee*[1] ([1]Department of Physics, UNIST)

C21.04 [17:04 - 17:22]
New approaches in general physics lab classbased on current IT technology / OH Won Kun*[1] ([1]Dept. Physics Education, Chungbuk National University)

2022 April 21(Thu) 09:00-10:48

[D1-pa] Accelerator-based Particle Physics Experiments IV

2022. 04. 21 Thursday 09:00~10:36

Room: 01

좌장 : 김현수 세종대학교

Chair: KIM HyunSoo (Sejong University)

D1.01 [09:00 - 09:12]

Search for heavy Majorana neutrino in Type-1 Seesaw model using dilepton events at CMS / YANG Un-ki*[1], LEE Haneol[1] ([1]Department of physics and astronomy, Seoul National University)

D1.02* [09:12 - 09:24]

The CMS Muon Seed Classifier with Machine Learning for the Run3 / JUN Won[1], OH Minseok[1], KIM Jihun[1], YOO Hwidong[2], YANG Un-ki*[1] ([1]Department of physics and astronomy, Seoul National University, [2]Department of physics, Yonsei University)

D1.03* [09:24 - 09:36]

Search for monotop events in pp collisions at 13 TeV from CMS experiment / MOON Chang-Seong*[1], HONG Jieun[1], DOGRA Sunil Manohar[1] ([1]Department of Physics, Kyungpook National University)

D1.04* [09:36 - 09:48]

Measurement of |Vts| using jet discrimination on ttbar dilepton final state events in pp collision at 13 TeV / LEE Jason Sang Hun*[1], JANG Woojin[1], WATSON Ian James*[1], ROH Youn Jung*[1], PARK Inkyu[1] ([1]Department of Physics, University of Seoul)

D1.06* [09:48-10:00]

Measurement of CP violation in single top t-channel production at 13 TeV / KO Byeonghak[2], ROH Youn Jung*[2], PARK Inkyu[2], LEE Jason Sang Hun[2], KIM Hyunsoo[3], WATSON Ian James[2] ([1]Science lab, University of Seoul, [2]Department of Physics, University of Seoul, [3]Department of Physics, Sejong University)

D1.07* [10:00-10:12]

Positive resampler using DNN for Monte Carlo events with negative weight / MOON Chang-Seong*[1], YOO Hwidong*[2], GOH Junghwan*[3], CHOI Suyong[4], KIM Sungwon[2], KIM Tongil[2], AN Soyun[1], WOO Seunghyeon[1], YOO Changhyun[3], KIM Jiwoong[1] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Yonsei University, [3]Department of Physics, Kyung Hee University, [4]Department of Physics, Korea University)

D1.08* [10:12 - 10:24]
Study of a novel approach for the identification of the additional b jets in the ttbb process / SONG Juhee*1, KIM TAE JEONG[1] ([1]Physics, Hanyang University)

D1.09 [10:24 - 10:36]
A background estimation for the charged lepton flavor violation in the top quark interaction with a muon and a tau in pp collisions at $\sqrt{s}$ = 13TeV / RYOU Yeon Su*1, KIM TAE JEONG[1] ([1]Physics, Hanyang University)

[D2-pa] Non-accelerator-based Particle Physics Experiments I
2022. 04. 21 Thursday 09:00~10:48
Room: 02
좌장 : 이명재 성균관대학교
Chair: LEE Myeong Jae (Sungkyunkwan University)

D2.01* [09:00 - 09:12]
Status of COSINE-100 experiment / YU Gyunho*1 ([1]Physics, Sungkyunkwan University)

D2.02* [09:12 - 09:24]
Update on dark matter searches using annual modulation in NaI crystals at COSINE-100 / NEAL Robert John*1 ([1]Centre for Underground Physics, IBS)

D2.03 [09:24 - 09:36]
A search for dark sector particles from the Sun with the COSINE-100 detector / PRIHTIADI Hafizh*1 ([1]Physics, Center for Underground Physics, IBS)

D2.04 [09:36 - 09:48]
Search for Bosonic Super-WIMP at COSINE-100 / KO Young Ju*1 ([1]Center for Underground Physics, Institute for Basic Science)

D2.05* [09:48 - 10:00]
Pulse shape analysis with a phoswich detector made from organic and NaI(Tl) scintillators / KIM Jinyoung*1, LEE Yujin*1, HA Chang Hyon*1 ([1]Physics, Chung-Ang University)

D2.06* [10:00 - 10:12]
A KSVZ sensitive axion search experiment around 24.5 μeV with an 8-cell microwave resonant cavity and a Josephson Parametric Amplifier / KUTLU Caglar[1,2], LEE Soohyung*1, UCHAIKIN Sergey[1], AHN Saebyeok[1,2], JEONG Junu[2], BAE Seongjae[1,2], YOUN Sungwoo[2], SEMERTZIDIS Yannis K[1,2] ([1]Physics, KAIST, [2]Center for Axion and Precision Physics Research, IBS)

D2.07* [10:12 - 10:24]
High-mass axion haloscope with tunable dielectric metamaterials / BAE SungJae*[1,2], YOUN SungWoo*[2], JEONG Junu[2], SEMERTZIDIS Yannis K[2], SEONG TaeHyeon[2] ([1]KAIST, [2]Center for Axion and Precision Physics, IBS)

D2.08* [10:24 - 10:36]
Background study for Korea Experiments on Magnetic Monopole / HUH Changgi*[1], KIM Bobae[1], LEE Sehwook[1], LEE Junghyun[1], RYU Min Sang[3], HAUPTMAN John[2], YOO Hwidong[4], EO Yun[4] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Iowa state university, [3]Center for High Energy Physics, Kyungpook National University, [4]Department of Physics, Yonsei University)

D2.09* [10:36 - 10:48]
Performance of the trigger-veto detector for KAEM / KIM Bobae*[1], HUH Changgi[1], LEE Junghyun[1], RYE Min Sang[2], LEE Sehwook[1], HAUPTMAN John[3] ([1]Kyungpook National University, [2]Center for High Energy Physics, Kyungpook National University, [3]Department of Physics, Iowa State University)

Ⓔ [D3-nu] Pioneer: Status of RAON and Nuclear Physics Experiments I
2022. 04. 21 Thursday 09:00~10:48
Room: 03
좌장 : 안득순 기초과학연구원
Chair : AHN Deuk Soon (IBS)

D3.01 [09:00 - 09:36]
Status of RAON / KWON Young-Kwan*[1] ([1]Rare Isotope Science Project, IBS)

D3.02 [09:36 - 10:12]
Nuclear Astrophysics at FRIB / SCHATZ Hendrik*[1] ([1]Michigan State University, USA)

D3.03 [10:12 - 10:48]
Unveiling new features in rare isotopes with direct reactions / KANUNGO Rituparna*[1] ([1]Saint Mary's University, TRIUMF, Canada)

[D4] No session

[D5-co] Magnetism I

2022. 04. 21 Thursday 09:00~10:12

Room: 05

좌장 : 김용관 한국과학기술원

Chair: KIM Yeong kwan (KAIST)

D5.01 [09:00 - 09:12]

Revised magnetic structure of a frustrated 4d pyrochlore magnet $Nd_2Ru_2O_7$ / YADAV Poonam[1], LEE Jae Hyuck[2], SONG Dongjoon[2], KIM Changyoung[2], CHOI Sungkyun[*1] ([1]Center for Integrated Nanostructure Physics (CINAP), Institute of Basic Science (IBS), Sungkyunkwan University, [2]Center for Correlated Electron Systems (CCES), Institute of Basic Science (IBS), Seoul National University)

D5.02 [09:12 - 09:24]

Colossal spin-phonon coupling and Higgs-amplitude fluctuations in $Nd_2Ru_2O_7$ / KIM Changyoung[*1,2], WULFERDING Dirk[1,2], KIM Junkyoung[3], KIM Mi Kyung[4], LEE Jae Hyuck[1,2], SONG Dongjoon[1,2], OH Dong Jin[1,2], KIM Heung-Sik[5], CHERN Li Ern[6], KIM Yong-Baek[6], YANG Yang[7], PERKINS Natalia[7], NOH Minji[1], CHOI Hyunyong[1], CHOI Sungkyun[8], PARK Seung Ryong[3] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Correlated Electron Systems, IBS, [3]Department of Physics, Incheon National University, [4]Department of Physics, Yonsei University, [5]Department of Physics, Kangwon National University, [6]Department of Physics, University of Toronto, [7]School of Physics and Astronomy, University of Minnesota, [8]Department of Energy Science, Sungkyunkwan University)

D5.03* [09:24 - 09:36]

Magnetic properties of two-dimensional lead-based Halide Perovskites / JUNG Myung Hwa[*1], LEE Sang-Eon[1], SO Hyeon Kyeong[1] ([1]Sogang University)

D5.04* [09:36 - 09:48]

Long-lived spin states of Fe atomic chains on Cu_2N via Hamiltonian engineering / ELBERSE Robertus J. G.[1], AHN Taehong[2,3], HWANG Jiyoon[2,3], OH Jeongmin[2,3], RIETVELD Jorn C.[1], BAE Yujeong[*2,3], OTTE Alexander F.[2,3], HEINRICH Andreas J.[1] ([1]Kavli Institute of Nanoscience, Delft University of Technology, [2]Center for Quantum Nanoscience, IBS, [3]Department of Physics, Ewha Womans University)

D5.05* [09:48 - 10:00]

Chaotic nonlinear dynamics in magnetic skyrmions / PARK Gyuyoung[1], KIM Sang-koog[*1] ([1]Seoul National University)

D5.06 [10:00 - 10:12]
Theory of Moire Magnets and Topological Magnons : Applications to Twisted Bilayer CrI_3 / KIM Kyoung-Min*[1], KIM Do Hun[2], BEDNIK Grigory[1], HAN Myung Joon[2], PARK Moon Jip[1] ([1]Center for Theoretical Physics of Complex Systems, IBS, [2]Department of Physics, KAIST)

Ⓔ [D6-co] Pioneer: Recent advancements of Kitaev and topological magnetism II
2022. 04. 21 Thursday 09:00~10:36
Room: 06
좌장 : 문은국 한국과학기술원
Chair: MOON Eun-Gook (KAIST)

D6.01 [09:00 - 09:24]
Recent results on Kitaev interactions in Co based magnets / ARMITAGE N. Peter*[1] ([1]Department of Physics & Astronomy, Johns Hopkins University)

D6.02 [09:24 - 09:48]
Spin-orbital-entangled nature of magnetic moments and Kitaev interactions in layered Ru-halides / KIM Heung-Sik*[1] ([1]Department of Physics, Kangwon National University)

D6.03 [09:48 - 10:12]
Experimental Insights into Two Cobalt-Based Candidate Kitaev Magnets / LI Yuan*[1] ([1]International Center for Quantum Materials, Peking University)

D6.04 [10:12 - 10:36]
Gaps in Topological Magnon Spectra: Intrinsic vs. Extrinsic Effects / DO Seung-Hwan*[1] ([1]Materials Science and Technology Division, Oak Ridge National Laboratory)

Ⓔ [D7-co] Pioneer: Moiré quantum materials I
2022. 04. 21 Thursday 09:00~10:36
Room: 07
좌장 : 정재일 서울시립대학교
Chair: JUNG Jeil (University of Seoul)

D7.01 [09:00 - 09:36]
Correlated Electron States in Twisted Multilayer Graphene / PHINNEY Isabelle[1], ZIMMERMAN Andrew[1], HAO Zeyu[1], RONEN Yuval[1], WATANABE Kenji[2], TANIGUCHI Takashi[2], KIM Philip*[1] ([1]Department of Physics, Harvard University, USA, [2]National Institute for Materials Science, Japan)

D7.02 [09:36 - 10:12]
The Magic of Moiré Materials / MACDONALD Allan H.*[1] ([1]University of Texas at Austin, USA)

D7.03 [10:12 - 10:36]
Magic-Angle Twisted Graphene Family / PARK Jeong Min*[1], CAO Yuan[1,2], XIA Liqiao[1], SUN Shuwen[1], WATANABE Kenji[3], TANIGUCHI Takashi[3], JARILLO-HERRERO Pablo*[1] ([1]Department of Physics, Massachusetts Institute of Technology, USA, [2]Department of Physics, Harvard University, USA, [3]National Institute for Materials Science, Japan)

[D8-co] Condensed-matter Computational Physics II
2022. 04. 21 Thursday 09:00~10:00
Room: 08
좌장 : **김영국** 성균관대학교
Chair: KIM Youngkuk (Sungkyunkwan University)

D8.01* [09:00 - 09:12]
Prediction of dual topological nature in NaZnBi / LEE Hyunggeun[1], KANG Yoon-Gu[1], JUNG Myung-Chul[1], HAN Myung Joon*[1], CHANG Kee Joo[1] ([1]Department of Physics, KAIST)

D8.02* [09:12 - 09:24]
Vestige of hourglass Weyl fermion and anomalous Hall effect in non-collinear antiferromagnet $Co_{1/3}TaS_2$ / KANG Yoon-Gu[1], PARK Pyeongjae[2,3], PARK Je-Geun[2,3,4], HAN Myung Joon*[1] ([1]Department of Physics, KAIST, [2]Center for Quantum Materials, Seoul National University, [3]Department of Physics & Astronomy, Seoul National University, [4]Institute of Applied Physics, Seoul National University)

D8.03 [09:24 - 09:36]
Weyl points and nodal lines in compensated ferrimagnet Mn_3Al / RHIM Sonny*[2], PARK Minkyu[1] ([1]Research Institute of Basic Sciences, University of Ulsan, [2]Department of Physics, University of Ulsan)

D8.04* [09:36 - 09:48]
Anomalous Hall and Nernst Effect under isotropic strain in compensated ferrimagnet Mn_3Al / HAN GuiHyun[1], PARK Minkyu[2], RHIM Sonny*[1] ([1]Department of Physics, University of Ulsan, [2]Research Institute of Basic Sciences, University of Ulsan)

D8.05 [09:48 - 10:00]
Electronic Structure of Higher-order Ruddlesden-Popper Nickelates $R_{n+1}Ni_nO_{3n+1}$ (n=4-6) / JUNG Myung-chul*1, KAPEGHIAN Jesse[1], HANSON Chase J[1], PAMUK Betül[2], BOTANA Antia S[1] ([1]Department of Physics, Arizona State University, [2]School of Applied and Engineering Physics, Cornell University)

Ⓔ [D9-co] Pioneer: Quantum geometrical properties of flatbands and experimental realization I

2022. 04. 21 Thursday 09:00~11:00

Room: 09

좌장 : 양범정 서울대학교

Chair: YANG Bohm Jung (Seoul National University)

D9.01 [09:00 - 09:24]
Twisted Bilayer Graphene = Topological Heavy Fermion / BERNEVIG Bogdan Andrei*1 ([1]Princeton University, USA)

D9.02 [09:24 - 09:48]
Quantum Metric and Superfluid States in Twisted Bilayer Graphene Systems / ROSSI Enrico*1, HU Xiang[1], PIKULIN Dmitry I.[2,3], HYART Timo[4,5] ([1]Department of Physics, William & Mary, Williamsburg (VA), 23187, USA, [2]Microsoft Quantum, Redmond, Washington 98052, USA, [3]Microsoft Quantum, Station Q, Santa Barbara, California 93106-6105, USA, [4]International Research Centre MagTop, Institute of Physics, Polish Academy of Sciences, Aleja Lotnikow 32/46, PL-02668 Warsaw, Poland, [5]Department of Applied Physics, Aalto University, 00076 Aalto, Espoo, Finland)

D9.03 [09:48 - 10:12]
Geometric properties of flat band Landau levels / HWANG Yoonseok[1,2], RHIM Jun-Won*[1,2,3], YANG Bohm Jung*[1,2] ([1]Center for Correlated Electron Systems (CCES), Institute for Basic Science (IBS), [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Physics, Ajou University)

D9.04 [10:12 - 10:36]
Evidence for Flat Band Dirac Superfluid originating from Quantum Geometry / BOCKRATH Marc*1, TIAN Haidong[1], CHE Shi[1], XU Tianyi[2], CHEUNG Patrick[2], WATANABE Kenji[3], TANIGUCHI Takashi[4], RANDERIA Mohit[1], ZHANG Fan[2], LAU Chun Ning*1 ([1]Department of Physics, The Ohio State University, Columbus, OH 43221, [2]Department of Physics, The University of Texas at Dallas, 800 West Campbell Road, Richardson, Texas 75080-3021, USA, [3]Research Center for Functional Materials, National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044, Japan, [4]International Center for Materials Nanoarchitectonics, National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044, Japan)

D9.05 [10:36 - 11:00]
Relations between quantum metric and topology in geometrically flat Chern insulators / OZAWA Tomoki*[1], MERA Bruno ([1]Advanced Institute for Materials Research (WPI-AIMR), Tohoku University, Sendai 980-8577, Japan)

[D10-ap] Nano / Surface
2022. 04. 21 Thursday 09:00~10:24
Room: 10
좌장 : **유효빈** 서강대학교
Chair: YOO Hyobin (Sogang University)

D10.01* [09:00 - 09:12]
Understanding the space charge effect of SnO_2-based perovskite solar cells / YOUN Sarah Su-O[1,2], KIM Jihyun[1], JO William*[1], KIM Gee Yeong[2] ([1]Department of Physics, Ewha Womans University, [2]Advanced Photovoltaics Research Center, KIST)

D10.02* [09:12 - 09:24]
Conversion between Schottky and Ohmic contact of Zinc oxide microwire based device / LEE Sang-Wook*[1], JE Yugyeong[1], JEONG Hyunjeong[1], TRAN Hue Thi[1] ([1]Department of Physics, Ewha Womans University)

D10.03* [09:24 - 09:36]
Heteroepitaxial growth of γ-GeSe crystals / JUNG Joong-Eon[1], LEE Sol[1], LEE Yangjin[1], PARK Jinsub[1], KIM Kwanpyo*[1] ([1]Physics, Yonsei University)

D10.04 [09:36 - 09:48]
Augmented sub-bandgap photoresponse in MoS_2 for intermediate band solar cell / HONG Chengyun[1,2], OH Saejin[1,2], DAT Vu Khac[1,2], KIM Ji-Hee*[1,2] ([1]Department of Energy Science, Sungkyunkwan University, [2]Center for Integrated Nanostructure Physics, Institute for Basic Science)

D10.05 [09:48 - 10:00]
Terahertz conductivity of high-quality indium film by low temperature deposition / JEONG Mun Seok*[1], CHOI Geunchang[3], RYEOM Junho[1] ([1]Department of Physics, Hanyang University, [2]Department of Physics, Incheon National University, [3]School of Electrical and Electronics Engineering, Chung-Ang University)

D10.06 [10:00 - 10:12]
Droplet evaporation and absorption in porous materials / GONçALVES Marta[1], KIM Jin Young[1,2], KIM Yeseul[1,2], RUBAB Najab[2], JUNG Narina[2], ASAI Takeshi[3], HONG Sungchan[3], WEON Byung Mook*[1,2] ([1]School of Advanced Materias Science and Engineering SKKU

Advanced Institute of Nanotechnology (SAINT, Sungkyunkwan University, [2]Research Center for Advanced Materials Technology, Sungkyunkwan University, [3]Faculty of Health and Sports Science, University of Tsukuba)

D10.07 [10:12 - 10:24]
Electrical properties and Raman spectroscopy of aligned and suspended carbon nanotubes / JEONG Hyeonhui[1], JEONG Hyunjeong[1], JE Yugyeong[1], JO Sung Il[2], SHIN Dong-Hoon[3], JEONG Goo-Hwan[2], LEE Sang-Wook*[1] ([1]Department of Physics, Ewha Womans University, [2]Department of Advanced Materials Science and Engineering, Kangwon National University, [3]Kavli Institute of Nanoscience, Delft University of Technology)

[D11-ap] Focus: Topological phenomena in magnetization dynamics
2022. 04. 21 Thursday 09:00~11:00
Room: 11
좌장 : 김동현 충북대학교
Chair: KIM Dong-Hyun (Chungbuk National University)

D11.01 [09:00 - 09:24]
Visualizing Antiferromagnets using Advanced Hard X-ray Scattering Techniques / CHANG Seo Hyoung*[1] ([1]Department of Physics, Chung-ang University)

D11.02 [09:24 - 09:48]
Tailoring the magnetic-skyrmion-phase-induced topological Hall effect in oxide superlattices / CHO Seong Won[1,2], JEONG Seung Gyo[3], KWON Hee Young[4], SONG Sehwan[5], HAN Seung Wu[2], HAN Jung Hoon[3], PARK Sungkyun[5], CHOI Woo Seok[3], LEE Suyoun[1], CHOI Jun Woo*[4] ([1]Center for Neuromorphic Engineering, KIST, [2]Department of Materials Science and Engineering, Seoul National University, [3]Department of Physics, Sungkyunkwan University, [4]Center for Spintronics, KIST, [5]Department of Physics, Pusan National University)

D11.03 [09:48 - 10:12]
Tunable Pure Spin Supercurrents and the Demonstration of Their Gateability in a Spin-Wave Device / JEON Kun-Rok*[1] ([1]Department of Physics, Chung-Ang University)

D11.04 [10:12 - 10:36]
Strong bulk spin-orbit torques in the van der Waals ferromagnet Fe_3GeTe_2 / LEE Kyujoon*[1,2], MARTIN Franziska[2], SCHMITT Maurice[2], SHAHEE Aga[2], GRADHAND Martin[1], MOKROUSOV Yuriy[5], DENNEULIN Thibaud[6], KOVACS Andras[6], LOTSCH Bettina[4], BRATAAS Arne[3], KLAEUI Mathias[2] ([1]Division of Display and Semiconductor Physics, Korea University, [2]Institute for Physics, Johannes Gutenberg University of Mainz, [3]Department of Physics, Norwegian University of Science and Technology, [4]Institute for solid state re-

search, Max Planck Institute for Solid State Research, [5]Peter Grünberg Institut and Institute for Advanced Simulation, Forschungszentrum Jülich and JARA, [6]7Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons and Peter Grünberg Institute, Forschungszentrum Jülich)

D11.05 [10:36 - 11:00]
Frontier to the spin manipulation utilizing the orbital angular momentum / KIM Junyeon*1, OTANI YoshiChika ([1]RIKEN-CEMS, Japan, [2]ISSP, The University of Tokyo and RIKEN-CEMS, Japan)

Ⓔ [D12-ap] Pioneer: Non-Equilibrium Quantum Materials: Experiments & Theory I
2022. 04. 21 Thursday 09:00~10:48
Room: 12
좌장 : 조길영 포항공과대학교
Chair: CHO Gil Young (POSTECH)

D12.01 [09:00 - 09:36]
Floquet chains and the stability of their edge modes / YATES Daniel J.[1], ABANOV Alexander G.[2], MITRA Aditi*1 ([1]NYU-NY, USA, [2]NYU-Stony Brook, USA)

D12.02 [09:36 - 10:12]
Laser induced Geometric Effects in Quantum Materials / OKA Takashi*1 ([1]The Institute for Solid State Physics, The University of Tokyo,)

D12.03 [10:12 - 10:48]
Ultrafast dynamics of phase, topology, and decoherence of graphene / LEE Jae-Dong*1 ([1]Department of Physics and Chemistry, DGIST)

[D13-st] Complex Systems II
2022. 04. 21 Thursday 09:00~10:48
Room: 13
좌장 : 육순형 경희대학교
Chair: YOOK Soon Hyung (Kyung Hee University)

D13.01* [09:00 - 09:12]
Defense strategies against cascading failures in networks: "Too-big-to-fail" and "too-small-to-fail" / KIM Minjung[1], KIM Beom Jun*2 ([1]Department of Chemistry and Nanoscience, Ewha Womans University, [2]Sungkyunkwan University)

D13.02* [09:12 - 09:24]
Prediction and mitigation of cascading failures using graph neural networks / JHUN Bukyoung[1], CHOI Hoyun[1], LEE Yongsun[1,2], LEE Jongshin[1,2], KIM Cook Hyun[1,2], KAHNG Byungnam*[2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Complex Systems and KI for Grid Modernization, KENTECH)

D13.03* [09:24 - 09:36]
Exploitation can help target searches in complex networks / BAE Young-kyoung[1], SON Gangmin[1], JEONG Hawoong*[1,2] ([1]Physics Department, KAIST, [2]Center for Complex Systems, KAIST)

D13.04* [09:36 - 09:48]
Effects of higher-order components in hypergraphs / KIM Jung-Ho[1], GOH KWANG-IL*[1] ([1]Korea University)

D13.05* [09:48 - 10:00]
청정 에너지 주식시장의 성숙도 및 발전 가능성: 가격 공정성과 정보 흐름 측면 / PARK Kwang yeol[1], AHN Kwangwon*[1] ([1]Department of Investment Information Engineering, Yonsei University)

D13.06 [10:00 - 10:12]
팜오일 시장의 효율성 분석 / KIM Sungchun[1], JEONG Minhyuk[1], YI Eojin[2], AHN Kwangwon*[1] ([1]Department of Industrial Engineering, Yonsei University, [2]Pritzker school of Law, Northwestern University)

D13.07 [10:12 - 10:24]
리츠 인덱스 기반 현물과 선물 시장에서의 가격 발견 / JEONG Minhyuk[1,2], JANG Hanwool[3], AHN Kwangwon*[1,2] ([1]Department of Industrial Engineering, Yonsei University, [2]Center for Finance and Technology, Yonsei University, [3]Department of Finance, Accountancy and Risk, Glasgow Caledonian University)

D13.08 [10:24 - 10:36]
Bitcoin Forks네트워크의 선호 이질성 / KIM Hyeonoh[1], AHN Kwangwon*[2,3] ([1]Moon Soul Graduate School of Future Strategy, KAIST, [2]Department of Industrial Engineering, Yonsei University, [3]Center for Finance and Technology, Yonsei University)

D13.09 [10:36 - 10:48]
A second-order perturbation theory for the continuous model of indirect reciprocity / LEE Sanghun[1], MURASE Yohsuke[2], BAEK Seung Ki*[1] ([1]Department of Physics, Pukyong National University, [2]Center for Computational Science, RIKEN)

[D14] No session

[D15-pl] Accelerator & Beam

2022. 04. 21 Thursday 09:00~10:24

Room: 15

좌장 : **김창범** 포항가속기연구소

Chair: KIM Changbum (Pohang Accelerator Laboratory)

D15.01* [09:00 - 09:12]

Numerical study of resonantly growing long beam instability in over-dense plasma / MOON Kook-Jin[1], CHUNG Moses*[1] ([1]Department of Physics, UNIST)

D15.02* [09:12 - 09:24]

A Non-Destructive Correlated Energy Spread Monitor Using Stripline Beam Position Monitor for X-ray Free Electron Lasers / CHUNG Moses*[1], SUNG Chang-Kyu[1], NAM Inhyuk[2], KIM Changbum[2], SHIN BokKyun[1] ([1]Department of Physics, UNIST, [2]XFEL Accelerator Department, Pohang Accelerator Laboratory)

D15.03 [09:24 - 09:36]

Generation of two-color hard X-ray pulses at PAL-XFEL / SHIM Chi Hyun*[1] ([1]Accelerator Control Team, Pohang Accelerator Laboratory)

D15.04 [09:36 - 10:00]

Two Color FEL Using Phase Shifters at Undulator Line / SHIM Chi Hyun*[1], CHO Myung Hoon[1] ([1]Accelerator Control Team, Pohang Accelerator Laboratory)

D15.05 [10:00 - 10:24]

Generation of 1 mJ/pulse self-seeded hard x-ray free electron laser and its applications / NAM Inhyuk*[1], MIN Chang-Ki[1], CHO Myung Hoon[1], SHIM Chi Hyun[1], KIM Gyujin[1], KANG Heung-Sik[1], KIM Changbum[1] ([1]PAL-XFEL, Pohang Accelerator Laboratory)

[D16-D17] No session

Ⓔ [D18-se] Pioneer: Exciton-Polaritons for Novel Semiconductor Photonics I

2022. 04. 21 Thursday 09:00~11:00

Room: 18

좌장 : **조창희** 대구경북과학기술원

Chair: CHO Chang-Hee (DGIST)

D18.01 [09:00 - 09:36]
Helical Topological Polaritons / AGARWAL Ritesh*1 ([1]University of Pennsylvania Department of Materials Science and Engineering)

D18.02 [09:36 - 10:12]
Excitons and Polaritons in van der Waals Hetero-bilayers / DENG Hui*1 ([1]University of Michigan, USA)

D18.03 [10:12 - 10:36]
Exciton-Polaritons in Phase-changing Lead Halide Perovskites / CHO Chang-Hee*1 ([1]Department of Physics and Chemistry, DGIST)

D18.04 [10:36 - 11:00]
Guided exciton polariton in multilayered WS_2 / GONG Su-Hyun*1 ([1]Department of Physics, Korea University)

Ⓔ **[D19-se] Pioneer: Low-Dimensional Nanomaterials and 2D van der Waals Heterostructures I**

2022. 04. 21 Thursday 09:00~10:48

Room: 19

좌장 : 안상민 전북대학교

Chair: AN Sangmin (Jeonbuk National University)

D19.01 [09:00 - 09:36]
Electromechanical systems enabled by interfacial slip in 2D material heterostructures / VAN DER ZANDE Arend M.*1 ([1]Department of Mechanical Science and Engineering, University of Illinois Urbana-Champaign)

D19.02 [09:36 - 10:12]
Wafer-scale heterogeneous integration of atomically thin electronic materials on arbitrary substrates toward mechanically reconfigurable devices / JUNG Yeonwoong*1 ([1]Materials Science & Engineering, NanoScience Technology Center, Electrical & Computer Engineering, University of Central Florida)

D19.03 [10:12 - 10:48]
Chemical short-range order in SiGeSn medium-entropy alloys for optoelectronics / LI Tianshu*1 ([1]Department of Civil and Environmental Engineering, School of Engineering and Applied Science, The George Washington University)

[D20-bp] Molecular Biological Physics II

2022. 04. 21 Thursday 09:00~10:48

Room: 20

좌장 : 손민주 포항공과대학교

Chair: SHON Min Ju (POSTECH)

D20.01 [09:00 - 09:24]

Stochasticity generates spontaneous polarity on the membrane whose degree of lateral confinement differs in different parts / KIM Hyuneil[1], LEE Albert[1], Sameer Rajesh[1], HANSEN Scott D.[2], WEINER Orion[3], GROVES Jay T.[*1] ([1]UC Berkeley, USA, [2]University of Oregon, USA, [3]UC San Francisco, USA)

D20.02 [09:24 - 09:48]

Cisplatin fixes chromatin irreversibly even at a high chloride concentration / HONG Seok-Cheol[*1,2], MOON Hyeon-Min[1,2], PARK JINSUNG[1], LEE IL BOEM[1,2], KANG Young-Im[2], JUNG Hae Jun[2], AN Dongju[3], SHIN Yumi[3], KIM Min Ji[4], KIM Hugh I.[4], SONG Ji-Joon[3], KIM Jaehoon[3], LEE Nam Kyung[5] ([1]Center for Molecular Spectroscopy and Dynamics, IBS, [2]Physics, Korea University, [3]Biological Sciences, KAIST, [4]Chemistry, Korea University, [5]Physics, Sejong University)

D20.03 [09:48 - 10:12]

Extracting single fibril information from amyloid-β 42 aggregates via single-molecule fluorescence imaging and deep learning / MENG Fanjie[1], YOO Janghyun[*1], CHUNG Hoi Sung[1] ([1]National Institute of Diabetes and Digestive and Kidney Diseases, National Institute of Health)

D20.04 [10:12 - 10:36]

Characterization of single DNA loop extrusion steps by condensin / Je Kyung Ryu[1], Sang-Hyun Rah[2], Richard Janissen[3], Jacob W. J. Kessemakers[3], Andrea Bonato[4], Davide Michieletto[4], DEKKER Cees[*3] ([1]Department of Physics, Seoul National University, [2]Department of Physics, Pohang University of Science and Technology (POSTECH), [3]Department of Bionanoscience, Delft University of Technology, Delft, The Netherlands, [4]School of Physics and Astronomy, University of Edinburgh, Edinburgh, UK)

D20.05 [10:36 - 10:48]

Active diffusion of self-propelled particles in flexible polymer networks / KIM Yeongjin[1], JOO Sungmin[1], KIM Won Kyu[2], JEON Jae-Hyung[*1,3] ([1]Department of Physics, POSTECH, [2]School of Computational Sciences, KIAS, [3]Department of Physics, Asia-Pacific Center for Theoretical Physics(APCTP))

Sessions E

2022 April 21(Thu) 13:00-14:48

[E1] No session

Ⓔ [E2-pa] Focus: Recent progress on Physics of Dark Matter and Baryogenesis

2022. 04. 21 Thursday 13:00~14:36

Room: 02

좌장 : 임상희 기초과학연구원

Chair: IM Sang Hui (Institute for Basic Science)

E2.01 [13:00 - 13:24]
Affleck-Dine Leptogenesis from Higgs Inflation / BARRIE Neil David*1, HAN Chengcheng[2], MURAYAMA Hitoshi[3] ([1]IBS, CTPU, [2]SYSU, China, [3]UC Berkeley, Kavli IPMU, LBNL)

E2.02 [13:24 - 13:48]
Lepto-axiogenesis in minimal SUSY KSVZ model / KAWAMURA Junichiro*1, RABY Stuart[2] ([1]CTPU, IBS, [2]Ohio State University, USA)

E2.03 [13:48 - 14:12]
Axion dark world / Kwang Sik Jeong*1 ([1]Department of Physics, Pusan National University)

E2.04 [14:12 - 14:36]
Dark World beyond WIMP / SHIN Seodong*1 ([1]Physics, Jeonbuk National University)

Ⓔ [E3-nu] Pioneer: Status of RAON and Nuclear Physics Experiments II

2022. 04. 21 Thursday 13:00~14:48

Room: 03

좌장 : 한인식 기초과학연구원

Chair : HAHN Insik (IBS)

E3.01 [13:00 - 13:24]
The Status of experimental systems of RAON / SHIN Taeksu*1 ([1]RISP, Institute for Basic Science)

E3.02 [13:24 - 14:00]
Recent progress and plans at RIBF / SAKURAI Hiroyoshi*[1] ([1]RIKEN Nishina Center, Japan)

E3.03 [14:00 - 14:24]
Exploring the limits of nuclear existence / AHN Deuk Soon*[1], HWANG Jongwon[1], AHN Sunghoon(Tony)[1], KIM Dahee[1], HAHN Insik[1], MOON Chang-Bum[1] ([1]Center for Exotic Nuclear Studies, IBS)

E3.04 [14:24 - 14:48]
Key Nuclear Physics Studies using CENS Instruments at RAON / AHN Sunghoon(Tony)*[1], CENS Collaboration[1] ([1]Center for Exotic Nuclear Studies, IBS)

[E4-as] Focus: Black Hole Physics I
2022. 04. 21 Thursday 13:00~14:48
Room: 04
좌장 : **김정리** 이화여자대학교
Chair: KIM Chunglee (Ewha Womans University)

E4.01 [13:00 - 13:12]
Black Hole Physics: Introduction / GWAK Bogeun*[1] ([1]Physics and Semiconductor Science-Physics, Dongguk University)

E4.02 [13:12 - 13:48]
Diving into a black hole / LI Li*[1] ([1]Institute of Theoretical Physics, Chinese Academy of Sciences)

E4.03 [13:48 - 14:24]
Black holes in effective field theory extensions of general relativity / KIMURA Masashi*[1] ([1]Department of Physics, Rikkyo University)

E4.04 [14:24 - 14:48]
Chaotic orbits in Kerr-Newman black hole / KAN Naoto[1], GWAK Bogeun*[1] ([1]Physics and Semiconductor Science-Physics, Dongguk University)

Ⓔ [E5-co] Pioneer: Orbitronics for future electronics I

2022. 04. 21 Thursday 13:00~14:36

Room: 05

좌장 : 이현우 포항공과대학교

Chair: LEE Hyun-Woo (POSTECH)

E5.01 [13:00 - 13:24]

Enhancing spin-orbit torque efficiency via orbital currents / HU Chen-Yu[1], CHIU Yu-Fang[1], TSAI Chia-Chin[1], HUANG Chao-Chung[1], CHEN Kuan-Hao[1], PENG Cheng-Wei[1], LEE Chien-Min[2], SONG Ming-Yuan[2], HUANG Yen-Lin[2], LIN Shy-Jay[2], PAI Chi-Feng*[1] ([1]Department of Materials Science and Engineering, National Taiwan University, [2]Corporate Research, Taiwan Semiconductor Manufacturing Company)

E5.02 [13:24 - 13:48]

Efficient conversion of orbital Hall current to spin current for spin-orbit torque switching / LEE Soogil[1], KANG Min-Gu[1], DONGWOOK Go[2,3], KIM Dohyoung[1], KANG Jun-Ho[4], LEE Taekhyeon[4], LEE Geun-Hee[4], KANG Jaimin[1], LEE Nyun Jong[5], MOKROUSOV Yuriy[2,3], KIM Sanghoon[5], KIM Kab-Jin[4], LEE Kyung-Jin[4], PARK Byong-Guk*[1] ([1]Department of Materials Science and Engineering, KAIST, [2]Peter Grünberg Institut and Institute for Advanced Simulation, Forschungszentrum Jülich and JARA, Jülich 52425, Germany, [3]Institute of Physics, Johannes Gutenberg University Mainz, Mainz 55099, Germany, [4]Department of Physics, KAIST, [5]Department of Physics, University of Ulsan)

E5.03 [13:48 - 14:12]

Observation of the orbital Hall effect in a light metal Ti / CHOI Young-Gwan[1], JO Daegeun[2], KO Kyung-Hun[1], GO Dongwook[3,4], KIM Kyung-Han[2], PARK Hee Gyum[5], KIM Changyoung[6,7], MIN Byoung-Chul[5], CHOI Gyungmin*[1,8], LEE Hyun-Woo[2,9] ([1]Department of Energy Science, Sungkyunkwan University, [2]Department of Physics, POSTECH, [3]Peter Grünberg Institut and Institute for Advanced Simulation, Forschungszentrum Jülich, [4]Institute of Physics, Johannes Gutenberg University Mainz, [5]Center for Spintronics, Korea Institute of Science and Technology, [6]Department of Physics and Astronomy, Seoul National University, [7]Center for Correlated Electron Systems, Institute for Basic Science, [8]Center for Integrated Nanostructure Physics, Institute for Basic Science, [9]Asia Pacific Center for Theoretical Physics, Asia Pacific Center for Theoretical Physics)

E5.04 [14:12 - 14:36]

Chirality-induced Orbital Polarization in DNA-like Chiral Materials / LIU Yizhou[1], XIAO Jiewen[1], HOLDER Tobias[1], KOO Jahyun[1], YAN Binghai*[1] ([1]Department of condensed matter physics, Weizmann Institute of Science, Israel)

[E6-co] Focus: Electronic structure, interaction and phase transitions in Kagome metals I

2022. 04. 21 Thursday 13:00~14:48

Room: 06

좌장 : 한명준 한국과학기술원

Chair: HAN Myung Joon (KAIST)

E6.01 [13:00 - 13:36]

Twofold van Hove singularity and origin of CDW in a kagome superconductor CsV_3Sb_5 / PARK Jae-Hoon*[1,2] ([1]Department of Physics, POSTECH, [2]Center for Complex Phase Materials, MPK)

E6.02 [13:36 - 14:12]

Single crystal growth and physical properties of several Kagome metals / KIM Kee Hoon*[1,2] ([1]Department of physics and astronomy, Seoul National University, [2]Institute of Applied Physics, Seoul National University)

E6.03 [14:12 - 14:48]

Intertwining orbital current order and superconductivity in Kagome metal / LEE SungBin*[1] ([1]physics, KAIST)

Ⓔ [E7-co] Pioneer: Moiré quantum materials II

2022. 04. 21 Thursday 13:00~14:48

Room: 07

좌장 : 민홍기 서울대학교

Chair: MIN Hongki (Seoul National University)

E7.01 [13:00 - 13:36]

Moiré quasicrystals / KOSHINO Mikito*[1] ([1]Department of Physics, Osaka University, Japan)

E7.02 [13:36 - 14:00]

Electronic structures and interactions in twisted graphene layers / CHOI Hyoung Joon*[1] ([1]Department of Physics, Yonsei University)

E7.03 [14:00 - 14:24]

Berry curvature dipole senses topological transition in a moiré superlattice / SINHA Subhajit[1], ADAK Pratap Chandra[1], CHAKRABORTY Atasi[2], DAS Kamal[2], DEBNATH Koyendrila[3], SANGANI L. D. Varma[1], WATANABE Kenji[4], TANIGUCHI Takashi[5], WAGHMARE Umesh V.[3], AGARWAL Amit[2], DESHMUKH Mandar M.*[1] ([1]Tata Institute of Fundamental Research, Mumbai, India, [2]IIT Kanpur, India, [3]Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, [4]Research Center for Functional Materials, National Institute for Materials

Science, Japan, [5]International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Japan)

E7.04 [14:24 - 14:48]
Piezoelectric response and nonlinear optical properties of twisted graphene systems / ZHANG Shihao, PENG Ran, LU Xin, LIU Jianpeng*1 ([1]School of Physical Science and Technology, ShanghaiTech University, China)

[E8-co] Focus: Quasiparticles in correlated topological materials I
2022. 04. 21 Thursday 13:00~14:36
Room: 08
좌장 : **최우석** 성균관대학교
Chair: CHOI Woo Seok (Sungkyunkwan University)

E8.01 [13:00 - 13:24]
Competing orders in monolayer AV_3Sb_5 (A=Na, Rb, Cs) / KIM Sun-Woo[1,2], OH Hanbit[2], MOON Eun-Gook[2], KIM Youngkuk*1 ([1]Department of Physics, Sungkyunkwan University, [2]Physics, KAIST)

E8.02 [13:24 - 13:48]
The charge density wave collective excitations in Weyl semimetal $(TaSe_4)_2I$ / KIM Soyeun*1 ([1]Department of Physics, University of Illinois, Urbana-Champaign)

E8.03 [13:48 - 14:12]
Spin-Split Band Hybridization in Graphene Proximitized with α-$RuCl_3$ Nanosheets / KIM Youngwook*1 ([1]Department of Physics and Chemistry, DGIST)

E8.04 [14:12 - 14:36]
Hyperbolic plasmon polaritons propagating in metallic delafossite $PdCoO_2$ / YOON Sangmoon*1,2, LUPINI Andrew R.[3], LEE Ho Nyung[2] ([1]Department of Physics, Gachon University, [2]Materials Science and Technology Division, Oak Ridge National Laboratory, [3]Center for Nanophase Materials Sciences, Oak Ridge National Laboratory)

[E9-co] Focus: Ultrafast science in emerging materials properties I
2022. 04. 21 Thursday 13:00~14:36
Room: 09
좌장 : **송창용** 포항공과대학교
Chair: SONG Changyong (POSTECH)

E9.01 [13:00 - 13:24]
Fluctuating Antiferromagnetic Domains in Ni_2MnTeO_6 / 김민규*1 ([1]University of Wisconsin, Milwaukee)

E9.02 [13:24 - 13:48]
Study of a transient normal state of the superconducting YBCO: Bridging the knowledge gap between equilibrium state and non-equilibrium state in high-T_c cuprates / LEE Jun-Sik*1 ([1]SLAC National Accelerator Laboratory, USA)

E9.03 [13:48 - 14:12]
Dimensionality-control and giant enhancement of the electron-phonon coupling in $SrRuO_3$ films / CHOI Inhyeok[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)

E9.04 [14:12 - 14:36]
Femtosecond X-ray scattering and imaging to study light-induced ultrafast phase transition using X-ray Free Electron Laser / KIM Hyunjung*1 ([1]Department of Physics, Sogang University)

[E10-ap] Focus: Engineering of 2D materials' optoelectronic properties
2022. 04. 21 Thursday 13:00~14:48
Room: 10
좌장 : 김관표 연세대학교
Chair: KIM Kwanpyo (Yonsei University)

E10.01 [13:00 - 13:36]
Manipulation of ultrafast hot carrier dynamics for 2D optoelectronic applications / KIM Ji-Hee*1 ([1]Department of Energy Science, Sungkyunkwan University)

E10.02 [13:36 - 14:12]
Probing Deep-UV Optoelectronic Processes in vdW Wide Bandgap Semiconductors / KIM Jonghwan*1 ([1]Department of Materials Science and Engineering, POSTECH)

E10.03 [14:12 - 14:48]
Manipulating exciton dynamics in 2D-TMDC with high quality factor dielectric metasurfaces / JEONG Jeeyoon*1 ([1]Department of Physics, Kangwon National University)

[E11-ap] Focus: Recent Advances of Functional Electromechanical Materials I

2022. 04. 21 Thursday 13:00~14:48

Room: 11

좌장 : **양찬호** 한국과학기술원

Chair: YANG Chan-Ho (KAIST)

E11.01 [13:00 - 13:36]

Dominant role of ferroelectric dipoles for mechanical energy harvesting and acoustic energy transfer / KIM Hyun Soo[1,2], SONG Hyun-Chul[2], JUNG Jong Hoon*[1] ([1]Department of Physics, Inha University, [2]Electronic Materials Research Center, KIST)

E11.02 [13:36 - 14:12]

Magneto-Mechano-Electric energy harvesting by magnetoelectric composite for IoT sensor systems / RYU Jungho*[1] ([1]School of Materials Science and Engineering, Yeungnam University)

E11.03 [14:12 - 14:48]

Triboelectrification for New Energy Solution and Tribotronics / KIM Sang-Woo*[1] ([1]School of Advanced Materials Science and Engineering,, Sungkyunkwan University)

[E12-ap] [F] Optical nanodevices and integration I

2022. 04. 21 Thursday 13:00~14:48

Room: 12

좌장 : **노유신** 건국대학교

Chair: NO You-Shin (Konkuk University)

E12.01 [13:00 - 13:36]

Emerging optoelectronics based on the quantum-dots and oxide semiconductors / KANG Seong Jun*[1] ([1]Department of Advanced Materials Engineering for Information and Electronics, Kyung Hee University)

E12.02 [13:36 - 14:12]

On-chip Brillouin scattering and its applications / SHIN Heedeuk*[1] ([1]Department of Physics, Pohang University of Science and Technology)

E12.03 [14:12 - 14:48]

Plug-and-play single-photon source with highly efficient fiber interface / JEON Woong Bae[1], KIM Je-Hyung*[1] ([1]School of Nature Science, Department of Physics, Ulsan National Institute of Science and Technology (UNIST))

[E13-st] Nonequilibrium Systems and Phase Transition

2022. 04. 21 Thursday 13:00~14:12

Room: 13

좌장 : 정하웅 한국과학기술원

Chair: JEONG Hawoong (KAIST)

E13.01 [13:00 - 13:12]

Time-dependent entropy production estimator / LEE Sangyun[1], KIM Dong-Kyum[3], PARK Jongmin[1], KIM Won Kyu[2], LEE Jae Sung*[1], PARK Hyunggyu[1] ([1]School of Physics, KIAS, [2]School of Computational Science, KIAS, [3]Physics, KAIST)

E13.02* [13:12 - 13:24]

Solving generalized Langevin equations violating the fluctuation-dissipation theorem: numerical simulation and exact theory / JOO Sungmin[1], JEON Jae-Hyung*[1] ([1]Department of Physics, POSTECH)

E13.03* [13:24 - 13:36]

Analytical results for power and efficiency of active Brownian heat engine / BAEK Yongjoo*[1], OH Yongjae[1] ([1]Department of Physics and Astronomy, Seoul National University)

E13.04* [13:36 - 13:48]

Correlation between concurrence and mutual information / KWON Yong[1], BAEK Seung Ki*[1], UM Jaegon[2] ([1]Department of Physics, Pukyong National University, [2]Department of Physics, POSTECH)

E13.05* [13:48 - 14:00]

Continuous phase transition in Brownian Potts Model: Suppression of phase coexistence by particle diffusion / WOO Chul-Ung[1], RIEGER Heiko[2], NOH Jae Dong*[1] ([1]Department of Physics, University of Seoul, [2]Department of Theoretical Physics & Center for Biophysics, Saarland University)

E13.06 [14:00 - 14:12]

Upgrading performance of Quantum Network by using Hypergraph / KIM Cook[1], KAHNG Byungnam*[1] ([1]Institute for Grid Modernization, KENTECH, [2]Department of Physics and Astronomy, Seoul National University)

[E14] No session

[E15-pl] Special Commemorative Session: Prof. D.I. Choi and Prof. S.J. Noh

2022. 04. 21 Thursday 13:00~14:12

Room: 15

좌장 : 홍봉근 전북대학교

Chair: HONG Bong Guen (Chonbuk National University)

E15.01 [13:00 - 13:24]
최덕인 교수님을 기리며 / 최은하*[1] ([1]광운대학교 전자바이오물리학과)

E15.02 [13:24 - 13:48]
우리나라 핵융합 연구에서 고 최덕인 교수님의 업적 – 플라즈마 불안정성 및 난류 연구와 KSTAR 프로그램을 중심으로 / 권재민*[1] ([1]한국핵융합연구원 통합시뮬레이션연구부)

E15.03 [13:48 - 14:12]
핵융합로 재질의 수소동위원소 permeation 및 retention 연구와 노승정교수 / 김희수*[1] ([1]단국대학교 죽전캠퍼스 공과대학)

Ⓔ **[E16-op] Pioneer: Soft Matter Physics & Optics I**

2022. 04. 21 Thursday 13:00~14:36

Room: 16

좌장 : 이승우 고려대학교

Chair: LEE Seungwoo (Korea University)

E16.01 [13:00 - 13:24]
Direct writing of structural-color graphics with colloidal photonic inks / KIM Shin-Hyun*[1] ([1]Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology (KAIST))

E16.02 [13:24 - 13:48]
Structural color as a tool to investigate structure and formation pathways of colloidal clusters / VOGEL Nicolas*[1] ([1]Friedrich-Alexander University Erlangen-Nürnberg, Germany)

E16.03 [13:48 - 14:12]
Creating Photonic Architectures by Nanoimprinting Unconventional Materials / MIHI Agustín*[1] ([1]Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Campus de la UAB, 08193 Bellaterra, Spain)

E16.04 [14:12 - 14:36]
Manipulating light and color with soft and structured matter / KOLLE Mathias*[1] ([1]MIT, US)

[E17-at] Atomic and Molecular Physics I

2022. 04. 21 Thursday 13:00~14:48

Room: 17

좌장 : 김준기 성균관대학교

Chair: KIM Junki (Sungkyunkwan University)

E17.01* [13:00 - 13:12]

Contextual advantages and certification for maximum confidence discrimination / FLATT Kieran[1], LEE Hanwool[1], CARCELLER Carles Roch i[2], BRASK Jonatan Bohr[2], BAE Joonwoo[*1] ([1]School of Electrical Engineering, KAIST, [2]Physics, Technical University of Denmark)

E17.02* [13:12 - 13:24]

Detecting Entanglement Generating Circuits in Cloud-Based Quantum Computing / BAE Joonwoo[*1], SEONG Jiheon[1] ([1]School of Electrical Engineering, KAIST)

E17.03* [13:24 - 13:36]

Coherent Control of Motion in a Trapped Ion System / KIM Taehyun[*1,3,4,5], JEON Hong-gi[2], KANG Jiyong[1], KIM Kyunghye[1], CHOI Wonhyeong[1] ([1]Computer Science and Engineering, Seoul National University, [2]Department of Physics and Astronomy, Seoul National University, [3]Automation and System Research Institute, Seoul National University, [4]Inter-university Semiconductor Research Center, Seoul National University, [5]Institute of Computer Technology, Seoul National University)

E17.04* [13:36 - 13:48]

Interpretable Shadow Neural Network for Entangled Many-Body States / LEE Wonjun[1], AHN Cheong-Eung[1], CHO Gil Young[*1,2,3] ([1]Department of Physics, POSTECH, [2]N/A, Asia-Pacific Center for Theoretical Physics(APCTP), [3]N/A, Center for Artificial Low Dimensional Electronic Systems (CALDES), IBS)

E17.05* [13:48 - 14:00]

Maximum-Independent-Set Experiments with Random Arrays of Rydberg Atoms / KIM Kangheun[1], KIM Minhyuk[1], AHN Jaewook[*1] ([1]Physics, KAIST)

E17.06 [14:00 - 14:12]

A fast quantum algorithm for computing matrix permanent / HUH Joonsuk[*1,2,3] ([1]Chemistry, Sungkyunkwan University, [2]SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, [3]Institute of Quantum Biophysics, Sungkyunkwan University)

E17.07* [14:12 - 14:24]

Trapping Yb ions in a segmented-blade linear trap / KIM Myunghun[*1], KIM Keumhyun[*1], HONG JungSoo[1], LEE Won Chan[2], LEE Hyegoo[1], LEE Minho[1], MOON Young il[1], LEE Moonjoo[1] ([1]Department of Electrical Engineering, POSTECH, [2]Department of Physics, POSTECH)

E17.08* [14:24 - 14:36]
Quantum simulation of 2D arranged Platonic graph Ising spins / BYUN Andrew[1], KIM Minhyuk[1], AHN Jaewook*[1] ([1]Physics, KAIST)

E17.09* [14:36 - 14:48]
Rydberg wire gates for universal quantum computation / JEONG Seok Ho[1], SHI Xiao-Feng[2], KIM Minhyuk[1], AHN Jaewook*[1] ([1]Physics, KAIST, [2]School of Physics and Optoelectronic Engineering, Xidian University, China)

Ⓔ [E18-se] Pioneer: Exciton-Polaritons for Novel Semiconductor Photonics II
2022. 04. 21 Thursday 13:00~15:00
Room: 18
좌장 : 공수현 고려대학교
Chair: GONG Su-Hyun (Korea University)

E18.01 [13:00 - 13:36]
Perovskite Semiconductors for Photonics and Polaritonics / XIONG Qihua*[1] ([1]Department of Physics, Tsinghua University)

E18.02 [13:36 - 14:00]
Direct polariton coupling in single hexagonal microcavity at room temperature / CHO Yong-Hoon*[1] ([1]Department of Physics and KI for the NanoCentury, Korea Advanced Institute of Science and Technology (KAIST))

E18.03 [14:00 - 14:36]
Femtosecond Dynamics of a Polariton Bosonic Cascade at Room Temperature / CHEN Zhanghai*[1] ([1]Department of Physics, College of Physical Science and Technology, Xiamen University, Xiamen 361005, China)

E18.04 [14:36 - 15:00]
Tip-enhanced cavity-spectroscopy / PARK Kyoung-Duck*[1] ([1]Department of Physics, POSTECH)

Ⓔ [E19-se] Pioneer: Low-Dimensional Nanomaterials and 2D van der Waals Heterostructures II
2022. 04. 21 Thursday 13:00~14:48
Room: 19
좌장 : 오혜민 군산대학교
Chair: OH Hye Min (Kunsan National University)

E19.01 [13:00 - 13:36]
Resonant tunneling through twisted black phosphorus heterostructures / LEE Changgu*1 ([1]School of Mechanical Engineering, Sungkyunkwan University)

E19.02 [13:36 - 14:12]
Strain-induced electronic structure and functionality changes in MoTe2 - Understanding the nanomechanical underlying mechanisms governing strain engineering / SOLARES Santiago D.*1 ([1]Department of Mechanical and Aerospace Engineering, School of Engineering and Applied Science, The George Washington University)

E19.03 [14:12 - 14:48]
Epitaxial growth, exfoliation, and heterostructing of complex-oxide membranes / KUM Hyun S.*1 ([1]Department of Electrical and Electronic Engineering, Yonsei University)

E

[E20-bp] Focus: The future of genome editing: Emerging technologies and applications

2022. 04. 21 Thursday 13:00~14:36

Room: 20

좌장 : 이상화 광주과학기술원

Chair: LEE Sanghwa (GIST)

E20.01 [13:00 - 13:24]
Current Status and Challenges in Genome Editing / BAE Sangsu*1 ([1]Department of Chemistry, Hanyang University)

E20.02 [13:24 - 13:48]
Self-sufficient minimalism in CRISPR technology: Target with TaRGET / KIM Yong-Sam*1 ([1]Genome Editing Research Center, KRIBB; GenKOre)

E20.03 [13:48 - 14:12]
Predicting the Efficiencies and Outcomes of Genome Editing and time-recording using Cas9 / KIM Hyongbum Henry*1 ([1]Department of Pharmacology, Yonsei University College of medicine)

E20.04 [14:12 - 14:36]
In vivo Genome Editing for Vision / KIM Jeong Hun*1,2 ([1]Fight against Agiogenesis-Related Blindness (FARB) Laboratory, Clinical Research Institute, Seoul National University Hospital, [2]Department of Biomedical Sciences & Ophthalmology, Seoul National University College of Medicine)

[E21-or] Focus: Low-carbon energy alternatives

2022. 04. 21 Thursday 13:00~14:36

Room: 21

좌장 : **박승남** 한국표준과학연구원

Chair: PARK Seung-nam (KRISS)

E21.01 [13:00 - 13:24]
주요국가의 핵융합 연구개발 동향 / 장한수*1 ([1]한국핵융합에너지연구원)

E21.02 [13:24 - 13:48]
Global Trends on Non-Electric Application using SMR for Carbon Neutrality / KIM Chan Soo*1 ([1]Nuclear Hydrogen Research Team, korea Atomic Energy Research Institute)

E21.03 [13:48 - 14:12]
Catalyst Designs and Nanoarchitecture for Hydrogen and Fuel Cell Applications / YOO Sung Jong*1 ([1]Korea Institute of Science and Technology, Hydrogen·Fuel Cell Research Center)

E21.04 [14:12 - 14:36]
태양광 미래 기술 / 윤재호*1 ([1]한국에너지공과대학교 에너지공학부)

2022 April 21(Thu) 15:10-16:58

[F1-pa] Accelerator-based Particle Physics Experiments V

2022. 04. 21 Thursday 15:10~17:10

Room: 01

좌장 : **천병구** 한양대학교

Chair: CHEON Byung Gu (Hanyang University)

F1.01 [15:10 - 15:22]
Reduction of systematic error sources with rf phase-space matching in the muon g-2 experiment at Fermilab / KIM On*1, SEMERTZIDIS Yannis Kyriakos1,2 (1Center for Axion and Precision Physics Research, Institute for Basic Science, 2Physics, KAIST)

F1.02 [15:22 - 15:34]
Study of B->\rho\gamma at Belle and Belle II / WATANUKI Shun*1 (1Department of physics, Yonsei University)

F1.03 [15:34 - 15:46]
AMGA를 활용한 Belle II 분산데이터처리 시스템 연구개발 / CHO Kihyeon*1, PARK Kihong1, KIM Kyungho2 (1UST, KISTI, 2Supercomputing center, KISTI)

F1.04 [15:46 - 15:58]
Recent results on tau leptons from Belle / KWON Youngjoon*1 (1Physics, Yonsei University)

F1.05 [15:58 - 16:10]
Status of the SUB-Millicharge ExperimenT (SUBMET) / YOO Jae Hyeok*1 (1Physics, Korea University)

F1.06* [16:10 - 16:22]
Studies on the detector modules for SUBMET / YOO Jae Hyeok*1, JEONG Hoyong1 (1Physics, Korea University)

F1.07 [16:22 - 16:34]
Readout system for SUBMET / YOO Jae Hyeok*1, MOON Hyunki1 (1Physics, Korea University)

F1.08 [16:34 - 16:46]
Update of DUNE experiment / SIYEON Kim*1 (1Physics, Chung-Ang University)

F1.09 [16:46 - 16:58]
Neutron detection and application with a novel 3D projection scintillator tracker in the DUNE / GWON Sunwoo*[1] ([1]Physics, Chung-Ang University)

F1.10 [16:58 - 17:10]
Update of the GBAR experiment status / KIM Bongho*[1], CHOI Jaejin[2], CHUNG Moses[3], KIM Eun San[4], KIM Sun Kee[2], KO Young Ju[1], LEE Byungchan[2], LEE Hobin[2], LEE Jaison[1], LIM Eunhoon[4], PARK Kwanhyung[2], WON DongHwan[2], YOO Kyoung-Hun[3] ([1]Center for Underground Physics, IBS, [2]Department of physics and astronomy, Seoul National University, [3]Department of physics, UNIST, [4]Department of accelerator physics, Korea University)

[F2-pa] Non-accelerator-based Particle Physics Experiments II
2022. 04. 21 Thursday 15:10~17:10
Room: 02
좌장 : 오유민 기초과학연구원
Chair: OH Yoomin (IBS)

F2.01* [15:10 - 15:22]
AMoRE-I Status and Performance / KIM HAN BEOM[1,2], KIM Yong-Hamb*[1], WOO Kyun-grae[1,3] ([1]Center for Underground Physics, IBS, [2]Department of Physics and Astronomy, Seoul National University, [3]IBS School, University of Science and Technology)

F2.02 [15:22 - 15:34]
AMoRE-II construction at Yemilab / KIM Go Woon*[1], KIM Yeongduk[1] ([1]CUP, IBS)

F2.03 [15:34 - 15:46]
Measurement of the smallest neutrino mixing angle using reactor antineutrino events with neutron capture on hydrogen at RENO / KIM Sang yong*[1], CHOI Juneho[7], JANG Hanil[8], JANG Jeeseuong[4], JOO Kyungkwang[3], JUNG Daeun[2], JUNG Sanghoon[2], KIM Jaeyool[3], KIM Jonggun[2], KIM Soo-Bong[2], KIM Wooyoung[5], KWON Eunhyang[2], LIM Intaek[6], LEE Hyungi[2], LEE Wonjun[1], MOON Dongho[3], PAC Myoung Youl[7], SEO Hyunkwan[1], SEO Jiwoong[2], SHIN ChangDong[2], YANG Byeongsu[1], YOON Seok-Gyeong[1], YU Intae[2], YOO Jonghee[1] ([1]Department of Physics & Astronomy, Seoul National University, [2]Department of Physics, Sungkyunkwan University, [3]Department of Physics, Chonnam National University, [4]GIST College, GIST, [5]Department of Physics, Kyungpook National University, [6]Department of Physics Education, Chonnam National University, [7]Department of Radiology, Dongshin University, [8]Department of Fire Safety, Seoyeong Univsersity)

F2.04 [15:46 - 15:58]
Measurement of cosmogenic 9Li and 8He production rates at RENO / LEE Hyungi*[1], KIM Wooyoung[2], PAC Myoung Youl[3], CHOI Juneho[3], JANG Hanil[4], KIM Sang yong[1], SEO Hyunkwan[1], LEE Dongha[1], KIM Jonggun[5], SEO Jiwoong[5], YU Intae[5], JEON Sanghoon[5], JUNG Daeun[5], KIM Jaeyool[6], MOON Dongho[6], SHIN Changdong[6], JOO Kyungkwang[6], LIM Intaek[7], JANG Jeeseung[8], YOO Jonghee[1], YANG Byeongsu[1], YOON Seok-Gyeong[9], PARK Ryeonggoon[6] ([1]physics, Seoul National University, [2]Department of physics, Kyungpook National University, [3]Department of Radiology, Dongshin University, [4]Department of Fire Safety, Seoyeong University, [5]Department of physics, Sungkyunkwan University, [6]Department of physics, Chonnam National University, [7]Department of Physics Education, Chonnam National University, [8]GIST College, GIST, [9]Department of physics, KAIST)

F2.05 [15:58 - 16:10]
Status of NEOS-II / OH Yoomin*[1] ([1]IBS)

F2.06* [16:10 - 16:22]
Pulse shape discrimination in NEOS II with a convolutional neural network / JUNG KiYoung*[1] ([1]Physics, Chung-Ang University)

F2.07 [16:22 - 16:34]
Status of Neutrino Elastic-scattering Observation with NaI(Tl) experiment (NEON) / PARK ByungJu*[1,2] ([1]Center for Underground Physics, IBS, [2]IBS, UST)

F2.08 [16:34 - 16:46]
Integrating the Camera System to the IceCube Upgrade / RODAN Steven Thomas*[1], LEE Jiwoong[1] ([1]Physics, Sungkyunkwan University)

F2.09 [16:46 - 16:58]
Novel Camera System to Improve Analysis of Neutrino Events in the IceCube Upgrade / RODAN Steven Thomas*[1], LEE Jiwoong[1], WOOSIK Kang[1], CHOI Seowon[1], ROELLINGHOFF Gerrit[1], ROTT Carsten[1,2], CHRISTOPH Toennis[1,2] ([1]Physics, Sungkyunkwan University, [2]Physics, Univeristy of Utah)

F2.10 [16:58 - 17:10]
Detection of Cosmic Rays under latitude & altitude dependence in South Korea / CHO Seongbeom*[1], KIM TAE JEONG[1] ([1]Department of physics, Hanyang University)

F

Ⓔ [F3-nu] Pioneer: Equation of state of nuclear matter I

2022. 04. 21 Thursday 15:10~16:22

Room: 03

좌장 : 홍병식 고려대학교

Chair : HONG Byungsik (Korea University)

F3.01 [15:10 - 15:34]

Exploring EOS in heavy-ion collisions with transport models / ONO Akira*[1] ([1]Tohoku Univ., Japan)

F3.02 [15:34 - 15:58]

KIDS Energy Density Functional and Symmetry Energy / HYUN Chang Ho*[1] ([1]Daegu University)

F3.03 [15:58 - 16:22]

Apha cluster formation in the surface of stable and unstable nuclei / KIMURA Masaaki*[1] ([1]Hokkaido U., Japan)

[F4-as] Focus: Black Hole Physics II

2022. 04. 21 Thursday 15:10~16:58

Room: 04

좌장 : 곽보근 동국대학교

Chair: GWAK Bogeun (Dongguk University)

F4.01 [15:10 - 15:46]

Probing the expansion history of the universe with gravitational waves / LEE Hyung Mok*[1] ([1]Department of Physics and Astronomy, Seoul National University)

F4.02 [15:46 - 16:22]

Multi-messenger Astronomy with 7-Dimensional Telescope / IM Myungshin*[1] ([1]Dept. of Physics & Astronomy, Seoul National University)

F4.03 [16:22 - 16:34]

aLIGO Gravitational-Wave Detector Science: Room Temperature Ground-Based Detector / LEE Kyung-ha*[1] ([1]Physics, Sungkyunkwan University)

F4.04 [16:34 - 16:58]

KAGRA and Einstein telescope : the underground cryogenic gravitational wave telescope / PARK June Gyu*[1], LEE SungHo[1], KIM Chang-Hee[1], KIM Yunjong[1], JEONG Ueejeong Jeong[1], SEONG Hyeon Cheol[1] ([1]Technology Center for Astronomy and Space Science, KASI)

Ⓔ [F5-co] Pioneer: Orbitronics for future electronics II

2022. 04. 21 Thursday 15:10~17:10

Room: 05

좌장 : 임성현 울산대학교

Chair: RHIM Sonny (University of Ulsan)

F5.01 [15:10 - 15:34]

Orbital torque in magnetic bilayers / LEE Kyung-Jin*[1] ([1]Department of Physics, KAIST)

F5.02 [15:34 - 15:58]

Long-range orbital transport in ferromagnets: Theory and experiment / GO Dongwook*[1,2], HAYASHI Hiroki[3], JO Daegeun[4], KIM Kyung-Whan[5], LEE Soogil[6], KANG Min-Gu[6], PARK Byong-Guk[6], BLüGEL Stefan[1], LEE Hyun-Woo[4], ANDO Kazuya[3,7,8], MOKROUSOV Yuriy[1,2] ([1]Peter Grünberg Institut and Institute for Advanced Simulation, Forschungszentrum Jülich and JARA, 52425 Jülich, Germany, [2]Institute of Physics, Johannes Gutenberg University Mainz, 55099 Mainz, Germany, [3]Department of Applied Physics and Physico-Informatics, Keio University, Yokohama 223-8522, Japan, [4]Department of Physics, Pohang University of Science and Technology, Pohang 37673, Korea, [5]Korea Institute of Science and Technology, Seoul 02792, Korea, Center for Spintronics, [6]Department of Materials Science and Engineering and KI for Nanocentury, KAIST, Daejeon 34141, Korea, [7]Keio Institute of Pure and Applied Sciences, Keio University, Yokohama 223-8522, Japan, [8]Keio University, Yokohama 223-8522, Japan, Center for Spintronics Research Network)

F5.03 [15:58 - 16:22]

Generating Orbital Currents and Densities / MANCHON Aurélien*[1], PEZO Armando[1], OVALLE Diego Garcia[1] ([1]CINaM, Aix-Marseille University, Marseille, France)

F5.04 [16:22 - 16:46]

Orbitronics: new torques and magnetoresistance effects / KLäUI Mathias*[1,2] ([1]Institute of Physics, Johannes Gutenberg-University Mainz, 55099 Mainz, Germany, [2]Graduate School of Excellence Materials Science in Mainz, Staudinger Weg 7, 55128 Mainz, Germany)

F5.05 [16:46 - 17:10]

Observation of the orbital Hall effect in a light metal Ti / CHOI Young-Gwan[1], JO Daegeun[2], KO Kyung-Hun[1], GO Dongwook[3,4], KIM Kyung-Han[2], PARK Hee Gyum[5], KIM Changyoung[6,7], MIN Byoung-Chul[5], CHOI Gyung-Min*[8], LEE Hyun-Woo*[2,9] ([1]Department of Energy Science, Sungkyunkwan University, [2]Department of Physics, Pohang University of Science and Technology, [3]Peter Grünberg Institut and Institute for Advanced Simulation, Forschungszentrum Jülich and JARA, 52425 Jülich, Germany, [4]Institute of Physics, Johannes Gutenberg University Mainz, 55099 Mainz, Germany, [5]Center for Spintronics,, Korea Institute of Science and Technology, [6]Department of Physics and Astronomy, Seoul National University, [7]Center for Correlated Electron Systems, Institute for Basic Science, [8]Center for Integrated Nanostructure Physics, Institute for Basic Science, [9]Asia Pacific Center for Theoretical Physics, Korea)

F

[F6-co] Focus: Electronic structure, interaction and phase transitions in Kagome metals II

2022. 04. 21 Thursday 15:10~16:34

Room: 06

좌장 : 김영국 성균관대학교

Chair: KIM Youngkuk (Sungkyunkwan University)

F6.01 [15:10 - 15:46]

The critical role of Sb-p state in the Van Hove singularity formation and the electronic correlation for superconducting Kagome metal CsV_3Sb_5 / JEONG Min Yong[1], YANG Hyeok-Jun[1], KIM Hee Seung[1], KIM Yong Baek[2], LEE SungBin[*1], HAN Myung Joon[*1] ([1]Department of Physics, KAIST, [2]Department of Physics, University of Toronto)

F6.02 [15:46 - 16:22]

Flat band, Dirac fermions, and CDW formation in Kagome Lattices / WANG Chongze[1], CHO Jun Hyung[*1] ([1]Physics, Hanyang University)

F6.03* [16:22 - 16:34]

A first-principles study of kagome superconductors AV_3Sb_5 (A = K, Rb, Cs): exchange-correlation functional and van Hove singularity / SIM Sangjun[1], JEONG Min Yong[1], HAN Myung Joon[*1] ([1]Department of Physics, KAIST)

[F7-co] Focus: Ultrafast science in emerging materials properties II

2022. 04. 21 Thursday 15:10~16:46

Room: 07

좌장 : 엄인태 포항가속기연구소

Chair: UM In-Tae (Pohang Accelerator Laboratory)

F7.01 [15:10 - 15:34]

Studies of emerging materials using time-resolved resonant X-ray scattering at PAL-XFEL / CHUN SAE HWAN[*1] ([1]XFEL Division, Pohang Accelerator Laboratory)

F7.02 [15:34 - 15:58]

Two-temperature and ab initio molecular dynamics study of ultrafast nonequilibrium structural transformation of nanoparticles / IHM Yungok[*1,3], JUNG Chulho[2,3], CHO Do Hyung[2,3], AHN Je Young[1], LEE Heemin[2,3], SHIM Ji Hoon[1,3], SONG Changyong[2,3] ([1]Department of Chemistry, POSTECH, [2]Department of Physics, POSTECH, [3]Photon Science Center, POSTECH)

F7.03 [15:58 - 16:22]
Ultrafast lattice control and electron phonon correlation spectroscopy / KIM Hee-jae*1 ([1]Department of Molecular Spectroscopy, Max Planck Institute for Polymer Research, Mainz, Germany)

F7.04 [16:22 - 16:46]
First-Principles Studies on Ultrafast Excited-State Dynamics in Materials / BANG Junhyeok*1 ([1]Department of Physics, Chungbuk National University)

[F8-co] Focus: Quasiparticles in correlated topological materials II
2022. 04. 21 Thursday 15:10~16:46
Room: 08
좌장 : 옥종목 부산대학교
Chair: OK Jong Mok (Pusan National University)

F

F8.01 [15:10 - 15:34]
Magnetic effects in graphene / HWANG Choongyu*1 ([1]Physics, Pusan National University)

F8.02 [15:34 - 15:58]
Correlated nodal surface semimetal in Mn-based kagome compound $Sc_3Mn_3Al_7Si_5$ / KIM Heung-Sik*1 ([1]Department of Physics, Kangwon National University)

F8.03 [15:58 - 16:22]
양자 스핀 액상 이종구조 / SOHN Changhee*1 ([1]Department of Physics, UNIST)

F8.04 [16:22 - 16:46]
Search for Majorana Fermions in Quantum Magnets / MOON Eun-Gook*1 ([1]physics, KAIST)

Ⓔ [F9-co] Pioneer: Quantum geometrical properties of flatbands and experimental realization II
2022. 04. 21 Thursday 15:10~17:10
Room: 09
Chair : ANDREANOV Alexei IBS-PCS

F9.01 [15:10 - 15:34]
Topological band engineering for ultracold atoms in shaken optical lattices / SHIN Yong-il*1 ([1]Department of Physics and Astonomy, Seoul National University)

F9.02 [15:34 - 15:58]
Topological phases and flat bands of quantized light / WANG Da-Wei*1 ([1]Department of Physics, Zhejiang University)

F9.03 [15:58 - 16:22]
Flatband photonic lattices: from localized states to topological phenomena / CHEN Zhigang*1 ([1]The MOE Key Laboratory of Weak-Light Nonlinear Photonics, TEDA Applied Physics Institute and School of Physics, Nankai University, Tianjin 300457, China)

F9.04 [16:22 - 16:46]
Exciton-polaritons in flatland: Controlling flatband properties in coupled optical resonator lattices / KLEMBT Sebastian*1 ([1]Technische Physik, Wilhelm-Conrad-Röntgen-Research Center for Complex Material Systems, and Würzburg-Dresden Cluster of Excellence ct.qmat, Universität Würzburg, Am Hubland, D-97074 Würzburg, Germany)

F9.05 [16:46 - 17:10]
Quantum geometry and superfluidity in fermionic and bosonic systems: new twists / HUHTINEN Kukka-Emilia[1], JULKU Aleksi[1,2], BRUUN Georg[2], TÖRMÄ Päivi*1 ([1]Department of Applied Physics, Aalto University, Finland, [2]Center for Complex Quantum Systems, Department of Physics and Astronomy, Aarhus University, Denmark)

[F10-ap] Focus: Straintronics in graphene
2022. 04. 21 Thursday 15:10~16:46
Room: 10
좌장 : 남영우 경상대학교
Chair: NAM Youngwoo (Gyeongsang National University)

F10.01 [15:10 - 15:34]
Strained Graphene Optoelectronic Devices for Integrated Quantum Photonics / NAM Donguk*1 ([1]Nanyang Technological University, Singapore)

F10.02 [15:34 - 15:58]
Strain-Engineered Quantum Interferometry and Qubits in Graphene / MYOUNG Nojoon*1 ([1]Department of Physics Education, Chosun University)

F10.03 [15:58 - 16:22]
Electro-mechanical properties of 2D crystals / WOO Sungjong*1, SON Young-Woo[2], PARK Hee Chul[1], LEE Jae-Ung[3], CHEONG Hyeonsik[4] ([1]기초과학연구원 복잡계이론물리연구단, [2]고등과학원 계산과학부, [3]아주대 물리학과, [4]서강대 물리학과)

F10.04 [16:22 - 16:46]
Thermal Hall response: violation of gravitational analogues and Einstein relations / PARK Jinhong*[1], GOLAN Omri[2], VINKLER-AVIV Yuval[1], ROSCH Achim[1] ([1]institute for theoretical physics, University of Cologne, [2]Department of Condensed Matter Physics, Weizmann Institute of Science)

[F11-ap] Focus: Recent Advances of Functional Electromechanical Materials II
2022. 04. 21 Thursday 15:10~16:58
Room: 11
좌장 : 김태헌 울산대학교
Chair: KIM Tae Heon (University of Ulsan)

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F11.01 [15:10 - 15:46]
Ultrahigh Strain and Piezoelectric Behavior in Gen III PMN-PZT Single Crystals (d_{33}>5,000 pC/N) Developed by SSCG Technique / KIM Moon-Chan[1], JOO Hyun-Jae[1], OH Hyun-Taek[1], LEE Ho-Yong*[1,2] ([1]Ceracomp Co., Ltd., [2]Sunmoon University)

F11.02 [15:46 - 16:22]
Structural characteristics and applications of BNT-based relaxor ferroelectric ceramics / BU Sang-Don*[1], CHO Sam yeon[1] ([1]Department of Physics, Jeonbuk National University)

F11.03 [16:22 - 16:58]
Emergence of isotropy at morphotropic phase boundary of relaxor ferroelectrics / CHU Kanghyun*[1], RIEMER Lukas[1], DAMJANOVIC Dragan[1] ([1]SCI STI DD, EPFL, Lausanne 1015, Switzerland)

Ⓔ [F12-ap] Pioneer: Non-Equilibrium Quantum Materials: Experiments & Theory II
2022. 04. 21 Thursday 15:10~16:58
Room: 12
좌장 : 김건우 중앙대학교
Chair: KIM Kun Woo (Chung-Ang University)

F12.01 [15:10 - 15:46]
Steady Floquet-Andreev states in graphene Josephson junctions / LEE Gil-Ho*[1,4], PARK Sein[1], LEE Wonjun[1,5], JANG Seong[1], CHOI Yong-Bin[1], PARK Jinho[1], JUNG Woo-chan[1], WATANABE Kenji[2], TANIGUCHI Takashi[3], CHO Gil Young[1,4] ([1]Department of Physics, POSTECH, [2]Research Center for Functional Materials, National Institute for Materials Science,

[3]International Center for Materials Nanoarchitectonics, National Institute for Materials Science, [4]APCTP, Asia-Pacific Center for Theoretical Physics(APCTP), [5]Center for Artificial Low Dimensional Electronic Systems, Institute for Basic Science)

F12.02 [15:46 - 16:10]
Charge Induced Aharonov-Bohm Phase Modulation in Multiple Quantum Hall Edges Graphene Fabry-Pérot Interferometer / RONEN Yuval[1], WERKMEISTER Thomas[2], EHRETS James[1], NAJAFABADI Danial Haei[3], WESSON Marie[1], WATANABE Kenji[4], TANIGUCHI Takashi[5], HALPERIN Bertrand I.[1], YACOBY Amir[6], KIM Philip[*6] ([1]Department of Physics, Harvard University, Cambridge, MA, USA, [2]John A. Paulson School of Engineering and Applied Sciences, Harvard University, Cambridge, MA, USA, [3]CNS, Harvard University, Cambridge, MA, USA, [4]Research Center for Functional Materials, National Institute for Materials Science, Tsukuba, Japan, [5]International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan, [6]Department of Physics, John A. Paulson School of Engineering and Applied Sciences, Harvard University, Cambridge, MA, USA)

F12.03 [16:10 - 16:34]
Floquet theory of multiterminal Josephson junctions / MERLIN Regis[*1] ([1]CNRS/Institut Neel, France)

F12.04 [16:34 - 16:58]
Floquet-engineered topological transport in quantum materials / SCHULTE B.[1], DAY M. W.[1], JOTZU G.[1], STEIN F.-U.[1], MATSUYAMA T.[1], MEIER G.[1], CAVALLERI A.[1], MCIVER J. W.[*1] ([1]Max Planck Institute for the Structure and Dynamics of Matter, Hamburg, Germany)

[F13-F14] No session

[F15-pl] Focus: Toward next-generation accelerators: R&Ds and Applications
2022. 04. 21 Thursday 15:10~16:46
Room: 15
좌장 : **박성희** 고려대학교
Chair: PARK Seong Hee (Korea University)

F15.01 [15:10 - 15:34]
가속기 포럼: 가속기 분야의 일관성 있는 장기전략 및 로드맵의 필요성 / CHUNG Moses[*1] ([1]Department of Physics, UNIST)

F15.02 [15:34 - 15:58]
양성자가속기 기반 핵파쇄 중성자원 기술현황 / KWON Hyeok-Jung[*1] ([1]KOMAC, KAERI)

F15.03 [15:58 - 16:22]
Review and prospects of the laser-plasma accelerator research and applications for light source / SUK Hyyong*[1] ([1]Dept. of Physics and Photon Science, GIST)

F15.04 [16:22 - 16:46]
Critical issues in the 4th generation storage ring projects / SHIN Seung Hwan*[1], LEE Jaeyu[1], OH BongHoon[1], JANG Gyeong Su[1], KIM Dong Eon[1], HA Tae Kyun[1], YOON Young Dae[1], CHUNG Moses[2] ([1]PLS-II Accelerator Department, Pohang Accelerator Laboratory, [2]Department of Physics, UNIST)

Ⓔ [F16-op] Pioneer: Soft Matter Physics & Optics II
2022. 04. 21 Thursday 15:10~16:22
Room: 16
좌장 : 이승우 고려대학교
Chair: LEE Seungwoo (Korea University)

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F16.01 [15:10 - 15:34]
Structural Colors of Mie-Resonant Hollow Nanospheres / YI Gi-Ra*[1] ([1]Department of Chemical Engineering, Sungkyunkwan University)

F16.02 [15:34 - 15:58]
Transformative applications enabled by the spherically symmetric chiral Bragg diffraction of cholesteric spherical reflectors / LAGERWALL Jan*[1] ([1]Department of Physics and Materials Science, University of Luxembourg, Grand Duchy of Luxembourg)

F16.03 [15:58 - 16:22]
Inorganic DNA origami particles / GOPINATH Ashwin*[1] ([1]MIT, US)

[F17-at] Atomic and Molecular Physics II
2022. 04. 21 Thursday 15:10~16:22
Room: 17
좌장 : 채은미 고려대학교
Chair: CHAE Eunmi (Korea University)

F17.01* [15:10 - 15:22]
Observation of universal coarsening dynamics in a ferromagnetic spinor Bose-Einstein condensate / HUH SeungJung[1], SEO Jihoon[1], KWON Kiryang[1], HUR Junhyeok[1], CHOI Jae Yoon*[1] ([1]Physics Department, KAIST)

F17.02* [15:22 - 15:34]
Towards degenerate NaK molecular gases with long-range dipolar interactions / CHANG JaeRyeong[1], LEE Sungjun[1], KIM Yoonsoo[1], LIM Younghoon[1], PARK Jee Woo*[1] ([1]Department of Physics, POSTECH)

F17.03 [15:34 - 15:46]
Experimental Study of the Inhomogeneous Kibble-Zurek Mechanism / RABGA Tenzin[2], LEE YangHeon[1,2], BAE Dalmin[1,2], KIM Myeonghyeon[1,2], GOO Junhong[1], SHIN Yong-il*[1,2] ([1]Department of Physics and Astonomy, Seoul National University, [2]Center for Correlated Electron Systems, CCES (IBS))

F17.04 [15:46 - 15:58]
변조전달분광신호를 이용한 불안정도 10-14 수준의 주파수 고안정화 / LEE Sanglok[1,2], PARK Sang Eon[1], HONG Hyun-Gue[1], HEO Myoung Sun[1], LEE Jae Hoon[1], SEO Sangwon[1], KWON Taeg Yong[1], MOON Geol[2], LEE Sang Bum*[1] ([1]Center for Time and Frequency, KRISS, [2]Department of Physics, Chonnam National University)

F17.05* [15:58 - 16:10]
Dynamic polarization response of polarization-maintaining optical fiber by a periodic temperature modulation / HWANG Sungi[1], LEE Sanglok[1], BAEK Jaeuk[1], JEONG Jeongyoun[1], MOON Geol*[1] ([1]Department of Physics, Chonnam National University)

F17.06* [16:10 - 16:22]
Observation of interplay between propagations of phase front and phase information during defect formation on a quenched inhomogeneous Bose gas / KIM Myeonghyeon[1], RABGA Tenzin[2], LEE Yangheon[1,2], BAE Dalmin[1,2], GOO Junhong[1], SHIN Yong-il*[1,2,3] ([1]Department of Physics and Astonomy, Seoul National University, [2]Center for Correlated Electron Systems, Institute for Basic Science, [3]Institute of Applied Physics, Seoul National University)

[F18-se] Focus: Perovskite Materials and Optoelectronics Applications
2022. 04. 21 Thursday 15:10~16:46
Room: 18
좌장 : 류미이 강원대학교
Chair: RYU Mee-Yi (Kangwon National University)

F18.01 [15:10 - 15:34]
Chiral induced spin selectivity enabling a spin light-emitting diode / KIM Young-Hoon*[1] ([1]Department of Energy Engneering, Hanyang University)

F18.02 [15:34 - 15:58]
유기 반도체 첨가제 기반 결정 성장 제어 기술 기반 고효율 페로브스카이트 발광 소자 / 박민호*1 ([1]승실대학교 유기신소재·파이버공학과)

F18.03 [15:58 - 16:22]
Perovskite and quantum dot light-emitting diodes for future realistic displays / CHO Himchan*1 ([1]Department of Materials Science and Engineering, KAIST)

F18.04 [16:22 - 16:46]
Preparation of Chemically Stable Ultrathin SiO_2-Coated Core−Shell Perovskite QDs via Modulation of Ligand Binding Energy and PeLED Applications / LEE Chang-Lyoul*1 ([1]Advanced Photonics Research Institute (APRI), Gwangju Institute of Science and Technology (GIST))

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Ⓔ [F19-se] Pioneer: The 2rd Korea-Vietnam Joint Workshop I
2022. 04. 21 Thursday 15:10~16:46
Room: 19
좌장 : 김용수 울산대학교
Chair: KIM Yong Soo (University of Ulsan)

F19.01 [15:10 - 15:34]
Self-Selective Ferroelectric Memory Realized with Semimetalic Graphene Channel / JUNG Sungchul[2], PARK JinYoung[1], KIM Junhyung[1], SONG Wonho[1], PARK Hyunjae[1], KONG Myong[4], JO Jaehyeong[1], KANG Seokhyeong[4], MUHAMMAD Sheeraz[5], KIM Ill Won[5], KIM Tae Heon[5], PARK Kibog*[1,3] ([1]Department of Physics, Ulsan National Institute of Science and Technology (UNIST), [2]EUV Team, SK Hynix, [3]Department of Electrical Engineering, Ulsan National Institute of Science and Technology, [4]Department of Electrical Engineering, POSTECH, [5]Department of Physics and Energy Harvest-Storage Research Center (EHSRC), University of Ulsan)

F19.02 [15:34 - 15:58]
Making room temperature ferromagnetism of lead-free ferroelectric materials / DANG Duc Dung*[1], NGUYEN Hoang Thoan[1], NGUYEN Huu Lam[1], VU Tien Lam[1] ([1]Multifunctional Ferroics Materials Lab., School of Engineering Physics, Ha Noi University of Science and Technology, Viet Nam)

F19.03 [15:58 - 16:22]
Modified Orbital Occupancy induced MIT of VO_2 films by Octahedral Symmetry / LEE Doo Yong[1], TAEWON Min[1], KIM Jiwoong[1], SONG Sehwan[1], LEE Jaekwang[1], KANG Haeyong[1], LEE Jisung[1,2], CHO Deok-Yong[3], JANG Jae Hyuck[2], LEE Jouhahn[2], PARK Sungkyun*[1] ([1]Department of Physics, Pusan National University, [2]Nano Surface, KBSI, [3]Physics, Jeonbuk National University)

F19.04 [16:22 - 16:46]
Insight into the adsorption of hydrogen on Sc2C monolayers from the perspectives of first-principles / LE Thong Nguyen-Minh*[1,3], CHIU Cheng-chau[2], KUO Jer-Lai[3] ([1]Center for Innovative Materials and Architectures, Vietnam, [2]National Sun Yat-sen University, Taiwan, [3]Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan)

[F20-bp] Focus: Frontiers in Biophysics
2022. 04. 21 Thursday 15:10~16:46
Room: 20
좌장 : 김채운 울산과학기술원
Chair: KIM Chae Un (UNIST)

F20.01 [15:10 - 15:34]
Latest Advances and Prospective of Cryo-Electron Microscopy / HYUN Jaekyung*[1]
([1]Department of Convergence Medicine, School of Medicine, Pusan National University)

F20.02 [15:34 - 15:58]
Swimming bacteria in 2D confinement: Observing Stochastic and Deterministic Processes / JEONG Joonwoo*[1] ([1]Physics, UNIST)

F20.03 [15:58 - 16:22]
Structural basis for a dynamic metallocofactor in Mo-nitrogenase. / KANG Wonchull*[1]
([1]Chemistry, Soongsil University)

F20.04 [16:22 - 16:46]
Photoacoustic endomicroscopy as a new tool for the in vivo visualization of microvasculature / YANG Joon-Mo*[1] ([1]Department of Biomedical Engineering, UNIST)

Ⓚ [F21-or] 기초연구사업 정책세션
2022. 04. 21 Thursday 15:10~16:20
Room: 21
좌장 : 강세종 고려대학교
Chair: KAHNG Se-Jong (Korea University)

[프로그램]

[15:10-15:15]	**인사말** / 노태원 (한국물리학회장, IBS/서울대) 김현정 (정책위원장, 서강대)
[15:15-15:40]	**기초연구사업 현황 및 향후 계획** / 이준엽 단장 (한국연구재단 자연과학단)
[15:40-16:00]	**패널 의견 제시**
[16:00-16:20]	**질의 및 응답**
[16:20]	**폐회사**

Ⓔ [FF3-nu] Pioneer: Equation of state of nuclear matter II

2022. 04. 21 Thursday 17:10~18:22

Room: 03

좌장 : 윤진희 인하대학교

Chair : YOON Jin-Hee (Inha University)

FF3.01 [17:10 - 17:34]

The equation of state of dense matter and nuclear physics constraints / GULMINELLI F.*1 ([1]LPC Caen, University of Caen)

FF3.02 [17:34 - 17:58]

Experimental study of asymmetric nuclear matter equation of state by using heavy RI collisions at RIKEN-RIBF / ISOBE TadaAki*1 ([1]RIKEN, Japan)

FF3.03 [17:58 - 18:22]

Status of LAMPS / MOON Dong Ho*1 ([1]Physics Department, Chonnam National University)

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Ⓔ [FF19-se] Pioneer: The 2rd Korea-Vietnam Joint Workshop II

2022. 04. 21 Thursday 17:10~18:46

Room: 19

좌장 : 노희석 전북대학교

Chair: RHO Heesuk (Jeonbuk National University)

FF19.01 [17:10 - 17:34]

Progresses in Metamaterials for Electromagnetic Radiation Applications: energy transfer and absorption / VU Dinh Lam*1, BUI Son Tung[1,2], BUI Xuan Khuyen[1,2] ([1]Graduate University of Science and Technology, Vietnam Academy of Science and Technology, Vietnam, [2]Institute of Materials Science, Vietnam Academy of Science and Technology, Vietnam)

FF19.02 [17:34 - 17:58]

Au-MoS_2 Nanostructures for Electronic and Optoelectronic Device Applications / KIM Dong-Wook*1 ([1]Department of Physics, Ewha Womans University)

FF19.03 [17:58 - 18:22]

Efficient ambient ammonia synthesis by Lewis acid pair over cobalt single atom catalyst with suppressed proton reduction / TRAN Ngoc Quang*1,2, LIU Xinghui[3,4], CHO Yunhee[3,4], LE Thai Duy[6], ZHENG Lirong[7], YU Jianmin[3,4], AJMAL Sara[3,4], SHAO Xiaodong[3,4], LEE Jinsun[3,4], LEE Hyoyoung*[3,4,5] ([1]Center for Innovative Materials & Architectures, Vietnam, [2]Vietnam National University, Vietnam, [3]Center for Integrated Nanostructure Physics, Institute for Basic Science (IBS), Sungkyunkwan University, [4]Department of Chemistry, Sungkyunkwan University, [5]Creative Research Institute, Sungkyunkwan University, [6]Department of Materials

Science and Engineering, Ajou University, [7]Beijing Synchrotron Radiation Facility, Institute of High Energy Physics, Chinese Academy of Sciences, China)

FF19.04 [18:22 - 18:46]

STM investigation on layered chalcogenide materials / LY Trinh Thi[1], LEE Changgu[2], CHANG Young Jun[3], KIM Sanghoon[1], SOON Aloysius[4], KIM Jungdae*[1] ([1]Physics, University of Ulsan, [2]School of Mechanical Engineering, Sungkyunkwan University, [3]Department of Physics, University of Seoul, [4]Department of Material Science and Engineering, Yonsei University)

Sessions G

2022 April 22(Fri) 09:00-10:48

Ⓔ [G1-pa] Pioneer: Novel Perspectives in Black Hole Information Paradox I

2022. 04. 22 Friday 09:00~10:48

Room: 01

좌장 : 김근영 광주과학기술원

Chair: KIM Keun Young (GIST)

G1.01 [09:00 - 09:36]
Recent Progress on the Black Hole Information Problem / ENGELHARDT Netta*1 ([1]MIT, USA)

G1.02 [09:36 - 10:12]
Wormholes and Black Holes / YANG Zhenbin*1 ([1]Stanford University, USA)

G1.03 [10:12 - 10:48]
Quantum circuit picture of black hole interior / ZHAO Ying*1 ([1]KITP, USA)

Ⓔ [G2-pa] Pioneer: Dark Matter and Neutrino Searches with Scintillating Detectors I

2022. 04. 22 Friday 09:00~10:48

Room: 02

좌장 : 이현수 기초과학연구원

Chair: LEE Hyun Su (IBS)

G2.01 [09:00 - 09:36]
WIMPs interpretations with NaI detectors: DAMA/Libra and beyond / SCOPEL Stefano*1 ([1]Physics, Sogang University)

G2.02 [09:36 - 10:12]
Testing DAMA/LIBRA at three-sigma with ANAIS−112 experiment / SARSA Marisa*1 ([1]University of Zaragoza, Spain)

G2.03 [10:12 - 10:48]
COSINE experiment / MARUYAMA Reina*1 ([1]Yale University, USA)

[G3-nu] Nuclear Astrophysics & Nuclear Structure

2022. 04. 22 Friday 09:00~10:36

Room: 03

좌장 : **채경육** 성균관대학교

Chair: CHAE Kyung Yuk (Sungkyunkwan University)

G3.01 [09:00 - 09:12]

Neutrino mean free path within neutron star with the KIDS-EDF model / HUTAURUK Parada Tobel Paraduan*[1,3], GIL Hana[2], NAM Seung-il[1,2], HYUN Chang Ho[3] ([1]Physics, Pukyong National University, [2]Center for Extreme Nuclear Matters (CENuM), Korea University, [3]Department of Physics Education, Daegu University)

G3.02 [09:12 - 09:24]

The electromagnetic fluctuation in the astrophysical plasma / HWANG EUNSEOK[1], JANG Dukjae[2], CHEOUN Myung Ki*[1] ([1]Department of Physics, Soongsil University, [2]Center for Relativistic Laser Science, IBS)

G3.03 [09:24 - 09:36]

The effect of the magnetized electron to neutrino process in core-collapse supernova / KO Heamin[1], CHEOUN Myung Ki*[1], JANG Dukjae[2] ([1]Department of Physics, Soongsil University, [2]Center for Relativistic Laser Science, IBS)

G3.04 [09:36 - 09:48]

Stellar Nucleosynthesis Studies with the COREA Detector / AHN Jung Keun*[1], KIM Shin Hyung[1] ([1]Department of Physics, Korea University)

G3.05 [09:48 - 10:00]

Oxygen isotopes in Nuclear Lattice Effective Field Theory / SONG Young-Ho*[1] ([1]Rare Isotope Science Project, Institute for Basic Science)

G3.06 [10:00 - 10:12]

Hint of shape evolution in ^{110}Sn from Coulomb excitation / PARK Joochun[1], HAHN Kevin Insik*[1] ([1]Center for Exotic Nuclear Studies, IBS)

G3.08 [10:12 - 10:24]

Particle identification of VAMOS++ spectrometer data using artificial neural network / CHO Youngju*[1] ([1]Department of Physics and Astronomy, Seoul National University)

G3.09 [10:24 - 10:36]

Exact-exchange functional in relativistic nuclear density functional theory: study for neutron drops / ZHAO Qiang*[1], PARK Tae-Sun[1], ZHAO Pengwei[2], REN Zhengxue[2] ([1]Center for Exotic Nuclear Studies, IBS, [2]School of Physics, Peking University)

[G4-as] Gravity/Cosmology/Gravitational Waves/Multi-Messenger Astrophysics

2022. 04. 22 Friday 09:00~10:12

Room: 04

좌장 : 김진호 한국천문연구원

Chair: KIM Jinho (KASI)

G4.01 [09:00 - 09:12]

Tolman temperature in general relativity / KIM Hyeong-Chan*1, LEE Youngone1 (1School of Liberal Arts and Sciences, Korea National University of Transportation)

G4.02 [09:12 - 09:24]

The meaning of the speed of light in the FLRW universe / LEE SEOK CHEON*1 (1Department of Physics, Sungkyunkwan University)

G4.03 [09:24 - 09:36]

Classicality revisited via Wheeler-DeWitt equation / YEOM Dong-han*1 (1Physics Education, Pusan National University)

G4.04 [09:36 - 09:48]

Gravitational Waves by the Perturbation of a Rotating Axisymmetric Rigid Body / KIM Sung Won*1 (1Science Education, Ewha Womans University)

G4.05 [09:48 - 10:00]

Detection of Gravitational Waves by Electromagnetic Waves without Acceleration Noise / PARK Chan*1 (1Center for the Theoretical Physics of Universe, IBS)

G4.06 [10:00 - 10:12]

Binary neutron star mergers as a probe of quark-hadron crossover equations of state / KIM Hee IL*1, KEDIA Atul2, SUH In-Saeng2, MATHEWS Grant J.2 (1CQUeST, Sogang University, 2Dept. of Physics, University of Notre Dame)

Ⓔ [G5-co] Pioneer: Novel Phases in Correlated Topological Matter I

2022. 04. 22 Friday 09:00~10:36

Room: 05

좌장 : 유재준 서울대학교

Chair: YU Jaejun (Seoul National University)

G5.01 [09:00 - 09:24]

Gapless Electronic Topology Driven by Strong Correlations / SI Qimiao*1 (1Rice University, Rice University)

G5.02 [09:24 - 09:48]
Giant signatures and genuine control of topology in Kondo systems / PASCHEN Silke*[1] ([1]Institute of Solid State Physics, Vienna University of Technology)

G5.03 [09:48 - 10:12]
Quantum spin liquid in a nearly disorder-free Kagome antiferromagnet $YCu_3(OH)_{6+x}Br_{3-x}$ / CHOI Kwang Yong*[1] ([1]Department of Physics, Sungkyunkwan University)

G5.04 [10:12 - 10:36]
Glassy behavior in quantum spin liquids / LEE SungBin*[1] ([1]physics, KAIST)

[G6-co] Other Condensed Materials/Instruments
2022. 04. 22 Friday 09:00~09:48
Room: 06
좌장 : 이수용 포항가속기연구소
Chair: LEE Su Yong (Pohang Accelerator Laboratory)

G6.01 [09:00 - 09:12]
Measurements of nanosecond dynamics in ferroelectric oxides using synchrotron x-ray radiation from PAL / LEE Hyeon Jun[1], JO Ji Young[2], LEE Su Yong[3], NOH Tae Won*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]School of Materials Science and Engineering, GIST, [3]9C beamline, Pohang Accelerator Laboratory)

G6.02 [09:12 - 09:24]
Open-loop non-raster scanning in high-speed atomic force microscope / OTIENO Luke Oduor[1], THU Nguyen Thi[1], LEE Yong Joong*[1] ([1]School of Mechanical Engineering, Kyungpook National University)

G6.03* [09:24 - 09:36]
Anisotropic metamagnetic transition and intrinsic Berry curvature in magnetic Weyl semimetal NdAlGe / CHO Beong Ki*[1], RHYEE Jong-Soo*[3], CHO Keun ki[1,2], HAN Song Hee[4], YOON Seungha[2] ([1]School of Materials Science and Engineering, GIST, [2]Green Energy & Nano Technology R&D Group, KITECH, [3]Department of Applied Physics and Institute of Natural Sciences, Kyung Hee University, [4]3Division of Navigation Science, Mokpo National Maritime University)

G6.04 [09:36 - 09:48]
Direct determination of quantum decoherence with high-harmonic spectroscopy / KIM Youngjae[1], KIM Minjeong[2,3], CHA Soonyoung[3], KIM Jonghwan*[2,3], LEE JaeDong*[1] ([1]Department of Physics and Chemistry, DGIST, [2]Department of Materials Science and Engineering, POSTECH, [3]Center for Epitaxial van der Waals Quantum Solids, IBS)

[G7-co] Nano and mesoscopic physics + Surface/Interface/Nanomaterials

2022. 04. 22 Friday 09:00~10:36

Room: 07

좌장 : 전상준 중앙대학교

Chair: JEON Sangjun (Chung-ang University)

G7.01* [09:00 - 09:12]

Current-driven modulation of magnetic interlayer coupling in Fe_5GeTe_2 van der Waals magnet / KIM Kwangsu[1,2], ANH Hyo-bin[3], JIN Munsu[4], JEONG Seyeob[1], LEE Donghyeon[1], KWON Dohee[1], KIM Seong Been[2,5], KIM Sung Jong[2,5], PARK Jungmin[4], LEE Nyun Jong[1,6], KOO Hyun Cheol[2,5], AN Kyongmo[7], MOON Kyoung-Woong[7], LEE Changgu[8], KIM Se Kwon[4], PARK Tae-Eon[2], KIM Sanghoon*[1] ([1]Department of physics, University of Ulsan, [2]Center for spintronics, KIST, [3]SKKU advanced institute of nanotechnology, Sungkyunkwan University, [4]Department of physics, KAIST, [5]KU-KIST graduate school of converging science and technology, Korea University, [6]Energy harvest storage research center, University of Ulsan, [7]Spin convergence research team, KRISS, [8]School of mechanical Engineering, Sungkyunkwan University)

G7.02* [09:12 - 09:24]

Steady Floquet-Andreev States in graphene Josephson junctions / PARK Sein[1], LEE Wonjun[1,3], JANG Seong[1], CHOI Yong-Bin[1], PARK Jinho[1], CHAN Jung Woo[1], WATANABE Kenji[2], TANIGUICHI Takashi[2], CHO Gil Young[1,3,4], LEE Gil-Ho*[1,3] ([1]Department of Physics, POSTECH, [2]Research Center for Functional Materials, NIMS, [3]., Asia-Pacific Center for Theoretical Physics(APCTP), [4]Center for Artificial Low Dimensional Electronic Systems, IBS)

G7.03 [09:24 - 09:36]

Absence of supercurrent in edge-free Corbino graphene Josephson junction in the quantum Hall regime / JANG Seong[1], PARK Sein[1], PARK Jinho[1], WATANABE Kenji[2], TANIGUCHI Takashi[3], LEE Gil-Ho*[1] ([1]Department of Physics, POSTECH, [2]Research Center for Functional Materials, National Institute for Materials Science, [3]International Center for Materials Nanoarchitectonics, National Institute for Materials Science)

G7.04* [09:36 - 09:48]

Thermal entanglement of the pseudogap Kondo model / KIM Minsoo*[1], SHIM Jeong-min[1], KIM Donghoon[1], SIM Heung-Sun[1] ([1]Department of Physics, KAIST)

G7.05* [09:48 - 10:00]

Theoretical study of spin-valley polarized electronic structures of twisted bilayer graphene / CHO Yosep[1], CHOI Young Woo[1,2], CHOI Hyoung Joon*[1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, University of California, Berkeley)

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G7.06 [10:00 - 10:12]
Diffusive density response of electrons in anisotropic multiband systems / MIN Hongki*[1], SEO Jeonghyeon[1], KIM Sunghoon[1], HWANG Euy Heon[2] ([1]Department of Physics and Astronomy, Seoul National University, [2]SKKU Advanced Institute of Nanotechnology and Department of Nano Engineering, Sungkyunkwan University)

G7.07 [10:12 - 10:24]
Replica higher-order topological insulators of the Hofstadter butterflies in twisted bilayer graphene / KIM Sun-Woo*[1,2], JEON Sunam[3], KIM Youngkuk*[2] ([1]Department of physics, KAIST, [2]Department of Physics, Sungkyunkwan University, [3]Department of Energy science, Sungkyunkwan University)

G7.08* [10:24 - 10:36]
Water evaporation inside hexagonal micropillars / WEON Byung Mook*[1], OH Gun[1], JEONG Woojun[1], KANG Sung Hoon[2] ([1]School of Advanced Materias Science and Engineering SKKU Advanced Institute of Nanotechnology (SAINT, Sungkyunkwan University, [2]Department of Mechanical Engineering, Johns Hopkins University)

Ⓔ [G8-co] Pioneer: Physics of Hund's strange metal – Recent progresses I
2022. 04. 22 Friday 09:00~10:36
Room: 08
좌장 : 김흥식 강원대학교
Chair: KIM Heung-Sik (Kangwon National University)

G8.01 [09:00 - 09:24]
The interplay between spin-orbit coupling, Hund's coupling and van-Hove singularity in $BaOsO_3$ / MRAVLJE Jernej*[1] ([1]Institute Jozef Stefan, Slovenia)

G8.02 [09:24 - 09:48]
Vertex-based diagrammatic impurity solver / KIM Aaram J.*[1], LENK Katharina[2], LI Jiajun[1,3], WERNER Philipp[1], ECKSTEIN Martin[2] ([1]Department of Physics, University of Fribourg, 1700 Fribourg Switzerland, [2]Department of Physics, University of Erlangen-Nuürnberg, 91058 Erlangen, Germany, [3] Condensed Matter Theory, Paul Scherrer Institute, PSI Villigen, Switzerland)

G8.03 [09:48 - 10:12]
How to differentiate Hund from Mott physics? / LEE Seung-Sup*[1] ([1]Department of Physics & Astronomy, Seoul National Univeristy)

G8.04 [10:12 - 10:36]
How are crystal structures and superconductivity affected by Hundsness? / HAULE Kristjan*[1] ([1]Rutgers University, US)

[G9-co] Strongly Correlated Systems I

2022. 04. 22 Friday 09:00~10:12

Room: 09

좌장 : 김범준 포항공과대학교

Chair: KIM Bumjoon (POSTECH)

G9.01* [09:00 - 09:12]

Kondo interaction in FeTe and its potential role in the magnetic order / KIM Youn-sik[1,2], KIM Minsoo[1,2], KIM Min-Seok[3], CHENG Cheng-Maw[4], CHOI Joonyoung[5], JUNG Saegyeol[1,2], LU Donghui[6], KIM Jong Hyuk[7], CHO Soohyun[8], SONG Dongjoon[1,2], OH Dong Jin[1,2], YU Li[9], CHOI Young Jai[7], KIM Hyeong-Do[10], HAN Jung Hoon[11], JO Youn Jung[5], SEO Jungpil[3], HUH Soon Sang[1,2], KIM Changyoung*[1,2] ([1]Center for Correlated Electron System, Institute for Basics Science, [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Emerging Materials Science, DGIST, [4]–, National Synchrotron Radiation Research Center, [5]Department of Physics, Kyungpook National University, [6]Stanford Synchrotron Radiation Light source, SLAC National Accelerator Laboratory, [7]Department of Physics, Yonsei University, [8]Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, [9]Beijing National Laboratory for Condensed Matter Physics and Institute of Physics, Chinese Academy of Sciences, [10]XFEL Beamline Division, Pohang Accelerator Laboratory, [11]Department of Physics, Sungkyunkwan University)

G9.02* [09:12 - 09:24]

Coexistence of Kondo effect and Weyl semimetallic states in Mn-doped Mn_xVAl_3 compounds / LEE Kwan-Young[1], RHYEE Jong-Soo*[1] ([1]Dept. of Applied Physics, Kyung Hee University)

G9.03* [09:24 - 09:36]

$La_{1-x}Sr_xMnO_3$/$NdNiO_3$ 이중층의 전기적 상전이 과정에서 나타나는 전자구조 분석 / CHO HaEun[1], LEE Jongmin[2], LEE Nyun Jong[1], YANG Mihyun[3], SIM Eunji[4], IHM Kyu Wook[3], KIM Sanghoon*[1] ([1]Department of physics, University of Ulsan, [2]Materials Science and Engineering, GIST, [3]Nano Interface Research Team, Pohang Accelerator Laboratory, [4]Department of Smart Fab, Sungkyunkwan University)

G9.04* [09:36 - 09:48]

Symmetry-preserving strain engineering of Hundness and Mottness in a two-dimensional correlated system / KO Eun Kyo[1,2], HAN Sungsoo[1,2], SOHN Changhee[3], LEE Sangmin[4], KIM Choong Hyun[1,2], KIM Changyoung[1,2], NOH Tae Won*[1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Correlated Electron Systems, CCES (IBS), [3]Department of Physics, UNIST, [4]Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)

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G9.05 [09:48 - 10:00]
Fine details of sixfold Dirac fermions in a pyrite-structured $PdSb_2$ / JU Woori[1], JEONG Jinwon[1], CHO En-Jin[1], NOH Han-Jin[*1], KIM Kyoo[2], PARK Byeong-Gyu[3] ([1]department of physics, Chonnam National University, [2]Material Science Division, KAERI, [3]Pohang Accelerator Laboratory, POSTECH)

G9.06* [10:00 - 10:12]
Acoustic and Optic Phonons in Lead Halide Perovskite $MAPbX_3$ (MA = methylammonium and X =Br, Cl) Single Crystals / NAQVI Syed Furqan Ul Hassan[1], KO Jaehyeon[*1], AHN Chang Won[2], KIM Tae Heon[2] ([1]School of Nano Convergence, Hallym University, [2]Department of Physics and Energy Harvest Storage Research Center, University of Ulsan)

Ⓔ [G10-ap] Pioneer: Artificial Intelligence Aided Discovery and Investigation of Novel Nanomaterials I

2022. 04. 22 Friday 09:00~10:12

Room: 10

좌장 : 장우선 연세대학교

Chair: JANG Woosun (Yonsei University)

G10.01 [09:00 - 09:24]
Data-Efficient Iterative Training of Gaussian Approximation Potentials: Application to Surface Structure Determination of Rutile IrO_2 and RuO_2 / LEE Yonghyuk[1], TIMMERMANN Jakob[1], STAACKE Carsten[1], MARGRAF Johannes[1], SCHEURER Christoph[1], REUTER Karsten[*1] ([1]Fritz-Haber-Institut der Max-Planck-Gesellschaft, Faradayweg 4-6, 14195 Berlin)

G10.02 [09:24 - 09:48]
Nano structure prediction using the first-principles data based machine learning force field / KANG Joonhee[*1] ([1]Nanoenergy Engineering, Pusan National University)

G10.03 [09:48 - 10:12]
Efficient electronic passivation schemes for surface calculations of semiconductors exhibiting spontaneous polarization: Thermodynamic and electronic properties of GaN surfaces / YOO Su-Hyun[*1], TODOROVA Mira[1], LYMPERAKIS Liverios[1], VAN DE WALLE Chris[2], NEUGEBAUER Jörg[1] ([1]Department of Computational Materials Design, Max-Planck-Insitut für Eisenforschung GmbH, Düsseldorf, Germany, [2]Computational Materials Group, Materials Department, UCSB, USA)

[G11-ap] Spin and Oxide

2022. 04. 22 Friday 09:00~10:24

Room: 11

좌장 : **양상모** 서강대학교

Chair: YANG Sang Mo (Sogang University)

G11.01* [09:00 - 09:12]

자기 이방성 방향의 분포를 적용한 Stoner-Wohlfarth 모델을 이용하여 입상 박막의 보자력 분석 / LEE Donghyeon[1], HAN Donghyeon[2], JEONG Seyeop[1], LEE Nyun-Jong[1], IPPEI Suzuki[2], YUKIKO Takahashi[2], KIM Sanghoon[*1] ([1]Department of physics, University of Ulsan, [2]Materials Science and Engineering, KAIST, [3]Research Center for Magnetic and Spintronic Materials, NIMS)

G11.02* [09:12 - 09:24]

Colossal THz emission by Spin-to-Charge Conversion in topologically non-trivial Bi1-xSbx / RHO Seungwon[2], PARK Hanbum[2], KIM Jonghoon[2], CHO Mann Ho[*2,3] ([1]Yonsei University, [2]Department of Physics, Yonsei University, [3]Department of System Semiconductor Engineering, Yonsei University)

G11.03 [09:24 - 09:36]

High-power heat generation from ferrite nanoparticles for hyperthermia application / KIM Sang-koog[*1], LEE JaeHyeok[1], KIM Yongsub[1] ([1]Seoul National University)

G11.04* [09:36 - 09:48]

The relationship between contact resistance and transistor performance of negative capacitance field effect transistors / SUH Dongseok[*1,2], JUNG Moonyoung[1] ([1]Department of Energy Science, Sungkyunkwan University, [2]Center for Integrated Nanostructure Physics, Institute for Basic Science)

G11.05 [09:48 - 10:00]

Microwave absorption properties of multi-phase TiOX thin films / KIM Il-hwan[1], LEE Han-ju[1], SEO Hye-Won[*1] ([1]Dept of Physics, Jeju National University)

G11.06* [10:00 - 10:12]

Anomalous domain switching dynamics in Si:HfO_2 thin film capacitors / KIM Yoon Ki[1], YOO Hyo Bin[1], YANG Sang Mo[*1] ([1]Department of Physics, Sogang University)

G11.07 [10:12 - 10:24]

Strain control of oxygen sublattice structures in epitaxial $SrCuO_2$ thin films / CHOI Jin San[1], DASH Umasankar[1], MUHAMMAD Sheeraz[1], KIM Tae Heon[*1] ([1]Department of Physics, University of Ulsan)

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[G12-ap] [F] Optical nanodevices and integration II

2022. 04. 22 Friday 09:00~10:48

Room: 12

좌장 : **김제형** 울산과학기술원

Chair: KIM Je Hyung (UNIST)

G12.01 [09:00 - 09:36]

On-chip transferrable light source and its electrification in photonic circuit / NO You-Shin*1 ([1]Department of Physics, Konkuk University)

G12.02 [09:36 - 10:12]

Ultrasound sensor on silicon photonic MEMS / CHOI Dong J.[1], NAM Sangwoo[1], KIM Dong U.[1], PARK Young J.[1], HER Man J.[1], LIM Min G.[1], HONG Myung S.[1], SONG Hyeju[1], YU Jaesok*[1,2], HAN Sangyoon*[1,2] ([1]Department of Robotics Engineering, DGIST, [2]DGIST Robotics Research Center, DGIST)

G12.03 [10:12 - 10:48]

Resource-saving photonic quantum memory based on integrated photonics / KOH Youngseo[1], SOHN Young-Ik*[1] ([1]The School of Electrical Engineering, Korea Advanced Institute of Science and Technology (KAIST))

[G13] No session

[G14-te] Physics teaching in primary, secondary, and tertiary level

2022. 04. 22 Friday 09:00~10:12

Room: 14

좌장 : **지영래** 순천대학교

Chair: JI Young rae (Sunchon National University)

G14.01 [09:00 - 09:12]

빛의 굴절에 대한 2015 개정 초등과학 교육과정 및 교과서 분석 / LEE Jiwon*[1], KIM Jung Bog[1] ([1]Korea National University of Education)

G14.02 [09:12 - 09:24]

2015 개정 초등학교 과학 검정교과서에는 '무게' 개념을 어떻게 설명하고 있는가? / PARK Sang Woo*[1], SHIN Jung-Yun[2], HONG Mi-Na[3], JUNG Hyun-Ji[4], KIM Hyun-Jae[5] ([1]Dept. of Science Education, Cheongju National University of Education, [2]Teacher, Daejeon Baeul Elementary School, [3]Teacher, Yongin Seokhyun Elementary School, [4]Teacher, DanYang Maepo Elementary School, [5]Teacher, Cheongju KyungSan Elementary School)

G14.03 [09:24 - 09:36]
초등학생을 위한 양자물리 교수학습의 사례와 가능성 탐색 / IM Sungmin*[1] ([1]Department of Physics Education, Daegu University)

G14.04 [09:36 - 09:48]
고등학교 과학과 서 · 논술형 학생평가의 운영 실태 및 쟁점 / KIM EiSeul[1], HAN Chaerin[1], SONG Jinwoong*[1] ([1]Seoul National University)

G14.05 [09:48 - 10:00]
예비교사의 온라인 기반 물리 교수자료 개발 역량 향상을 위한 학습조력 프로그램의 개발과 적용 / MOON Sujin[1], LEE Jiwon[1], KIM Jung Bog*[1] ([1]Dept Physics Education, Korea National University of Education)

G14.06 [10:00 - 10:12]
Comparison of competency models for graduate students of Korean research-oriented universities / JANG Hyewon*[1] ([1]Graduate School, Kyung Hee University)

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[G15-pl] Nuclear Fusion
2022. 04. 22 Friday 09:00~10:48
Room: 15
좌장 : 윤의성 울산과학기술원
Chair: YOON Eisung (UNIST)

G15.01 [09:00 - 09:24]
E x B Shear Flow Dynamics in a Magnetic Island / HAHM Taik Soo*[1], CHOI Gyung Jin[1] ([1]Seoul National University)

G15.02 [09:24 - 09:48]
Linear gyrokinetic simulation of TAE with turbulence in KSTAR / CHOI Gyung Jin*[1], PARK Sangjin[1], KANG Jisung[2], HAHM Taik Soo[1] ([1]Nuclear Engineering, Seoul National University, [2]Division of Integrated Simulation, Korea Institute of Fusion Energy)

G15.03 [09:48 - 10:12]
Gyrokinetic simulation studies of ExB staircase in KSTAR L-mode plasmas / KANG Byung Jun[1], HAHM Taik Soo*[1], SEO Jang Hoon[2], QI Lei[2] ([1]Seoul National University, [2]Simulation research team, KFE)

G15.04 [10:12 - 10:24]
Transport events and E×B staircase in gyrokinetic flux-driven ion temperature gradient (ITG) turbulnece simulation / KIM Yong Jik[1], IMADERA Kenji[2], KISHIMOTO Yasuaki[2], HAHM Taik Soo*[1] ([1]Seoul National University, [2]Graduate School of Energy Science, Kyoto University)

G15.05 [10:24 - 10:36]
Evidence of turbulence generated by localized current drive in the core of tokamak plasma / KIM Dong Kwon[1], CHOI Minjun Jhong[2], LEE Jaehyun[3], YOON Young Dae[4], YUN GUNSU[*1] ([1]Department of Physics, POSTECH, [2]MHD Stability Research Team, KFE, [3]Pedestal Stability Research Team, KFE, [4]Beam Operation Team, Pohang Accelerator Laboratory)

G15.06* [10:36 - 10:48]
Experimental analysis on the effect of the plasma current overshoot in KSTAR / PARK Minseo[1], KIM Boseong[1], SEO Jaemin[1], PARK Sangjin[1], LEE Chanyoung[1], LEE Youngho[1,2], KIM Sangkyeun[3,4], NA Yong Su[*1] ([1]Nuclear Engineering, Seoul National University, [2]Advanced Operation Scenario group, KFE, [3]Plasma Physics Lab, Princeton University, [4]., Princeton Plasma Physics Laboratory)

[G16-op] Nanophotonics I
2022. 04. 22 Friday 09:00~10:24
Room: 16
좌장 : **정지윤** 강원대학교
Chair: JEONG Jeeyoon (Kangwon National University)

G16.01 [09:00 - 09:24]
Discovering nanophotonic structures exhibiting asymmetric optical transmission with factorization machine-quantum annealing interfaces / LEE Eungkyu[*1], KIM Seongmin[2], LUO Tengfei[2] ([1]Electronic Engineering, Kyung Hee University, [2]Aerospace and Mechanical Engineering, University of Notre Dame)

G16.02 [09:24 - 09:48]
Moiré excitons and correlated states in 2D transition metal dichalcogenide heterostructures / BAEK Hyeonjun[*1] ([1]Department of physics, Sogang University)

G16.03* [09:48 - 10:00]
Spatio-spectral decomposition of complex eigenmodes in subwavelength nanostructures through transmission matrix analysis / CHOI Wonshik[*1,2], OH Juntaek[1,2], JIN Young Ho[3], KIM Myung Ki[3] ([1]Department of Physics, Korea University, [2]Center for Molecular Spectroscopy and Dynamics, IBS, [3]KU-KIST Graduate School of Converging Science and Technology, Korea University)

G16.04 [10:00 - 10:12]
Surface plasmon mediated emission and lasing in InGaAs semiconductor with periodic metal grating / SEO Dong Guk[1], LEE SEONG YEON[1], PARK ByeongJun[1], SONG Ji Yeon[1], YEE Ki Ju[*1] ([1]Department of Physics, Chungnam National University)

G16.05 [10:12 - 10:24]
높은 개구수와 적절한 시야를 가지는 새로운 위상 방식의 메타렌즈 / CHO Yong Hoon*1, GO Gi Hyun1 (1KAIST)

[G17-at] Focus: Symposium for an AKPA-OYRA winner I
2022. 04. 22 Friday 09:00~10:48
Room: 17
좌장 : **조범석** 울산과학기술원
Chair: ZHAO Bum Suk (UNIST)

G17.01 [09:00 - 09:36]
Nuclear spin-wave quantum register for a solid state qubit / CHOI Joonhee*1 (1Institute for Quantum Information and Matter, and Division of Physics, Mathematics and Astronomy, California Institute of Technology, USA)

G17.02 [09:36 - 10:12]
High fidelity control and measurement of semiconductor quantum dot spin qubits / KIM Dohun*1 (1Department of Physics and Astronomy, and Institute of Applied Physics, Seoul National University)

G17.03 [10:12 - 10:48]
Multiplexed sensing of magnetic field and temperature using a quantum diamond sensor / SHIM Jeong Hyun*1 (1Quantum Magnetic Imaging Team, KRISS)

Ⓔ [G18-se] Pioneer: Semiconductor based Sensors Applications I
2022. 04. 22 Friday 09:00~10:12
Room: 18
좌장 : **김종수** 영남대학교
Chair: KIM Jong Su (Yeungnam University)

G18.01 [09:00 - 09:36]
Epitaxial graphene based biosensor for rapid detection of COVID-19 / KIM Soaram*1 (1US Army Research Laboratory, Adelphi, MD 20783, USA)

G18.02 [09:36 - 10:12]
Reactant/polymer hybrid films on pn junction photodetectors for self-powered, non-invasive glucose biosensors / KIM Min-Gon*1, KIM Kihyeun (1Department of Chemistry, Gwangju Institute of Science and Technology (GIST))

[G19-se] Emerging energy materials & device applications

2022. 04. 22 Friday 09:00~10:36

Room: 19

좌장 : 강해용 부산대학교

Chair: KANG Haeyong (Pusan National University)

G19.01* [09:00 - 09:12]

Probing Pathways of Conductive Filaments of $FAMAPbI_3$ WORM Device Using Conductive Atomic Force Microscopy / JEONG Mun Seok*[1], YU Hyangmi[1] ([1]Department of Physics, Hanyang University)

G19.02 [09:12 - 09:24]

Controllable Surface Oxidation and Doping Effect of Indium Selenide (InSe) Using Polymer Passivation / JEONG Mun Seok*[1], PARK Hyeon Jung[1], PARK Dae Young[1], KWON Chan[1] ([1]Department of Physics, Hanyang University)

G19.03 [09:24 - 09:36]

Ultra-high photoresponsivity of photodiode based on integrated freestanding two-dimensional transition metal dichalcogenide / JEONG Mun Seok*[1], JEONG Hyun[1] ([1]Department of Physics, Hanyang University)

G19.04 [09:36 - 09:48]

Large-Area MoS2 via Colloidal Nanosheet Ink for Integrated Memtransistor / PARK Dae Young[1], ANH Nguyen Duc[2], IM Hyun Sik[2], YANG Heejun[3], JEONG Mun Seok*[1] ([1]Department of Physics, Hanyang University, [2]Division of Physics and Semiconductor Science, Dongguk University, [3]Department of Physics, KAIST)

G19.05* [09:48 - 10:00]

Fabrication of narrow bandgap $CuInSe_2$ (CIS) solar cell via solution-based spray deposition / MINA Md Salahuddin[1], ENKHBAYAR Enkhjargal[1], KIM JunHo*[1] ([1]Incheon National University)

G19.06 [10:00 - 10:12]

Degradation Mechanism by Moisture of Quasi-2D Halide Perovskite / JEONG Hyeon Jun[1], LEE Kang-Nyeoung[2], KIM Sung Hyuk[2], SEO Gang Hyeok[1], LIM Seong Chu[2], NAM-KOONG Gon[3], JEONG Mun Seok*[1] ([1]Department of Physics, Hanyang University, [2]Department of Energy Scicence, Sungkyunkwan University, [3]Department of Electrical and Computer Engineering, Old Dominion University)

G19.07* [10:12 - 10:24]

웨어러블 슈퍼커패시터를 위한 전기화학적 양극산화법에 의한 수산화구리 나노선의 합성 및 특성 / EDUGULLA Girija Shankar[2], AMIT Kumar Das[1], YU Jae Su*[2,1] ([1]Department of Electronics and Information Convergence, Kyung Hee University, [2]Department of Electronic Engineering, Kyung Hee University)

G19.08 [10:24 - 10:36]
Interface Engineering for Scalable Fabrication of Planar Perovskite Solar Cells / LEE Jinho*1 ([1]Department of Physics, Incheon National University)

[G20] No session

Ⓔ [G21-or] Open KIAS: Quantum Computing and Quantum Networking in High Energy Physics

2022. 04. 22 Friday 09:00~11:00

Room: 21

좌장 : 고병원 KIAS

Chair: KO Pyungwon (KIAS)

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[프로그램]

G21.01 [09:00 - 10:00]
Quantum Computing for High Energy Physics / LYKKEN Joseph D.*1 ([1]Deputy Director for Research, Fermi National Accelerator Laboratory)

G21.02 [10:00 - 11:00]
Quantum Networking and High Energy Physics / SPIROPULU Maria*1 ([1]The Division of Physics, Mathematics and Astronomy, California Institute of Technology, USA)

2022 April 22(Fri) 11:10-12:58

Ⓔ [H1-pa] Pioneer: Novel Perspectives in Black Hole Information Paradox II

2022. 04. 22 Friday 11:10~12:58

Room: 01

좌장 : 윤정기 아시아 태평양이론 물리학센터

Chair: YOON Junggi (Asia-Pacific Center for Theoretical Physics(APCTP))

H1.01 [11:10 - 11:46]

Tabletop Flying Plasma Mirrors to Investigate Black Hole Information Loss Paradox / CHEN Pisin*[1,2,3] ([1]Department of Physics and Graduate Institute of Astrophysics, National Taiwan University, [2]Leung Center for Cosmology and Particle Astrophysics (LeCosPA), National Taiwan University, [3]Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), Stanford University)

H1.02 [11:46 - 12:10]

Python's lunch geometries in Jackiw-Teitelboim gravity with matter / BAK Dongsu*[1] ([1]University of Seoul)

H1.03 [12:10 - 12:34]

Page curve from Euclidean path integral / YEOM Dong-han*[1] ([1]Physics Education, Pusan National University)

H1.04 [12:34 - 12:58]

Black hole information paradox and island prescription / AHN Byoungjoon*[1] ([1]Department of Physics and Photon Science, Gwangju Institute of Science and Technology)

Ⓔ [H2-pa] Pioneer: Dark Matter and Neutrino Searches with Scintillating Detectors II

2022. 04. 22 Friday 11:10~12:58

Room: 02

좌장 : 유종희 서울대학교

Chair: YOO Jonghee (Seoul National University)

H2.01 [11:10 - 11:46]

The COHERENT Experimental Program / SCHOLBERG Kate*[1] ([1]Duke University, USA)

H2.02 [11:46 - 12:22]
Search for Light New Particles / PARK Jong-Chul*1 ([1]Department of Physics, Chungnam National University)

H2.03 [12:22 - 12:58]
NaI(Tl) detector development and the NEON experiment / HA Chang Hyon*1 ([1]Department of Physics, Chung-Ang University)

[H3-nu] Heavy Ion Collisions
2022. 04. 22 Friday 11:10~12:58
Room: 03
좌장 : **김범규** 성균관대학교
Chair : KIM Beom Kyu (Sungkyunkwan University)

H3.01 [11:10 - 11:22]
Checking Non-Flow Assumptions and Results via PHENIX results in small collision systems / LIM Sang Hoon*1 ([1]Physics Department, Pusan National University)

H3.02* [11:22 - 11:34]
Model study on the collectivity in small collision systems of different geometry / LIM SangHoon*1, LIM Hyunji[1] ([1]Physics Department, Pusan National University)

H3.03 [11:34 - 11:46]
f0(980) resonance production in small collision systems with ALICE / KIM Junlee*1, KIM Eun-Joo[1], LIM Sanghoon[2], KIM Beomkyu[3] ([1]Division of Science Education, Jeonbuk National University, [2]Department of Physics, Pusan National University, [3]Department of Physics, Sungkyunkwan University)

H3.04 [11:46 - 11:58]
Measurement of electron from beauty-hadron decays in pp collisions at $\sqrt{s}$ = 13TeV with ALICE / PARK Jong Han*1, KWEON Min Jung*1 ([1]Dep. of Physics, Inha University)

H3.05* [11:58 - 12:10]
Measurement of the transverse momentum (j_T) distribution of jet fragmentation in 5.02 TeV pp collision with ALICE / LIM SangHoon*1, RYU Jaehyeok[1] ([1]Physics Department, Pusan National University)

H3.06* [12:10 - 12:22]
Status of the multiplicity dependent analysis of Xic+ production in pp collisions at $\sqrt{s}$ = 13TeV with ALICE / CHO JaeYoon[1], KWEON Min Jung*1 ([1]Department of physics, Inha University)

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H3.07 [12:22 - 12:34]
Measurements of light-by-light scattering and lepton pair photoproduction in PbPb collisions with the CMS experiment / KIM Yongsun*1 (1Sejong University)

H3.08* [12:34 - 12:46]
Production of molecular configuration hadron / YOON HyungOk[1], LEE Su Houng*1, LIM SangHoon[2], CHO Sung Tae[3], KIM Yongsun[4] (1Yonsei University, 2Department of Physics, Pusan National University, 3Division of Science Education, Kangwon National University, 4Department of Physics, Sejong University)

H3.09* [12:46 - 12:58]
Performance study of Ξ_{cc}^{++} via decays into $\pi^{+}+\Xi_{c}^{+}(\rightarrow pK^{-}\pi^{+})$ with ALICE 3 / SEO Jinjoo*1, KWEON Min Jung[1] (1Dept. of Physics, Inha University)

[H4-as] Gravitational Waves/Multi-Messenger Astrophysics/High Energy Astrophysics/Compact Objects
2022. 04. 22 Friday 11:10~12:34
Room: 04
좌장 : 홍성욱 한국천문연구원
Chair: HONG Sungwook E (KASI)

H4.01 [11:10 - 11:22]
Seismic Metamaterial and Bandgap Engineering for the Next Generation Terrestrial Gravitational-Wave Observatories / OH John J.*1 (1Gravity Research and Application Team, NIMS)

H4.02 [11:22 - 11:34]
Optimizing Parameters of Information-Theoretic Correlation Measurement for Multi-Channel Time Series Datasets in Gravitational-Wave Detectors / OH John J.*1, JUNG Piljong[1], OH Sang Hoon[1], SON Edwin J.[1], KIM Young-Min[2] (1Gravity Research and Application Team, NIMS, 2Department of Physics, UNIST)

H4.03 [11:34 - 11:46]
Neutrinos from Red Super Giants / SEONG Gwangeon[1], SHIN Bokkyun[1], SON Changhee[1], KWAK Kyujin*1, RYU Dongsu[1] (1Physics, UNIST)

H4.04 [11:46 - 11:58]
Cherenkov fluoresence hybird observatory for astrophysical neutrinos of 1 MeV energies / CHUNG Moses*1, SHIN Bokkyun[1], SEONG Gwangeon[1], SON Chang Hee[1], KWAK Kyujin[1], RYU Dongsu[1] (1Department of Physics, UNIST)

H4.05 [11:58 - 12:10]
Vision Transformer for Gamma-Hadron Classification with the HAWC Observatory / LEE Jason Sang Hun*[1], JO Baeksun[1], WATSON Ian James[1], CHOI MyeongHun[1] ([1]Department of Physics, University of Seoul)

H4.06* [12:10 - 12:22]
Deep Learning applied to Air Shower Reconstruction with the HAWC Observatory / LEE Jason Sang Hun*[1], WATSON Ian James[1], CHOI Myeonghun[1], JO Baek Sun[1] ([1]Department of Physics, University of Seoul)

H4.07 [12:22 - 12:34]
Search for Dark Matter Decay in Galaxy Clusters and Galaxies with IceCube / JEONG Minjin*[1] ([1]Department of Physics, Sungkyunkwan University)

Ⓔ **[H5-co] Pioneer: Novel Phases in Correlated Topological Matter II**
2022. 04. 22 Friday 11:10~12:46
Room: 05
좌장 : **박두선** 성균관대학교
Chair: PARK Tuson (Sungkyunkwan University)

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H5.01 [11:10 - 11:34]
Anomalous thermodynamics of multiband superconductors near a quantum critical point / DZERO Maxim*[1] ([1]Kent State University, USA)

H5.02 [11:34 - 11:58]
Quantum transition in an integer spin quasi-2D square lattice antiferromagnet $Ba_2FeSi_2O_7$ / PARK Jae-Hoon*[1,2] ([1]Department of Physics, POSTECH, 2Center for Complex Phase Materials, MPK)

H5.03 [11:58 - 12:22]
Electric quantum oscillations in Weyl semimetals / HWANG Kyusung*[1], LEE Woo-Ram[2], PARK Kwon[1] ([1]School of Physics, Korea Institute for Advanced Study, [2]Department of Physics, Virginia Tech)

H5.04 [12:22 - 12:46]
Pre-thermalization via self-driving and external driving of extensive subsystems / LEE Hyun-Yong*[1] ([1]Division of Display and Semiconductor Physics, Korea University)

[H6-co] Magnetism II

2022. 04. 22 Friday 11:10~12:22

Room: 06

좌장 : 오윤석 울산과학기술원

Chair: OH Yoon Seok (UNIST)

H6.01* [11:10 - 11:22]

Anisotropic nature and spin-flop transition in antiferromagnetic $NiPS_3$ / KIEM Do Hoon[1], NAUMAN Muhammad[5], CHOI Joonyoung[2], PARK Je-Geun[3,4], HAN Myung Joon[*1], JO Younjung[2] ([1]Department of Physics, KAIST, [2]Department of Physics, Kyungpook National University, [3]Department of Physics and Astronomy, Seoul National University, [4]Center for Quantum Materials, Seoul National University, [5]Division of Mathematical and Physical Sciences, Institute of Science and Technology (IST))

H6.02 [11:22 - 11:34]

Conductance study for ultrathin Pt film with roughness / YUN Changjin[2], KIM Mingu[2], RHIE Kungwon[*1] ([1]Department of Display and Semiconductor Physics, Korea University, [2]Applied physics, Korea University)

H6.03* [11:34 - 11:46]

Mn3Sn 박막에서 관찰되는 비 이상적 홀 효과의 결정 의존성 연구 / IM Subin[1], LEE Donghyeon[1], HAN Donghyeon[3], NGUYEN Thanh Huong Thi[4], LEE Nyun Jong[1], PARK Jungmin[2], PARK Byong Guk[3], KIM Sanghoon[*1] ([1]Department of physics, University of Ulsan, [2]Department of physics, KAIST, [3]Department of Materials Science and Engineering, KAIST, [4]Department of physics, DGIST)

H6.04 [11:46 - 11:58]

Field-induced easy-axis softening of weak quantum ferromagnet with cubic anisotropy / TU Wei-Lin[*1], GHAZANFARI Seyed Reza[2], WU Huan-Kuang[3], LEE HYUNYONG[1], KAWASHIMA Naoki[2] ([1]Division of Display and Semiconductor Physics, Korea University, [2]Institute for Solid State Physics, The University of Tokyo, [3]Department of Physics, University of Maryland)

H6.05 [11:58 - 12:10]

The study of helical magnetic state in $Fe_{5-x}GeTe_2$ crystals with magnetic force microscopy / KIM Sanghoon[*1], PARK Jungmin[2], LEE Nyun Jong[1], KIM Kwangsu[1,3], AHN Hyo-Bin[4], YOU Chun-Yeol[4], LEE Changgu[5], KIM Kab-Jin[2] ([1]Department of physics, University of Ulsan, [2]Department of physics, KAIST, [3]Center for spintronics, KIST, [4]School of mechanical engineering, Sungkyunkwan University, [5]Department of emerging materials science, DGIST)

H6.06* [12:10 - 12:22]

Effect of impurities and inhomogeneity in magnetic quantum oscillations / JUNG Myung Hwa[*1], LEE Sang-Eon[1], JI Sanghyun[1] ([1]Sogang University)

[H7-co] Surface/Interface/Nanomaterials

2022. 04. 22 Friday 11:10~12:46

Room: 07

좌장 : 임준원 아주대학교

Chair: RHIM Jun Won (Ajou University)

H7.01 [11:10 - 11:22]

First-principles study on phononic, electronic, and optical properties of $MoSe_2$/WSe_2 heterobilayer / KIM Han-gyu[1], CHOI Young Woo[1,2], CHOI Hyoung Joon[*1] ([1]Department of Physics, Yonsei University, 2Department of Physics, University of California, Berkeley)

H7.02* [11:22 - 11:34]

Two dimensional checkerboard charge density wave in $NbTe_2$ / SIM Junyoung[*1], JANG Won-Jun[2], KIM Hyo Won[2], JEON Sangjun[1] ([1]Physics department, Chung-Ang University, [2]Nanoelectronics lab, Samsung Advanced Institute of Technology)

H7.03 [11:34 - 11:46]

Circular Dichroism of Emergent Chiral Stacking Orders in Quasi-One-Dimensional Charge Density Waves / KIM Sun-Woo[*1], KIM Hyun Jung[2], CHEON Sang Mo[3], KIM Tae-Hwan[4] ([1]Department of physics, KAIST, [2]Peter Grünberg Institut and Institute for Advanced Simulation, Forschungszentrum Jülich, [3]Department of Physics, Hanyang University, [4]Department of Physics, POSTECH)

H7.04 [11:46 - 11:58]

Band structures and effective Hamiltonian of 90°-twisted few-layer black phosphorus / NAM Taesik[1], KIM Han-gyu[1], CHOI Hyoung Joon[*1] ([1]Department of Physics, Yonsei University)

H7.05* [11:58 - 12:10]

Pseudogap in black phosphorus doped by disordered dopants / KIM Keun Su[*1], PARK Do Yun[1], RYU Sae Hee[1], HUH Minjae[2], KIM Yoonyi[1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Pohang University of Science and Technology (POSTECH))

H7.06* [12:10 - 12:22]

Modulation of surface state hybridization in Bi_2Se_3 topological Insulator by exchange interaction / CHO Mann Ho[*1,2], KIM Jonghoon[1], HONG Seokbo[1], KIM Dajung[1], NAM Gihwan[1], RHO Seungwon[1] ([1]Yonsei University, [2]Department of System Semiconductor Engineering, Yonsei University)

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H7.07* [12:22 - 12:34]

Atomic vacancy induced short-range disorder scattering in a bipolar pseudospin system / CHO Doohee*[1], LEE Sanghun[1], CHO Yongjun[1], NOH Heeyoon[1], JUNG Sung Won[2], KIM Hyo Won[3], JANG Won Jun[3], KIM Keun Su[1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Gyeongsang National University, [3]Samsung Advanced Institute of Technology (SAIT), Samsung electronics)

H7.08* [12:34 - 12:46]

Anisotropic charge screening in a topological Dirac nodal line semimetal / LEE Ga-hee*[1], JANG Won-Jun[2], KIM Hyowon[2], JEON Sangjun[1] ([1]Department of physics, Chung-Ang University, [2]Nano Electronics Lab, Samsung Advanced Institute of Technology)

Ⓔ **[H8-co] Pioneer: Physics of Hund's strange metal – Recent progresses II**

2022. 04. 22 Friday 11:10~12:46

Room: 08

좌장 : 심지훈 포항공과대학교

Chair: SHIM Ji Hoon (POSTECH)

H8.01 [11:10 - 11:34]

Hund metal and neighboring phases in two and three orbital systems / CHOI Sang-kook*[1] ([1]Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, USA)

H8.02 [11:34 - 11:58]

Electronic structure studies of Hund's metal behavior in $NiS_{2-x}Se_x$ and atomic layer of $SrRuO_3$ / KIM Changyoung*[1] ([1]Department of Physics and Astronomy, Seoul National University)

H8.03 [11:58 - 12:22]

Tuning of nematicity and spin fluctuations in Fe-based superconductors / BAEK Seung-Ho*[1] ([1]Physics, Changwon National University)

H8.04 [12:22 - 12:46]

Strain-Temperature phase diagram of $SrRuO_3$-$SrTiO_3$: DFT+DMFT study / KIM Min-jae*[1], KIM Bongjae[2], KANG Chang-Jong[3], HAN Jae-Ho[4] ([1]School of computational sciences, KIAS, [2]Department of Physics, Kunsan National University, [3]Department of Physics, Chungnam National University, [4]Center for Theoretical Physics of Complex Systems, IBS)

[H9-co] Strongly Correlated Systems II

2022. 04. 22 Friday 11:10~12:10

Room: 09

좌장 : 김기석 포항공과대학교

Chair: KIM Ki Seok (POSTECH)

H9.01 [11:10 - 11:22]

Holographic Lieb lattice and Gapping its Dirac band / SIN Sang Jin*[1] ([1]physics department, Hanyang University)

H9.02* [11:22 - 11:34]

Attention-based Neural Network Wave Functions for Strongly Correlated Fermions / KIM Seonpyo[1], LEE Wonjun[1], KANG Byungmin[2], CHO Gil Young*[1] ([1]Department of Physics, POSTECH, [2]School of Physics, KIAS)

H9.03* [11:34 - 11:46]

Classification of Non-Unitary MTCs and Topological Phases / SEO Donghae[1], KIM Hee-Cheol[1], CHO Gil Young*[1] ([1]Department of Physics, POSTECH)

H9.04* [11:46 - 11:58]

Exotic Thermal Transitions with Spontaneous Symmetry Breaking / MOON Eun-Gook*[1], OH Hanbit[1] ([1]physics, KAIST)

H9.05 [11:58 - 12:10]

A reliable parameter-free analytic continuation of imaginary-frequency Green's function / HAN Mancheon[1], CHOI Hyoung Joon*[1] ([1]Department of Physics, Yonsei University)

Ⓔ [H10-ap] Pioneer: Artificial Intelligence Aided Discovery and Investigation of Novel Nanomaterials II

2022. 04. 22 Friday 11:10~12:58

Room: 10

좌장 : 신정호 한국화학연구원

Chair: SHIN Jungho (KRICT)

H10.01 [11:10 - 11:46]

Data-Driven Design of High Entropy Halide Perovskite Alloys / MANNODI-KANAK-KITHODI Arun*[1], YANG Jiaqi[1], MANGANARIS Panos[1], CHAN Maria K.Y.[2], KUMAR Rishi E.[3], FENNING David P.[3] ([1]School of Materials Engineering, Purdue University, West Lafayette, IN 47906, [2]Center for Nanoscale Materials, Argonne National Laboratory, Argonne, IL 60439, [3]Department of NanoEngineering, University of California San Diego, CA 92093)

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H10.02 [11:46 - 12:22]
Polymer Informatics: Current Status and Critical Next Steps / KIM Chiho*[1], RAMPRASAD Rampi ([1]School of Materials Science and Engineering, Georgia Institute of Technology, 771 Ferst Drive NW, Atlanta, Georgia 30313, USA)

H10.03 [12:22 - 12:58]
Nanostructure Self-assembling Peptide Discovery: Overcoming Human Bias Using Machine Learning / BATRA Rohit*[1] ([1]Center for Nanoscale Materials, Argonne National Laboratory, 9700 S. Cass Avenue, Lemont, IL 60439, USA)

[H11-ap] Energy and Computational
2022. 04. 22 Friday 11:10~12:22
Room: 11
좌장 : 김지영 한국과학기술연구원
Chair: KIM Gee Yeong (Korea Institute of Science and Technology)

H11.01* [11:10 - 11:22]
Classification and prediction of hazardous compounds using artificial intelligence / SEO Miri[1], LEE Sang-Wook*[1] ([1]Department of Physics, Ewha Womans University)

H11.02* [11:22 - 11:34]
Dual Ag-Graded Structure Engineering for High Efficiency ACZTSSe Solar Cells / ENKHBAT Temujin[1], ENKHBAYAR Enkhjargal[1], MINA Md Salahuddin[1], KIM JunHo*[1] ([1]Incheon National University)

H11.03* [11:34 - 11:46]
Crystal structure prediction of mixed-halide perovskites using a machine-learning potential / HONG Changho*[1], LEE Jiho[1], YIM Kanghoon[2], YOUN Yong[2], HAN Seung Wu[1] ([1]Department of Materials Science and Engineering, Seoul National University, [2]Computational Science and Engineering Laboratory, Korea Institute of Energy Research)

H11.04* [11:46 - 11:58]
Photo-Carrier Dynamics of NH4Cl Passivated Interfaces in Efficient Perovskite Solar Cells / KIM JIHYUN[1], PARK Joonho[3], BICH PHUONG Nguyen[2], YEO Hyeonwoo[3], KIM Yong-Hoon[3], JO William*[1,2] ([1]Department of Physics, Ewha Womans University, [2]New and Renewable Energy Research Center, Ewha Womans University, [3]School of Electrical Engineering, KAIST)

H11.05 [11:58 - 12:10]
Fabrication of Co-Doped Garnet LLZO with Ta^{5+} and Ga^{3+} by Solid-State Reaction / ENKHBAYAR Enkhjargal[1], KIM JunHo*[1] ([1]Incheon National University)

H11.06 [12:10 - 12:22]
Effect of $SnSe_2$ formation on CZTSSe thin film solar cells / OH Siwon[1], LIM Soo Yeon[1], SON Dae-Ho[2], KANG Jin-Kyu[2], KIM Dae-Hwan[2], CHEONG Hyeonsik*[1] ([1]Department of Physics, Sogang University, [2]Energy Research Division, Daegu Gyeongbuk Institute of Science and Technology)

[H12-H13] No session

[H14-te] Focus: Improvement of Physics Subject Content for Educating 'Good' Teacher in the Era of Physics Education Crisis
2022. 04. 22 Friday 11:10~12:22
Room: 14
좌장 : 조광희 조선대학교
Chair: JO Kwang Hee (Chosun University)

H14.01 [11:10 - 11:34]
내용학 교수가 생각하는 물리교육 / KIM Jung Bog*[1] ([1]Dept Physics Education, Korea National University of Education)

H14.02 [11:34 - 11:58]
물리교사 양성을 위한 물리학(내용학)과목의 운영방안 / PARK Jong Won*[1] ([1]Chonnam National University)

H14.03 [11:58 - 12:22]
교사양성기관 교과내용학 강의개선을 위한 새로운 방안 모색: '교사를 위한 일반상대성이론'을 중심으로 / 이경호*, 김홍빈 ([1]서울대학교 물리교육과, 2부산대학교 유전체물성연구소)

[H15-pl] Basic Plasma Phenomena
2022. 04. 22 Friday 11:10~12:10
Room: 15
좌장 : 정경재 서울대학교
Chair: CHUNG Kyoung-Jae (Seoul National University)

H15.01 [11:10 - 11:34]
Observation of lower-hybrid frequency fluctuations in KAERI divertor plasma simulator / CHAI Kil-Byoung*[1], YOON Young Dae[2] ([1]Nuclear Physic Application Research Division, KAERI, [2]PLS-II Accelerator Division, Pohang Accelerator Laboratory)

H15.02 [11:34 - 11:46]
Collisionless relaxation process of current sheets / YOON Young Dae*1, YUN Gunsu2 (1PLS-II Accelerator Division, Pohang Accelerator Laboratory, 2Department of Physics, Pohang University of Science and Technology (POSTECH))

H15.03 [11:46 - 11:58]
Evolution of Kinetic and Magnetic Energy in a large magnetic Prandtl number System / PARK Kiwan*1, CHEOUN Myung Ki1 (1Physics, Soongsil University)

H15.04 [11:58 - 12:10]
Analysis of phase-resolved plasma dynamics in dual-frequency capacitively coupled Ar plasmas / SHIN Ji Hyun1, KIM Cheol Woong1, KIM Hwan Ho1, LEE Hae June*1 (1Department of Electrical Engineering, Pusan National University)

[H16-op] Nanophotonics II
2022. 04. 22 Friday 11:10~12:46
Room: 16
좌장 : 김경호 충북대학교
Chair: KIM Kyoung-Ho (Chungbuk National University)

H16.01 [11:10 - 11:34]
Synthetic anti-PT symmetric system in an optical fiber / SHIN Heedeuk*1 (1Department of Physics, Pohang University of Science and Technology (POSTECH))

H16.02 [11:34 - 11:58]
Organic Hyperbolic Material Assisted Optical Nanoscopy / LEE Yeon Ui*1 (1Department of Physics, Chungbuk National University)

H16.03 [11:58 - 12:22]
Scattering Near-field Optical Microscopy for Quantum Interaction Studies / YOO SeokJae*1 (1Department of Physics, Inha University)

H16.04 [12:22 - 12:34]
Engineering real-space optical vortex dynamics in high-dimensional synthetic media / KIM Dongha*1, SEO Min-Kyo1 (1Department of Physics, KAIST)

H16.05* [12:34 - 12:46]
Nanoscale analyses of EUV and e-beam irradiated photoresists based on near-field infrared spectroscopy / KIM Jiho1, LEE Jin-Kyun2, CHAE Boknam1, LEE Sangsul*1 (1Pohang Accelerator Laboratory, 2Department of Polymer Science & Engineering, Inha University)

[H17-at] Focus: Symposium for an AKPA-OYRA winner II

2022. 04. 22 Friday 11:10~11:46

Room: 17

좌장 : **조범석** 울산과학기술원

Chair: ZHAO Bum Suk (UNIST)

H17.01 [11:10 - 11:46]

Rydberg atoms for quantum simulation and computation / AHN Jaewook*[1] ([1]Department of Physics, Korea Advanced Institute of Science and Technology)

Ⓔ [H18-se] Pioneer: Semiconductor based Sensors Applications II

2022. 04. 22 Friday 11:10~12:22

Room: 18

좌장 : **김영호** 한국표준과학연구원

Chair: KIM Yeongho (KRISS)

H18.01 [11:10 - 11:46]

High sensitivity AlGaAsSb avalanche photodiodes for 1.55 μm applications / LEE S.*[1], JUNG H.[1], JIN X.[2], LEWIS H.[2], LIU Y.[2], GUO B.[3], SCHWARTZ M.[1], KODATI S. H.[1], RONNINGEN T. J.[1], DAVID J. P. R.[2], CAMPBELL Joe. C.[3], KRISHNA S.*[1] ([1]Department of Electrical and Computer Engineering, The Ohio State University, USA, [2]Department of Electronic and Electrical Engineering, University of Sheffield, UK, [3]Department of Electrical and Computer Engineering, University of Virginia, USA)

H18.02 [11:46 - 12:22]

GaSb/InGaAsSb and InAs/GaSb based infrared photodetectors / KIM Jong Su*[1], SAEIDNAHAEI Sanam[1], HA J. D.[1], KWAK Minsoo[1], Vivek Mohan More[2], KIM Yeongho[2], LEE Sang Jun[2] ([1]Department of Physics, Yeungnam University, [2]Division of Interdisciplinary Materials Measurement Institute, Korea Research Institute of Standards and Science)

[H19-H20] No session

Ⓚ [H21-or] 새로운 대형연구시설의 국내 건설 필요성과 계획, part II

2022. 04. 22 Friday 11:10~12:58

Room: 21

좌장 : 박승일 한국원자력연구원

Chair: PARK J. M. Sungil (KAERI)

[프로그램]

- 인사말 / 박승일 (대형연구시설 소위원회 위원장, 한국원자력연구원)
- PAL 4세대 방사광가속기 빔 라인 추가 / 강흥식 (포항가속기연구소)
- 초고속 전자회절장치 이용자 시설 / 정영욱 (한국원자력연구원)

2022 April 22(Fri) 14:00-15:48

[I3-nu] Hadron Physics I

2022. 04. 22 Friday 14:00~15:48

Room: 03

좌장 : 천명기 숭실대학교

Chair: CHEOUN Myung Ki (Soongsil University)

I3.01* [14:00 - 14:12]

Effects of flavor SU(3) symmetry breaking on the gravitational form factors of the baryon octet and their stability conditions / WON Ho-Yeon[1], KIM June-Young[2], KIM Hyun-Chul*[1] ([1]Inha University, [2]Institut für Theoretische Physik II, Ruhr-Universität Bochum)

I3.02 [14:12 - 14:24]

Energy-momentum tensor form-factors and the quark and gluon subsystems inside a large Nc nucleon / SON Hyeondong*[1,2] ([1]Korea University, [2]Department of Physics, Inha University)

I3.03* [14:24 - 14:36]

The h_1 axial-vector meson in the coupled-channel approach / CLYMTON Samson[1], KIM Hyun-Chul*[1] ([1]Inha University)

I3.04 [14:36 - 14:48]

Axial-vector transition form factors of singly heavy baryons in the pion mean-field approach / SUH Jung-Min[1], KIM Hyun-Chul*[1], JUN Yu-Son[1] ([1]Inha University)

I3.05* [14:48 - 15:00]

Cross-section measurement for K^-N interactions at 1.8 GeV/c with J-PARC E42 detector / JUNG WooSeung[1], AHN Jung Keun*[1], FOR THE J-PARC E42 Collaboration[2] ([1]Department of Physics, Korea University, [2]ASRC, JAEA)

I3.06 [15:00 - 15:12]

Light-cone distribution amplitude of the nucleon in a pion mean-field approach / KIM Hyun-Chul*[1], KIM June-Young[2], POLYAKOV Maxim V.[3] ([1]Inha University, [2]Institute for Theoretical Physics II, Ruhr-University Bochum, [3]TPII (Deceased), Ruhr-University Bochum)

I3.07 [15:12 - 15:24]

Subthreshold Pion Production in pA and AA Reactions with SUPER / AHN Jung Keun*[1] ([1]Department of Physics, Korea University)

I

I3.08* [15:24 - 15:36]
Design of Gamma-Ray Detector Array for Nucleosynthesis Reaction Studies / LEE SUNGJUNE[1], AHN Jung Keun[*1] ([1]Department of Physics, Korea University)

I3.09* [15:36 - 15:48]
Measurement of K*(892) mesons and hyperons via $^{12}C(K^-,p)$ reactions at J-PARC / AHN Jung Keun[*1], CHOI Sungwook[1] ([1]Department of Physics, Korea University)

Ⓔ [I9-co] Pioneer: Nano-Rheology and Physics of Complex Fluids I
2022. 04. 22 Friday 14:00~15:36
Room: 09
좌장 : 안상민 전북대학교
Chair: AN Sangmin (Jeonbuk National University)

I9.01 [14:00 - 14:24]
Viscoelastic instabilities in microfluidic flows / SHEN Amy Q.[*1] ([1]Micro/Bio/Nanofluidics Unit, Okinawa Institute of Science and Technology Graduate University, Okinawa, Japan)

I9.02 [14:24 - 14:48]
Nanorheology of phase changing materials / SIRIA Alessandro[*1] ([1]École Normale Supérieure, France Laboratoire de Physique)

I9.03 [14:48 - 15:12]
Rheology at multi-scales from bulk to micro to nano / KIM Chungman[1], SHIM Jae-won[1], KO Joon-Hyuk[1], AN Sangmin[2], LEE Manhee[3], WEITZ David[4], JHE Wonho[*1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Physics, Jeonbuk National University, [3]Department of Physics, Chungbuk National University, [4]Department of Physics and Applied Physics, Harvard University)

I9.04 [15:12 - 15:36]
Nano-confined water under high electric fields / KLEIN Jacob[*1] ([1]Department of Materials & Interfaces, Weizmann Institute of Science, Israel)

[I14-te] Focus: 2022 Revision Curriculum Progress and Tasks: Focusing on Continuity and Hierachy of Physics Curriculum
2022. 04. 22 Friday 14:00~15:12
Room: 14
좌장 : 임성민 대구대학교
Chair: IM Sungmin (Daegu University)

I14.01 [14:00 - 14:36]
교육과정 속 전자기 영역의 내용 및 체계 구성에서 고려할 문제들 / CHEONG Yong Wook*[1], YOON Hye-Gyoung[2] ([1]physics education, Gyeongsang National University, [2]science education, Chnucheon National University of Education)

I14.02 [14:36 - 15:12]
2022 개정 과학과(물리) 교육과정 개발 현황과 쟁점: '힘과 운동' 영역을 중심으로 / 정용재*[1], 이재봉[2] ([1]공주교육대학교 과학교육과, [2]한국교육과정평가연구원 국가수준 학업성취도 평가연구실)

[I16-op] Biophotonics
2022. 04. 22 Friday 14:00~15:24
Room: 16
좌장 : 김문석 가톨릭대학교
Chair: KIM Moonseok (The Catholic University of Korea)

I16.01 [14:00 - 14:24]
Real-time volumetric adaptive optical microscopy using compressed time-reversal matrix / YOON Seokchan*[1], LEE Hojun[2,3], HONG Jin-Hee[2,3], CHOI Wonshik[2,3] ([1]Department of Biomedical Convergence Engineering, Pusan National University, [2]Department of Physics, Korea University, [3]Center for Molecular Spectroscopy and Dynamics, Institute for Basic Science)

I16.02 [14:24 - 14:48]
Dimensionality reduction adaptive-optical microscopy for in vivo through-skull imaging at visible wavelength / JO Yonghyeon[1,2], LEE Ye-Ryoung[3], HONG Jin-Hee[1,2], KIM Dong-Young[1,2], KWON Junhwan[4,5], CHOI Myunghwan[4,5], KIM Moonseok[6,7], CHOI Wonshik*[1,2] ([1]Center for Molecular Spectroscopy and Dynamics, IBS, [2]Department of Physics, Korea University, [3]Institute of Basic Science, Institute of Basic Science, [4]School of Biological Sciences, Seoul National University, [5]The Institute of Molecular Biology and Genetics, Seoul National University, [6]Department of Medical Life Sciences, College of Medicine, The Catholic University of Korea, [7]Department of Biomedicine & Health Sciences, College of Medicine, The Catholic University of Korea)

I16.03 [14:48 - 15:12]
고출력 펨토초 티타늄사파이어 오실레이터 개발 및 바이오 이미징 응용 / SONG Dong Hoon*[1] ([1]ETRI)

I16.04* [15:12 - 15:24]
투명 다층 센서를 이용한 3차원 위치, 각도 정보 측정 / CHOI Minho[1], CHOI Jaewu*[1] ([1]Information Display, Kyung Hee University)

[I18-se] Focus: Novel Materials and Energy Applications

2022. 04. 22 Friday 14:00~15:36

Room: 18

좌장 : 정문석 한양대학교

Chair: JEONG Mun Seok (Hanyang University)

I18.01 [14:00 - 14:24]

High-throughput screening of semiconductor materials for photovoltaic applications / PARK Ji-Sang*1 ([1]Physics, Kyungpook National University)

I18.02 [14:24 - 14:48]

Machine-Learning-Guided Prediction models and Materials discovery for high Tc cuprates / KIM Sooran*1 ([1]Department of Physics Education, Kyungpook National University)

I18.03 [14:48 - 15:12]

Hydrogen Evolution Reaction based on 2D MoS2 Catalysts / PAK Sangyeon*1 ([1]School of Electronic and Electrical Engineering, Hongik University)

I18.04 [15:12 - 15:36]

저차원 나노계면소재를 활용한 고성능 에너지 저장 소자 / 홍승현*1 ([1]국민대학교 신소재공학부 전자화학재료전공)

Ⓚ [I21-or] 연구기관에서의 물리학연구

2022. 04. 22 Friday 14:00~16:00

Room: 21

좌장 : 김재영 기초과학연구원

Chair: KIM Jae-Young (IBS)

I21.01 [14:00 - 14:24]

Toward Quantum Force Standard Traceable to Redefined SI / CHOI Jae Hyuk*1 ([1]Division of Physical Metrology, KRISS)

I21.02 [14:24 - 14:48]

10^{-18} Accuracy Optical Clocks: Future Time Standard and Applications / YU Dai-Hyuk*1, KIM Huidong[1], HEO Myoung Sun[1], PARK Chang Yong[1], LEE Won-Kyu[1] ([1]Division of Physical Metrology, Korea Research Institute of Standards and Science)

I21.03 [14:48 - 15:12]

Synchrotron X-ray projection imaging and computed tomography at the Pohang Light Source-II / LIM Jae-Hong*1, KIM Seob-Gu[1], KWAK Ho Jae[1], KIM Jong Hyun[1] ([1]Pohang Accelerator Laboratory, Pohang)

I21.04 [15:12 - 15:36]
Ultrafast X-ray science at PAL-XFEL / JANG Hoyoung*1 (1PAL-XFEL, Pohang Accelerator Laboratory)

I21.05 [15:36 - 16:00]
Neuroscience questions with physics reasoning / CHOI Jee H*1 (1Korea Institute of Science and Technology, Korea)

2022 April 22(Fri) 16:10-17:58

[J3-nu] Hadron Physics II

2022. 04. 22 Friday 16:10~17:22

Room: 03

좌장 : 이수형 연세대학교

Chair : LEE Su Houng (Yonsei University)

J3.01 [16:10 - 16:22]

Algebraic approach to quarkyoniclike configuration and stable diquarks in dense matter / PARK Aaron*[1], LEE Su Houng[1] ([1]Department of Physics and Institute of Physics and Applied Physics, Yonsei University)

J3.02 [16:22 - 16:34]

The mass-radius relations of neutron stars in an pion mean-field approach / KIM Hyun-Chul*[1], YANG Ghil-Seok[2], YAKHSHIEV Ulugbek[1], GHIM Nam-Yong[1] ([1]Inha University, [2]Department of General Education for Human Creativity, Hoseo University)

J3.03 [16:34 - 16:46]

Single transverse spin asymmetry of neutral pion production in the very forward direction / KIM Hyun-Chul*[1], KIM Hee-Jin[1], CLYMTON Samson[1] ([1]Inha University)

J3.04 [16:46 - 16:58]

$\Lambda_c \rightarrow pK_s \pi^0$ decays at Belle / KIM YoungJun[1], YANG Seongbae[1], AHN Jung Keun*[1] ([1]Department of Physics, Korea University)

J3.05 [16:58 - 17:10]

Current Status of the H-Dibaryon Search with J-PARC E42 / AHN Jung Keun*[1], KIM Shin Hyung[1] ([1]Department of Physics, Korea University)

J3.06 [17:10 - 17:22]

Production of $P_c(4312)$ state in electron-proton collisions / PARK In Woo[1], CHO Sungtae[2,3], KIM Yongsun[3,4], LEE Su Houng*[1] ([1]Yonsei University, [2]Division of Science Education, Kangwon National University, [3]Center for Extreme Nuclear Matters, Korea Univserity, [4]Department of Physics, Sejong University)

Ⓔ [J9-co] Pioneer: Nano-Rheology and Physics of Complex Fluids II

2022. 04. 22 Friday 16:10~17:46

Room: 09

좌장 : 제원호 서울대학교

Chair: JHE Wonho (Seoul National University)

J9.01 [16:10 - 16:34]
Interfacial water: Atomic-scale imaging of solid-water interfaces / GARCIA Ricardo*1
([1]Instituto de Ciencia de Materiales de Madrid, CSIC, Madrid, Spain)

J9.02 [16:34 - 16:58]
Residual stresses and shear-induced overaging in boehmite gels / DIVOUX Thibaut*1
([1]Laboratoire de Physique (UMR CNRS 5672), Ecole Normale Supérieure de Lyon, France)

J9.03 [16:58 - 17:22]
Viscoelastic polymer flows in 3D porous media / DATTA Sujit S.*1 ([1]Chemical and Biological Engineering, Princeton University, USA)

J9.04 [17:22 - 17:46]
Micro-viscometry of soft matter for clinical applications / LEE Manhee*1 ([1]Department of Physics, Chungbuk National University)

J

[J14-te] Physics education in diverse perspectives

2022. 04. 22 Friday 16:10~17:46

Room: 14

좌장 : 김지나 부산대학교

Chair: KIM Jina (Pusan National University)

J14.01 [16:10 - 16:22]
Electrostatic potential of a uniformly charged triangle in barycentric coordinates / KIM U-Rae[1], HAN Wooyong[1], JUNG Dong-Won[1], LEE Jungil*1, YU Chaehyun[1] ([1]Department of Physics, Korea University)

J14.02 [16:22 - 16:34]
Interplay between Physics and Mathematics in Physics Educatin / KIM Minchul[1], CHEONG Yongwook[2], SONG Jinwoong*3 ([1]Department of Physics Education, Kongju National University, [2]Department of Physics Education, Gyeongsang National University, [3]Department of Physics Education, Seoul National University)

J14.03 [16:34 - 16:46]
새물리 논문 결론부 서술의 특징 분석 / JO Kwang Hee*1 ([1]Chosun University)

[J18-se] Focus: Triboelectric Materials and Systems

2022. 04. 22 Friday 16:10~17:46

Room: 18

좌장 : **정권범** 동국대학교

Chair: CHUNG Kwun Bum (Dongguk University)

J18.01 [16:10 - 16:34]

Polymer based triboelectric nanogenerator and tactile sensor / 이주혁*1 ([1]Department of Energy Science and Engineering,, Daegu Gyeongbuk Institute of Science and Technology (DGIST))

J18.02 [16:34 - 16:58]

Sustainable energy generation based on triboelectric effect & dielectric polarization / LEE Sangmin*1 ([1]School of Mechanical Engineering, Chung-Ang University)

J18.03 [16:58 - 17:22]

Design of triboelectric effect-based system for its effective utilization / 최동휘*1 ([1]경희대학교)

J18.04 [17:22 - 17:46]

Interfacial Engineering of Tribo-materials for enhancing TENGs / CHOI Dukhyun*1 ([1]School of Mechanical Engineering, Sungkyunkwan University)

2022 April 21(Thu) 11:00-12:00

Ⓔ **[PL1-or] Plenary Lecture: Individual atoms as clocks and bits**

2022. 04. 21 Thursday 11:00~12:00

Room: 01

좌장 : **김재완** 고등과학원

Chair: KIM Jaewan (KIAS)

PL1.01 [11:00 - 12:00]

Individual atoms as clocks and bits / WINELAND David*1 ([1]Phillip H. Knight Distinguished Research Chair, University of Oregon)

Sessions T

2022 April 20(Wed) 09:00~10:48

Ⓚ [T1-pa] Tutorial: Introduction to Quantum Computing

2022. 04. 20 Wednesday 09:00~10:36

Room: 01

좌장 : **박명훈** 서울과학기술대학교

Chair: PARK Myeonghun (Seoul National University of Science and Technology)

T1.01 [09:00 - 10:00]
양자컴퓨팅 기법 소개 / 권혁준*1 ([1]고등과학원 계산과학부)

T1.02 [10:00 - 10:36]
양자컴퓨팅 기법 소개 (Introduction to Quantum Computing) / 이용해*1 ([1]한국과학기술원)

Ⓚ [T2-co] Tutorial: Superconducting Quantum Device

2022. 04. 20 Wednesday 09:00~10:48

Room: 07

좌장 : **김준성** 포항공과대학교

Chair: KIM Jun Sung (POSTECH)

T2.01 [09:00 - 10:00]
초전도 양자소자의 활용 / LEE Gil-Ho*1 ([1]Department of Physics, POSTECH)

Ⓚ [T3-te] Tutorial: A Physicist's School Science Study: Focusing on Elementary and Secondary Physics Subjects

2022. 04. 20 Wednesday 09:00~10:48

Room: 14

좌장 : **박상우** 청주교육대학교

Chair: PARK Sang Woo (Cheongju National University of Education)

T3.01 [09:00 - 10:00]
한 물리학자의 학교과학 탐구: 초중등 물리교과를 중심으로 / 현동걸*1 ([1]제주대학교 교육대학 초등과학교육전공)

Ⓚ [T4-se] Tutorial: Analysis of Defects in Semiconductors with Deep Level Transient Spectroscopy

2022. 04. 20 Wednesday 09:00~10:00

Room: 18

좌장 : 정문석 한양대학교

Chair: JEONG Mun Seok (Hanyang University)

T4.01 [09:00 - 10:00]

Analysis of Defects in Semiconductors with Deep Level Transient Spectroscopy / KIM Eun Kyu*1 ([1]Department of Physics, Hanyang University)

Ⓚ [T5-se] Tutorial: Excitons in Semiconductors: Light-matter interactions

2022. 04. 20 Wednesday 09:00~10:00

Room: 19

좌장 : 류미이 강원대학교

Chair: RYU Mee-Yi (Kangwon National University)

T5.01 [09:00 - 10:00]

Excitons in semiconductors: Light-matter interactions / CHO Chang-Hee*1 ([1]Department of Physics and Chemistry, Daegu Gyeongbuk Institute of Science and Technology (DGIST))

Ⓚ [T6-bp] Tutorial: Molecular switches regulating structures and interactions of protein nanotubes

2022. 04. 20 Wednesday 09:00~10:00

Room: 20

좌장 : 정철현 한국과학기술연구원

Chair: JEONG Cherlhyun (KIST)

T6.01 [09:00 - 10:00]

Molecular switches regulating structures and interactions of protein nanotubes / CHOI Myung Chul*1 ([1]Department of Bio and Brain Engineering, KAIST)

Sessions W1

2022 April 20(Wed) 19:00~21:00

Ⓚ [W1-or] APCTP 선정, 올해의 과학도서 저자 강연 (Ten Science Books of 2021 – Authors Lectures)

2022. 04. 20 Wednesday 19:00~21:00

Room: 21

좌장 : 손승우 한양대학교

Chair: SON Seung-Woo (Hanyang University)

아시아태평양이론물리센터에서는 매년 10권을 선정하고 저자 강연을 진행하고 있습니다. 이번 세션에서는 2021 올해의 과학도서 중 고재현 교수의 〈빛의 핵심〉을 주제로 강연과 대화의 장을 마련하고자 합니다. 저자 강연 후 APCTP의 과학문화위원과의 질의응답 시간도 준비되어 있습니다.

[프로그램]

- 사회자 : 황정아 (APCTP 과학문화위원, KASI 책임연구원)
- 강연자 : 고재현 (한림대학교 나노융합스쿨)
- 패 널 : 이은희(과학커뮤니케이터), 이정원(Pebblous)

Sessions W2

2022 April 21(Thu) 19:00~21:00

Ⓚ [W2-or] 여성위원회 특별 북 토크- The gender gap in science

2022. 04. 21 Thursday 19:00~21:00

Room: 21

좌장 : 이현정 한국핵융합에너지연구원

Chair: LEE Hyun Jung (KFE)

여성위원회에서는 이번 봄학술대회 프로그램으로 gender 관련 서적 "겸손한 목격자들"과 "나는 대한민국 여성 과학자입니까?"를 소개하고 그 저자들을 만나보고자 합니다.

[프로그램]

- **"겸손한 목격자들"** / 김연화(포스텍 박태준미래전략연구소), 성한아(한국과학기술원 인류세연구센터), 임소연(숙명여대), 장하원(서울대 기초연구원)
- **"나는 대한민국 여성 과학자입니까?"** / 홍정숙(서울대 고분자 나노 융합소재 가공기술센터)
- **패널** / 정우성(포항공대), 김계령(한국원자력연구원)

포스터발표논문 시간표

Poster Session Schedule

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
Metaverse Presentation (mandatory): April 20, 18:10-19:30
Room: Metaverse poster room

P1-ap.101*
Controlling Nucleation and Growth Parameters of AgCN Microwires on Two-Dimensional Crystals / JANG Myeongjin[1,2], KIM Minseol[1], LEE Yangjin[1,2], LEE Sol[1,2], KIM Kwanpyo*[1,2] ([1]Physics, Yonsei University, [2]Center for Nanomedicine, Institute for Basic Science (IBS))

P1-ap.102*
TEM dark field analysis on domain boundary structure in twisted 2-D materials / YOO Hyobin*[1], YUK Ayoung[1] ([1]Department of Physics, Sogang University)

P1-ap.103*
All Solution-Processed van der Waals Thin-Film Electronics with High Performance and Low-Power Operation / JOUNG Su-Yeon[1], YIM Haena[2], SHIM Jaehyung[1], KIM Yeon Ho[1], KIM Jin S.[1], CHOI Ji Won[2], LEE Chul-Ho*[1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Center for Electronic Materials, Korea Institute of Science and Technology, KIST)

P1-ap.104*
Effect of temperature on the EEA in WS_2 monolayer / KIM Donggyu[1], KIM Jeongyong[2], JANG Joon Ik*[1] ([1]Physics, Sogang University, [2]Department of Energy Science, Sungkyunkwan University)

P1-ap.107
Graphene encapsulated in high k-dielectric as charge trapping layer for MoS_2-based memory devices / SUH Dongseok*[1,2], VU Duc Anh1 ([1]Department of Energy Science, Sungkyunkwan University, [2]Center for Integrated Nanostructure Physics, Institute for Basic Science)

P1-ap.108*
Remote surface charge-transfer doping in MoS_2 field-effect transistors / JANG Juntae[1], KIM Jae-Keun[2], CHO Kyungjune[3], KANG Keehoon*[4], LEE Takhee*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Microstructure Physics, Max-Planck Institute, [3]Soft Hybrid Materials Research Center, KIST, [4]3Department of Materials Science and Engineering, Seoul National University)

P1-ap.109*

STEM Image Analysis Based on Deep Learning: Identification of Vacancy of Defects and Polymorphs of MoS_2 / KIM Kwanpyo[*1,2], PARK Jinsub[1], LEE Kihyun[1], CHOI Soyeon[1], LEE Yangjin[1,2], LEE Sol[1,2], JUNG Joowon[1], LEE Jong-Young[3], ULLAH Farman[4], TAHIR Zeeshan[4], KIM Yong Soo[4], LEE Gwan-Hyoung[3,5,6,7] ([1]Physics, Yonsei University, [2]Center for Nanomedecine, IBS, [3]Material Science and Engineering, Seoul National University, [4]Physics and Energy Harvest Research Center, University of Ulsan, [5]Research Institute of Advanced Materials, Seoul National University, [6]Institute of Engineering Research, Seoul National University, [7]Institute of Applied Physics, Seoul National University)

P1-ap.110*

Interlayer interactions in MoS_2–ReS_2 heterostructures / CHOI YeonDong[1], OH Siwon[1], KIM Jungcheol[1], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University)

P1-ap.111*

Optical Spectroscopy of 2H-MoS_2/1T′-$MoTe_2$ Heterostructures / VONG Chenda[1], CHEON Yeryun[1], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University)

P1-ap.112*

Temperature-dependent piezoresponse force microscopy study of Moiré superlattices in twisted bilayer WSe_2 / PARK Sang hwa[1], YUK Ayoung[1], YOO Hyobin[1], YANG Sang Mo[*1] ([1]Department of Physics, Sogang University)

P1-ap.113*

Raman study of $ReSe_2$/$MoSe_2$ heterostructures / LEE Do Youl[1], PARK Je Myoung[1], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
Metaverse Presentation (mandatory): April 20, 18:10-19:30
Room: Metaverse poster room

P1-ap.201
Lithium ionic drift based memristor mimicking synaptic behavior with low power consumption / JEON Young Pyo[1], HONG Dong Pyo[1], LEE Sang hwa[1], LEE Hak Ji[1], LEE Eun Jung[1], YOO Young Joon[*1], PARK Sang Yoon[1] ([1]Advanced institutes of convergence technology)

P1-ap.202
Effect of the ceria particle size on SiO_2 film polishing rate by adjusting synthesis molor ratio / PARK Jeagun[*1,2], HONG Seongwan[2], KIM Pilsu[2], HAN Manhyup[2], KIM Eunseong[2] ([1]Hanyang University, [2]Department of Nanoscale Semiconudctor Engineering, Hanyang University, Hanyang University)

P1-ap.203
Measurement and theorical approach to thermoelectrical properties in out-of-plane direction of MoS_2 films depend on layer numbers / LEE Sang-Kwon[*1], CHOI Jae Won[1], KANG Min-Seong[1], KIM Gil-Seong[1], PARK No Won[1] ([1]Physics, Chung-ang University)

P1-ap.204*
화학기상증착법을 이용한 대면적 MoS_2 박막의 합성 및 기초물성 연구 / KIM Keun Soo[*1], LEE Gil Yong[1], NAM Jungtae[1] ([1]Department of Physics & Astronomy, Sejong University)

P1-ap.205*
Tailoring the electronic properties of graphene via photoreduced silver nanoparticle decoration / SONG Inseon[1], KIM Yujeong[1], LEE Byung Hoon[2], KIM Soo Yeon[1], JOO Min-Kyu[1,3], YOON ChangKyu[3,4], SHIN Jeeyoung[3,4], KIM Soo Min[5], KO Changhyun[*1,3] ([1]Department of Applied Physics, Sookmyung Women's University, [2]Center for Integrated Nanostructure Physics (CINAP), Sungkyunkwan University, [3]Institute of Advanced Materials and Systems, Sookmyung Women's University, [4]Department of Mechanical Systems Engineering, Sookmyung Women's University, [5]Department of Chemistry, Sookmyung Women's University)

P1-ap.206*

Antisymmetircal Temperature Dependence of Longitudinal Spin Seebeck Effect Measurement in Pt/TMDC/YIG Multilayer Structure / KIM Yunho[1], LEE Sang-Kwon*[1] ([1]Physics, Chung-ang University)

P1-ap.207

In situ imaging of chiral active site in high-Miller-index exposed nanoparticle / CHOI Sungwook[1], IM Sang Won[2], KIM Jaeseung[1], NAM Ki Tae[2], KIM Hyunjung*[1] ([1]Physics, Sogang University, [2]Materials Science and Engineering, , Seoul National University)

P1-ap.208

Opposite Raman Shift of Ring Stretching in Pyrrole Molecule Influenced by Ag Nanomaterials Attachment and Electron Addition / JEON Gi Wan[1], JANG Jae Won*[1] ([1]Division of Physics and Semiconductor Science, Dongguk University)

P1-ap.209*

Gradual current modulation based on based on Au/Ni/Pb($Zr_{0.52}Ti_{0.48}$)O_3/Nb doped $SrTiO_3$ structure / PARK Bae Ho*[1], KIM Sohwi[1], YOON Chansoo[1], OH Gwangtaek[1], SHIN Minjeong[1], KEE Eun Hee[1], LEE Ji Hye[2,3], PARK Sanghyun[4], KANG Bo Soo[4], KIM Young Heon[5] ([1]Department of Physics, Konkuk University, [2]Institute of Basic Science, CCES (IBS), [3]Department of Physics and Astronomy, Seoul National University, [4]Department of Applied Physics, Hanyang University ERICA, [5]Graduate School of Analytical Science and Technology, Chungnam National University)

P1-ap.210

Laser scribed carbon nanomaterials on flexible polyimide film and gas sensor application / KO Yong-il[1], KIM Min Jae[1], JANG A-Rang[2], KIM Keun Soo*[1] ([1]Department of Physics & Astronomy, Sejong University, [2]Department of Electrical Engineering, Semyung University)

P1-ap.211*

Metal-Polymer Composites for X-ray Radiation Shielding / KWON Dae Seong[1], KANG Ha Yeong[1], KANG Seok Gyu[1], JEON Min Ji[1], LEE Byeong Woo[1], KIM Junghwan*[1] ([1]Department of Materials System Engineering, Pukyong National University)

P1-ap.212*

Modulation of rectification induced by ion-gel gate in ferrocenyl-alkanethiolate molecular vertical junctions / SONG Minwoo[1], HWANG Wang-Taek[1], NAM Jongwoo[1], LEE Changjun[1], KANG Keehoon[2], LEE Takhee*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Materials Science and Engineering, Seoul National University)

P1-ap.213

Phase change random acess memory를 위한 $Ge_2Sb_2Te_5$ 및 $[(GeTe)_x/(Sb_2Te_3)_y]_n$ superlattice 증착조건 제안 / OH Gyoung Hoon[1], SUH Dongseok*[1] ([1]Department of Energy Science, Sungkyunkwan University)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
Metaverse Presentation (mandatory): April 20, 18:10-19:30
Room: Metaverse poster room

P1-bp.001
Single-molecule measurements of mechanical interactions between the viral Spike glycoprotein and ACE2 receptor using optical tweezers / LEE Ga-Young[1], LEE Yujeong[2], KIM Kipom*[3] ([1]Brain Research Core Facilities, Korea Brain Research Institute, [2]Cognitive Science Research Group, Korea Brain Research Institute, [3]Research Strategy Office, Korea Brain Research Institute)

P1-bp.002*
The intermediate structure study of metal substituted carbonic anhydrase II / KIM Jin Kyun[1], LEE Choel[1], LIM Seon Woo[1], KIM Chae Un*[1] ([1]Department of Physics, UNIST)

P1-bp.003*
Molecular mechanism underlying DNA damage repair by Neil3 glycosylase / KIM Subin[1], LEE Ja Yil*[1] ([1]Department of Biological Sciences, UNIST)

P1-bp.004*
Roles of transcriptional pause in ρ-dependent termination / 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.005*
Direct observation of target-search by CRISPR/Cas9 / LEE Jeongmin[1,2], GOO Jiyoung[1,3], KU Hyeyeong[1,3], WOO Jaesung[2], JEONG Cherlhyun*[1] ([1]Chemical and Biological Integrative Research Center, KIST, [2]Department of Life Sciences, Korea University, [3]KHU-KIST Department of Converging Science and Technology, Kyung Hee University)

P1-bp.006
Enhancement of radiotherapeutic effect with radiation-guided nanoradiosensitizer in mouse brain tumor models / LIM Sa Hoe*[1,2], JUNG Shin[1,2] ([1]Medical School/Department of Neurosurgery, Chonnam National University, [2]Department of Neurosurgery, Chonnam National University Hwasun Hospital)

P1-bp.007*
Study on Imatinib Binding to c-Src Tyrosine Kinase / PARK Suhyun[1], WU Sangwook*[1] ([1]Department of Physics, Pukyong National University)

P1-bp.008

Transient dynamics of information transfer in a simple Markov model / LEE Julian*[1]
([1]Dept. of Bioinformatics and Life Science, Soongsil University)

P1-bp.010

The Brownian Motion of Conjugates of Magnetic Nanoparticles and Anti-CD3 Monoclonal Antibodies and the Drainage of Nanoparticles through Mice's Organs / LEE Sang Suk*[1], HASAN Mahbub[1], CHOI Jong-Gu[1], BAE Ye-Bin[1], LEE Jung-In[1], LIM Ye-Eun[1], JEON Chan-Ho[1], LEE Han-Seung[1], AKTER Hafeza[1] ([1]Department of Oriental Biomedical Engineering, Sangji University)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
Metaverse Presentation (mandatory): April 20, 18:10-19:30
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P1-co.101*
Searching for Majorana bound state by Shapiro step measurement in $FeTe_{0.55}Se_{0.45}$ Josephson junction / SHIN Seung-Hyun[1], LEE Gil-Ho*[1] ([1]Department of Physics, POSTECH)

P1-co.102*
Mechanism of Superconductivity in CrB_2 at High Pressure / CHOI Hong-Suk[1], LEE Kwan-Woo*[2,1] ([1]Department of Applied Physics, Korea University, [2]Division of Display and Semiconductor Physics, Korea University)

P1-co.103
Mirror symmetry breaking beyond critical doping in High T_c cuprate superconductor / JUNG Saegyeol[1], SONG Dongjoon[1], KIM Changyoung*[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-co.104
Superconducting properties for HTS GdBCO CC with heat treatments / YOU Jong Su[1], YANG Jeong Hun[1], SONG Kyu Jeong*[1] ([1]Division of Science Education at College of Education, Jeonbuk National University)

P1-co.105*
The vortex property of the $Bi_2Sr_2Ca_2Cu_3O_x$ with Torque Magnetometry / JANG Joonho*[1,2], CHOI WonBeom[1,2] ([1]Department of Physics, Seoul National University, [2]Center for Correlated Electron Systems, CCES, IBS)

P1-co.106*
스퍼터링을 이용한 고품질 Nb, NbN 초전도 박막의 전기적 특성 연구 / JUNGHYUN Ryu[1], SUH Dongseok*[1] ([1]Department of Energy Science, Sungkyunkwan University)

P1-co.107*
Josephson Junctions in Twisted $NbSe_2$ van der Waals Heterostructures / HA Sangwook[1,2], CHOI Junwon[1], JANG Joonho*[1,2] ([1]Department of Physics, Seoul National University, [2]Center for Correlated Electron Systems, Institute of Basics Science (IBS))

P1-co.108

Epitaxial growth of van der Waals ferromagnetic metal $MnTe_2$ / LEE Suyoung[1,2], LEE Sangjae[1,2], KIM Changyoung[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]CCES, CCES (IBS))

P1-co.109

Magnetic exciton of multiferroic van der Waals material NiI_2 / KIM Jae Ha[1], SON Suhan[2,3], LEE Youjin[2,3], PARK Je-Geun[2,3], KIM Jae Hoon[*1] ([1]Department of Physics, Yonsei University, [2]Center for Quantum Materials, Seoul National University, [3]Department of Physics and Astronomy, Seoul National University)

P1-co.110*

The physical properties of nanoparticle AFe_2O_4 (A = Fe, Co) for biomedical applications / AN Hyun Ho[1], LEE Gyeong Tae[1], CHOI Hyungkyung[2], KIM Chul sung[2], KIM Sung Baek[*1] ([1]Department of Biomedical materials, Konyang University, [2]Department of Physics, Kookmin University)

P1-co.111*

The magnetic properties and biocompatibility study of nanoparticle $MnFe_2O_4$ / KIM Bomin[1], LEE Chaeyeon[1], AN Hyun Ho[1], CHOI Hyungkyung[2], KIM Chul sung[2], KIM Sung Baek[*1] ([1]Department of Biomedical materials, Konyang University, [2]Department of Physics, Kookmin University)

P1-co.112

Temperature dependence Raman study of $Ca_{2-x}Sr_xRuO_4$ (x=0.0, 0.2, 0.3, 0.4, 0.5) / PARK Seung Ryong[*1], KIM Junkyoung[1] ([1]Incheon National University)

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Temperature dependence of Raman spectrum from magnetic van der Waals $Mn_{0.5}Fe_{0.5}PS_3$ with a spin-glass state / CHEONG Hyeonsik[*1], KIM Jieun[1], LIM SOO YEON[1], OH Siwon[1], SON Suhan[2,3], KIM Haeri[2], PARK Je-Geun[2,3] ([1]Department of Physics, Sogang University, [2]Department of Physics and Astronomy, Seoul National University, [3]Center for Quantum Materials, Seoul National University)

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Study on new Kondo lattice $Ce_3Fe_2Ge_{11}$ / PARK Tuson[1], LEE Hanoh[*1], OLAJUMOKE OLUWATOBILOBA EMMANUEL1 ([1]Physics, Sungkyunkwan University)

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Synchrotron radiation spectroscopy study of a topological Kondo insulator candidate of CeNiSn / SEONG Seungho[1], DENLINGER J. D.[2], ŌNUKI Y.[3], KIM Kyoo[4], MIN B. I.[5], KANG Jeongsoo[*1] ([1]Physics, The Catholic University of Korea, [2]ALS, Lawrence Berkeley National Lab, [3]Graduate School of Science, Osaka University, [4]Advanced Materials Research Division, KAERI, [5]Department of Physics, POSTECH)

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Tunable asymmetric spin wave excitation and propagation in a magnetic system with two rectangular blocks / SEO Dongpyo[1], HAN Song Hee[2], YOON Seungha[3], CHO Beong Ki[*1] ([1]School of Materials Science and Engineering, GIST, [2]Division of Navigation Science, Mokpo National Maritime University, [3]Green Energy & Nano Technology R&D Group, KITECH)

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Dispersion characteristics of spin waves channeled in antiferromagnetic domain walls / PARK Hyeon-Kyu[1], KIM Sang-koog[*1] ([1]Seoul National University)

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Versatile MBE growth of tetrataenite $L1_0$-FeNi film / LEE June Hyuk[*1], NGUYEN Van Quang[1] ([1]Neutron Science Division, KAERI)

P1-co.119*

Excitation-dependent emissive FeSe nanoparticles induced by chiral interlayer expansion and their multi-color bio-imaging / CHOI Youngeun[1], PARK Chul Hong[*2], LEE Jaebeom[*1,3] ([1]Chemical engineering and applied chemistry, Chungnam National University, [2]Quantum Matter Core-Facility and Research Center of Dielectric and Advanced Matter Physics, Pusan National University, [3]Chemistry, Chungnam National University)

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Rotating magnetocaloric effect (RMCE) in RB_4 (R=Gd-Tm) group / BAE Jaehan[1], HAN Song Hee[2], YOON Seungha[3], CHO Beong Ki[*1] ([1]School of Materials Science and Engineering, GIST, [2]Division of Navigation Science, Mokpo National Maritime University, [3]Green Energy & Nano Technology R&D Group, KITECH)

P1-co.121*

Role of Ti in magneto-crystalline anisotropy of Co/Pt thin film / KIM GyeongHye[1], HO Thi H.[1], HONG Soon Cheol[1], RHIM Sonny[*1] ([1]Department of Physics, University of Ulsan)

P1-co.122

Effect of valance fluctuation on the magnetic and thermoelectric properties of $Eu_8CuNi_{2.5}Si_{42.5}$ clathrate / RHYEE Jong-Soo[*1], RAWAT POOJA[1] ([1]Dept. of Applied Physics, Kyung Hee University)

P1-co.123*

Yttrium Iron Garnet($Y_3Fe_5O_{12}$) 다결정의 결정성과 입도크기가 강자성 공명에 미치는 영향 / LEE Joon Woo[1], LEE Nyun Jong[2], KIM Jun-Su[3], YOU Chun-Yeol[3], KIM Sanghoon[2], OH Yoon Seok*[1] ([1]Department of Physics, UNIST, [2]Department of Physics, University of Ulsan, [3]Department of Physics and Chemistry, DGIST)

P1-co.124

Quantum-classical crossover in a molecular magnet embedded in S/F/S Josephson junction / KIM Gwang-Hee*[1] ([1]Physics and Astronomy, Sejong University)

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P1-co.201*
Study of the electronic structure of Kagome metal AV_3Sb_5 (A = K, Rb, Cs) / IM JUNHEE*[1], KANG Chang-Jong[1] ([1]Physics, Chungnam National University)

P1-co.202*
Electronic and magnetic structure of double perovskite $BaLaCuOsO_6$: density functional theory / LEE Dong Hyun David[1], JUNG Myung-Chul[1], HAN Myung Joon*[1] ([1]Department of Physics, KAIST)

P1-co.203*
A computational study of titanyl phthalocyanine on Ag(100) and on MgO/Ag(100) / NAMGOONG Young[1,2], NOH Kyungju[1,2], URDANIZ Corina[1,3], HEINRICH Andreas[1,2,3], WOLF Christoph*[1,2,3] ([1]IBS center for Quantum Nanoscience, IBS, [2]Department of Physics, Ewha Womans University, [3]Ewha Womans University, Ewha Womans University)

P1-co.204
Configuration of water molecules at the electrified electrochemical interfaces with graphene electrodes / YU Seunghyun[1], YEO Hyeonwoo[1], KIM Yong-Hoon*[1] ([1]School of Electrical Engineering, KAIST)

P1-co.205
Feasible experimental growth of novel aluminum nitride polytypes: A DFT perspective / ALSARDIA MOWAFAQ MOHAMMAD KETHYAN[1], KHADKA ISHWOR BAHADUR[1], HAQ Bakhtiar Ul[2], KIM Se Hun*[1] ([1]Jeju National University, [2]Department of Physics, King Khalid University)

P1-co.206
First-principles study of Janus 2D heterostructures for valleytronics applications / KIM YunJae[1], HONG SukLyun*[1], KIM Junghwan[1], CHOI Chang-Gyu[1], CHOI Hyeong-Kyu[1] ([1]Sejong University)

P1-co.207

Fast computation of lattice thermal conductivity using machine learning interatomic potentials / LEE Kyeongpung[*1], CHOI JeongMin[1], KIM Sangtae[1], MOON Minseok[1], JEONG Wonseok[2], HAN Seung Wu[1] ([1]Materials science and engineering, Seoul National University, [2]Department of Energy, Lawrence Livermore National Laboratory)

P1-co.208

Plasmonic catalysis in metallic nanoclusters: A time-dependent density functional theory study / PARK Noejung[*1], FAHRVANDI Hamoon[1], UISEOK Jeong[1], SAIT OKYAY Mahmut[1] ([1]UNIST)

P1-co.209

Topological classification of nodal-line semimetals with square-net structures / LEE Inho[*1], SHIM Ji Hoon[*1,2] ([1]Department of Chemistry, POSTECH, [2]Department of Physics, POSTECH)

[P1-co.3] Condensed Matter Physics: Other Condensed Materials/Instruments 포스터 발표

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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열전도도 측정 장치 구축 / 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.302*

Controlling metal-insulator transition of VO_2(200)/R-Al_2O_3(012) thin film by interfacial strain / KANG Hyon Chol*[1], NOH Do Young[2], OH Ho Jun[2], HA Sung Soo[2], YUN Young Min[2], CHOI Suk June[2], KWON Oh Young[2], LEE Su Yong[3] ([1]Department of Materials Science and Engineering, Chosun University, [2]Department of Physics and Photon Science (DPH) & School of Materials Science and Engineering, GIST, [3]9C beamline, Pohang Accelerator Laboratory)

P1-co.303

Fast Quantum State Tomography Implemented by Measurement Axis Adjustment / KIM Eunseong*[1], HWANG Hyeok[1], CHOI JeaKyung[1] ([1]Department of Physcis, KAIST)

P1-co.304

UV-Visible photoresponse enhancement at self-power and low bias mode by plasmonic nanoparticle treatment of Quasi Freestanding Graphene/vicinal SiC devices / KHADKA ISHWOR BAHADUR[1], ALSARDIA MOWAFAQ MOHAMMAD KETHYAN[1], KIM Se Hun*[1] ([1]Jeju National University)

P1-co.305*

More than Morse: Observing an additional interaction between CO molecules with Lateral Force Microscopy / NAM Shinjae*[2], GRETZ Oliver[2], HOLZMANN Thomas[2], WEYMOUTH Alfred Jay[2], GIESSIBL Franz Josef[2] ([1]Ewha Womans University, [2]Physics, Universität Regensburg)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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P1-nu.001
Neutron skin thickness of ^{208}Pb using neutrino scattering in Qusasiparticle Random Phase Approximation / CHEOUN Myung Ki*[1], LEE Chaeyun[1] ([1]Department of Physics, Soongsil University)

P1-nu.002*
Yukawa 퍼텐셜에 대한 슈뢰딩거 방정식의 두 가지 수치해석적 풀이 / YOON Jin-Hee*[1], LEE Seungju[1], HONG Younghoo[1], CHO Soyeon[1] ([1]Dept. of Physics, Inha University)

P1-nu.003*
A Study on the Measurement of Half-life for ^{177}Re and ^{179}Re Isotopes by using 100-MeV Proton Accelerator / BAN Taeyang[1,2], KIM Taewoo[1,2], LEE Samyol*[1,2] ([1]Department of Radiological Science, Dongseo University, [2]Center for Radiological Environment & Health Science, Dongseo University)

P1-nu.004
The Study of a Composited Radiotherapy Method / WOO Jong-Kwan*[1], LIU Dong[1] ([1]Department of Physics, Jeju National University)

P1-nu.005*
Momentum-Kick model에서 다중도 의존성 계산 / YOON Jin-Hee*[1], YOON Jeongseok[1], CHO Soyeon1 ([1]Dept. of Physics, Inha University)

P1-nu.006*
Describe the Ridge structure in various high-multiplicity pp collision at $\sqrt{s_{NN}}$=13TeV via Momentum-Kick model / YOON Jin-Hee*[1], KIM Jaesung[1], CHO Soyeon[1] ([1]Dept. of Physics, Inha University)

P1-nu.007*
The measurement of the absolute light yield of crystal scintillators by utilizing silicon photodiodes / JEGAL Jin[1], PARK Hyeoung woo[1], KIM Hong Joo*[1] ([1]Department of Physics, Kyungpook National University)

P1-nu.008*

Status of prototype Beam Drift Chamber(BDC) of the LAMPS Experiment / 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]Physics Department, Chonnam National University, [2]Physics Department, Korea University, [3]Rare Isotope Science Project, Institute for Basic Science)

P1-nu.009

Measurement of ^{228}Ac isomers by using ^{228}Ra deposited $CeBr_3$ scintillator / LEE Doohyeok[1], KIM Hong Joo*[1], KHAN Arshad[1], LEE Hyun Su[2], PHAN Quoc Vuong[1], SO Jung Ho[2] ([1]Department of Physics, Kyungpook National University, [2]Center for Underground Physics, Institute for Basic Science)

P1-nu.010

Simulation for proton beam energy optimization for BNCT application / SHIM HyunHa*[1], PARK Seong Hee[1] ([1]Korea University)

P1-nu.011

Development and Application of positron lifetime spectroscopy / LEE Jaegi*[1], SUN Gwang-Min[1], KIM Jaehong[2], SHIN Dong Ho[3] ([1]HANARO Utilization Division, Korea Atomic Energy Research Institute, [2]Rare Isotope Science Project, Institute for Basic Science, [3]Welfare & Medical ICT Research Department, Electronics and Telecommunications Research Institute)

P1-nu.012

Measuring and unfolding fast neutron spectrum using a stilbene scintillation detector / NGUYEN Duy Quang[1], KIM Hong Joo*[1], NGUYEN Duc Ton[1], NAM UkWon[2], KIM SungHwan[3] ([1]Department of Physics, Kyungpook National University, [2]Space Science Division, Korea Astronomy and Space Science Institute, [3]Department of Radiological Science, Cheongju University)

P1-nu.013

Development of X-ray imaging system based on Raspberry Pi Camera / NGUYEN Duc Ton[1], DANIEL D. Joseph[1], PHAN Quoc Vuong[1], KIM Hong Joo*[1] ([1]Department of Physics, Kyungpook National University)

P1-nu.014

방사성동위원소 농도비를 이용한 RbCl 표적에의 양성자빔 입사 에너지 추청방법 연구 / KIM Kye-Ryung*[1], YUN Sang pil[1], LEE Pilsoo[1], CHO Yong-Sub[1] ([1]Korea Multi-purpose Accelerator Complex, KAERI)

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P1-op.001*
Decomposing images of acoustic resonant modes into superposition of quasi-eigenmodes / AN Kyungwon*[1], KIM Juman[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-op.002
Polarization dependence of Degenerate Four Wave Mixing in DO3 doped polymer films / WU Yang[1], CHOI Dong Soo[2], SEO Hyo Jin[1], KIM Sun Il*[1] ([1]Department of Physics, Pukyong National University, [2]Department of Materials Physics, Dong-A University)

P1-op.003
자연 채광기용 프리즘 광학계의 설계 (Design of prism optics for Natural light illumination system) / KIM Jong Tae*[1] ([1]Department of Image Science & Engineering, Pukyong National University)

P1-op.005
희토류 금속을 첨가한 Perovskite stannates $ASnO_3$ (A = Ca, Sr, and Ba)의 구조 및 광학 특성 / KWAN CHUL LEE*[1], LEE YUN SANG*[1] ([1]Department of Physics, Soongsil University)

P1-op.006
Polymerase Chain Reaction 시스템의 Thermal cycling을 위한 레이저 파워 밀도 정량화 / LEE Junho*[1], BAEK Jieun[1,2], KWON Soonwook[1], CHOI Sunjak[1], KIM Donghyun[2] ([1]IT Materials & Components R&D Division, KETI, [2]Electrical and Electronic Engineering, Yonsei University)

P1-op.007
Photo-luminescent and Structural analysis on Dy^{3+} doped alkaline-earth zirconates $A_{1-x}Dy_xZrO_3$ (A=Ba, Sr, and Ca) / WI Sang Won*[1], KIM Jin Su[1], LEE YUN SANG[1], CHUNG Jin Seok[1] ([1]Department of Physics, Soongsil University)

P1-op.008
A Multimodal Imaging System for Digital Holographic Doppler Spectroscopy of Living Biological Tissues / JEONG Kwan*[1] ([1]Department of Physics and Chemistry, Korea Military Academy)

P1-op.009

측면 가공 커플러의 제작 조건에 따른 위상 이동 특성 / KIM Hyun Sung[1], MA Hye Jun[1], LEE Seung Seok[1], CHOI Eun Seo*[1] ([1]Department of Physics, Chosun University)

P1-op.010

FDTD를 이용한 잘린 정팔면체 프레임 구조 나노 입자의 전자기장 분포 분석 / PARK Doo Jae*[1], JEONG HyeonSeok[1], OH Minwoo[1] ([1]School of nano convergence technology, Hallym University, [2]School of nano convergence technology, Hallym University, [3]School of nano convergence technology, Hallym University)

P1-op.011*

Electrical charge control of h-BN single photon sources / LEE Jieun*[1], YU Mihyang[1], SEO Hosung[2], YIM Donggyu[2] ([1]Department of physics and astronomy, Seoul National University, [2]Department of energy systems research, Ajou University)

P1-op.012*

Study on thermal effect of end-pumped Tm:YLF crystal / EZZAT Mohamed[1], YOON Jin Woo[2], LEE Seong Ku[2], LEE Joong Wook*[1], NAM Chang Hee[4] ([1]Physics , Chonnam National University, [2]Apri , GIST, [3]Chonnam National University, [4]Physics and photon science, GIST)

P1-op.013

GRIN Lens을 이용한 Relay Lens 설계에 관한 연구(A Study on Relay Lens Design Using GRIN Lens) / KIM Jong Tae*[1] ([1]Department of Image Science & Engineering, Pukyong National University)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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P1-pa.001
The self-force on a single charged particle in the classical electrodynamics / KANG Teyoun*[1], HUR Min Sup[2] ([1]Pohang Accelerator Laboratory, [2]Department of Physics, UNIST)

P1-pa.002
Dark photon search using B → Klll decay at Belle / KIM Yongkyu[1], KWON Youngjoon*[1] ([1]Physics, Yonsei University)

P1-pa.003
Search for ALP through B → K a' (a' → γγ) decay with Belle experiment / CHO Sungjin[1], KWON Youngjoon*[1] ([1]Physics, Yonsei University)

P1-pa.004*
Search for B → Xs $\nu\bar{\nu}$ decay in Belle II experiment / KWON Youngjoon*[1], PARK Junewoo[1] ([1]Physics, Yonsei University)

P1-pa.005
Data Acquisition Software Development for Belle II Detector Operation / CHO Sungjin[1], KIM Yongkyu[1], KWON Youngjoon*[1], LEE Chanyoung[1], PARK Junewoo[1] ([1]Physics, Yonsei University)

P1-pa.006
Upcoming Beyond the Standard Model Searches in Belle II / KWON Youngjoon*[1], LEE Chanyoung[1], KIM Jaeyoung[1], KIM Chanho[1] ([1]Physics, Yonsei University)

P1-pa.007
Search for B^0 → l τ decays at Belle experiment / KIM Kyungho*[1], KWON Youngjoon[2], CHO Kihyeon[1,3] ([1]Supercomputing Center, KISTI, [2]Department of Physics, Yonsei University, [3]KISTI Campus, UST)

P1-pa.008
전자-양전자 충돌실험에서 생성된 이중 암흑광자가 뮤온 쌍으로 붕괴하는 모드에 관한 연구 / PARK Kihong[1], KIM Kyungho[2], CHO Kihyeon*[1] ([1]UST, KISTI, [2]Supercomputing center, KISTI)

P1-pa.009

The pileup jet identification algorithm performance of CMS Run2 data / YANG Unki*[1], OH Byunghoon[1], KIM Yeonjoon[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-pa.010*

Kinematic Significance of Mass Presence in Powheg Top Pair Decay / SHIN Jihoon[1], YOON Inseok[1], OH ByeongHun[1], KIM Yeonjoon[1], YANG Un-ki*[1] ([1]Department of physics and astronomy, Seoul National University)

P1-pa.011*

Study of interference effect in heavy W' boson search using Monte-Carlo simulation / KIM JongYeob[2], LEE JeongEun*[1], KIM DongHee[2], OH Young Do[2], YANG Yu Chul[2] ([1]Physics, Seoul National University, [2]Physics, Kyungpook National University)

P1-pa.012*

A Study on ME0 Background Estimation Using FLUKA Simulation in CMS Experiement / CHOI Minuk*[1] ([1]Department of Physics, Sungkyunkwan University)

P1-pa.013*

Pulse Shape Discrimination for the JSNS^2 experiment / GOH Junghwan*[1], HWANG Wonsang[1], YOO Chang Hyun[1], JOO Kyungkwang[2], KIM Jae Yool[2], LIM In Taek[2], MOON Donghoon[2], PARK RyeongGyoon[2], SHIN Chang Dong[2], KIM Eun Joo[3], CHOI Junho[4], PAC Myoung Youl[4], YEO Insung[4], JANG Jee Seung[5], KIM Wooyoung[6], JANG Hanil[7], KANG Shinkyu[8], CHEOUN Myung Ki[9], JEON Hyoungku[10], JEON Sanghoon[10], JUNG Da Eun[10], KIM Soo-Bong[10], YU Intae[10] ([1]Department of Physics, Kyung Hee 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, Gwangju Institute of Science and Technology, [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)

P1-pa.014*

Study of WZGamma production and anomalous quartic gauge couplings in fully leptonic final state at High-Luminosity LHC using Machine Learning Method / KIM DongHee*[1], YANG Yu Chul[1], LEE Dongyub[1], KIM Jiwoong[1], BYOUNGJUN Park[1] ([1]Department of Physics, Kyungpook National University)

P1-pa.015

Cosmic Muon Identification at JSNS^2 / PARK RyeongGyoon[*1], KIM Jae Yool[1], JOO Kyung Kwang[1], LIM In Taek[1], MOON Dong Ho[1], SHIN Chang Dong[1], KIM Eun Joo[2], CHOI June Ho[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 Han Il[7], KANG S. K.[8], CHEOUN Myung Ki[9], LEE C. Y.[9], JEON Hyoungku[10], JEON Sanghoon[10], JUNG Da Eun[10], KIM Soo-Bong[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, GIST, [5]Department of Physics, Kyungpook National University, [6]Department of Physics, Kyung Hee University, [7]Department of Fire Safety, Seoyeong Univsersity, [8]School of Liberal Arts, Seoul National University of Science and Technology, [9](Department of Physics, Soongsil University, [10]Department of Physics, Sungkyunkwan University)

P1-pa.016

Detection efficiency study for KDAR neutrino in JSNS^2 experiment / JANG Jee-Seung[*1], YEO Insung[2], CHOI J. H.[2], PAC M. Y.[2], JOO K.K.[3], KIM J.Y.[3], LIM I.T[3], MOON D.H.[3], PARK Y.G.[3], SHIN C.D.[3], KIM E.J.[4], KIM W.[5], PARK J.S.[5], GOH J.[6], HWANG W.[6], YOO C.[6], JANG H.I.[7], KANG S.K.[8], CHEOUN M.K.[9], LEE C.Y.[9], JEON H.[10], JEON S.[10], JUNG D.E.[10], KIM S.B.[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 Univsersity, [8]School of Liberal Arts, Seoul National University of Science and Technology, [9]Department of Physics, Soongsil University, [10]Department of Physics, Sungkyunkwan University)

P1-pa.017*

Jet Assignment in Dileptonic Top Pair Events using Machine Learning / LEE Jason Sang Hun[*1], WATSON Ian James[*1], YANG Seungjin[1], HEO Jeewon[1] ([1]Department of Physics, University of Seoul)

P1-pa.018*

JSNS^2 trigger for a sterile neutrino search / JUNG Da Eun[*1], JEON S.[1], YU I.[1], KIM S.B.[1], ROTT C.[1], JEON H.[1], GOH J.[2], HWANG W.[2], YOO C.[2], KIM J.Y.[3], PARK Y.G.[3], SHIN C.D.[3], LIM I.T.[3], MOON D.H.[3], JOO K.K.[3], JANG J.S.[4], PAC M.Y.[5], CHOI J.H.[5], YEO I.S.[5], KANG S.K.[6], KIM W.[7], PARK J.S.[7], KIM E.J.[8], JANG H.I.[9], CHEOUN M.G.[10], LEE C.Y.[10] ([1]physics, Sungkyunkwan University, [2]Department of Physics, Kyung Hee University, [3]Department of Physics, Chonnam National University, [4]Department of Physics and Optical Science, GIST, [5]Laboratory of High Energy Physics, Dongshin University, [6]School of Liberal Arts, Seoul National University of Science and Technology, [7]Department of Physics, Kyungpook National University, [8]Division of Science Education, Jeonbuk National University, [9]Department of Fire Safety, Seoyeong Univsersity, [10]Department of Physics, Soongsil University)

P1-pa.019*

Energy Calibration Study of an Electromagnetic Calorimeter Trigger System in the Belle II Experiment / CHOI Soo Kyung*[1], JANG Eunji[1,2], UNNO Yuuji[3], KIM CheolHun[3], CHO HanEol[3], CHEON ByungGu[3], KIM YoungJun[4] ([1]CAU-HEP, Chung-Ang University, [2]Department of Physics, Gyeongsang National University, [3]Department of Physics, Hanyang University, [4]Department of Physics, Korea University)

P1-pa.020*

A test of trapping and cooling of electrons with the antiproton trap for the GBAR experiment / LEE Byungchan[1], KIM Bongho*[2], KIM S. K.[1], WON D. H.[1], PARK K. H.[1], LEE H. B.[1], KIM E. S.[3], CHUNG M.[4], LIM E. H.[3], YOO K. H.[4] ([1]Dept. of Physics and Astronomy, Seoul National University, [2]Center for Underground Physics, IBS, [3]Department of Accelerator Science, Korea University, [4]Dept. of Physics, UNIST)

P1-pa.021*

Development of dynamic web interface for the CMS RPC detector efficiency monitoring / GOH Junghwan*[1], SHIN JongWon[1] ([1]Department of Physics, Kyung Hee University)

P1-pa.022*

Search for Charged Lepton Flavour Violation in top quark interaction with muon and tau in pp collisions at $\sqrt{s}$=13TeV / LIM JONGWON*[1], KIM TAE JEONG[1] ([1]Department of Physics, Hanyang University)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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P1-se.101*

Unusual optical phonon behaviors in strained monolayer WS_2 / LEE Taegeon[1], CHOI Soo Ho[2], KIM Soo Min[3], RHO Heesuk*[1] ([1]Department of Physics, Jeonbuk National University, [2]Center for Integrated Nanostructure Physics, Institute for Basic Science, [3]Department of Chemistry, Sookmyung Women's University)

P1-se.102

반투명하고 유연한 그래핀/WS_2 수직 이종접합 자가발전 광검출소자 / JANG Chan Wook[1], CHOI Suk-Ho*[1] ([1]Department of Applied Physics, Kyung Hee University)

P1-se.103

GaN 표면 위에 MOCVD로 성장된 2차원 이황화 몰리브덴의 성장특성 연구 / CHO Yong Hoon*[1], KANG Kibum[2], AHN Seonghun[1], SONG Yongho[1], KIM Tae Soo[2] ([1]Department of Physics, KAIST, [2]Department of Mechanical Science and Engineering, KAIST, [3]KAIST)

P1-se.104

Monolithic Interface Contact Engineering to Boost Optoelectronic Performances of 2D Semiconductor Photovoltaic Heterojunctions / YANG Seunghoon[1], CHA Janghwan[2], KIM Jongchan[3], LEE Donghun[1], PARK Hong-Gyu[6], JEONG Hu Young[4], HONG Suklyun[2], LEE Gwan-Hyoung[5], LEE Chul-Ho*[1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Physics and Graphene Research Institute, Sejong University, [3]School of Materials Science and Engineering, Ulsan National Institute of Science and Technology, [4]UNIST Central Research Facilities, Ulsan National Institute of Science and Technology , [5]Department of Materials Science and Engineering, Seoul National University, [6]Department of Physics, Korea University)

P1-se.105*

Faraday Geometry의 외부 자기장에서 InAlAs/$Al_{40}Ga_{60}As$ 단일 양자점의 자기 광학적 특성 분석 / KIM Byung Su[3], CHOI Minho[3], SONG JIN DONG[2], WOO Kie Young[3], CHO Yong Hoon*[3] ([1]KAIST, [2]Center for Opto-electronic Materials and Devices, KIST, [3]Department of Physics, KAIST)

P1-se.106

Evaluating the time constant of p-n GaAs junctions with estimating the quantum efficiency of the junctions by photo-reflectance spectroscopy / ZEINALVAND FARZIN Behnam[1], LEE DongKun[2], KIM Geun Hyeng[3], HA Jaedu[1], KIM Jong Su[*1], KIM Yeongho[4], LEE Sang Jun[4] ([1]Yeungnam University, [2]Institute of Photonic & Nano Technology, Yeungnam University, [3]Department of Aero Mechanical Engineering, Kyungwoon University, [4]Division of Interdisciplinary Materials Measurement Institute, Korea Research Institute of Standards and Science)

P1-se.107

Ab initio study of metal-induced gap states at the metal-insulator interfaces / SUNG Dongchul[1], IM Hyun Sik[2], HONG SukLyun[*1] ([1]Sejong University, [2]Division of Physics and Semiconductor Science, Dongguk University)

P1-se.108

Cross-linked Polyvinylpyrrolidone-induced Interface Trap Suppressed carrier transport with Electron Doping / LEE Juchan[1], JEONG Mun Seok[*1] ([1]Department of Physics, Hanyang University)

P1-se.109

Reducing Fermi level pinning effect at MoS_2-Mo_2C interfaces by using Mo_2C as an electrode through dry transfer / SEO Sunae[*1], OH Hyungsik[1], KIM Hansung[1], SONG Hyeonkyo[1], KIM Seonyeong[1] ([1]Department of Physics, Sejong University)

P1-se.110

Unveiling Hidden Surface Channel in Two-dimensional Multilayers / JOO Min-Kyu[*1], KIM Soo yeon[1], SEO You kyung[1], CHAE Minji[1] ([1]Department of Applied Physics, Sookmyung Women's University)

P1-se.111

Gate-induced photocurrent hysteresis in multilayer WSe_2 field effect transistor / LEE SEONG-YEON[1], YEE Ki Ju[*1] ([1]Department of Physics, Chungnam National University)

P1-se.112

징케이션 조건에 따른 알루미늄 기판 위 니켈-붕소 무전해 도금에 관한 연구 / 지현배[1], 빈정수[1], 나사균[2], LEE Youn Seoung[*1] ([1]Department of Information & Communication Engineering, Hanbat National University, [2]Department of Materials Science and Engineering, Hanbat National University)

P1-se.113

Photosensitive Field-Effect Transistors Using n-type NDI-C6 and p-type Rubrene Organic Semiconductors / CHOI Kyuhyun[1], LEE Sang-hun[1], JOO Jinsoo[*1] ([1]Department of Physics, Korea University)

P1-se.114

Fabrication of the quantum dot-stacked microscale wires by using a micropipette-combined QTF-AFM and optical setup / AN Sangmin*[1], SUN Yun Tae[1] ([1]Department of Physics, Institute of Photonics and Information Technology, Jeonbuk National University, [2]Department of Physics, Ulsan National Institute of Science and Technology)

P1-se.115*

MoS_2/WS_2의 이종접합구조에서 비틀림각도에 따른 발광특성 연구 / KIM Sung*[1], JEONG Tae Jin[2], JANG Chan Wook[2], KIM Jae Kuk[2], CHOI Suk-Ho[2] ([1]Humanitas College & Department of Physics, Kyung Hee University, [2]Department of Applied Physics, Kyung Hee University)

P1-se.116*

A study on Te and MoS_2 for CMOS inverter fabrication / JEONG Hyunjun[1], SUH Dongseok*[1], OH Gyunghoon[1], SHIM Jiyeon[1], BAE Sangyeol[1] ([1]Department of Energy Science, Sungkyunkwan University)

P1-se.117*

CVD 단일공정에 의한 2차원 WS_xSe_{1-x} 박막의 증착 및 Se 양의 조절을 통한 띠간격 에너지 조절 / KIM Jae Kuk[1], SO Jun Ho[1], JANG Chan Wook[1], KIM Sung[2], CHOI Suk-Ho*[1] ([1]Department of Applied Physics, Kyung Hee University, [2]Humanitas College, Kyung Hee University)

P1-se.118*

Raman mapping study of hBN-encapsulated monolayer WS_2 / LEE Kyoung-Yeon[1], LEE Taegeon[1], LEE Young-Jun[2], CHO Chang-Hee[2], RHO Heesuk*[1] ([1]Department of Physics, Jeonbuk National University, [2]Department of Emerging Materials Science, DGIST)

P1-se.119

Enhanced Photoluminescence and Photoresponsivity of Photodetector using Perovskite $MAPbI_3$ Hybridized with Au-Nanoparticles / JOO Jinsoo*[1], KWON Dayeong[1], KIM Jeongyong[2], KIM Taek Joon[1] ([1]Depsrtment of Physics, Korea University, [2]Department of Energy Science, Sungkyunkwan University)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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P1-se.201*
Role of Quantum Capacitance in Double-Gate Negative Capacitance Field-Effect Transistors / LEE Hakseon[1], PARK Yungyeong[1,2], KIM Jungsik[3], LEE Yeonghun[*1] ([1]Department of Electronics Engineering, Incheon National University, [2]Department of Materials Science and Engineering, Incheon National University, [3]Department of Electrical Engineering, Gyeongsang National University)

P1-se.202
Optical and electrical properties of Sn-doped β-Ga_2O_3 thin films / NGUYEN Thi Thu[1], JUNG Dae Ho[1], LEE Jae Jun[1], LEE Ho Sun[*1] ([1]Applied Physics, Kyung Hee University)

P1-se.203
Structural and optical properties of perovskite film in terms of precursor solution preparation method / OH Jaewon[1], HWANG Muntae[1], AHN Taegyeong[1], CHOI Hyemin[1], LEE Hyunbok[1], RYU Mee-Yi[*1] ([1]Department of Physics, Kangwon National University)

P1-se.204
Photoluminescence와 photereflectance를 이용한 InAlGaAs/GaAs Quantum Dot 광학적 특성분석 / KIM Jong Su[*1], HA Jae Du[1], KANG Taein[1], LEE Seunghyun[2], SANJAY Krishna[2] ([1]Yeungnam University, [2]Department of Electrical and Computer Engineering, The Ohio State University)

P1-se.205
뉴로모픽 컴퓨팅을 위한 전기화학적 금속화 셀 기반의 나노-스케일 아날로그 인공 시냅스 소자 / LEE Jun Ho[1,2], YANG Seon Pill[1,2], WOO Dae Seong[1,3], PARK Jeagun[*1,2,3] ([1]Hanyang University, [2]Department of Electronic Engineering, Hanyang University, [3]Department of Nanoscale Semiconductor Engineering, Hanyang University)

P1-se.206*
Temperature Dependency of Optical Characteristics in PbI_2/Alq_3 Hybrid Structure: Observation of Fabry-Perrot Resonance / LEE Sang-hun[1], JOO Jinsoo[*1], KIM Jeongyong[2] ([1]Depsrtment of Physics, Korea University, [2]Department of Energy Science, Sungkyunkwan University)

P1-se.207
Characteristics of amorphous Ga_2O_3 thin film growth on Ti substrates at low temperatures using MOCVD / AHN Namjun[1], LEE Jungbok[1], KIM Kyounghwa[1], AHN Hyungsoo[1], YANG MIN[*1] ([1]Korea Maritime and Ocean University)

P1-se.208
Growh of Ga_2O_3 thin films on Si substrates and transformation of crystal phase by thermal tretment / LEE JUNG BOK[1], YANG MIN[*1], AHN NAM JUN[1], AHN HYUNG SOO[1], KIM KYOUNG HWA[1] ([1]Korea Maritime and Ocean University)

P1-se.209*
Implementation of Capacitor-less Integrate-and-Fire Neuron with Oxygenated Amorphous Carbon based Memristor / PARK Jeagun[*1], KIM Dongeon[1,2] ([1]Hanyang University, [2]Department of Electronic Engineering, Hanyang University)

P1-se.210
Triboelectrification in ferromagnetic NiO-Ni-MgO nanocomposite: Synthesis, device fabrication, and energy harvesting performance / PADHAN Aneeta Manjari[*1], HAJRA Sugato[1], KIM Hoe Joon[1] ([1]Robotics, DGIST)

P1-se.211*
Study on the Array of the Transparent Photodetectors / JEONG Jiyoun[1], KIM Hyunah[1], CHOI Minho[1], CHOI Jaewu[*1] ([1]Information Display, Kyung Hee University)

P1-se.212*
Observation of Biexcitons in Perovskite Single Crystals with High Photoluminescence Quantum Yield / RYU Hongsun[1], PARK Jeehong[2], YI Yeonjin[2], JANG Joon Ik[*1] ([1]Physics, Sogang University, [2]Physics, Yonsei University)

P1-se.213
Improvement of SnO_2 electron transport layer prepared using calcium chloride additive for perovskite solar cells application / YANG JungYup[*1], SIN Jaegwan[1], KIM MoonHoe[1], KIM Gisung[1], PARK Geon[1], KIM Mijoung[1], LEE Hyeonu[1], KIM Jaeho[1], OH Juyoung[1] ([1]Department of Physics, Kunsan National University)

P1-se.214
준직접 에너지밴드갭 Si의 광특성 / AHN Hyung Soo[*1], KIM Soyeong[1], WI Nayoung[1], LEE Gangseok[1], KIM Kyounghwa[1], MUN Suhyun[1], PARK Seonwoo[1], LEE Jaehak[1], KIM Suckwhan[2] ([1]Electronic Materials Engineering, Korea Maritime and Ocean University, [2]Physics, Andong National University)

P1-se.215*

슈퍼커패시터 응용을 위한 코발트 인화물의 합성 및 특성 / MANCHI Nagaraju[2], BHIMANABOINA Ramulu[2], SHAIK Junied Arbaz[2], YU Jae Su*[1,2] ([1]Department of Electronics and Information Convergence, Kyung Hee University, [2]Department of Electronic Engineering, Kyung Hee University)

P1-se.216

Study of ultrafast amorphization and re-crystallization on phase-change materials / KIM Sungwon[1], KIM Dasol[2], CHOI Sungwook[1], KIM Jaeseung[1], CHO Mann-ho[2], KIM Hyunjung*[1] ([1]Physics, Sogang University, [2]physics, Yonsei University)

P1-se.217

Temperature-dependent photoluminescence in Green InGaN/GaN light-emitting diodes with the Si-doped graded short-period superlattice (GSL) / KIM Jong Su*[1], SAEIDNAHAEI Sanam[1], HA Jae Du[1], KIM Jin Soo[2], KIM G.H[3], LEE Dong Kun[4] ([1]Yeungnam University, [2]Division of Advanced Materials Engineering and Research Center of Advanced Materials Development, Jeonbuk National University, [3]Department of Aero Mechanical Engineering, Kyungwoon University, [4]Institute of Physics & Nano Technology, Yeungnam University)

P1-se.218

Investigating of InAs/GaSb single quantum well band structure using eight-band k.p model discretized with finite difference method / SEYEDEIN ARDEBILI Seyedeh Bahareh[1], KIM Jong Su*[1], HA Jae Du[1], KIM Yeongho[2], LEE Sang Jun[2] ([1]Yeungnam University, [2]Division of Interdisciplinary Materials Measurement Institute, Korea Research Institute of Standards and Science)

P1-se.219

열처리 온도가 digital alloy InGaAlAs multi quantum well의 광학적 특성에 미치는 영향 / PARK Gyound Du[1], KIM Jong Su*[1], JO HyunJun[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)

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P1-st.001
Phase Transitions and Critical Phenomena of the Square-Lattice Ising Model with a Ratio of 2:1 between the Nearest-Neighbor and the Next Nearest-Neighbor Interactions / KIM Seung-Yeon*1 ([1]School of Liberal Arts and Sciences, Korea National University of Transportation)

P1-st.002
Direct measurement of correlation length for absorbing phase transitions / LEE Jae Hwan*1, KIM Jin Min[1] ([1]Department of Physics, Soongsil University)

P1-st.003
Functional connectivity and network analysis in a mouse model of mild traumatic brain injury / LEE Dongha[1], LEE Yujeong[1], LEE Yoonsang[1], KIM Kipom*2 ([1]Cognitive Science Research Group, Korea Brain Research Institute, [2]Research Strategy Office, Korea Brain Research Institute)

P1-st.004
Numerical Analysis of Diffusive Epidemic Process / PARK Nuri[1], KIM Dong-Hee[1], HA Meesoon*2 ([1]Department of Physics and Photon Science, GIST, [2]Department of Physics Education, Chosun University)

P1-st.005
Activeness hinders accurate estimation of the extent of anomalous diffusion via thermodynamic uncertainty relation / HAN HyeongTark[1], LEE Jae Sung[2], JEON Jae-Hyung*1,3 ([1]Department of Physics, POSTECH, [2]School of Physics, KIAS, [3]Department of Physics, APCTP)

P1-st.006
Excess defect kinetics in the two-dimensional ferromagnetic Ising model under slow cooling: Effects of nonlinear cooling protocols / JEONG Kangeun*1, KIM Bong Soo[1,2], LEE Sung Jong[3] ([1]Departmentof Physics, Changwon National University, [2]Institute for Soft and Bio Matter Science, Changwon National University, [3]Basic Science Institute, Changwon National University)

P1-st.007

Excess defect kinetics in the two-dimensional ferromagnetic Ising model under Periodic Temperature / JEONG Kangeun[*1], KIM Bong Soo[1,2], LEE Sung Jong[3] ([1]Departmentof Physics, Changwon National University, [2]Institute for Soft and Bio Matter Science, Changwon National University, [3]Basic Science Institute, Changwon National University)

P1-st.008

Nonequilibrum kinetics of excess defect generation and dynamic scaling in the Kawasaki Ising spin chain under slow cooling / KIM Heejeong[*1], KIM Bong Soo[1,2], JEONG Kangeun[1], LEE Sung Jong[3] ([1]Department of physics, Changwon National University, [2]Institute for Soft and Bio Matter Science, Changwon National University, [3]Basic Sciences Institute, Changwon National University)

P1-st.009

Revealing role of Korean Physics Society with keyword co-occurrence network / JO Seonbin[1], PARK Chanung[2], YOON Jisung[3], JUNG Woo-Sung[*1,2,3,4] ([1]Department of Physics, POSTECH, [2]Division of Social Data Science, POSTECH, [3]Department of Industrial and Management Engineering, POSTECH, [4]Graduate School of Artificial Intelligence, POSTECH)

P1-st.010*

Demand prediction of public bicycle system through graph neural network / PARK Sangjoon[2], KWON Yongsung[2], LEE Mi Jin[1], SON Seung-Woo[*1,2] ([1]Department of Applied Physics, Hanyang University, [2]Department of Applied Artificial Intelligence, Hanyang University)

P1-st.011*

Roughening transition of information landscape on social networks / KIM Kwanwoo[1], YOOK Soon Hyung[*1] ([1]Department of Physics, Kyung Hee University)

P1-st.012*

Non-Gaussian to Gaussian crossover and ergodicity recovery of the random walk in spatially correlated annealed diffusivity fields / PARK Seongyu[1], DURANG Xavier[1], METZLER Ralf[2], JEON Jae-Hyung[*1,3] ([1]Department of Physics, POSTECH, [2]Institute of Physics & Astromony, University of Potsdam, [3]Department of Physics, Asia-Pacific Center for Theoretical Physics(APCTP))

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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P2-ap.101*
Investigation of the temperature dependence of Raman spectrum of antiferromagnetic $CrPS_4$ / NGUYEN Manh Hong[1], KIM Junghyun[2], NA Woongki[1], PARK Je-Geun[2], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University, [2]Department of Physics and Astronomy, Seoul National University)

P2-ap.102*
Magnetic ordering of $NiPS_3$ studied by Raman spectroscopy / CHEONG Hyeonsik[*1], NA Woongki[1], KIM Junghyun[2], PARK Je-Geun[2] ([1]Department of Physics, Sogang University, [2]Department of Physics & Astronomy, Seoul National University)

P2-ap.103
Epitaxial ferroelectric $Hf_{0.5}Zr_{0.5}O_2$ thin films deposited by using pulsed laser deposition / PARK Bae Ho[*1], YOON Chansoo[1], RYU Woohyeon[1] ([1]Department of Physics, Konkuk University)

P2-ap.104*
Effect of Hydrothermal Synthesis Conditions on The Structural and Electrical Characterization of Hydrothermally Deposited $Bi_{0.5}(Na_{1-x}K_x)_{0.5}TiO_3$ Films / KIM Eun-Young[1], WI Sang Won[2], LEE YUN SANG[2], BU Sang-Don[*1] ([1]Department of Physics, Jeonbuk National University, [2]Department of Physics and Integrative Institute of Basic Sciences, Soongsil University)

P2-ap.105*
Modulation of MIT characteristics of tungsten-doped vanadium dioxide thin films via controlling composition gradation / SHIN Eunbi[1], AHN Sehyeon[1], CHOI Eunji[1], KO Changhyun[*1,2] ([1]Department of Applied Physics, Sookmyung Women's University, [2]Institute of Advanced Materials and Systems, Sookmyung Women's University)

P2-ap.106
Competing phases in epitaxial SnO_2 thin films deposited on sapphire(0001) substrates / HAM Daseul[1], OH Seongchan[1], KANG Hyon Chol[*1] ([1]Department of Materials Science and Engineering, Chosun University)

P2-ap.107*

Effect of top electrode on ferroelectricity in hafnium-zirconium oxide thin film capacitors / BAE Seong Bin[1], KIM Yoon Ki[1], YANG Sang Mo[*1] ([1]Department of Physics, Sogang University)

P2-ap.108*

Ferroelectric $Hf_{0.5}Zr_{0.5}O$ synaptic barrister for energy-efficient convolution neural network / JANG Seonghoon[1], HAM Seongil[1], JANG Jingon[1], CHOI Sanghyeon[1], WANG Gunuk[*1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University)

P2-ap.109

고엔트로피 산화물(La-Ce-Nd-Gd-Y)에서 La_2O_3의 물리적 화학적 특성 분석 / 빈정수[1], 지현배[1], 고의준[2], NSIAH Ashong Andrews[2], 김정한[2], LEE Youn Seoung[*1] ([1]Department of Information & Communication Engineering, Hanbat National University, [2]Department of Advanced Materials Engineering, Hanbat National University)

P2-ap.110*

Ultrathin skin-attachable TiO_x synaptic array integrated with an organic photodiode for finger gesture recognition / CHO Haein[1], LEE In Ho[2], JANG Jingon[1], LEE Hanbee[2], PARK Sungjun[2], WANG Gunuk[*1,3] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Electrical and Computer Engineering, Ajou University, [3]Department of Integrative Energy Engineering, Korea University)

P2-ap.111*

$LaVO_3$/Si의 $LaVO_3$ 두께 변화에 따른 태양전지의 특성연구 / SHIN DongHee[*1], LEE JaeJun[2], JUNG DaeHo[2], LEE Hosun[*2] ([1]Andong National University, [2]Department of Applied Physics , Kyung Hee University)

P2-ap.112*

Artificial Neuron Based on Nanorod Structured Silicon Oxide Memristor for Probabilistic Inference Application / CHOI Sanghyeon[1], KIM Gwang Su[1,2], YANG Jehyeon[1], CHO Haein[1], KANG Chong-Yun[1,2], WANG Gunuk[*1,3] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Center for Electronic Materials, KIST, [3]Department of Integrative Energy Engineering, Korea University)

P2-ap.113*

반투명 광검출기 소자를 위한 그래핀/$LaVO_3$의 이종접합 구조의 광학적 및 전기적 특성연구 / SHIN DongHee[*1], KIM EunJi[2], LEE JaeJun[2], LEE HoSun[*2] ([1]Department of Physics, Andong National University, [2]Department of Applied Physics, Kyung Hee University)

P2-ap.114*

Optimization of the Wavelength and Intensity in Monochromatic X-ray to Minimize Radioactive Exposure / DONGHYUN KIM[1], WOO SUK JUNG[*2] ([1]Department of Engineering, Korea University, [2]Department of Broadcasting Imaging and Sound, Daelim University)

P2-ap.115*

자가 배열된 AuNPs로 인한 국부형 표면 플라즈몬 향상과 LPEG 소자에서의 전기적 특성 분석 / JANG Jun-Hyeon[1], CHOI Tae-ik[1], SON Min Sung[1], RYU Jae-Hoon[1,2], LEE Jeong-Yeon[1,2], KIM Sung-Hyun[1,2], KIM Han-Sol[1], LEE Ha Young[2], CHUN Young-Tae[1], AHN Hyung Soo[1], YI Sam Nyung[*1,2] ([1]Korea Maritime and Ocean University, [2]Interdisciplinary Major of Maritime AI Convergence, Korea Maritime and Ocean University)

P2-ap.116

Study of electronic structure of janus 2D metal monochalcogenides for valleytronics / KIM Junghwan[1], HONG SukLyun[*1], KIM YunJae[1] ([1]Sejong University)

P2-ap.117*

Neural Network Potential for Reaction in Atomic Layer Deposition Process / OH SangMin[*1], KIM Sangtae[1], AN Hyungmin[1], LEE Jiho[1], KIM Jaehoon[1], KIM Jaesun[1], HAN Seungwu[1] ([1]Material Science and Engineering, Seoul National University)

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P2-ap.201*
Realization of High Color Rendering Index of Conventional White LED Lighting by Using Red Quantum Dot Films / KO Jaehyeon*1, HONG Seung Chan[1], LEE Gi Jung[1], LEE Jung-Gyun[1], KO Young Wook[2], PARK Taehee[2], JOE Sung-yoon[3], KIM Yongduk[3] ([1]School of Nano Convergence, Hallym University, [2]GLVISION Co., Ltd, GLVISION Co., Ltd, [3]CPRI(Cheorwon Plasma Research Institute), CPRI(Cheorwon Plasma Research Institute))

P2-ap.202*
쌀겨를 이용한 바이오차의 합성과 물리화학적 특성 연구 / JUNG Gyeong Bok*1, KIM Da Young[1], BACK Ho Eun[1] ([1]Physics Education, Chosun University)

P2-ap.203
Investigation of polarization mode dispersion effect on optical signal to noise ratio measurement employing polarization vanishment / HAN Ki Ho*1 ([1]Department of Optical Engineering, Kongju National University)

P2-ap.204
Study of impact of electronic amplifiers on pursuit of polarization modes for optical fiber communication / HAN Ki Ho*1 ([1]Department of Optical Engineering, Kongju National University)

P2-ap.205
Characterization of Carbon Dots using Tobacco-ash by various solvent for solvothermal method / CHUNG Jong Won[1], HONG Woo Tae Hong[2], YOO Ji Hoon[3], YANG Hyun Kyoung*1 ([1]Department of Electrical, Electronics and Software Engineering, Pukyong National University, [2]Marine-Bionics convergence technology center, Pukyong National University, [3]Interdisciplinary Graduate Program of Artificial Inteligence on Computer, Electronic and Mechanical Engineering, Pukyong National University)

P2-ap.206
Tunable luminescence property and optical temperature sensing performance of Bi^{3+} and Sm^{3+} co-doped $GdNbO_4$ / PARK Jin Young[1], CHUNG Jong Won[1], YOO Ji Hoon[2], YANG Hyun Kyoung*1 ([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)

P2-ap.207

Luminescent properties of carbon dots derived from various paper / HONG Woo Tae[1], PARK Jin Young[2], MOON Byung Kee[3], YANG Hyun Kyoung[*2] ([1]Marine-Bionics convergence technology center, Pukyong National University, [2]Department of Electrical, Electronics and Software Engineering, Pukyong National University, [3]Department of Physics, Pukyong National University)

P2-ap.208

Study of Morphology and Device Property of Quantum Dot Light Emitting Diode / KIM Jaeseung[1], KIM Hyunjung[*1] ([1]Physics, Sogang University, [2]Department of Information Display, Kyung Hee University)

P2-ap.209

콘쥬게이션 폴리머 코팅 조건에 따른 형광 소멸 정도의 차이 연구 / NOH DaeGwon[1], OH Eunsoon[*1] ([1]Department of Physics, Chungnam National University)

P2-ap.210

Vertical transistor synapse based on Schottky barrier height modulation with organic ferroelectric material / WANG Gunuk[*1], HAM Seonggil[1], JANG Jingon[1], KOO Dohyoug[1], JANG Seonghoon[1], LEE Chul-Ho[1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University)

P2-ap.211*

Controlling evaporator temperature to improve carrier properties of crystalline organic semiconductor / LIM EunJu[*1,2], CHO Seongjib[1] ([1]Convergent Systems Engineering, Dankook University, [2]Science Education, Dankook University)

P2-ap.212*

Eu^{3+} 이온이 도핑된 $CaTiO_3$ 나노입자를 이용한 엑소좀 분리 연구 / BACK Sung Jin[1], KIM Woong[2], KIM Seok Jun[2], JUNG Gyeong Bok[*1] ([1]Physics Education, Chosun University, [2]Biomedical Science, Chosun University)

P2-ap.213*

Bioelectronic nose with micelle-stabilized olfactory receptors based on CNT-FET for detecting buttery flavors / CHOI Dan Min[1], SHIN Narae[1], HONG Seung Hun[*1], PARK Tai Hyun[2], LEE Seung Hwan[3] ([1]Physics, Seoul National University, [2]Department of Chemical and Biological Engineering, Institute of Chemical Processes, Seoul National University, [3]Department of Bionano Engineering and Bionanotechnology, Hanyang University)

[P2-as]

Astrophysics
포스터 발표

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
Metaverse Presentation (mandatory): April 21, 17:10-18:30
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P2-as.001

Development of new electron Pair Distribution Function (ePDF) analysis software for future gravitational wave detector upgrades / KIM PilSung[1], KIM Minhyo[1], LEE Kyung-ha*[1] ([1]Physics, Sungkyunkwan University)

P2-as.002

Development of effective local atomic structure analysis method for amorphous coating materials for future gravitational wave detectors / KIM Minhyo[1], KIM PilSung[1], LEE Kyung-ha*[1] ([1]Physics, Sungkyunkwan University)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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P2-at.001
The construction of a 2nd repump laser for laser cooling of MgF molecules / YOO Changhyuk[1], ROH Seunghwan[1], CHO Youngjoo[1], KWON Kikyeong[1], LEE Giseok[1], LIM Dongkyu[1], CHAE Eunmi*[1] ([1]The department of Physics, Korea University)

P2-at.002*
Phase noise measurement of a Raman laser system with low-phase noise fiber lasers for an atomic quantum gravimeter / HWANG Sungi[1], LEE Sanglok[1], BAEK Jaeuk[1], JEONG Jeongyoun[1], MOON Geol*[1] ([1]Department of Physics, Chonnam National University)

P2-at.003
Construction of a buffer-gas beam source towards a magneto-optical trap for MgF molecules / KWON Kikyeong[1], ROH Seunghwan[1], CHO Youngjoo[1], YOO Changhyuk[1], LIM Dong kyu[1], LEE Giseok[1], CHAE Eunmi*[1] ([1]The department of Physics, Korea University)

P2-at.004*
Parametric resonance of ^{85}Rb in Dual Magneto-optical Trap / BAEK Jaeuk[1], HWANG Sungi[1], LEE Sanglok[1], JEONG Jeongyoun[1], MOON Geol*[1] ([1]Department of Physics, Chonnam National University)

P2-at.005*
Towards the Creation of Degenerate Fermionic/Bosonic NaK Molecular Gases with Long-range Dipolar Interactions / KIM Yoonsoo[1], LEE Sungjun[1], CHANG JaeRyeong[1], LIM Younghoon[1], PARK Jee Woo*[1] ([1]Department of Physics, POSTECH)

P2-at.006
Analysis of high-harmonic generation in solids using diabatic basis / LEE Min-Ho*[1], CHOI Nark Nyul[1], BYUN Chang woo[1] ([1]School of Liberal Arts and Teacher Training, Kumoh National Institute of Technology)

P2-at.007
Closed Triple Collision Orbits and Stability Matrix / LEE Min-Ho*[1], BYUN ChangWoo[1] ([1]School of Liberal Arts and Teacher Training, Kumoh National Institute of Technology)

P2-at.008

공진기 내부에 포획된 단일 중성 원자의 움직임 분석 Analysis on the motion of single trapped atoms in an optical cavity / KIM Donggeon*[1], LEE Dowon[1], HA Taegyu[1], NOH Changsuk[2], LEE Moonjoo[1] ([1]Electrical Engineering, POSTECH, [2]Department of Physics, Kyungpook National University)

P2-at.009

Moving frame imaging of cold atoms in an optical dipole trap for coupling to nanophotonic devices / SEO Meungho*[1], DO Inhwan[2], LEE Hansuek[2], HONG Hyungue[1], HAN Jungho[1], PARK Sang Eon[1], LEE Sang-Bum[1], KWON Taekyong[1], MUN Jongchul[1], LEE Jae Hoon[1] ([1]KRISS, [2]Department of Physics, KAIST)

P2-at.010

Identification of the number of graphene layers and absence of fluorine layer on fluorinated graphene with partially removed thin film via AFM / KIM Namryeol[1], KIM Hyeonsu[1], SON Jangyup[2], AN Sangmin*[1] ([1]Department of Physics, Institute of Photonics and Information Technology, Jeonbuk National University, [2]Functional Composite Materials Research Center, Korea Institute of Science and Technology)

P2-at.011*

Magnetic Field Dependence of Modulation Transfer Spectroscopy for 87Rb and 85Rb Atoms / JEONG Jeongyoun[1], KIM Subin[1], LEE Sanglok[1], BAEK Jaeuk[1], HWANG Sungi[1], NOH Heung-Ryoul*[1], MOON Geol*[1] ([1]Department of Physics, Chonnam National University)

P2-at.012

Estimating non-Gaussianity of a quantum state by measuring orthogonal quadratures / PARK Jiyong*[1] ([1]School of Basic Sciences, Hanbat National University)

P2-at.013

Hitting time in a point of view on a graph as an electric network / CHOI Nark Nyul*[1], LEE Min-Ho[1], BYUN Chang Woo[1] ([1]School of Liberal Arts and Teacher Training, Kumoh National Institute of Technology)

P2-at.014

EIA and EIT of a degenerate two-level system in ^{85}Rb atoms in the case of the linear parallel polarization configuration / JADOON Zeeshan Ali Safdar[1], HASSAN Aisar Ul[1], NOH Heung-Ryoul[2], KIM Jin-Tae*[1] ([1]Dept. of Photonic Eng., Chosun University, [2]Dept. of Physics, Chonnam University)

P2-at.015*

Compensating the drift of mode-locked lasers' repetition rate to drive trapped-ion qubits / LEE Minho*[1], KIM Myunghun[1], KIM Keumhyun[1], HONG JungSoo[1], LEE Won Chan[1], LEE Hyegoo[1], MOON Young il[1], KIM Taehyun[2], LEE Moonjoo[1] ([1]Electrical Enginerring Department, Electrical Engineering, POSTECH, [2]Computer Science Department, Seoul National University)

P2-at.016*

A concentric solid immersion lens shortening milling time and retaining photon collection efficiency for nitrogen-vacancy center / PARK SungJoon[1], KIM Gyeonghun[1], KIM Dohun*[1] ([1]Department of Physics and Astronomy, Seoul National University)

P2-at.017

Observation of the photon statistics of single-atom superradiance / AN Kyungwon*[1], OH Seung-hoon[1], KIM Jinuk[2], HA Junseo[1], SON Gibeom[1], YANG Daeho[3] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Electrical Engineering, POSTECH, [3]Samsung Advanced Institute of Technology, Samsung Electronics)

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P2-co.101*

Poling-driven modulation in structural and optical properties of Eu^{3+} doped $(1-x)Na_{0.5}Bi_{0.5}TiO_3-xBaTiO_3$ / HAN Jaeho[1], WI Sang Won[1], KIM Eun-Young[2], CHO Samyeon[2], BU Sang-Don[2], LEE YUN SANG[*1] ([1]Department of Physics, Soongsil University, [2]Department of Physics, Jeonbuk National University)

P2-co.102*

Study of electrical property changes of aligned $PbTiO_3$ nanotube synthesized by hydrothermal method / KIM Bo Hyeon[1], KIM Eun-Young[1], CHO Sam Yeon[1], BU Sang Don[*1] ([1]Department of Physics, Jeonbuk National University)

P2-co.103

The interplay of oxygen vacancies and ferroelectricity in Ca-substituted super-tetragonal $BiFeO_3$ / YANG Chan-Ho[*1,2,3], KIM Jihun[1,2], YEO Youngki[1,2] ([1]Physics, KAIST, [2]Center for Lattice Defectronics, KAIST, [3]KAIST Institute for NanoCentury, KAIST)

P2-co.104

Enhanced electromechanical response (111)-oriented perovskite ferroelectric oxides / LEE Ji Hye[1,2], KIM Hong Joon[1,2], RYOO Eunjo[3], JANG Jinhyuk[4], KIM Sanghyeon[3], KIM Jeong Rae[1,2], PARK Se Young[5], CHOI Si-Young[4], LEE Daesu[3], NOH Tae Won[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Correlated Electron Systems, Institute of Basic Science, Seoul National University, [3]Department of Physics, POSTECH, [4]Department of Materials Science and Engineering, POSTECH, [5]Department of Physics , Soongsil University)

P2-co.105

Growth and atomically resolved polarization mapping of ferroelectric Bi_2WO_6 thin film / JEONG Jihwan[1,2], DAS Saikat[1,2], MUN Junsik[2,3], KIM Jinkwon[1,2], KIM Jeong Rae[1,2], PENG Wei[1,2], KIM Miyoung[2,3], NOH Tae Won[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Correlated Electron Systems, Institute for Basic Science, [3]Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)

P2-co.106

Synthesis, structure, and PL emission of Ce^{3+} and Eu^{3+} co-doped Sr_2SnO_4 / LEE Dong Jae[1], LEE YUN SANG[*1,2] ([1]Department of Physics and Integrative Institute of Basic Science, Soongsil University, [2]Department of Physics, Soongsil University)

P2-co.107

Growth phase diagram of cobalt oxide thin films with control of oxygen vacancy / NOH Tae Won[*1,2], SHIN Min Soo[1,2], LEE Han-Gyeol[1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Institute for Basic Science, CCES (IBS))

P2-co.109

Investigation of temperature dependent resistance of two-dimensional electron gas in $LaAlO_3/SrTiO_3$ hetero-interface / KWAK Yongsu[1], LEE Joon Sung[3], KIM Jinhee[2], SONG Jong Hyun[*1] ([1]Chungnam National University, [2]플랑크상수질량팀, KRISS, [3]Display and Semiconductor Physics, Korea University)

P2-co.110*

Magnetic octupole induced oscillation of Hall effect in an antiferromagnetic semimetal / SONG Jeongkeun[1,2], OH Taekoo[1,2], KO Eunkyo[1,2], LEE Ji Hye[1,2], KIM Woo Jin[3], ZHU Yangyu[4], YANG Bohm-Jung[1,2], LI Yangyang[4], NOH Tae Won[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Correlated Electron Systems, CCES (IBS), [3]Department of Physics, Stanford University, [4]School of Physics, Shandong University)

P2-co.111

Spectroscopic evidence for the metallic ground state of $SrIrO_3$ monolayer / KIM Donghan[1,2], SOHN Byungmin[3], KIM Changyoung[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]CCES (IBS), CCES (IBS), [3]Department of Applied Physics, Yale University)

P2-co.112

Transition of temperature dependent resistivity behavior in $SrTiO_3/SrIrO_3/SrTiO_3$ depending on the thickness of the $SrIrO_3$ film / LEE DongWoo[2], CHOI JungChan[2], MAENG JinYoung[2], SONG Jong Hyun[*1,2] ([1]Chungnam National University, [2]Department of physics, Chungnam National University)

P2-co.113

Correlation between the magnetic exchange energy and Neel temperature in pyrochlore ruthenates / LEE Jae Hyuck[1,2], SONG DONGJOON[1,2,4], KIM Junkyoung[3], WULFERDING Dietrich[1,2], PARK Seung Ryong[3], KIM Changyoung[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Correlated Electron Systems, Institute for Basic Science, [3]Department of Physics, Incheon National University, [4]Quantum Matter Institute, University of British Columbia)

P2-co.114

Changes in physical properties of nickelate thin film due to pulsed laser irradiation / MAENG Jin Young[2], SONG Jong Hyun[*1,2] ([1]Chungnam National University, [2]Department of Physics, Chungnam National University)

P2-co.115*

Manifestation of Hund's rule effect in the optical conductivity near the metal–insulator transition of NiS_2 / PARK Ina[1], JANG Bo Gyu[3], KIM Dongwook[1], SHIM Ji Hoon[*1,2] ([1]Department of Chemistry, POSTECH, [2]Department of Physics, POSTECH, [3]Quantum Universe Center, KIAS)

P2-co.116*

The Exciton–Phonon Coupling in the Critical Temperature Tc of Excitonic Insulator State in $TiSe_2$ / NGUYEN Thanh Xuan[*1], CHOI Han Yong[1] ([1]Department of Physics, Sungkyunkwan University)

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P2-co.201*
Electrical and Thermoelectric Properties of Gamma-GeSe / KIM Kwanpyo*[1], KIM Joonho[1], JANG Jeongsu[1], JUNG Joong-Eon[1], KIM Jong Hyuk[1], LEE Sol[1], LEE Yangjin[1], BAE Heesun[1], LEE Chaewoon[1], IM Seongil[1], CHOI Young Jai[1] ([1]Physics, Yonsei University)

P2-co.202
Analysis of Photoelectrochemical (PEC) property and APXPS of Strontium Titanate Oxysulfide (STO-S) / KIM Hyuk Jin[1], CHO Ayoung[2], RHEE Tae Gyu[1], KHIM Yeong Gwang[1], KIM Min Jay[3], CHOI Taekjib[2], CHANG Young Jun*[1,3] ([1]Department of Physics, University of Seoul, [2]Department of Nanotechnology and Advanced Materials Engineering, Sejong University, [3]Department of Smart cities, University of Seoul)

P2-co.203*
Charateristics of Interlayer Excitons in WS_2/PbI_2 Heterostructures / JOO Jinsoo*[1], KIM Jun Young[1], KIM Taek Joon[1], KIM Jeongyong[2], LEE Eunji[2] ([1]Depsrtment of Physics, Korea University, [2]Department of Energy Science, Sungkyunkwan University)

P2-co.204*
Observing phase degradation of NCM materials over cycling via Simultaneous EDS-EELS tomography / OH Jaewhan[1], KIM Seunggu[2], YANG Yongsoo*[1], BYON Hyeryung[2] ([1]Department of Physics, KAIST, [2]Department of Chemistry, KAIST)

P2-co.205
Low temperature characteristics of interlayer excitons in $MAPbI_3$-perovskite/CdSe-ZnS-QD hybrids / KIM Taek Joon[1], JOO Jinsoo*[1], LEE Eunji[2], KIM Jeongyong[2] ([1]Depsrtment of Physics, Korea University, [2]Department of Energy Science, Sungkyunkwan University)

P2-co.206
개방형 공초점 공동을 활용한 전기적 패브리-페롯 간섭계 / CHUNG Yun Chul*[1], JUNG Hwanchul[1] ([1]Pusan National University)

P2-co.207*

Coexistence of Surface 2DEG and Topologically Protected Surface states in Topological Insulator Nanowire / KWON Du Hyuk[1,2], DOH Yong-Joo[3], BAE Myung-Ho[2], SONG Jong Hyun*[1] ([1]Chungnam National University, [2]Electricity and Magnetism Group, KRISS, [3]Department of Physics and Photon Science, GIST)

P2-co.208

Blue-Shift of Oxygen-Hydrogen Stretching Mode in Nano Films of Glycerol Bounded by Interfaces / SHIN Jungyu[1], LEE In Jae*[1] ([1]Department of Physics, Chonbuk National University)

P2-co.209*

Cryogenic voltage sampling for a 10^6 Hz signal propagating in a 2DEG channel / KIM Minsik[1,2], KIM Bum-Kyu[1], PARK Suk-In[3], SONG Jindong[3], KIM Ju-Jin[2], BAE Myung-Ho*[1] ([1]Dep. of standards for physics, KRISS, [2]Physics, Jeonbuk National University, [3]광전소재연구단, KIST)

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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P2-pa.001
Studies on the response of NEOS-II Detector / KIM Jinyu*1 ([1]Department of Physics, Sejong University)

P2-pa.002*
Lowering the energy threshold to 0.5 keV in NaI(Tl) scintillation detectors using SiPMs / KIM Won Kyung*1,2 ([1]Department of Basic Science, University of Science and Technology, [2]Center for Underground Physics, IBS)

P2-pa.003
The status of AMoRE-II background simulation / SEO Jeewon[1], LEE Moo Hyun*1,2, JEON Eun Ju[1,2] ([1]IBS School, University of Science and Technology, [2]Center for Underground Physics (CUP), IBS)

P2-pa.004
Performances of R&D crystal detectors for AMoRE-II at IBS HQ / KIM Yeongduk*1, KIM Wootae[1,2], KIM Seung Cheon[1] ([1]IBS Center for Underground Physics, IBS, [2]IBS School, UST)

P2-pa.005
Study on Hue-wavelength Relationship Using Digital Photo Image for Liquid Scintillator / JOO Kyung Kwang*1, CHOI JIWON[1] ([1]Department of Physics, Chonnam National University)

P2-pa.006*
Estimating various uncertainties in the Hue-Wavelength relationship using a CMOS sensor with CFA-based digital images / JOO Kyung Kwang*1, PARK Hyeon Woo[1] ([1]Department of Physics, Chonnam National University)

P2-pa.007
Radioactivity levels in lead shields for experiments of rare process events / PARK Su-yeon[1], KIM Yeongduk*1, GILEVA Olga[1], KANG Woongu[1], KIM Gowoon[1], LEE Eunkyung[1], LEE Jaison[1], SO Jungho[1], YOON Sangcheol[1] ([1]IBS Center for Underground Physics, IBS)

P2-pa.008

R & D of water Cherenkov detector as a muon veto detector for AMoRE-II / KIM Yeongduk[*1,2], NYANDA Pendo Butogwa[2], LEE Jaison[1], KIM Gowoon[1], YI Eungseok[1], GILEVA Olga[1] ([1]IBS Center for Underground Physics, IBS, [2]Basic Science, UST)

P2-pa.009

AMoRE-I multiple hit study / KIM Hong Joo[*1], HA Daehoon[1], SO Jungho[2], KIM Yeongduk[2], OH Yoomin[2], PARK Su-yeon[2] ([1]Department of Physics, Kyungpook National University, [2]CUP, IBS)

P2-pa.010

Status of plastic scintillator detector development for AMoRE-II muon veto system / KIM Go Woon[*1], BUTOGWA Nyanda Pendo[2], KIM Yeongduk[1], LEE Jai Son[1], PARK Su-Yeon[1], YI Eungseok[1] ([1]CUP, IBS, [2]Basic Science, UST)

P2-pa.011

Application of photoploymerized tissue equivalent plastic scintillator for use as a dosimeter in radiotherapy / KIM Hong Joo[*1], KIM Gwang Soo[1], KIM Seong Hwan[2] ([1]Department of Physics, Kyungpook National University, [2]Department of Radiology, Cheongju University)

P2-pa.012

R&D of the NaI(Tl) crystal encapsulation for the NEON experiment / CHOI Jaejin[*1] ([1]Department of Physics and Astronomy, Seoul National University)

P2-pa.013

Report of the neutral particle identification for searching a weakly interacting dark matter / WOO Jong-Kwan[*1], JO Eunhye[1], LIU Dong[2] ([1]Department of Physics, Jeju National University, [2]Research Institute for Basic Science, Jeju National University)

P2-pa.014*

Implementation of magnetic monopole physics in GEANT4 and simulation results / LEE Junghyun[*1], HAUPTMAN John[2], HUH Changgi[1], KIM Bobae[1], LEE SehWook[1], RYU Minsang[3], EO Yun[4], YOO Hwidong[4] ([1]Department of physics, Kyungpook National University, [2]Department of physics, Iowa State University, [3]Center for High Energy Physics, Kyungpook National University, [4]Department of physics, Yonsei Univeresity)

P2-pa.015

Performance of the Dilution Refrigerator System for AMoRE-II / LEE Seunghun[*1,2] ([1]Center for Underground Physics, IBS, [2]Department of Physics, Kyungpook National University)

P2-pa.016*

Neutrino event reconstruction in Korean Neutrino Observatory (KNO) detector / YU Seonghyeon*1, YU Intae[1], KWON Eunhyang[1], SEO Jiwoong[1], KIM Kihoon[1], KIM Hyunsoo[2], JANG Jeeseung[3], LEE Youngmin[4], SHIN Bokkyun[5], SEO Hyunkwan[6], YOO Jonghee[7], YANG Byeongsu[7], JUNG Seunghyun[7] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Physics and Astronomy, Sejong University, [3]Department of Physics and Photon Science, GIST, [4]Department of Physics, KAIST, [5]Department of Physics, UNIST, [6]Department of Radiation Oncology, Gachon University Gil Medical Center, [7]Department of Physics and Astronomy, Seoul National University)

P2-pa.017*

Geant4 simulation of 3-γ annihilation of positronium for KAPAE detector / JEONG Dongwoo[1], KIM Hong Joo*1, PARK Hyeoung Woo[1], JEGAL Jin[1], KHAN Arshad[1] ([1]Department of Physics, Kyungpook National University)

P2-pa.019*

Study of cosmic-ray muon trajectories with plastic scintillator panels and silicon photomultipliers / KIM Jinyoung*1, LEE Yujin*1, HA Chang Hyon*1 ([1]Physics, Chung-Ang University)

P2-pa.020*

Reconstruction Tool for Low Energy Neutrino Event at KNO / KIM Kihoon*1, YU Intae[1], SEO Jiwoong[1], KWON EunHyang[1], YU Seonghyeon[1], KIM HyunSoo[2], JANG Jee Seung[3], LEE Young-Min[4], SHIN Bokkyun[5], YANG Byeongsu[6], YOO Jonghee[6], JUNG Seunghyun[6], SEO Hyunkwan[7] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Physics and Astronomy, Sejong University, [3]Department of Physics and Photon Science, GIST, [4]Department of Physics, KAIST, [5]Department of Physics, UNIST, [6]Department of Physics and Astronomy, Seoul National University, [7]Department of Radiation Oncology, Gachon University Gil Medical Center)

P2-pa.021*

Search for Pauli Exclusion Principle violation in an NaI(Tl) crystal / LEE Yujin*1, KIM Jinyoung*1, HA Chang Hyon*1 ([1]Department of Physics, Chung-Ang University)

P2-pa.022*

Alpha signal modeling for the NaI(Tl) crystals in COSINE-100 / LEE Hyunseok*1 ([1]Basic Science, University of Science and Technology)

[P2-pl.1]

Plasma physics I
포스터 발표

Poster Exposure Period : April 18, 12:00 ~ April 22, 18:00
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P2-pl.101
Development of Transverse Emittance Measurement Method Using Wire-scanner and Computational Tomography / DANG Jeongjeung*[1], LEE Seunghyun[1], YUN Sang pil[1], KIM DongHwan Dani[1], KWON Hyeok-Jung[1], KIM Han Sung[1] ([1]KAERI)

P2-pl.102
3 MeV, 350 MHz RFQ 설계 비교 연구 / KWON Hyeok-Jung*[1], KIM Han Sung[1], DANG Jeongjeung[1], LEE Seunghyun[1], KIM DongHwan[1], YUN Sang pil[1] ([1]KOMAC, KAERI)

P2-pl.103
Development of Artificial Neural Network Model for the Low Energy Beam Tuning in the KOMAC Proton Injector / KIM DongHwan*[1], LEE Seunghyun[1], DANG Jeongjeung[1], KWON Hyeok-Jung[1], YUN Sang pil[1], KIM Han Sung[1] ([1]Division of Accelerator Development and Research, KAERI)

P2-pl.104
Formation characteristics of magnetized Plasma Dipole Oscillation / SONG Hyung Seon[1], HUR Min Sup*[1] ([1]Physics, UNIST)

P2-pl.105
Beam Error Analysis and Orbit Correction Simulation Studies at KOMAC / LEE Seunghyun*[1], KWON Hyeok-Jung[1], KIM Han Sung[1], DANG Jeongjeung[1], YUN Sang pil[1], KIM DongHwan Dani[1] ([1]KOMAC, KAERI)

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