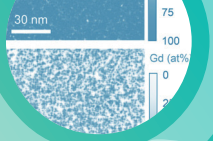

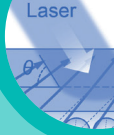

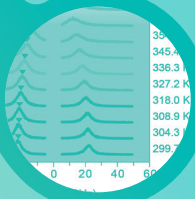

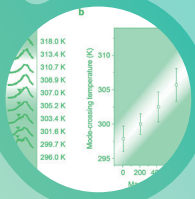

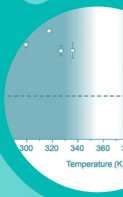

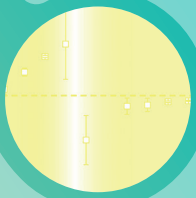

- 2021. 04 제39권 제1호
- Bulletin of the Korean Physical Society
- 한국물리학회 회보

2021년 2021 KPS Spring Meeting

봄 학술논문발표회 및 제97회 정기총회

2021년 4월 21일(수) ~ 23일(금)

Virtual Conference

KPS 한국물리학회 The Korean Physical Society

Contents

이번 호의 표지는 김창수, 이수길 (공동제1저자), 김현규, 박지호, 문경웅, 박재열, 육종민, 이경진, 박병국, 김세권*, 김갑진*, 황찬용* (*공동교신저자) 회원들의 최근 논문 “Distinct handedness of spin wave across the compensation temperatures of ferrimagnets, Nat. Mater. 19, 980 (2020)”에서 모티브를 채택했다. 이 논문에서는 반강자성 정렬 된 준강자성체의 온도에 따른 회전동역학을 브릴루앙 광 산란을 이용하여 연구하였다. 이번 봄 학술논문발표회 C5-co (Pioneer: Recent Advances in X-ray Science II) 세션에서 김창수 회원이 관련 주제에 대해서 발표할 예정(C5.02)이다.

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	130,000	Subscription (Fellow/Regular member)	1 journal	80,000
	Student member	70,000		2 journals	120,000
	Nonmember (general)	300,000			
	Nonmember (invited speaker or student)	150,000	Subscription (Student member)	1 journal	40,000
Membership	Fellow	100,000		2 journals	60,000
	Regular member	50,000			
	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 rooms (April 19~April 23) On-line Discussion(mandatory): April 21, 16:00-16:50 & April 23, 14:00-14:50	• 제97회 정기총회 & 평의원회: 21 • Plenary Lecture: 01 • Modern Lock-in Detection Technology: 21 • Open KIAS: Hubble Constant Conundrum: 21 • 21세기 대학 일반물리학: 21 • 기초연구사업 정책세션: 21 • 인공지능과 물리학: 21 • APCTP 저자강연: 21 • 오창 다목적 방사광가속기: 21 • 여성위원회 특별 패널 토의: 21 • 대중화위원회 온라인 특별 강연: 21
Nuclear Physics	03		
Condensed Matter Physics	05, 06, 07, 08		
Applied Physics	09, 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. Oral Presentations

- All oral sessions will be essentially virtual meetings and conducted via Zoom.
- You should pre-record your video presentation, which will be broadcasted online during the scheduled time. (Q&A will be conducted in real time. An invited speaker has an option to deliver his/her presentation in real time.)
- Please adhere to the time limit for your presentation, which includes setup, presentation, and Q&A: 12 minutes for a contributed talk and 24 (or 36, 48) minutes for an invited talk.

5. Poster Presentations

- All poster sessions will be essentially virtual meetings and are accessible online at the KPS homepage during the Conference (April 20, 12:00 ~ April 23, 18:00).
- All presenters are required to attend the e-Poster Online Discussion Sessions, scheduled on April 21 and 23, and answer the questions through the comment window.

Session	Date and Time	Presentation Method
e-Poster Release	Apr. 19(Mon.) - Apr. 23(Fri.)	Poster presenters daily check the comments on their presentation.
e-Poster Online Discussion	Apr. 21(Wed.) 16:00-16:50 Apr. 23(Fri.) 14:00-14:50	Poster presenters must attend and reply to the questions.

6. 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

7. 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.

Program for 2021 KPS Spring Meeting

Virtual Conference (April 21-23, 2021)

	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 phys		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. 21 (Wed.)	Session A 11:10~12:58	A1-pa Accelerator I	A2-pa Non-accelerator I	A3-nu Hadron Physics		A5-co [F] Graphene and Topological Materials	A6-co Magnetism	A7-co Dielectrics	A8-co Computational Physics I	A9-ap [F] 2D	A10-ap [F] Spin	A11-ap Energy	A12-ap [F] First-principles-I	A13-st Biophysics					A18-se [F] Emerging Energy Mat and Dev	A19-se Semiconductor growth		e-Poster Session (Apr.19-23)	A21-or Modern Lock-in Detection Technology
	Lunch Break 12:58~14:00																						
	Tutorial 14:00~15:48					T1-co [T] Quantum Spintronics				T2-ap [T] KPFM					T3-te [T] Teacher Educator	T4-pl [T] 3D Field Physics in Tokamak		T5-at [T] Optical Clocks and SI Second	T6-se [T] Characterizing electric bandgaps				
	Break 15:48~16:00																						
	Session P1 16:00~16:50	e-Poster On-line Discussion - I																					M21-or 제97회 정기총회 & 평의원회 (0)
	Break 16:50~17:00																						
	Session PL 17:00~18:00	PL1-or Plenary Lecture																					
	18:10~19:10																						
Apr. 22 (Thu.)	Session B 09:00~10:48	B1-pa [P] LHC Run III CMS I		B3-nu Nucl. strc. & reac.		B5-co [P] X-ray Science I	B6-co [F] Lattice defects in solids I	B7-co Strongly Correlated/ Dielectric	B8-co Nano and meso I	B9-ap 2D-I	B10-ap [P] Spintronics-I	B11-ap [P] Organic-I	B12-ap [F] First-principles-II	B13-st Complex Systems		B15-pl [P] 3D Effects in Tokamak I	B16-op Photonics	B17-at AMP I	B18-se [P] Transferable epitaxy I	B19-se [F] Semicon materials for quantum inform			B21-or Open KIAS: Hubble Constant Conundrum
	Break 10:48~11:10																						
	Session C 11:10~12:58	C1-pa Accelerator II	C2-pa Particle phenomenology I	C3-nu Nucl. Strc. & Reac.	C4-as Astrophysics Theories	C5-co [P] X-ray Science II	C6-co [F] Lattice defects in solids II	C7-co Strongly Correlated	C8-co [F] Quantum Coherence	C9-ap 2D-II	C10-ap [P] Spintronics-II	C11-ap [P] Organic-II	C12-ap [F] First-principles-III	C13-st Complex Nonlinear		C15-pl [P] 3D Effects in Tokamak II	C16-op [F] Terahertz Device	C17-at AMP II	C18-se [P] Transferable epitaxy II	C19-se [F] Electric properties of semiconductor	C20-bp [F] Cell Mechanobiology		C21-or 21세기 대학 일반물리학
	Session CC 13:00~14:00			CC3-nu [P] Pioneer for Nucl. Exp. I																			
	Session D 14:00~15:48	D1-pa Accelerator III	D2-pa Non-accelerator II	D3-nu [P] Pioneer for Nucl. Exp. II	D4-as [F] Astrophysics I	D5-co [P] ARPES study with strain I	D6-co [F] High magnetic fields I	D7-co Computational Physics II	D8-co Nano and meso II	D9-ap [F] Nano device-I	D10-ap [P] Skyrmion-I	D11-ap Organic-III	D12-ap [F] Oxide-I	D13-st Nonequilibrium Systems		D15-pl [F] Advanced Beam Physics	D16-op [F] Terahertz Spectroscopy	D17-at [P] Cold Molecules I	D18-se [P] The 3rd Korea-Taiwan Joint Workshop I	D19-se [F] Optical properties of semiconductor	D20-bp Biological Physics		D21-or 기초연구사업 정책세션
	Break 15:48~16:10																						
	Session E 16:10~17:58	E1-pa [P] LHC Run III CMS II	E2-pa Field and string theory I	E3-nu [P] Pioneer for Nucl. Exp. III	E4-as [F] Astrophysics II	E5-co [P] ARPES study with strain II	E6-co [F] High magnetic fields II	E7-co Computational Physics III	E8-co Surface/ Interface/Nano I	E9-ap [F] Nano device -II	E10-ap [P] Skyrmion-II	E11-ap [F] Optics	E12-ap [F] Oxide-II	E13-st Phase Transition		E15-pl Accelerator, Beam & Laser	E16-op Plasmonics	E17-at [P] Cold Molecules II	E18-se [P] The 3rd Korea-Taiwan Joint Workshop II	E19-se [P] The 2nd Korea-North Macedonia I	E20-bp [F] Biophysics of IDPs		E21-or 인공지능과 물리학
	Session EE 18:10~19:58																		EE18-se Emerging 2D materials and devices	EE19-se [P] The 2nd Korea-North Macedonia II			EE21-or APCTP 저자강연 (19:00-20:00)
Apr. 23 (Fri.)	Session F 09:00~10:48	F1-pa Accelerator IV	F2-pa Non-accelerator III	F3-nu Heavy-ion collision	F4-as Astrophysics Exp./Obs.		F6-co [F] Symmetry-manipulated oxides I	F7-co Magnetism/ Superconductivity	F8-co Surface/ Interface/Nano II	F9-ap 2D-III	F10-ap [F] RIXS	F11-ap [F] Quantum	F12-ap [F] Oxide-III		F14-te Physics Education	F15-pl [F] KSTAR	F16-op Lasers and Interferometry		F18-se Low-D mater and novel quantum	F19-se Device and applications			
	Break 10:48~11:10																						
	Session G 11:10~12:58	G1-pa [F] Belle II Status	G2-pa Field and string theory II	G3-nu HIC & Nucl. Exp.		G5-co [F] Topology in 2D materials	G6-co [F] Symmetry-manipulated oxides II	G7-co Superconductivity		G9-ap Surface	G10-ap Oxide and spin	G11-ap Organic and photonics	G12-ap [F] Oxide-IV		G14-te [F] High School Credit System	G15-pl Nuclear Fusion, Basic Plasma & Application	G16-op Quantum Optics		G18-se [F] Application of Emerging Semicon	G19-se Energy materials and devices			G21-or 오창 다목적 방사광가속기
	Lunch Break 12:58~14:00																						
	Poster Session 2 14:00~14:50	e-Poster On-line Discussion - II																					GG21-or 여성위원회 특별 패널 토의 (14:00-15:30)
	Break 14:50~15:00																						
	Session H 15:00~16:48	H1-pa Accelerator V	H2-pa Particle phenomenology II	H3-nu Nucl. Exp.											H14-te [F] Population Cliffs			H17-at [F] Quantum Simulation I	H18-se Quantum electronics, photonics	H19-se [F] 2D-materials moire patterns			
	Break 16:48~17:10																						
	Session I 17:10~18:58			I3-nu Nucl. Str., Astro, & Eng. & Had.														I17-at [F] Quantum Simulation II					
	Break 18:58~20:00																						
	Session W 20:00~22:00																						W21-or 대중화위원회 온라인 특별 공연(20:00-)

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

Poster Sessions

- Presentation : **April 19, 12:00 ~ April. 23, 18:00**
- On-line Discussion(mandatory) : **April 21, 16:00-16:50 & April 23, 14:00-14:50**

P1-pa.1 Accelerator-based particle physics experiments	**P1-pa.2** Non-accelerator-based particle physics experiments	**P1-nu** Nuclear physics	**P1-co.1** Magnetism/ Superconductivity	**P1-co.2** Strongly Correlated/ Dielectrics/ Functional Oxides	**P1-co.3** Nano-Meso/ Surface-Interface	**P1-co.4** Computational Condensed Matter Physics	**P1-co.5** Other condensed materials/ Instruments
P1-ap.1 2D materials	**P1-ap.2** Nano, surface, and interface	**P1-ap.3** Magnetism, Oxide, Energy, and Computational	**P1-ap.4** Quantum, Organic, and Bio	**P1-ap.5** Photonics	**P1-st** Statistical Physics	**P1-te** Methods and Approaches in Physics Education	**P1-pl.1** Plasma physics I
P1-pl.2 Plasma physics II	**P1-op** Optics and Quantum Electronics	**P1-at** Atomic, Molecular and Optical Physics	**P1-se.1** Semiconductor physics I	**P1-se.2** Semiconductor physics II	**P1-as** Astrophysics Experiments /Observations	**P1-bp** Biological Physics	

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

Program at a glance

Date	Time	Program		Special Sessions & KPS Events
Apr. 21 (Wed)	11:10~12:58	Session A	e-Poster Session (Apr.19 ~ 23)	Zurich Instruments: Modern Lock-in Detection Technology
	12:58~14:00	Lunch Break		
	14:00~15:48	Tutorial		
	15:48~16:00	Break		
	16:00~16:50	e-Poster On-line Discussion I		제97회 정기총회 & 평의원회 (16:00-17:00)
	16:50~17:00	Break		
	17:00~18:00	Plenary		
Apr. 22 (Thu)	09:00-10:48	Session B		Open KIAS: Hubble Constant Conundrum
	10:48-11:10	Break		
	11:10~12:58	Session C		21세기 대학 일반물리학
	13:00-14:00	Session CC / Lunch Break		
	14:00-15:48	Session D		기초연구사업 정책세션
	15:48-16:10	Break		Break
	16:10-17:58	Session E		인공지능과 물리학
	17:58-18:10	Break		Break
	18:10~19:58	Session EE		APCTP 저자강연 (19:00-20:00)
Apr. 23 (Fri)	09:00-10:48	Session F		
	10:48-11:10	Break		
	11:10-12:58	Session G		오창 다목적 방사광가속기 특별세션
	12:58-14:00	Lunch Break		
	14:00-14:50	e-Poster On-line Discussion II		여성위원회 특별 패널 토의 (14:00-15:30)
	14:50-15:00	Break		
	15:00-16:48	Session H		
	16:48-17:10	Break		
	17:10-18:58	Session I		
	18:58-20:00	Break		
	20:00~22:00	Session W		대중화위원회 온라인 특별 공연 (20:00-)

Plenary Lecture

Tutorial sessions

Sessions organized by KPS committees

List of Award Winners' Presentations

A: April 21(Wed) 11:10-12:58

B: April 22(Thu) 09:00-10:48

C: April 22(Thu) 11:10-12:58

CC: April 22(Thu) 13:00-14:00

D: April 22(Thu) 14:00-15:48

E: April 22(Thu) 16:10-17:58

EE: April 22(Thu) 18:10-19:58

F: April 23(Fri) 09:00-10:48

G: April 23(Fri) 11:10-12:58

GG: April 23(Fri) 14:00-14:50

H: April 23(Fri) 15:00-16:48

I: April 23(Fri) 17:10-18:58

PL: April 21(Wed) 17:00-18:00

Tutorial: April 21(Wed) 14:00-15:48

W: April 23(Fri) 20:00-22:00

P1: e-Poster Release - April 19(Mon.), 12:00 ~ April 23(Fri.), 18:00
* e-Poster Online Discussion - April 21(Wed.), 16:00-16:50 & April 23(Fri.), 14:00-14:50

구두발표논문 시간표

Oral session schedule

기조강연 Plenary Lecture

[E] [PL1-or] Plenary Lecture

2021. 04. 21 Wednesday 17:00~18:00

Room: 01

좌장 : **유재준** 서울대

Chair : YU Jaejun (Seoul National University)

PL1.01 [17:00 - 17:48]

Chiral magnetic effect in a Weyl superconductor / BEENAKKER Carlo*1 ([1]Lorentz Institute for Theoretical Physics, Leiden University)

Professor Carlo Beenakker studied physics at Leiden University, earning a Ph.D. degree in 1984 on the theory of many-body hydrodynamic interactions in colloidal suspensions. After a postdoctoral year in Stanford and Santa Barbara (USA) he joined the Philips Research Laboratories in Eindhoven (The Netherlands). He returned to Leiden University in 1991 as professor of theoretical physics at the Lorentz Institute, a chair he holds to this date.

In 1987, while at Philips Research, Carlo Beenakker contributed to the discovery and explanation of conductance quantization in a quantum point contact, for which he shared the Royal Dutch Shell prize (1993) with his colleagues Henk van Houten and Bart van Wees. In Leiden he continued his research on quantum transport in nanostructures, honored with the Spinoza prize (1999), which is the highest scientific award in the Netherlands, the Physica prize (2003), and the AKZO Nobel Science Award (2006) "for his pioneering work in the field of nanoscience". His recent research is in the field of topological superconductivity, focusing on the ways in which Majorana fermions can be used for topological quantum computations, in close collaboration with the QuTech laboratory in Delft.

Carlo Beenakker has co-authored over 350 publications and is recognized by the Web of Science as a "Highly-cited Researcher". For his services to science and society he was elected member to the Royal Netherlands Academy of Arts and Sciences and knighted in the Order of the Dutch Lion.

This talk is hosted jointly by the Korean Physical Society and the Korea Institute for Advanced Study.

Abstract

The chiral magnetic effect is the appearance of a current along the lines of magnetic flux, due to an imbalance between Weyl fermions of opposite chirality. In a Weyl semimetal this is a dissipative, non-equilibrium current. We will discuss how this current can flow in equilibrium, without dissipation, in the vortex lattice of a Weyl superconductor. The chirality imbalance appears when one of the two chiralities is confined to vortex cores. The confined states are charge-neutral Majorana fermions.

Tutorial Sessions

[T1-co] Tutorial: Quantum Spintronics

2021. 04. 21 Wednesday 14:00~14:48

Room: 05

좌장 : **전건상** 이화여자대학교

Chair : JEON Gun Sang (Ewha Womans University)

[SCOPE]

기존 정보 처리 기술의 속도/에너지/집적도 문제를 해결하기 위해 입자의 전기적 성질인 전하와 자기적 성질인 스핀을 모두 이용하여 초고속 초저전력 정보 처리 기술을 개발하는 스핀트로닉스 연구가 수십년간 활발히 진행되고 있다. 특히, 최근 들어 기존 정보 처리 기술의 기능을 훌쩍 뛰어 넘는 차세대 기술을 개발하기 위하여 이차원 물질, 초전도체와 같은 양자 물질을 이용한 스핀트로닉스가 새로운 분야로 떠오르고 있다. 본 튜토리얼 강의에서는 양자 물질 과학과 스핀트로닉스가 결합된 양자 스핀트로닉스 분야에 대하여 예를 중심으로 논의하고자 한다.

T1.01 [14:00 - 14:48]

Unconventional Spin Transport in Quantum Materials / KIM Se Kwon*1 ([1]Physics, KAIST)

Recent advancements in spintronic techniques originally developed for spin-based devices now enable us to study fundamental spin physics of various quantum materials with unprecedented spin-current control and measurement, opening a new area of theoretical and experimental investigation of quantum systems. In this talk, we will introduce this emerging research area of spin transport in quantum materials which is fueled by the global interest in quantum information science. As examples, we will discuss our discovery of magnonic topological insulators realized by 2D magnets [1-3], which shows how spintronic techniques can be used for probing elusive quantum materials, and our prediction of long-range spin transport mediated by a vortex liquid in superconductors [4], which shows that quantum materials can provide novel platforms for efficient spin-transport devices. We will conclude the talk by offering a future outlook on quantum spintronics.

[1] S. K. Kim, H. Ochoa, R. Zarzuela, and Y. Tserkovnyak, "Realization of the Haldane-Kane-Mele Model in a System of Localized Spins," Phys. Rev. Lett. **117**, 227201 (2016)
[2] G. Go, S. K. Kim, and K.-J. Lee, "Topological Magnon-Phonon Hybrid Excitations in Two-Dimensional Ferromagnets with Tunable Chern Numbers," Phys. Rev. Lett. **123**, 237207 (2019)
[3] S. Zhang, G. Go, K.-J. Lee, S. K. Kim, "SU(3) Topology of Magnon-Phonon Hybridization in 2D Antiferromagnets," Phys. Rev. Lett. **124**, 147204 (2020)
[4] S. K. Kim, R. Myers, and Y. Tserkovnyak, "Nonlocal Spin Transport Mediated by a Vortex Liquid in Superconductors," Phys. Rev. Lett. **121**, 187203 (2018)

[T2-ap] Tutorial: Surface Photovoltage Characterizations using Kelvin probe force microscopy

2021. 04. 21 Wednesday 14:00~15:48

Room: 09

좌장 : 양상모 서강대학교

Chair : YANG Sang Mo (Sogang University)

[SCOPE]

Atomic force microscopy (AFM)는 가장 주목 받는 nanometrology tool 중 하나이다. 특히, 표면 전위를 측정하는 Kelvin probe force microscopy (KPFM)는 광원을 이용하면 높은 공간분해능으로 광생성 잉여 전하에 의한 surface photovoltage (SPV) 측정이 가능하다. 본 튜토리얼에서는 KPFM 기반 SPV 측정 원리와 연구사례를 살펴봄으로써 나노 소재 및 소자 연구에 있어서 다양한 활용 가능성을 고찰해보고자 한다.

T2.01 [14:00 - 15:48]

Surface Photovoltage Characterization using Kelvin Probe Force Microscopy / KIM Dong-Wook*1 ([1]Department of Physics, Ewha Womans University)

Atomic force microscopy (AFM)는 가장 주목 받는 nanometrology tool 중 하나이다. 특히, 표면 전위를 측정하는 Kelvin probe force microscopy (KPFM)는 광원을 이용하면 높은 공간분해능으로 광생성 잉여 전하에 의한 surface photovoltage (SPV) 측정이 가능하다. 본 튜토리얼에서는 KPFM 기반 SPV 측정 원리와 연구사례를 살펴봄으로써 나노 소재 및 소자 연구에 있어서 다양한 활용 가능성을 고찰해보고자 한다.

[T3-te] Tutorial: 교원양성대학 물리내용학 전공교수로 살아남기

2021. 04. 21 Wednesday 14:00~15:48

Room: 14

좌장 : 이경호 서울대학교

Chair : LEE Gyoungho (Seoul National University)

[SCOPE]

사범대학 물리교육과의 교육과정이 고유성과 전문성을 발전시켜나가기 위해서는 교육과정 내의 교과목의 지속적인 개선 노력이 필요하다. 본 튜토리얼은 사범대학에서 오랜 기간 물리내용학 강의를 개발해 온 발표자가 자신의 전문성을 신임 교수들과 공유하는 특별한 배움의 장이 될 것이다.

T3.01 [14:00 - 15:48]

물리교육과 내용학 수업의 전문성 기반에 의한 방향성 / KIM Sung Won*1 ([1]Science Education, Ewha Womans University)

이 발표에서는 사범대학 물리교육과에서 이루어지는 물리내용학 교육과 자연대학의 물리학과 또는 관련학과의 그것과의 차별화에 대한 논의를 다룬다. 이때 학과의 설립 목적에 따른 전문성 배양에 기반한 과목 개설과 수업에 대해 방향성을 실례와 함께 제시한다.

[T4-pl] Tutorial: 3D Field Physics in Tokamak Plasmas

2021. 04. 21 Wednesday 14:00~14:48

Room: 15

좌장 : **나용수** 서울대학교

Chair : NA Yong Su (Seoul National University)

[SCOPE]

3차원 자기장 섭동을 이용한 플라즈마 수송과 불안정성 제어는 그 놀라운 성능과 가능성으로 현대 핵융합 과학의 뜨거운 이슈로 떠오르고 있다. 한 예로 최근 한국의 KSTAR 장치에선 미래 핵융합 장치에 적용 가능한 방식의 엄밀한 삼차원 자장을 이용하여 수십 초에 달하는 고성능 플라즈마 운전을 국소적 불안정성이 없이 달성하는 괘거를 이룬 바 있다. 그러나 삼차원의 확장성만큼이나 복잡한 물리적 양상은 최적화된 조건과 적용에 여전히 도전 연구 과제로 남아있다. 해당 분야의 전세계적인 연구를 선도하고 있으며 미국의 국제 삼차원 자장 물리 연구 프로젝트를 이끌고 있는 박종규 박사를 초청하여 3차원 토카막 물리학의 근간과 발전, 최근 성과와 미래에 대해 다루고자 한다.

T4.01 [14:00 - 14:48]

3D Field Physics in Tokamak Plasmas / PARK J.-K.*[1], HU Q. M.[1], LOGAN N. C.[1,2], YANG S. M.[1], KIM S. K.[1,3], KOLEMEN E.[3], PAZ-SOLDAN C.[4], JEON Y. M.5, KIM K.[5], PARK G.[5], LEE H. H.[5], LEE J. H.[5], IN Y.[6], LEE Y.-S.[7], NA Y.-S.[7] ([1]Princeton Plasma Physics Laboratory, [2]Lawrence Livermore National Laboratory, [3]Princeton University, [4]Columbia University, [5]Korean Institute of Fusion Energy, [6]Ulsan National Institute of Science and Technology, [7]Seoul National University)

Massive fusion burning plasmas will be tested first in a tokamak, a toroidally axisymmetric device for magnetic confinement. It is the symmetry in the magnetic field that enables a toka- mak to confine hot and charged particles more efficiently than other confinement concepts, and thus any unexpected departure from the symmetry, i.e. 3D error field (EF), must be properly compensated. Surprisingly great utilities of 3D fields have also been discovered in tokamak operations as highlighted by 3D control of instabilities such as edge-localized-mode (ELM). These two opposing examples of 3D fields in a tokamak are in fact both related to the resonant bifurcation of local magnetic topology from nested magnetic surfaces to magnetic island chains, and even potentially to stochastic volumes, through the magnetohydrodynamic (MHD) evolu- tions with plasma fluids. Fundamental particle motions and transport are also changed in any such form of the 3D magnetic topologies, in particular promoting the toroidal drag of stabiliz- ing rotation due to the loss of toroidal symmetry. It is a major challenge for tokamak science to optimize 3D fields to leave only the beneficial part of the changes in magnetic topologies, MHD dynamics, and kinetic transport, through virtually unlimited choice of 3D fields and multi-scale tokamak profiles. Nonetheless recent linear and non-linear physics studies and validations have successfully resolved the key aspects such as major MHD and transport coupling optimizations, bifurcation thresholds and resonant windows, and adaptive control – which all shed light on the predictive use of 3D fields for tokamaks. As will also be introduced in the talk, KSTAR has been a major contributor in this area with its unique capabilities on 3D control coils, advanced imaging diagnostics, and long-pulse operation of high performance scenarios. This work was

supported by US DOE Contract DE-AC02-09CH11466, and also by the Korean Ministry of Science, ICT and Future Planning.

[T5-at] Tutorial: Optical Clocks and Redefinition of SI Second

2021. 04. 21 Wednesday 14:00~14:48

Room: 17

좌장 : 안재욱 한국과학기술원

Chair : AHN Jaewook (KAIST)

[SCOPE]

현재 SI 초는 세슘 원자의 마이크로파 전이선을 이용해 정의된다. 광시계의 발전으로 기존 세슘 원자시계보다 100 배 이상 정확한 결과들이 보고되고 있어서, 2026년 이후에 광시계를 이용하여 SI 초가 재정의될 것으로 예상된다. 이 강의에서는 광시계의 기본 원리, 발전 상황, 응용 분야 및 초 재정의의 파급효과에 대해 다룰 것이다.

T5.01 [14:00 - 14:48]

광시계와 SI 초의 재정의 (Optical Clocks and Redefinition of SI Second) / 이원규*1 (1한국표준과학연구원)

현재 국제단위계(SI)에서 초(second)는 세슘 원자의 마이크로파 전이선을 이용해 정의된다. 최근 들어 광시계의 비약적인 발전으로 기존 세슘 원자시계보다 100 배 이상 정확한 결과들이 속속 보고되고 있어서, 2026년 ~ 2030년 경에 광시계를 이용하여 SI 초가 재정의될 것으로 예상된다. 이 강의에서는 광시계의 기본 원리, 발전 상황, 응용 분야 및 초 재정의의 파급효과에 대해 다룰 것이다.

[T6-se] Tutorial: Characterizing electric bandgaps of low-dimensional semiconductors

2021. 04. 21 Wednesday 14:00~14:48

Room: 18

좌장 : 유영준 충남대학교

Chair : YU Young-Jun (Chungnam National University)

[SCOPE]

트랜지스터, 다이오드 등 중요한 반도체 소자의 기본이 되는 전자 구조 및 밴드갭 특성은 지금까지 3차원 반도체 소재를 대상으로, 광학적/전기적 방법으로, 다양하게 연구되어 왔다. 최근 새롭게 연구되고 있는 2차원 반도체 및 저차원 반도체 구조에서는 낮은 수준의 screening, 높은 exciton 결합 에너지 등 기존에 고려되지 않은 물리 현상이 발현되어, 반도체 특성 분석에 새로운 분석법을 요구하고 있다. 본 강연에서는 저차원 반도체 소재가 갖는 특이한 물성 측정 및 이를 활용하여 새로운 반도체 소자를 개발하려는 노력 및 결과를 소개한다.

T6.01 [14:00 - 14:48]

저차원 반도체 소재의 전자 구조 및 밴드갭 분석 기술 (Characterizing Electric Bandgaps of Low-dimensional Semiconductors) / YANG Heejun*1 ([1]Department of Physics, KAIST)

트랜지스터, 다이오드 등 중요한 반도체 소자의 기본이 되는 전자 구조 및 밴드갭 특성은 지금까지 3차원 반도체 소재를 대상으로, 광학적/전기적 방법으로, 다양하게 연구되어 왔다. 최근 새롭게 연구되고 있는 2차원 반도체 및 저차원 반도체 구조에서는 낮은 수준의 screening, 높은 exciton 결합 에너지 등 기존에 고려되지 않은 물리 현상이 발현되어, 반도체 특성 분석에 새로운 분석법을 요구하고 있다. 본 강연에서는 저차원 반도체 소재가 갖는 특이한 물성 측정 및 이를 활용하여 새로운 반도체 소자를 개발하려는 노력 및 결과를 소개한다.

학회주관세션 Sessions organized by KPS Committees

[A21-or] Modern Lock-in Detection Technology

2021. 04. 21 Wednesday 11:10~12:58

Room: 21

좌장 : **염일남** Zurich Instruments Korea

Chair : YEOM Il-Nam (Zurich Instruments Korea)

A21.01 [11:10 - 11:34]

Modern Lock-in Detection at Typical optical/photonics experiment (Squeeze more out of your measurement with modern Lock-in amplifier technology) / RIEK Claudius*1 ([1]Zurich Instruments AG)

A21.02 [11:34-12:10]

DFRT method and feedback optimization at SPM/Ferroelectric measurement / STOMP Romain*1 ([1]Zurich Instruments AG)

A21.03 [12:10-12:22]

Sensor characterization and control / ESAT Kivanc*1 ([1]Zurich Instruments AG)

A21.04 [12:22-12:58]

What makes a good Quantum Computing Control System? / THIELE Tobias*1, KUNG Bruno[1] ([1]Zurich Instruments AG)

[B21-or] Open KIAS: Hubble Constant Conundrum

2021. 04. 22 Thursday 09:00~10:36

Room: 21

좌장 : **고병원** 고등과학원

Chair : KO Pyungwon (KIAS)

B21.01 [09:00 - 09:48]

New Determination of the Hubble Constant with Gaia EDR3, Further Evidence of Excess Expansion / RIESS Adam*[1]([1]Johns Hopkins University)

B21.02 [09:48 - 10:36]

Cosmic Discord: Implications for and of Cosmological Theory / KNOX Lloyd*[1] ([1]UC Davis)

[C21-or] 교육위원회 세션: 21세기 대학 일반물리학

2021. 04. 22 Thursday 11:10~12:58

Room: 21

좌장 : **오원근** 충북대

Chair : OH Won Kun (Chungbuk National University)

[프로그램]

- 11:10–11:15 인사말(한국물리학회장, 교육위원장)
- 11:15–11:35 21세기형 일반물리학 콘텐츠의 지향, 정진수 (충북대)
- 11:35–11:55 IT 기술과 일반물리학의 혁신, 정용욱 (경상대)
- 11:55–12:15 일반물리학에서 필요한 것과 불필요한 것, 손창희 (UNIST)
- 12:15–12:35 새로운 대학물리교육과정의 개발, 최만수 (고려대)
- 12:35–12:58 질의 및 응답

[D21-or] The session on Science Policy(기초연구사업 정책세션)

2021. 04. 22 Thursday 14:00~15:00

Room: 21

좌장 : **강세종** 고려대학교

Chair : KAHNG Se-Jong (Korea University)

[프로그램]

- 14:00–14:05 인사말 (한국물리학회장, 정책위원장)
- 14:05–14:30 기초연구사업 현황 및 향후 계획, 김보열 (과학기술정보통신부 기초연구진흥과장)
- 14:30–14:45 패널 의견 제시
  송정현 교수 (건국대)
  정문석 교수 (한양대)
  이홍석 교수 (전북대)
  김현정 교수 (서강대, 정책위원장)
- 14:45–15:00 질의 및 응답
- 15:00 폐회사

[E21-or] AI in Physics(인공지능과 물리학)

2021. 04. 22 Thursday 16:10~17:46

Room: 21

좌장 : **장현주** 한국화학연구원

Chair : CHANG Hyun Ju (KRICT)

E21.01 [16:10 - 16:34]
인공지능과 입자물리학 / CHO Kihyeon*1 ([1]UST, KISTI)

E21.02 [16:34 - 16:58]
Exploring super-functional materials with artificial intelligence / LEE In-Ho*1 ([1]Korea Research Institute of Standards and Science)

E21.03 [16:58 - 17:22]
Emergence of AI research topics from the calculation scale / SHIN Jeongkyu*1, PARK Jonghyun[1], HWANG Eunjin[1] ([1]Lablup Inc.)

E21.04 [17:22 - 17:46]
Magnetic Hamiltonian parameter estimation using deep learning techniques / KWON Hee Young*1, YOON Han Gyu[2], LEE Chanki[2], CHEN Gong[3], LIU Kai[4], SCHMID Andreas K[5], WU Yi Zheng[6], CHOI Jun Woo[1], WON Changyeon*2 ([1]Korea Institute of Science and Technology (KIST), [2]Kyung Hee University, [3]University of California, Davis, [4]Georgetown University, [5]Lawrence Berkeley National laboratory, [6]Fudan University)

[EE21-or] Ten Science Books of 2020 – Authors Lectures (APCTP 저자강연)

2021. 04. 22 Thursday 19:00~20:50

Room: 21

좌장 : **손승우** 한양대

Chair : SON Seung-Woo (Hanyang University)

[프로그램]

- 19:00–19:05 프로그램 소개 및 강연자 소개
- 19:05–20:00 1부 저자 강연 (한정훈 성균관대 물리학과 교수, "물질의 물리학")
- 20:00–20:30 2부 패널 대담 (APCTP 과학문화위원 – 손승우, 이은희, 이정원, 황정아)
- 20:30–20:50 질의 및 응답

[G21-or] 오창 다목적 방사광가속기 특별세션

2021. 04. 23 Friday 11:10~12:20

Room: 21

좌장 : **송창용** 포항공과대학교

Chair : SONG Changyong (POSTECH)

[프로그램]

- 11:10–11:15 인사말 (한국물리학회장, 정책위원장)
- 11:15–11:40 오창 방사광 가속기 사업(안) 경과 보고 (과학기술정보통신부)
- 11:40–12:40 패널 의견 제시
  권기석 과장 (과학기술정보통신부 원자력개발과)
  김진형 단장 (충북방사광가속기추진지원단)
  정진석 교수 (숭실대)
  문봉진 교수 (GIST)
  이성호 박사 (SK Hynix)
  류혜진 박사 (KIST)
  김현정 교수 (서강대, 정책위원장)
- 12:05–12:20 질의 및 응답
- 12:20 폐회사

[GG21-or] Women in Physics(여성위원회 특별 패널 토의)

2021. 04. 23 Friday 14:00~15:30

Room: 21

좌장 : **이현정** 한국핵융합에너지연구원

Chair : LEE Hyun Jung (KFE)

[프로그램]

- 14:00–14:05 인사말 (한국물리학회회장, 여성위원회 위원장)
- 14:05–14:45 패널 소개 및 주제 발언 (패널 8인)
- 14:45–15:10 설문결과 공유 및 설문에 대한 패널 의견 제시
- 15:10–15:30 질의 및 응답

[W21-or] Science Communication Special Session
(대중화위원회 온라인 특별 공연: 나 혼자 푼다-물리편)

2021. 04. 23 Friday 20:00~22:00

장소: 유튜브 채널 "사피엔스 스튜디오", "카오스 재단", "과학과 사람들"에서 동시 방송

진행: 한국물리학회 물리대중화특별위원회

[프로그램]

- 20:00–20:15 오프닝 영상 상영과 출연자 소개
- 20:15–21:45 퀴즈 프로그램 진행과 심사
- 21:45–22:00 시상및 클로징

[2021 반도체학술상 수상자 발표]

D19.03 2021. 04. 22 Thursday 14:48 – 15:12 Room: 19

Simultaneous Raman and photoluminescence mapping studies of few-layer MoS_2 / RHO Heesuk*[1] ([1]Department of Physics, Jeonbuk National University)

[2021 젊은통계물리학자상 수상자 발표]

B13.05 2021. 04. 22 Thursday 10:00 – 10:12 Room: 13

Polarized social mobilization for pandemic control / HONG Inho*[1], RUTHERFORD Alex[1], CEBRIAN Manuel[1] ([1]Center for Humans and Machines, Max Planck Institute for Human Development)

[2021 보산핵물리학상 수상자 발표]

I3.08 2021. 04. 23 Friday 17:10~18:58 18:34 – 18:46 Room: 03

Near-threshold photoproduction of J/ψ mesons off the proton / KIM Sangho*[1], NAM Seung-il[1] ([1]Department of Physics, Pukyong National University)

[2021 광학 및 양자전자학 신진과학자상 수상자 발표]

D16.02 2021. 04. 22 Thursday 14:24 – 14:48 Room: 16

Ultrafast optical-pump THz-probe spectroscopy of 2D systems / SIM Sangwan*[1] ([1]Division of Electrical Engineering, Hanyang University ERICA)

[2021 CAP Young Researcher Award수상자 발표]

C9.03 2021. 04. 22 Thursday 11:34 – 11:46 Room: 09

Semiconductor-less field emission barristor with I_{ON}/I_{OFF} of 10^6 / LEE Jun-Ho[1], JEONG Nae Bong[1], CHOI Inchul[1], KIM Min Jeong[1], CHUNG Hyun-Jong*[1] ([1]Department of Physics, Konkuk University)

[2021 응집물질물리학 젊은과학자상 수상자 발표]

G5.03 2021. 04. 23 Friday 11:58 – 12:22 Room: 05

Higher-Order topology in Twisted Bilayer Graphene / PARK Moon Jip*1 ([1]Department of Physics, KAIST)

[2021 재미물리학자협회(AKPA) Outstanding Young Researcher Award 수상자 초청강연 1]

A5.01 2021. 04. 21 Wednesday 11:10 – 11:46 Room: 05

Superconductor-semiconductor systems for advanced quantum devices / LEE Joon Sue*1 ([1]Department of Physics and Astronomy, University of Tennessee)

[2021 재미물리학자협회(AKPA) Outstanding Young Researcher Award 수상자 초청강연 2]

H17.01 2021. 04. 23 Friday 15:00 – 15:36 Room: 17

Benchmarking near-term quantum devices based on quantum chaos / CHOI Joonhee[1], SHAW Adam L.[1], MADJAROV Ivaylo S.[1], XIE Xin[1], CONVEY Jacob P.[1], COTLER Jordan[2], MARK Daniel K.[3], HUANG Hsin-Yuan[1], KALE Anant[2], PICHLER Hannes[4], BRANDAO Fernando[1], CHOI Soonwon*5, ENDRES Manuel*1 ([1]Caltech, [2]Harvard, [3]MIT, [4]University of Innsbruck, [5]UC Berkeley)

Session A

2021 April 21(Wed) 11:10-12:58

[A1-pa] Accelerator-based particle physics experiments I

2021. 04. 21 Wednesday 11:10~12:46

Room: 01

좌장 : 박인규 서울시립대학교

Chair : PARK Inkyu (University of Seoul)

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

Search for flavor-changing neutral current interaction of the top quark and the Higgs boson decaying into $b\bar{b}$ at $\sqrt{s}$ = 13TeV with CMS Run2 data / PARK Jiwon[*1], KIM Tae Jeong[1] ([1]Department of Physics, Hanyang University)

A1.02* [11:22 - 11:34]

Search for a heavy neutrino in top quark decays using CMS detector / JEON Sihyun[1], BHYUN Jihwan[1], YANG Un-ki[*1] ([1]Department of Physics and astronomy, Seoul National University)

A1.03 [11:34 - 11:46]

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

A1.04* [11:46 - 11:58]

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

A1.05* [11:58 - 12:10]

Search for Charged Higgs Boson Decaying to W Boson and Pseudo-scalar Higgs Boson at $\sqrt{s}$ = 13TeV with CMS Run2 dataset / YANG Un-ki[*1], CHOI Jin[1] ([1]Department of Physics and astronomy, Seoul National University)

A1.06* [12:10 - 12:22]

Measurement of CP violation by using an angular distribution in single top t-channel @ 13 TeV / KO Byeonghak[1], KIM Hyunsoo[2], PARK Inkyu[*1], LEE Jason Sang Hun[1], ROH Youn Jung[1], WATSON Ian James[1] ([1]University of Seoul, [2]Department of Physics, Sejong University)

A1.07* [12:22 - 12:34]
Spiking Neural Network for the Event Classification in High Energy Physics / KIM TAE JEONG*[1], RYOU Yeonsu[1] ([1]Department of Physics, Hanyang University)

A1.08* [12:34 - 12:46]
Search for non-thermal Dark Matter in Monotop Events in Proton-Proton Collisions at 13 TeV / PARK Inkyu*[1], KIM Seulgi[1], LEE Jason Sang Hun[1], WATSON Ian James[1], ROH Youn Jung[1] ([1]University of Seoul)

[A2-pa] Non-accelerator-based particle physics experiments I
2021. 04. 21 Wednesday 11:10~12:34
Room: 02
좌장 : 윤성우 기초과학연구원
Chair : YOUN SungWoo (IBS)

A2.01 [11:10 - 11:22]
Annual modulation search from COSINE-100 / PRIHTIADI Hafizh*[1] ([1]Center for Underground Physics, IBS)

A2.02* [11:22 - 11:34]
Deep Learning Event Selection for Low Energy Scintillation of the COSINE-100 Dark Matter Experiment / LEE Seung Mok*[1], KO Young Ju[2], LEE Hyun Su[2], KIM Kyoung Won[2], KIM Sun Kee[1], CHOI Jaejin[1], JOO Han Wool[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center For Underground Physics, IBS)

A2.03 [11:34 - 11:46]
Status of COSINE-100 / KIM SungHyun*[1] ([1]Center for Underground Physics, IBS)

A2.04 [11:46 - 11:58]
Background estimation for the AMoRE-II experiment / JEON Eun Ju*[1] ([1]Center for Underground Physics, IBS)

A2.05 [11:58 - 12:10]
Assay of MoO_3 powders with the CAGe / KIM Yeongduk*[1], PARK Su-yeon[1], HAHN Insik Kevin[2], KANG Woongu[1], KIM Gowoon[1], LEE Eunkyung[1], LEONARD Douglas Sidney[1], KAZALOV Vladimir[3], LEE Moohyun[1] ([1]Center for Underground Physics, IBS, [2]Center for Exotic Studies, IBS, [3]Baksan Neutrino Observatory, Institute for Nuclear Research of the Russian Academy of Science)

A2.06* [12:10 - 12:22]
AMoRE-I Analysis for Heat and Light Signals / KIM HAN BEOM[1,2], WOO Kyungrae*[1,3],

ON The behalf of AMoRE Collaboration[1] ([1]Center for Underground Physics, IBS, [2]Department of Physics and Astronomy, Seoul National University, [3]IBS, UST)

A2.07 [12:22 - 12:34]
First observation of new isomers in ^{228}Ac : Impact on dark matter searches / LEE Hyun Su*[1] ([1]Center for Underground Physics, IBS)

[A3-nu] Hadron Physics
2021. 04. 21 Wednesday 11:10~12:58
Room: 03
좌장 : 이희정 충북대학교
Chair : LEE Hee Jung (Chungbuk National University)

A3.01* [11:10 - 11:22]
Analysis of virtual meson production in solvable (1+1) dimensional scalar field theory / CHOI Yongwoo*[1], JI Chueng-Ryong[2], CHOI Ho-Meoyng[3], OH Yongseok[1] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, North Carolina State University, [3]Department of Physics Education, Teachers College, Kyungpook National University)

A3.02* [11:22 - 11:34]
Vector meson mass in the chiral symmetry restored vacuum / KIM Jisu[1], LEE Su Houng*[1] ([1]Yonsei University)

A3.03* [11:34 - 11:46]
The medium modification of singly heavy baryon masses / WON Ho-Yeon[1], KIM Hyun-Chul*[1], YAKHSHIEV Ulugbek[1] ([1]Inha University)

A3.04* [11:46 - 11:58]
The effect of hidden-charm strange pentaquarks P_{cs} on the $K^- p \to J/\psi \Lambda$ reaction / CLYMTON Samson[1], KIM Hee-Jin[1], KIM Hyun-Chul*[1] ([1]Inha University)

A3.05* [11:58 - 12:10]
Color-octet heavy-quark potential from the instanton vacuum / KIM Hyun-Chul*[1], HONG Ki-Hoon[1], YAKHSHIEV Ulugbek[1] ([1]Inha University)

A3.06* [12:10 - 12:22]
Baryonic matter and the medium modification of the baryon masses / KIM Hyun-Chul*[1], YANG Ghil-Seok[2], YAKHSHEIV Ulugbek[1], GHIM Nam-Yong[1] ([1]Inha University, [2]Department of General Education for Human Creativity, Hoseo University)

A3.07 [12:22 - 12:34]

The Doubly-heavy Tetraquarks ($qq'\overline{Q}\,\overline{Q'}$) in a Constituent Quark Model with a Complete Set of Harmonic Oscillator Bases / NOH Sungsik[1], PARK Woosung[1], LEE Su Houng*[1] ([1]Yonsei University)

A3.08 [12:34 - 12:46]

Electromagnetic radiative decays for the singly charmed baryons with spin 3/2 / KIM Hyun-Chul*[1], KIM June-Young[2], YANG Ghil-Seok[4], OKA Makoto[3] ([1]Inha University, [2]Institute for Theoretical Physics II, Ruhr-University Bochum, [3]Department of General Education for Human Creativity, Hoseo University, [4]Advanced Science Research Center, Japan Atomic Energy Agency)

A3.09 [12:46 - 12:58]

Properties of the charged light pseudoscalar mesons at finite temperature and the presence of the external magnetic field / HUTAURUK Parada Tobel Paraduan*[1], NAM Seung-il*[1,2] ([1]Department of Physics, Pukyong National University, [2]APCTP)

[A4] No session

[A5-co] Focus: Nano/Mesoscopic system, Graphene and Topological Materials

2021. 04. 21 Wednesday 11:10~12:58

Room: 05

좌장 : 김준성 포항공과대학교

Chair : KIM Jun Sung (POSTECH)

A5.01 [11:10 - 11:46]

Superconductor-semiconductor systems for advanced quantum devices / LEE Joon Sue*[1] ([1]Department of Physics and Astronomy, University of Tennessee)

A5.02 [11:46 - 12:22]

Higher order topological phases in twisted bilayer graphene and magnetic van-der Waals materials / LEE SungBin*[1] ([1]Department of Physics, KAIST)

A5.03 [12:22 - 12:58]

Antiferromagnetic Kitaev-Γ Model under Magnetic Field / LEE Ki Hoon*[1] ([1]Department of Physics, Incheon National University)

[A6-co] Magnetism

2021. 04. 21 Wednesday 11:10~12:22

Room: 06

좌장 : 오윤석 울산과학기술원

Chair : OH Yoon Seok (UNIST)

A6.01* [11:10 - 11:22]

Anomalous phase of magnetic quantum oscillation by broken time-reversal symmetry / JUNG Myung Hwa*[1], LEE Sang-Eon[1], JI Sanghyun[1], JUN Jin Hyun[1] ([1]Sogang University)

A6.02* [11:22 - 11:34]

Study of thin films of molecular spin qubits by surface-sensitive electron spin resonance spectrometer / DONATI Fabio*[1,2], YU Jisoo[1,2], CHO Franklin Hyunil[1,2], COLAZZO Luciano[1,2], JEONG Yejin[1,2], LIU Junjie[3], ARDAVAN Arzhang[3], BOERO Giovanni[4], HEINRICH Andreas Johachim[1,2] ([1]Department of Physics, Ewha Womans University, [2]Center for Quantum Nanoscience (QNS), IBS, [3]The Clarendon Laboratory, Department of Physics, University of Oxford, [4]Laboratory for Microsystems, Ecole Polytechnique Fédérale de Lausanne (EPFL))

A6.03* [11:34 - 11:46]

Engineering anomalous Hall effect in $SrRuO_3$-based heterostructure by controlling kinetic bombardment during pulsed laser deposition / KO Eun Kyo[1,2], LEE Han Gyeol[1,2], LEE Sangmin[3], MUN Junsik[3], KIM Miyoung[3], CHANG Seo Hyoung[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 Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University, [4]Department of Physics, Chung-Ang University)

A6.04* [11:46 - 11:58]

Data generation using variational autoencoder and direct exploration in latent space to search desired physical states / WON Changyeon*[1], PARK Seong Min[1], KWON Hee Young[2], YOON Han Gyu[1], LEE Doo Bong[1] ([1]Department of Physics, Kyung Hee University, [2]Center for Spintronics, KIST)

A6.05* [11:58 - 12:10]

Estimation the magnetic effective fields from spin configurations by machine learning algorithm and its applications / WON Changyeon*[1], LEE Doo Bong[1], KWON Hee Young[2], YOON Han Gyu[1], PARK Seong Min[1] ([1]Department of Physics, Kyung Hee University, [2]Center for Spintronics, KIST)

A6.06* [12:10 - 12:22]

Generating intermediate states between two different chiral magnetic states using machine learning algorithms / WON Changyeon*[1], YOON Han Gyu[1], LEE Chanki[1],

LEE Doo Bong[1], PARK Seong Min[1], CHOI Jun woo[2], KWON Hee Young[2] ([1]Department of Physics, Kyung Hee University, [2]Center for Spintronics, KIST)

[A7-co] Dielectric/Functional Oxides

2021. 04. 21 Wednesday 11:10~12:46

Room: 07

좌장 : 김충현 서울대

Chair : KIM Choong Hyun (Seoul National University)

A7.01* [11:10 - 11:22]

Switchable bias-field effect in large tensile strained $BaTiO_3$ epitaxy film on lab-made $BaZrO_3$ substrate / LEE Jun Han[1], DUONG Nguyen Xuan[2], JUNG Min-Hyoung[3], KIM Junhyung[4], KIM Ahyoung[5], KIM Gye-Hyeon[6], CHO Byeong-Gwan[7], LEE Hyun-Jae[8], PARK Daehwan[1], KIM Young-Min[3], LEE Jun Hee[8], KOO Tae-Yeong[7], SOHN Changhee[1,6], YANG Sang Mo[5], PARK Kibog[1,4], JEONG Hu Young[9], KIM Tae Heon[2], OH Yoon Seok*[1] ([1]Department of Physics, UNIST, [2]Department of Physics and Energy Harvest Storage Research Center (EHSRC), University of Ulsan, [3]Department of Energy Science, Sungkyunkwan University, [4]School of Electrical and Computer Engineering, UNIST, [5]Department of Physics, Sogang University, [6]School of Natural Science, UNIST, [7]Pohang Accelerator Laboratory, POSTECH, [8]School of Energy and Chemical Engineering, UNIST, [9]UNIST Central Research Facilities, UNIST)

A7.02 [11:22 - 11:34]

The built-in defect-dipole in square tensile strained $BaTiO_3$ / OH Yoon Seok*[1], LEE Hyun-Jae[2], KUMAR Pawan[2], LEE Jun Hee[2] ([1]Department of Physics, UNIST, [2]Department of Energy and Chemical Engineering, UNIST)

A7.03* [11:34 - 11:46]

Low mechanical loading force on new ferroelectric (111)-oriented $CaTiO_3$ thin films / KIM Hong Joon[1], LEE Ji Hye[1], KIM Jeong Rae[1], LEE Daesu[2], NOH Tae Won*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Physics, POSTECH)

A7.04* [11:46 - 11:58]

Observation of relaxor-like behavior near magnetic Néel temperature in heavily La-substituted $BiFeO_3$ / YANG Chan-Ho*[1], YEO Youngki[1], KIM Yongjin[1] ([1]Department of Physics, KAIST)

A7.05 [11:58 - 12:10]

First-principles study on the superlattice-induced ferroelectricity in charge-ordered $La_{1/3}Sr_{2/3}FeO_3$ / PARK Se Young*[1,5,4], RABE Karin M[2], NEATON Jeffrey B[3] ([1]Department of Physics, Soongsil University, [2]Department of Physics and astronomy, Rutgers University,

[3]Department of Physics, UC Berkeley, [4]Center for correlated electron systems(CCES), IBS, [5]Department of Physics and astronomy, Seoul National University)

A7.06* [12:10 - 12:22]

Ferroelectric and piezoelectric power generation characteristics of poly(vinylidene-fluoride-co-trifluoroethylene) (PVDF-TrFE) thin films according to the crystallinity of the Pt bottom electrode grown on mica substrate / SHIN Young-Han*[1], KEUM Yoon Hyung[2], SON Jong Yeog[2], SHIN Hyun Wook[2] ([1]Department of Physics, University of Ulsan, [2]Department of Applied Physics and Integrated Education Program for Frontier Materials (BK21 Four), Kyung Hee University)

A7.07 [12:22 - 12:34]

Giant Tunneling Electroresistance in Epitaxial Ferroelectric Ultrathin Films Directly Integrated on Si / LEE Kyoungjun[1], BYUN Jinho[2], PARK Kunwoo[3,4], KANG Sungsu[3,4], PARK Jungwon[3,4], LEE Jaekwang[2], CHAE Seung Chul*[1] ([1]Department of Physics Education, Seoul National University, [2]Department of Physics, Pusan National University, [3]School of Chemical and Biological Engineering, Institute of Chemical Processes, Seoul National University, [4]Center for Nanoparticle Research, IBS)

A7.08* [12:34 - 12:46]

Ferroelectricity of Excimer Laser Annealed $Hf_xZr_{1-x}O_2$ Thin Film / SONG Myeong Seop[1], CHAE Seung Chul*[1] ([1]Department of Physics Education, Seoul National University)

[A8-co] Condensed Matter Computational Physics I

2021. 04. 21 Wednesday 11:10~12:34

Room: 08

좌장 : 민홍기 서울대학교

Chair : MIN Hongki (Seoul National University)

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

Crucial Role of Sublattice Polarization on Electron-Phonon Coupling in Twisted Graphene Layers / CHOI Young Woo[1], CHOI Hyoung Joon*[1] ([1]Department of Physics, Yonsei University)

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

Web platforms for conventional simulations of matters / KIM Seungchul*[1], KIM Doyeon[1], KEMBAY Assel[1], KIM Sowon[1,5], YUN Kayoung[1,4], LEE Chan-Woo[3], LEE Byeong-Joo[2], SEOL Donghyuk[2], KIM Yong-Hoon[6], JANG Semi[1,4], LEE Minho[4], LEE Jungho[4] ([1]Computational Science Research Center, KIST, [2]Department of Materials Science and Engineering, POSTECH, [3]Platform Technology Laboratory, KIER, [4]Virtual Lab. Inc., [5]Department of Chemistry, Hanyang University, [6]School of Electrical Engineering, KAIST)

A8.03* [11:34 - 11:46]
Spin Hall Conductivities of W-N Alloys / NGUYEN Quynh Anh Thi[1], DO Duc Cuong[1], HONG Soon Cheol[1], RHIM Sonny*[1] ([1]Department of Physics, University of Ulsan)

A8.04* [11:46 - 11:58]
Cooperative evolution of polar distortion and nonpolar rotation of oxygen octahedra in oxide heterostructures / MIN Taewon[1], CHOI Wooseon[2], SEO Jinsol[2], HAN Gyeongtak[2], SONG Kyung[3], RYU Sangwoo[4], LEE Hyungwoo[4], LEE Jungwoo[4], EOM Kitae[4], EOM Chang-Beom[4], JEONG Hu Young[5], KIM Young-Min[2], OH Sang Ho[2], LEE Jaekwang*[1] ([1]Department of Physics, Pusan National University, [2]Department of Energy Science, Sungkyunkwan University, [3]Materials Testing and Reliability Division, Korea institute of materials Science, [4]Department of Materials Science and Engineering, University of Wisconsin-Madison, [5]UNIST Central Research Facilities, Ulsan National Institute of Science and Technology)

A8.05 [11:58 - 12:10]
Thermoelectric efficiency of thermoelectric heat engine with temperature dependent transport properties / RYU Byungki*[1], CHUNG Jaywan[1], PARK SuDong[1] ([1]Energy Conversion Research Center, KERI)

A8.06* [12:10 - 12:22]
Topological flat bands in rhombohedral four-layer graphene on boron nitride moire superlattices / PARK Youngju[1], CHITTARI Bheema Lingam[1,2], JUNG Jeil*[1,3] ([1]Department of Physics, University of Seoul, [2]Department of Physical Sciences, Indian Institute of Science Education and Research Kolkata, [3]Department of Smart Cities, University of Seoul)

A8.07* [12:22 - 12:34]
First-principles study of $CuInP_2S_6$ based van der Waals heterostructure at non-equilibrium state / KIM Yong-Hoon*[1], SONG Yumin[1], LEE Juho[1] ([1]School of Electrical Engineering, KAIST)

[A9-ap] Focus: 2D quantum emitters
2021. 04. 21 Wednesday 11:10~12:58
Room: 09
좌장 : 이철호 고려대학교
Chair : LEE Chul-Ho (Korea University)

A9.01 [11:10 - 11:46]
Single-photon emitters using strained two-dimensional materials / PARK Hong-Gyu*[1], SO Jae-Pil[1], JEONG Kwang-Yong[1] ([1]Korea University)

A9.02 [11:46 - 12:22]
Engineered quantum light sources from 2D materials / KIM Je Hyung*1 ([1]Department of Physics, UNIST)

A9.03 [12:22 - 12:58]
First-principles theory of optically active spin defects in hexagonal boron nitrides / SEO Hosung*1 ([1]Department of Physics, Ajou University)

[A10-ap] Focus: Ultrafast Spin Behaviors
2021. 04. 21 Wednesday 11:10~12:46
Room: 10
좌장 : 제숭근 전남대학교
Chair : JE Soong-Geun (Chonnam National University)

A10.01 [11:10 - 11:34]
Spin generation from ultrafast demagnetization of metallic ferromagnets / CHOI Gyungmin*1 ([1]Department of Energy Science, Sungkyunkwan University)

A10.02 [11:34 - 11:58]
Nonequilibrium Heat Transport in Elemental Metals Probed by an Ultrathin Ferromagnetic Thermometer / JANG Hyejin*1 ([1]Materials Science and Engineering, Seoul National University)

A10.03 [11:58 - 12:22]
Ultrafast strain-induced spin dynamics / SHIN Yooleemi[1], KIM Jiwan*1 ([1]Department of Physics, Kunsan National University)

A10.04 [12:22 - 12:46]
Magnetic soliton rectifier via phase synchronization / KIM Duck-Ho*1, KIM Dong-Hyun[2], KIM Dae-Yun[1,3], CHOE Sug-Bong[3], ONO Teruo[4], LEE Kyung-Jin[2,5], KIM Se Kwon[5] ([1]Center for Spintronics, KIST, [2]Department of Semiconductor Systems Engineering, Korea University, [3]Department of Physics and Institute of Applied Physics, Seoul National University, [4]Institute for Chemical Research, Kyoto University, [5]Department of Physics, KAIST)

[A11-ap] Energy materials

2021. 04. 21 Wednesday 11:10~12:22

Room: 11

좌장 : 김지영 한국과학기술연구원

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

A11.01* [11:10 - 11:22]

Enhancement of light absorption, ionic migration, and stability in hybrid perovskite solar cells on passivated SnO_2 ETL / KIM Jihyun[1], NGUYEN Bich Phuong[2], KIM Gee Yeong[3], KIM Yeon Soo[2], JO William[*1,2] ([1]Department of Physics, Ewha Womans University, [2]New and Renewable Research Center, Ewha Womans University, [3]Advanced Photovoltaics Research Center, Korea Institute of Science and Technology)

A11.02* [11:22 - 11:34]

Enhancement of photo-conversion efficiency by defect passivation in Na-added $Cu_2ZnSn(S,Se)_4$ flexible solar cells / PARK Ha Kyung[1], CHO Yunae[1,3], KIM Juran[1], KIM Gee Yeong[4], JEONG Woo-Lim[2], KIM Kyung-Pil[2], LEE Dong-Seon[2], JO William[*1,3] ([1]Department of Physics, Ewha Womans University, [2]New and Renewable Energy Research Center (NREC), Ewha Womans University, [3]Advanced Photovoltaics Research Center, National Agenda Research Division, KIST, [4]School of Electrical Engineering and Computer Science, GIST)

A11.03* [11:34 - 11:46]

Polarization- and Electrode-optimized Polyvinylidene Fluoride Films for Harsh Environmental Piezoelectric Nanogenerator Applications / JIN Da Woon[1], KO Young Joon[1], AHN Chang Won[2], HUR Sunghoon[3], LEE Tae Kwon[1], JEONG Dong Geun[1], LEE Minbaek[1], KANG Chong-Yun[3,4], JUNG Jong Hoon[*1] ([1]Inha University, [2]Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan, [3]Center for Electronic Materials, KIST, [4]KU-KIST Graduate School of Converging Science and Technology, Korea University)

A11.04* [11:46 - 11:58]

A Highly Efficient and Durable Kirigami Triboelectric Nano-generator for Rotational Energy Harvesting / KONG Dae Sol[1], HAN Jae Yeon[1], KO Young Joon[1], PARK Sang Hyeok[1], LEE Minbaek[1], JUNG Jong Hoon[*1] ([1]Inha University)

A11.05 [11:58 - 12:10]

Suppression of extrinsic recombination process in anatase and rutile TiO_2 epitaxial thin films for efficient electron transport layers / KIM Yeon Soo[1], JIN Hye-Jin[2], JUNG Hye Ri[2], KIM Jihyun[2], NGUYEN Bich Phuong[1], KIM Juran[2], JO William[*1,2] ([1]New and Renewable Energy Research Center (NREC), Ewha Womans University, [2]Department of Physics, Ewha Womans University)

A11.06 [12:10 - 12:22]

Ion migration and hysteresis in mixture of 2D/3D perovskites / NGUYEN Bich Phuong[2], KIM Jihyun[1], JO William[*1,2], KIM Gee Yeong[3] ([1]Department of Physics, Ewha Womans University, [2]New and Renewable Energy Research Center, Ewha Womans University, [3]Advanced Photovoltaics Research Center, Korea Institute of Science and Technology)

[A12-ap] Focus: First-principles studies of energy materials-I

2021. 04. 21 Wednesday 11:10~12:46

Room: 12

좌장 : **김용훈** 한국과학기술원

Chair : KIM Yong-Hoon (KAIST)

A12.01 [11:10 - 11:34]

Unraveling degradation mechanism of Pt_3Co nanoparticle electrocatalyst by combining kinetic Monte Carlo simulation and machine-learning potential / JUNG Jisu[1], JU Suyeon[1], KIM Purun-hanul[1], KANG Sungwoo[1], JUNG Wonseok[1], HAN Seung Wu[*1] ([1]Seoul National University)

A12.02 [11:34 - 11:58]

Designing Interface for Selective Electrochemical CO_2 Conversion / KWON Young-kook[*1] ([1]School of Energy and Chemical Engineering, UNIST)

A12.03 [11:58 - 12:22]

On the microscopic details of electric double layer / SHIN Seung-Jae[1], KIM Hyungjun[*1] ([1]Department of Chemistry, KAIST)

A12.04 [12:22 - 12:46]

First-principles study on the electrode materials for Li-ion batteries / SEO Dong-Hwa[*1] ([1]School of Energy and Chemical Engineering, UNIST)

[A13-st] Biophysics

2021. 04. 21 Wednesday 11:10~13:10

Room: 13

좌장 : **조정효** 서울대

Chair : JO Junghyo (Seoul National University)

A13.01 [11:10 - 11:34]

Structure and function of the neural circuits in the little brain: Discoveries from connectomic analysis of electron microscope images / 박창주[1,2], 임윤석[1,2,3], 김자원[2], 반상규[2], 이상훈[2], 박준수[1], 유성봉[1], 이기석[4], 손정은[2], 이계주[2], 김진섭[*1,2] ([1]성균관대학교 생명과학과, [2]한국뇌연구원 신경회로연구그룹, [3]서울대학교 물리천문학부, [4]프린스턴대학교 신경과학연구소)

A13.02 [11:34 - 11:58]

Bio-inspired deep neural networks for hearing / KIM Sung-Won[1], PARK Sang-hyun[1], KIM Jaehyeon[1], KIM Hyunjae[1], KIM Gibeom[1], PARK Maruchan[1], LIM Woojae[1], LEE Changwon[1], PARK Hyoseok[1], BOICHENKO Nelly[1], YOO Jaeyun[1], LEE Wooseok[1], AHN Kang Hun*[1] ([1]Bio-inspired Artificial Intelligence Lab., Department of Physics, Chungnam National University)

A13.03* [11:58 - 12:10]

Tubulin-based Architectures by Cationic Molecular Switch and 2D Shape-controllable Building Blocks / LEE Juncheol[2], SONG Chaeyeon[2], LEE Jimin[2], MILLER Herbert P.[3], CHO Hasaeam[2], GIM Bopil[2], LI Youli[4], FEINSTEIN Stuart C.[3], WILSON Leslie[3], SAFINYA Cyrus R.[5], KIM Jinjoo[6], KEUM Hyeongseop[6], KIM Yumi[2], KIM Yujin[6], YU Byeongjun[6], LEE Sang Yeop[2], TANAKA Junichi[7], JON Sangyong[6], CHOI Myung Chul*[2] ([1]KAIST, [2]Department of Bio and Brain Engineering, KAIST, [3]Molecular, Cellular and Developmental Biology Department and Neuroscience Research Institute, UCSB, [4]Materials Research Laboratory, UCSB, [5]Materials, Physics, Molecular, Cellular and Developmental Biology Departments, UCSB, [6]Department of Biological Sciences, KAIST, [7]Department of Chemistry, Biology and Marine Science, University of the Ryukyus)

A13.04* [12:10 - 12:22]

Tensile elasticity of a freely jointed chain with reversible hinges / NOH Geunho[1], BENETATOS Panayotis*[1] ([1]Department of Physics, Kyungpook National University)

A13.05 [12:22 - 12:34]

Theoretical analysis of kymographs : influence of time window and resolution / DURANG Xavier[1], PARK Hye Yoon[2], JEON Jae-Hyung*[1] ([1]Department of Physics, POSTECH, [2]Department of Physics & Astronomy, Seoul National University)

A13.06 [12:34 - 12:46]

Dynamical Origin for The Winner-Take-All Competition and Emergence of Sparsely Synchronized Rhythms in The Hippocampal Dentate Gyrus / KIM Sang-Yoon[1], LIM Woochang*[1] ([1]Daegu National University Of Education)

A13.07 [12:46 - 12:58]

Simple model of artificial selection of microbial groups on the group composition / LEE Juhee[1], PARK Hye Jin*[1] ([1]APCTP)

A13.08* [12:58 - 13:10]

Heterogeneous vesicle fusion in the auditory hair cells / YOO Jaeyun[1], AHN Kang Hun*[1] ([1]Bio-inspired Artificial Intelligence Lab., Department of Physics, Chungnam National University)

[A14-A17] No session

[A18-se] Focus: Emerging Energy Materials and Devices

2021. 04. 21 Wednesday 11:10~12:46

Room: 18

좌장 : 양희준 한국과학기술원

Chair : YANG Heejun (KAIST)

A18.01 [11:10 - 11:34]

Efficient, stable silicon tandem cells enabled by anion-engineered wide-bandgap perovskites / SHIN Byungha*1 ([1]Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology)

A18.02 [11:34 - 11:58]

High-Performance Infrared Photodetectors Based on 2D InSe / JANG Hanbyeol[1], SEOK Yongwook[1], CHOI YiTaek[1], CHO Sang-Hoo[1], WATANABE Kenji[2], TANIGUCHI Takashi[2], LEE Kayoung*1,3 ([1]School of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), [2]National Institute for Materials Science, Japan, [3]School of Electrical Engineering, KAIST)

A18.03 [11:58 - 12:22]

Energy level tuned quantum dot solids for efficient photovoltaics / KIM Taewan[1], CHOI Manmin[1], JEONG Sohee*1 ([1]Department of Energy Science, Sungkyunkwan University)

A18.04 [12:22 - 12:46]

Phase Engineering in Transition Metal Dichalcogenides Toward Efficient Electrocatalysis / PARK HYESUNG*1 ([1]Department of Materials Science and Engineering, UNIST)

[A19-se] Semiconductor growth, structural properties, and characterization

2021. 04. 21 Wednesday 11:10~12:10

Room: 19

좌장 : 이홍석 전북대학교

Chair : LEE Hong Seok (Jeonbuk National University)

A19.01* [11:10 - 11:22]

Comparison of optical properties AlGaAsSb PIN DA structure and RA structure / KIM Jong Su*1, HA Jae Du[1], JO Hyun-Jun[1], LEE Sang Jo[1], LEE Seung Hyun[2], KIRISHNA Sanjay[2], LEE Sang Jun[3] ([1]Yeungnam University, [2]Department of Electrical and Computer Engineering, Ohio State University, [3]IoT optical sensor team, KRISS)

A19.02 [11:22 - 11:34]

Time-resolved photocurrent measurements in $In_{0.25}Ga_{0.75}As_{0.3}Sb_{0.7}$ nBn infrared detector. / KIM Jong Su*1, SAEID NAHAEI Sanam[1], JO Hyun-Jun[1], LEE SangJun[2], KWAK Minsoo[1], MORE Vivek Mohan[2] ([1]Yeungnam University, [2]KRISS)

A19.03* [11:34 - 11:46]
백색조명을 위한 Ca_2YNbO_6 이중 페로브스카이트 형광체 연구 / HUA Yongbin[2], YU Jae Su*[1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department of Electronics and Information Convergence Engineering, Kyung Hee University)

A19.04* [11:46 - 11:58]
Fabrication of Ⅲ-nitride semiconductor based microtube cavity and its optical properties / CHO Yong Hoon*[1], CHOI Doyoung[1], WOO Kie Young[1] ([1]KAIST)

A19.05 [11:58 - 12:10]
InAs/AlSb 초격자 구조의 photoluminescence 및 photoreflectance 연구 / KIM Jong Su*[1], KIM Sung Yeop[1], LEE SeungHyun[2], KRISHNA Sanjay[2] ([1]Yeungnam University, [2]Department of Electrical and Computer Engineering, The Ohio State University)

[A20] No session

[A21-or] Modern Lock-in Detection Technology
2021. 04. 21 Wednesday 11:10~12:58
Room: 21
좌장 : 염일남 Zurich Instruments Korea
Chair : YEOM Il-Nam (Zurich Instruments Korea)

A21.01 [11:10 - 11:34]
Modern Lock-in Detection at Typical optical/photonics experiment (Squeeze more out of your measurement with modern Lock-in amplifier technology) / RIEK Claudius*[1] ([1]Zurich Instruments AG)

A21.02 [11:34 - 12:10]
DFRT method and feedback optimization at SPM/Ferroelectric measurement / STOMP Romain*[1] ([1]Zurich Instruments AG)

A21.03 [12:10 - 12:22]
Sensor characterization and control / ESAT Kivanc*[1] ([1]Zurich Instruments AG)

A21.04 [12:22 - 12:58]
What makes a good Quantum Computing Control System? / THIELE Tobias*[1], KUNG Bruno[1] ([1]Zurich Instruments AG)

Session B

2021 April 22(Thu) 09:00-10:48

[B1-pa] [E] Pioneer: Run III prospects and new wave from CMS experiment I

2021. 04. 22 Thursday 09:00~10:48

Room: 01

좌장 : 양운기 서울대학교

Chair : YANG Un-ki (Seoul National University)

B1.01 [09:00 - 09:36]

Theoretical Prospects of Run III at the LHC / TAIT Tim*1 ([1]UC Urvine, USA)

B1.02 [09:36 - 10:00]

Experimental Prospects of Run III at CMS / CHOI Suyong*1 ([1]Department of Physics, Korea University)

B1.03 [10:00 - 10:24]

Precision Higgs at CMS / DASU Sridhard*1 ([1]Univ. of Wisconsin at Madison, USA)

B1.04 [10:24 - 10:48]

Multi-boson physics at CMS / CHANG Philip*1 ([1]U.C. San Diego, USA)

[B2] No session

[B3-nu] Nuclear structure & reaction

2021. 04. 22 Thursday 09:00~10:48

Room: 03

좌장 : 하은자 숭실대학교

Chair : HA Eun Ja (Soongsil University)

B3.01* [09:00 - 09:12]

Bubble configuration and shape coexistence in the ground state of 72 ≤ Z ≤ 80 even-even isotopes / LEE Chang Hwan*3, KIM Youngman[2], CHOI Yong-Beom[3] ([1]Pusan National University, [2]Rare Isotope Science Project, IBS, [3]Department of Physics, Pusan National University)

B3.02* [09:12 - 09:24]

Coulomb Breakup Reaction of Loosely Bound 17F with dynamic polarization poten-

tials / HEO Kyoungsu[1], CHEOUN Myung Ki*[1] ([1]Department of Physics, Soongsil University)

B3.03 [09:24 - 09:36]
Study of proton-unbound states in the vicinity of ^{66}Se / KIM SUNJI*[1] ([1]Center for Exotic Nuclear Studies, IBS)

B3.04 [09:36 - 09:48]
Exploring the proton dripline in the ^{100}Sn region / PARK Joochun*[1] ([1]Center for Exotic Nuclear Studies, IBS)

B3.05 [09:48 - 10:00]
Tensor force effects on the ground and excited states of N=Z nuclei / CHEOUN Myung Ki*[1], HA Eunja[2] ([1]Department of Physics, Soongsil University, [2]Department of General Education, Hoseo University)

B3.06 [10:00 - 10:12]
Proton-neutron pairing nature in ^{138}I through beta decay / MOON Byul*[1] ([1]Center for Exotic Nuclear Studies, IBS)

B3.07 [10:12 - 10:24]
A study on the boundary condition of the R-matrix theory / PARK Tae-Sun*[1] ([1]CENS, IBS)

B3.08 [10:24 - 10:36]
Gamow-Teller Giant Resonance in ^{11}Li neutron drip-line nucleus / STUHL Laszlo*[1] ([1]Center for Exotic Nuclear Studies, IBS)

B3.09 [10:36 - 10:48]
Elastic alpha-carbon-12 scattering for d-wave channel at low energies in effective Lagrangian approach / ANDO Shung-Ichi*[1] ([1]Department of Information Display, Sun Moon University)

[B4] No session

[B5-co] [E] Pioneer: Recent Advances in X-ray Science I
2021. 04. 22 Thursday 09:00~10:36
Room: 05
좌장 : 강현철 조선대학교
Chair : KANG Hyon Chol (Chosun University)

B5.01 [09:00 - 09:24]
Nanoscale Au-Si eutectic mixtures formed by dewetting of a Au-Ni film on Si_3N_4:

A Coherent X-ray Diffractive Imaging Study / KIM Yoonhee[1,2], KIM Chan[*1], AHN Kang-woo[2], LEE Su Yong[3], KIM Jin Woo[2,3], KANG Hyon Chol[4], NOH Do Young[*2] ([1]European X-ray Free-Electron Laser Facility, [2]Department of Physics and Photon Science and School of Materials Science and Engineering, Gwangju Institute of Science and Technology, [3]Pohang Accelerator Laboratory, [4]Department of Materials Science and Engineering, Chosun University)

B5.02 [09:24 - 09:48]

Ultrafast Phase Transformation by X-ray Free Light-induced Electron Laser / KIM Hyunjung[*1] ([1]Department of Physics, Sogang University)

B5.03 [09:48 - 10:12]

Observing ultrafast kinetics at quantum space-time domain with femtosecond X-rays / SONG Changyong[*1] ([1]POSTECH)

B5.04 [10:12 - 10:36]

In-situ observation of metal-halide perovskite crystal formation using synchrotron x-ray scattering / KIM Hyo Jung[*1,2], HONG Seong Yeon[2], LEE Sunghun[2], CHO In Hwa[3] ([1]Organic Material Science and Engineering, Pusan National University, [2]School of Chemical Engineering, Pusan National University, [3]Department of Physics and Photon Science, GIST)

[B6-co] Focus: Lattice defects and functionalities in solids I

2021. 04. 22 Thursday 09:00~10:48

Room: 06

좌장 : **양찬호** 한국과학기술원

Chair : YANG Chan-Ho (KAIST)

B6.01 [09:00 - 09:36]

Controlling phases in oxygen sponge $SrFe_{1-x}Co_xO_{3-\delta}$ / JEEN Hyoung Jeen[*1] ([1]Department of Physics, Pusan National University)

B6.02 [09:36 - 10:00]

Direct Observation and Control of Atomic-Scale Defects in Energy Materials / CHUNG Sung-Yoon[*1] ([1]KAIST)

B6.03 [10:00 - 10:24]

단결정성 박막 내에서의 양이온 이동에 기반한 뉴로모픽 소자 / PARK Bae Ho[*1], YOON Chan-soo[1], LEE Mi Jung[1], LEE Ji Hye[2], LEE Sangik[1], JEON JI Hoon[1], KIM Dae Hwan[3], JANG Jun Tae[3], KIM Young Heon[4], AHN Jae-Pyoung[5], KIM Sung-Hoon[5], PARK Je-Geun[2], LEE Sungmin[2], HONG Suklyun[6], MIN Kyung-Ah[6], CHOI Hyunsoo[6] ([1]Department of Physics, Konkuk University, [2]Department of Physics, Seoul National University, [3]School of Electrical Engineering, Kookmin University, [4]Graduate School of Analytical Science and Technology,

Chungnam National University, [5]Advanced Analysis Center, Korea Institute of Science and Technology, [6]Department of Physics, Sejong University)

B6.04 [10:24 - 10:48]

The role of defects for tunneling phototransistors and electronic spectroscopy based on 2D materials / YANG Heejun*[1] ([1]Department of Physics, KAIST)

[B7-co] Strongly Correlated/Dielectric/Functional Oxides

2021. 04. 22 Thursday 09:00~10:24

Room: 07

좌장 : 이대수 포항공대

Chair : LEE Daesu (POSTECH)

B7.01* [09:00 - 09:12]

Validation of the People–Bean model in estimating the critical thickness of perovskite oxide thin films via data analytics / CHOI Woo Seok*[1], SHIN Dongwon[2], OH Jin Young[1] ([1]Department of Physics, Sungkyunkwan University, [2]Materials Science and Technology, Oak Ridge National Laboratory)

B7.02 [09:12 - 09:24]

Semiconductor–Metal transition in $LaVO_3$ and $La_{1-x}Sr_xVO_3$ ($0 \leq x \leq 1$) thin films grown on LSAT substrates / OH Ye Jin[1], JUNG Dae Ho[1], PARK Woo Sung[1], LEE Jae Jun[1], LEE Ho Sun*[1] ([1]Applied Physics, Kyung Hee University)

B7.03* [09:24 - 09:36]

The effect of thermal annealing on Ga_2O_3 X-ray photodetector and observation of X-ray photo-oxidation in non-stoichiometric Ga_2O_{3-x} Thin Films / KANG Hyon Chol*[1], CHOI Sukjune[2], KANG Sae Hyun[2], OH Ho Jun[2], HA Sung Soo[3], LEE Su Yong[4], HAM Daseul[4], NOH Do Young[2] ([1]Department of Materials Science and Engineering, Chosun University, [2]Department of Physics and Photon Science, GIST, [3]School of Materials Science and Engineering, GIST, [4]Pohang Accelerator Laboratory, POSTECH)

B7.04* [09:36 - 09:48]

Symmetry-driven spin wave gap modulation in atomically-designed $SrRuO_3$ heterostructures / JEONG Seung Gyo[1], KIM Hyeonbeom[2,3], HONG Sung Ju[2,3], SUH Dongseok[2,3], CHOI Woo Seok*[1] ([1]Department of Physics, Sungkyunkwan University, [2]Center for Integrated Nanostructure Physics, IBS, [3]Energy Sciences, Sungkyunkwan University)

B7.05 [09:48 - 10:00]

Temperature dependent ARPES measurement of VS_2 / KIM Hyuk Jin[1], CHOI Byoung Ki[1], LEE In Hak[2], JOZWIAK Chris[3], BOSTWICK Aaron[3], ROTENBERG Eli[3], LEE Sunghun[4],

CHANG Young Jun*[1,5] ([1]Department of Physics, University of Seoul, [2]Center for Spintronics, Korea Institute of Science and Technology, [3]Advanced Light Source (ALS), E. O. Lawrence Berkeley National Laboratory, [4]Department of Physics, Sejong University, [5]Department of Smart cities, University of Seoul)

B7.06 [10:00 - 10:12]

Observation of a metallic electronic structure in a single-atomic-layer perovskite oxide / KIM Jeong Rae[1], SOHN Byungmin[1], KIM Changyoung[1], NOH Tae Won*[1] ([1]Department of Physics and Astronomy, Seoul National University)

B7.07* [10:12 - 10:24]

Single magnon scattering and possible topological phase of $Y_2Ir_2O_7$ in Raman spectroscopy / NGUYEN Thi Huyen[1,2], SON Jaeseok[1,2], KIM Soyeun[1,2], CHO Hwanbum[1,2], KIM Choong H.[1,2], WANG Yiping[3], BURCH Kenneth S.[3], YANG In-Sang[4], JEONG Jaehong[1,2], PARK Je-Geun[1,2], MOON SoonJae[5], NOH Tae Won*[1,2] ([1]Center for Correlated Electron Systems, IBS, [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Physics, Boston College, [4]Department of Physics, Ewha Womans University, [5]Department of Physics, Hanyang University)

[B8-co] Nano and mesoscopic physics I

2021. 04. 22 Thursday 09:00~10:12

Room: 08

좌장 : **최형순** 한국과학기술원

Chair : CHOI Hyoungsoon (KAIST)

B8.01* [09:00 - 09:12]

Topological acoustic triple point / PARK Sungjoon[1,2], HWANG Yoonseok[1,2], CHOI Hong Chul[2], YANG Bohm Jung*[1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]IBS CCES)

B8.02* [09:12 - 09:24]

Mapping current profiles of point-contacted graphene devices using scanning diamond nitrogen-vacancy center magnetometer / LEE Myeongwon[1], JANG Seong[2], JUNG Woochan[2], LEE Yuhan[1], TANIGUCHI Takashi[3], WATANABE Kenji[4], KIM Ha-Reem[1], PARK Hong-Gyu[1,5], LEE Gil-Ho[2], LEE Donghun*[1] ([1]Department of Physics, Korea University, [2]Department of Physics, POSTECH, [3]International Center for Materials Nanoarchitectonics, National Institute for Materials Science, [4]Research Center for Functional Materials, National Institute for Materials Science, [5]KU-KIST Graduate School of Converging Science and Technology, Korea University)

B8.03* [09:24 - 09:36]

Electrical control of the valley magnetic domain and concomitant anomalous current in bilayer MoS_2 / JEON Jiwon[1], KIM Youngjae[1], LEE JaeDong*[1] ([1]Department of Emerging Materials Science, DGIST)

B8.04* [09:36 - 09:48]

Steady Floquet-Andreev States Probed by Tunneling Spectroscopy / PARK Sein[1], LEE Wonjun[1], JANG Seong[1], CHO Gil Young[1,2,3], LEE Gil-Ho*[1,2] ([1]Department of Physics, POSTECH, [2]., APCTP, [3]Center for Artificial Low Dimensional Electronic Systems, IBS)

B8.05 [09:48 - 10:00]

Features of Shapiro steps in the presence of 4π-periodic Josephson current / PARK Jinho[1], CHOI Yong-Bin[1], LEE Gil-Ho[1], LEE Hu-Jong*[1] ([1]Department of Physics, POSTECH)

B8.06 [10:00 - 10:12]

Nanomechanical bolometry by using a semiconducting nanowires at millikelvin temperatures / KIM Jihwan[1], CHA Jinwoong[2], RYU Younghun[1], PARK Suk In[3], SONG JinDong[3], SUH Junho*[2] ([1]Department of Physics, KAIST, [2]Quantum Technology Institute, KRISS, [3]Center for Opto-Electronics Materials and Devices Research, KIST)

[B9-ap] 2D materials-I

2021. 04. 22 Thursday 09:00~10:00

Room: 09

좌장 : 김관표 연세대학교

Chair : KIM Kwanpyo (Yonsei University)

B9.02* [09:00 - 09:12]

Study on interlayer interactions in $WSe_2/MoSe_2$ heterostructures / LIM Soo Yeon[1], CHEONG Hyeonsik*[1] ([1]Department of Physics, Sogang University)

B9.03* [09:12 - 09:24]

Structural and electronic band modulations in MoS_2/WSe_2 heterostructure due to interlayer interaction / KIM Jungcheol[1], JO Jaeyeon[2], KIM Miyoung[2], YOO Hyobin[1], CHEONG Hyeonsik*[1] ([1]Department of Physics, Sogang University, [2]Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)

B9.04* [09:24 - 09:36]

Spatially selective surface charge transfer doping for enhancing electrical characteristics of MoS_2 field-effect transistors / JEONG Inho[1,2], KIM Jaeyoung[3], SHIN Jiwon[3], SONG Minwoo[3], KIM Gyu-Tae[2], LEE Takhee[3], CHUNG Seungjun*[1] ([1]Soft Hybrid Materials Research Center, KIST, [2]Dept. of Electrical Engineering, Korea University, [3]Department of Physics and Astronomy, Seoul National University)

B9.05* [09:36 - 09:48]

Light-induced carrier behaviors in single-layer MoS_2 flakes investigated with Kelvin probe force microscopy / PARK Ji-Yong*[1], YIM Woongbin[1], NGUYEN Van Tu[1] ([1]Ajou University)

B9.06* [09:48 - 10:00]

Deep learning based TEM image analysis for identification of point defects and polymorphs in TMDCs / CHOI Soyeon[1], JUNG Joowon[1], LEE Kihyun[1], PARK Jinsup[1], LEE Sol[1], LEE Yangjin[1], KIM Kwanpyo*[1] ([1]Department of Physics, Yonsei University)

[B10-ap] [E] Pioneer: Spintronic Building-Blocks-I

2021. 04. 22 Thursday 09:00~10:48

Room: 10

좌장 : 고경춘 고려대학교

Chair : GO Gyungchoon (Korea University)

B10.01 [09:00 - 09:36]

Magnetic Skyrmions Studied by Full-Field Soft X-ray Microscopy / IM Mi-Young*[1], JE Soong-Geun[2], SOUMYANARAYANAN Anjan[3], BROCK Jeffrey A.[4], WANG Zidong[5], JIANG Wanjun[5] ([1]Center for X-ray Optics, Lawrence Berkeley National Laboratory, [2]Department of Physics, Chonnam National University, [3]Institute of Materials Research and Engineering, Agency for Science, Technology and Research, [4]Center for Memory and Recording Research, University of California San Diego, [5]State Key Laboratory of Low-Dimensional Quantum Physics and Department of Physics, Tsinghua University)

B10.02 [09:36 - 10:12]

Thermal effects on the skyrmion dynamics / JIANG Wanjun*[1] ([1]State Key Laboratory of Low-Dimensional Quantum Physics and Department of Physics, Tsinghua University)

B10.03 [10:12 - 10:48]

Creating and Manipulating Magnetic Skyrmions / SOUMYANARAYANAN Anjan*[1,2] ([1]Department of Physics, National University of Singapore, [2]Institute of Materials Research & Engineering, Agency for Science, Technology & Research (A*STAR))

[B11-ap] [E] Pioneer: The 6th Korea-Japan joint symposium on Organic Electronics: Recent advances on organic semiconductor materials and devices-I

2021. 04. 22 Thursday 09:00~10:36

Room: 11

좌장 : 이태우 서울대학교

Chair : LEE Tae-Woo (Seoul National University)

B11.01 [09:00 - 09:24]

Operando Analyses of the Organic Devices by Sum-frequency Generation Spectroscopy / MIYAMAE Takayuki*[1,2] ([1]Graduate School of Engineering, Chiba University, [2]Molecular Chirality Research Center, Chiba University)

B11.02 [09:24 - 09:48]

Aesthetic and Colorful: Dichroic Polymer Solar Cells Using High-Performance Fabry-Pérot Etalon Electrodes with a Unique Sb_2O_3 Cavity / YEOM Hye Rim[1], SONG Seyeong[1], WOO Han Young*[2], KIM Jin Young*[1] ([1]Department of Energy Engineering, Ulsan National Institute of Science and Technology (UNIST), [2]Department of Chemistry, Korea University)

B11.03 [09:48 - 10:12]

Efficient Electron Injection into Organic Semiconductors Utilizing Bases / FUKAGAWA Hirohiko*[1] ([1]NHK Science & Technology Research Laboratories)

B11.04 [10:12 - 10:36]

Charge carrier dynamics at organic interface by 2-photon photoemission / KIM Jeong Won*[1] ([1]KRISS)

[B12-ap] Focus: First-principles studies of energy materials-II

2021. 04. 22 Thursday 09:00~10:48

Room: 12

좌장 : 김용훈 한국과학기술원

Chair : KIM Yong-Hoon (KAIST)

B12.01 [09:00 - 09:24]

Time-dependent DFT study for photon-dressed spin states, second-order Hall effect of insulators, and resonant amplification of hydrogen production / PARK Noejung*[1] ([1]Department of Physics, UNIST)

B12.02 [09:24 - 09:48]

Carrier Multiplication in Nanosystems / BANG Junhyeok*[1], KANG Joongoo[2] ([1]Department of Physics, Chungbuk National University, [2]Department of Emerging Materials Science, DGIST)

B12.03 [09:48 - 10:12]

First-principles study of extended defects in halide perovskites / PARK Ji-Sang*[1] ([1]Department of Physics, Kyungpook National University)

B12.04 [10:12 - 10:36]

Benchmarking CO_2 Adsorption Energies and Geometries in Diamine-Functionalized Metal-Organic Frameworks with Density Functional Theory / LEE Jung-Hoon*[1] ([1]Computational Science Research Center, Korea Institute of Science and Technology (KIST))

[B13-st] Complex systems

2021. 04. 22 Thursday 09:00~10:48

Room: 13

좌장 : 손승우 한양대학교

Chair : SON Seung-Woo (Hanyang University)

B13.01 [09:00 - 09:24]

Statistical physics of data / JO Junghyo*[1] ([1]Department of Physics Education, Seoul National University)

B13.02* [09:24 - 09:36]

Effectiveness of the vaccination and quarantine policy to suppress the spreading of COVID-19 (코로나-19 백신접종과 격리정책의 효율성) / JANG Gyeong-Hwan[1], LEE Mi Jin[1], SON Seung-Woo*[1] ([1]Department of Applied Physics, Hanyang University)

B13.03* [09:36 - 09:48]

Effective epidemic control model on multilayer networks / KIM Minsuk[1], YOOK Soon Hyung*[1] ([1]Department of Physics, Kyung Hee University)

B13.04* [09:48 - 10:00]

Urban traffic analysis through the percolation of road networks / KWON Yongsung[2], SON Seung-Woo*[1,2], LEE Mi Jin[1] ([1]Department of Applied Physics, Hanyang University, [2]Department of Applied Artificial Intelligence, Hanyang University)

B13.05 [10:00 - 10:12]

Polarized social mobilization for pandemic control / HONG Inho*[1], RUTHERFORD Alex[1], CEBRIAN Manuel[1] ([1]Center for Humans and Machines, Max Planck Institute for Human Development)

B13.06 [10:12 - 10:24]

Relative entropy of the degree distributions under node removal / LEE Mi Jin[1], SON Seung-Woo*[1], LEE Deok-Sun*[2] ([1]Department of Applied Physics, Hanyang University ERICA, [2]School of Computational Sciences, KIAS)

B13.07 [10:24 - 10:36]

Evolution of irreversible somatic differentiation / GAO Yuanxiao[2], PARK Hye Jin*[1], TRAULSEN Arne[2], PICHUGIN Yuriy[2] ([1]APCTP, [2]Department of Evolutionary Theory, Max Planck Institute for Evolutionary Biology)

B13.08 [10:36 - 10:48]

Finite-size effects on the convergence time in continuous-opinion dynamics / JO Hang-Hyun*[1], MASUDA Naoki[2] ([1]Department of Physics, The Catholic University of Korea, [2]Department of Mathematics, State University of New York at Buffalo)

[B14] No session

[B15-pl] [E] Pioneer: 3D Effects in Tokamak Fusion Plasmas I

2021. 04. 22 Thursday 09:00~10:12

Room: 15

좌장 : 나용수 서울대학교

Chair : NA Yong Su (Seoul National University)

B15.01 [09:00 - 09:24]

Plasma performance without ELMs in DIII-D: RMP and other methods / PAZ-SOLDAN Carlos*[1] ([1]Columbia University)

B15.02 [09:24 - 09:48]

Regulating 3D Neoclassical Transport in Tokamak for Plasma Rotation Control / YANG S.M.*[1], PARK J.-K.[1], NA Y.-S.[2], WANG Z. R.[1], KO W.H.[3], IN Y.[4], LEE J. H.[3], LOGAN N.[1,5], HU Q.[1], JEON Y. M.[3], PARK G.Y.[3], KIM S. K.[1,6] ([1]Princeton Plasma Physics Laboratory, [2]Seoul National University, [3]Korea Institute of Fusion Energy, [4]Ulsan National Institute of Science and Technology, [5]Lawrence Livermore National Laboratory, [6]Princeton University)

B15.03 [09:48 - 10:12]

Optimizing tokamak pedestal confinement via adaptive ELM control using 3D field / KIM S. K.*[1], SHOUSHA R.[1], HAHN S. H.[2], NELSON A. O.[1], WAI J.[1], YANG S. M.[3], PARK J.-K.[3], IN Y.[4], NA Y.-S.[5], LEE J. H.[2], KIM J.[2], KOLEMEN E.[1,3] ([1]Princeton University, [2]Korea Institute of Fusion Energy, [3]Princeton Plasma Physics Laboratory, [4]Ulsan National Institute of Science Technology, [5]Department of Nuclear Engineering, Seoul National University)

[B16-op] Photonics

2021. 04. 22 Thursday 09:00~10:12

Room: 16

좌장 : 김명기 고려대학교

Chair : KIM Myung Ki (Korea University)

B16.01 [09:00 - 09:24]

초저전력 나노와트 프로그래머블 포토닉스 / HAN Sangyoon*1 ([1]Robotics Engineering, DGIST)

B16.02 [09:24 - 09:48]

Material Engineering for Heterogeneous Opto-electronic Integrated Devices / HAN Jae-Hoon*1 ([1]Center of Opto-electronic devices and materials, KIST)

B16.03 [09:48 - 10:00]

Universal scaling behavior of Anderson localization of electromagnetic waves incident on a randomly-stratified dielectric medium / KIM Seulong[1], KIM Kihong*1 ([1]Department of Physics, Ajou University)

B16.04* [10:00 - 10:12]

Synergistic Interplay of Dielectric Metamaterials and Molecular Engineering for Optical Chiral Detection / CHEON Junyeob[1], LEE Seungwoo*[1,2,3,4] ([1]Graduate School of Converging Sci & Tech & Dept. of Integrative Energy Engineering, Korea University, [2]Department of Biomicrosystem Technology, Korea University, [3]Department of Integrative Energy Engineering, Korea University, [4]KU Photonics Center, Korea University, Korea University)

[B17-at] Atomic and Molecular Physics I

2021. 04. 22 Thursday 09:00~10:00

Room: 17

좌장 : 허명선 한국표준과학연구원

Chair : HEO Myoung Sun (KRISS)

B17.01* [09:00 - 09:12]

Polarization entangled photon pair source at warm ^{85}Rb atoms / BAE Jinhyuk[1], PARK Jiho[1], MOON Han Seb*1 ([1]Pusan National University)

B17.02 [09:12 - 09:24]

The origin of quantum advantage of randomness for catalytic implementation of quantum channels / LIE Seok Hyung[1], JEONG Hyun Seok*1 ([1]Seoul National University)

B17.03 [09:24 - 09:36]

원자 앙상블에서 생성된 열광원을 이용한 다중경로 간섭 / MOON Han Seb*1, PARK Jiho[1], KIM Heonoh[1] ([1]Pusan National University)

B17.04* [09:36 - 09:48]
파장 측정기를 이용한 여러 레이저 주파수의 동시 안정화 / KIM Junwoo*[1], LEE Dowon[1], LEE Moonjoo[1] ([1]Electrical Engineering, Electrical Engineering, POSTECH)

B17.05* [09:48 - 10:00]
Photon pair generation at 1.5 μm-wavelength from warm Rb atomic ensemble / JEONG Hansol[1], MOON Han Seb*[1] ([1]Pusan National University)

[B18-se] [E] Pioneer: Transferable epitaxy for multifunctional-multistack flexible device fabrications I

2021. 04. 22 Thursday 09:00~10:36

Room: 18

좌장 : 홍영준 세종대학교

Chair : HONG Young Joon (Sejong University)

B18.01 [09:00 - 09:24]
Atomic-scale observation of epitaxial growth through two-dimensional materials / 김성규*[1] ([1]세종대학교 나노신소재공학과)

B18.02 [09:24 - 09:48]
Semiconductor Nanostructures Grown on Graphene Films / YI Gyu-Chul*[1] ([1]Department of Physics and Astronomy, Seoul National University)

B18.03 [09:48 - 10:12]
Transferable GaN layers grown on two dimensional layered materials / CHUNG Kunook*[1] ([1]Department of Physics, Ulsan National University of Science and Technology (UNIST))

B18.04 [10:12 - 10:36]
Stackable 2D and 3D materials for mixed dimensional heterostructures / BAE Sang-Hoon*[1] ([1]Mechanical Engineering, Research Laboratory of Electronics, and Materials Science and Engineering, Massachusetts Institute of Technology (MIT))

[B19-se] Focus: Semiconductor materials for quantum information technology

2021. 04. 22 Thursday 09:00~11:00

Room: 19

좌장 : 황도경 한국과학기술연구원

Chair : HWANG Do Kyung (Korea Institute of Science and Technology)

B19.01 [09:00 - 09:24]

Formation of low density InAs quantum dots by modified SK-growth mode and GaAs quantum dots/rings and drilled inverted grown InAs QDs by droplet epitaxy method for single photon sources / SONG J. D.*1 ([1]Center for Opto-Electronic Convergence Systems, Korea Institute of Science and Technology)

B19.02 [09:24 - 09:48]

양자응용을 위한 다이아몬드 단결정 반도체 소재기술 / 남옥현*1 ([1]한국산업기술대학교 나노반도체공학과)

B19.03 [09:48 - 10:12]

Room temperature quantum emission from atomic defects in wide-bandgap semiconductor / JEONG Kwang-yong*1 ([1]Department of Physics, Korea University)

B19.04 [10:12 - 10:36]

$LiNbO_3$ photonic platform for on-chip quantum key distribution / HEO Hyungjun[1], KWON Kiwon[2], HWANG Hyeon[3], SEO Min-Kyo[3], LEE Hansuek[3], HAN Sang-wook[1], JUNG Hojoong*1 ([1]KIST, [2]POSTECH, [3]KAIST)

B19.05 [10:36 - 11:00]

Growth of Topological Insulator using Molecular Beam Epitaxy / 박한범[1], 정광식[2], 김종훈[1], 홍석보[1], 노승원[1], 조만호*1 ([1]연세대학교 물리학과, [2]동국대학교 물리반도체과학부)

[B20] No session

[B21-or] Open KIAS: Hubble Constant Conundrum

2021. 04. 22 Thursday 09:00~10:36

Room: 21

좌장 : 고병원 고등과학원

Chair : KO Pyungwon (KIAS)

B21.01 [09:00 - 09:48]

mination of the Hubble Constant with Gaia EDR3, Further Evidence of Excess Expansion / RIESS Adam*1 ([1]Johns Hopkins University)

B21.02 [09:48 - 10:36]
Cosmic Discord: Implications for and of Cosmological Theory / KNOX Lloyd*1 (1UC Davis)

B

Session C

2021 April 22(Thu) 11:10-12:58

[C1-pa] Accelerator-based particle physics experiments II

2021. 04. 22 Thursday 11:10~12:46

Room: 01

좌장 : 문창성 경북대학교

Chair : MOON Chang-Seong (Kyungpook National University)

C1.01 [11:10 - 11:22]

Inclusive B → X_u + ℓ + ν and updated measurement of $|V_{ub}|$ at Belle / KWON Youngjoon*1 ([1]Department of Physics, Yonsei University)

C1.02 [11:22 - 11:34]

Status of readout DAQ system R&D of a dual-readout calorimeter for future e^+e^- collider / RYU Min Sang*1, KIM Bobae[1], LEE Junghyun[1], LEE Sehwook[1], KO Sanghyun[4], KIM Doyeong[3], LEE Jason[3], LEE Yunjae[3], WATSON Ian[3], CHO Guk[2], EO Yun[2], HA Seungkyu[2], HWANG Kyuyeong[2], KIM Dongwoon[2], KIM Jaeyoung[2], KIM Kyungho[2], KIM Minsoo[2], KIM Sungwon[2], KIM Tongil[2], PARK Junewoo[2], YOO Hwidong[2] ([1]The Center for High Energy Physics, Kyungpook National University, [2]Department of Physics, Yonsei University, [3]Department of Physics, University of Seoul, [4]Department of Physics, Seoul National University)

C1.03 [11:34 - 11:46]

Search for Dark Matter using Nuclear Emulsion / YOON Chun Sil*1, KIM Sung Hyun[2], KO Jae-Woo[2], LEE Kang Young[2], PARK Byung Do[2], SOHN Jong Yoon[2], LEE Kyong Sei[3], KIM Yeong Gyun[4], CHOI Ki-Young[5], WOO Jong-Kwan[6] ([1]Research Institute of Natural Science, Gyeongsang National University, [2]Physics Education Department & RINS , Gyeongsang National University, [3]KODEL, Korea University, [4]Department of Science Education, Gwangju National University of Education, [5]Department of Physics, Sungkyunkwan University, [6]Department of Physics, Jeju National University)

C1.04 [11:46 - 11:58]

Status of 3D printing based module R&D for a dual-readout calorimeter / YOO Hwidong*1, KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Min Sang[2], KO Sanghyun[3], KIM Doyeong[4], LEE Jason[4], LEE Yunjae[4], WATSON Ian[4], CHO Kuk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyeyeong[1], KIM Dongwoon[1], KIM Jaeyoung[1], KIM Kyungho[1], KIM Minsoo[1], KIM Sungwon[1], KIM Tongil[1], PARK Junewoo[1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]Department of Physics & Astronomy, Seoul National University, [4]Department of Physics, University of Seoul)

C1.05* [11:58 - 12:10]

Machine Learning application on particle identification for dual-readout calorimeter / LEE YunJae[1], PARK Inkyu*[1], LEE Jason[1], YOO Hwidong[2], KO Sanghyun[3], LEE Sehwook[4], KIM Bobae[3], LEE Junghyun[3], RYU Min Sang[3], KIM Doyeong[1], WATSON Ian[1], CHO Guk[2], EO Yun[2], HA Seungkyu[2], HWANG Kyuyeong[2], KIM Dongwoon[2], KIM Jaeyoung[2], KIM Kyungho[2], KIM Minsoo[2], KIM Sungwon[2], KIM Tongil[2], PARK Junewoo[2] ([1]University of Seoul, [2]Department of Physics, Yonsei University, [3]Department of Physics, Kyungpook National University, [4]Department of Physics, Seoul National University)

C

C1.06 [12:10 - 12:22]

Status of preparation for first test beam with dual-readout calorimeter R&D for future e^+e^- collider / HA Seungkyu*[1], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Min Sang[2], KO Sanghyun[3], KIM Doyeong[4], LEE Jason[4], LEE Yunjae[4], WATSON Ian[4], CHO Guk[1], EO Yun[1], HWANG Kyuyeong[1], KIM Dongwoon[1], KIM Jaeyoung[1], KIM Kyungho[1], KIM Minsoo[1], KIM Sungwon[1], KIM Tongil[1], PARK Junewoo[1], YOO Hwidong[1] ([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)

C1.07 [12:22 - 12:34]

입자가속기충돌실험에서의 원격제어실 구축 및 활용연구 / CHO Kihyeon*[1], PARK Kihong[1] ([1]UST, KISTI)

C1.08* [12:34 - 12:46]

Update of calibration and energy resolution study with 4π dual-readout calorimeter / YOO Hwidong*[1], KIM Bobae[2], LEE Junghyun[2], LEE Sehwook[2], RYU Min Sang[2], KO Sanghyun[4], KIM Doyeong[3], LEE Jason[3], LEE Yunjae[3], WATSON Ian[3], CHO Guk[1], EO Yun[1], HA Seungkyu[1], HWANG Kyuyeong[1], KIM Dongwoon[1], KIM Jaeyoung[1], KIM Kyungho[1], KIM Minsoo[1], KIM Sungwon[1], KIM Tongil[1], PARK Junewoo[1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kyungpook National University, [3]Department of Physics, University of Seoul, [4]Department of Physics and Astronomy, Seoul National University)

[C2-pa] Particle physics theory I

2021. 04. 22 Thursday 11:10~12:34

Room: 02

좌장 : **신서동** 전북대학교

Chair : SHIN Seodong (Jeonbuk National University)

C2.01 [11:10 - 11:22]

Exploring properties of long-lived particles in inelastic dark matter models at Belle II / KANG Dong Woo*[1] ([1]KIAS)

C2.02 [11:22 - 11:34]
XENON1T excess in local Z_2 DM models with light dark sector / BAEK Seungwon[2], KIM Jongkuk[*1], KO Pyungwon[1] ([1]School of Physics, KIAS, [2]Department of Physics, Korea University)

C2.03 [11:34 - 11:46]
The phenomenology of nuclear scattering for a WIMP of arbitrary spin / SCOPEL Stefano[*1], GONDOLO Paolo[2], KANG Sunghyun[1], JEONG Injun[1], TOMAR Gaurav[3] ([1]Department of Physics, Sogang University, [2]Department of Physics, University of Utah, [3]Department of Physics, Munich Tech. University)

C2.04 [11:46 - 11:58]
Self-interacting dark matter with multiple resonances / LEE Hyun Min[*1], KANG Yoo-Jin[1], KIM Seong Sik[1] ([1]Department of Physics, Chung-Ang University)

C2.05 [11:58 - 12:10]
Four-form flux mediated dark matter / LEE Hyun Min[*1], SONG Ji Seon[1], KANG Yoo Jin[1], MENKARA Adriana Guerrero[1] ([1]Department of Physics, Chung-Ang University)

C2.06 [12:10 - 12:22]
Conformally invariant linear sigma models and Higgs inflation / LEE Hyun Min[*1], GUERRERO MENKARA Adriana[1] ([1]Department of Physics, Chung-Ang University)

C2.07 [12:22 - 12:34]
Aligned Natural Inflation from String Geometry / CHOI Kang Sin[*1,2], ANGUS Stephen[2,3] ([1]Scranton Honors Program, Ewha Womans University, [2]Institute of Mathematical Sciences, Ewha Womans University, [3]APCTP)

[C3-nu] Nuclear Structure & Reaction
2021. 04. 22 Thursday 11:10~11:34
Room: 03
좌장 : **박태선** 기초과학연구원
Chair : PARK Tae-Sun (IBS)

C3.01 [11:10 - 11:22]
Experimental Study of Proton-Induced Energy-Dissipation Reactions on ^{93}Zr at 27MeV/u: Future Perspectives / HWANG Jongwon[*1], DOZONO Masanori[2], IMAI Nobuaki[2], MICHIMASA Shin'ichiro[2], SHIMOURA Susumu[2] ([1]Center for Exotic Nuclear Studies, IBS, [2]Center for Nuclear Study, The University of Tokyo)

C3.02 [11:22 - 11:34]
Alpha-cluster structure study of ^{19}Ne using alpha resonance scattering experiment / KIM Dahee[*1], HAHN Insik Kevin[1] ([1]Center for Exotic Nuclear Studies, IBS)

[C4-as] Astrophysics Theories

2021. 04. 22 Thursday 11:10~12:34

Room: 04

좌장 : 김형찬 한국교통대학교

Chair : KIM Hyeong-Chan (Korea National University of Transportation)

C

C4.01 [11:10 - 11:22]

Deflection of light by a Born-Infeld type electric charge / KIM Jin Young*1 ([1]Department of Physics, Kunsan National University)

C4.02 [11:22 - 11:34]

Dark energy from cosmological entanglement / LEE Jae-Weon*1 ([1]Department of Electrical and Electronic Engineering, Jungwon University)

C4.03 [11:34 - 11:46]

The Third Law of Thermodynamics in Rotating Black Holes / GWAK Bogeun*1 ([1]Physics and Semiconductor Science-Physics, Dongguk University)

C4.04 [11:46 - 11:58]

BH Phase transition in Generalized JT gravity / KIM Kyung Kiu*1 ([1]Department of Physics and Astronomy, Sejong University)

C4.05 [11:58 - 12:10]

Boson stars as instantons / YEOM Dong-han*1 ([1]Physics Education, Pusan National University)

C4.06 [12:10 - 12:22]

Observation of gravitational waves by electromagnetic waves beyond geometrical optics. / PARK Chan*1 ([1]Division of Basic Researches for Industrial Mathematics, NIMS)

C4.07 [12:22 - 12:34]

Small-scale shear: peeling off diffuse subhalos with gravitational waves / CHOI Han-Gil*1, PARK Chanung[1], JUNG Sunghoon[1] ([1]Department of Physics and Astronomy, Seoul National University)

[C5-co] [E] Pioneer: Recent Advances in X-ray Science II

2021. 04. 22 Thursday 11:10~12:22

Room: 05

좌장 : 문봉진 광주과학기술원

Chair : MUN Bongjin Simon (GIST)

C5.01 [11:10 - 11:34]

Structure and chemistry simultaneously studied by X-ray scattering and photoemission / NEMšáK Slavomír*1 ([1]Advanced Light Source, Lawrence Berkeley National Laboratory)

C5.02 [11:34 - 11:58]

Dynamics in Spin Structures / KIM Changsoo[1], MOON Kyoung-Woong[1], HWANG Chanyong*1 ([1]Quantum spin team, Koreas Research Institute of Standards and Science)

C5.03 [11:58 - 12:22]

Ultrafast structural and carrier dynamics studied by optical pump-probe techniques / CHOI In Hyuk[1], LEE Seung Wook[1], KIM Min Seop[1], KANG Chul[2], NAKAMURA Masao[3], TOKURA Yoshinori[3], LEE Jong Seok*1 ([1]Department of Physics and Photon Science, GIST, [2]Advanced Photonics Research Institute, GIST, [3]Center for Emergent Matter Science, RIKEN)

[C6-co] Focus: Lattice defects and functionalities in solids II

2021. 04. 22 Thursday 11:10~12:58

Room: 06

좌장 : 박성균 부산대학교

Chair : PARK Sungkyun (Pusan National University)

C6.01 [11:10 - 11:34]

Defect Engineering in Complex Oxide Thin Films / CHOI Woo Seok*1 ([1]Department of Physics, Sungkyunkwan University)

C6.02 [11:34 - 11:58]

Lattice- and impurity-type Kondo effect in graphene studied using ARPES / HWANG Choongyu*1 ([1]Department of Physics, Pusan National University)

C6.03 [11:58 - 12:22]

Topological solitons in one-dimensional charge-density waves / KIM Tae-Hwan*1 ([1]Department of Physics, POSTECH)

C6.04 [12:22 - 12:34]

Raman imaging of ferroelastically-designed Jahn-Teller domains in $LaMnO_3$ thin films / KIM Yong-Jin[1,2], PARK Heung-Sik[1,2], YANG Chan-Ho*[1,2] ([1]Department of Physics, KAIST, [2]Center for Lattice Defectronics, KAIST)

C6.05 [12:34 - 12:46]

Oxygen Vacancy-Induced Topological Nanodomains in Ultrathin Ferroelectric Films / PENG Wei[1,2], MUN Junsik[3], KIM Miyoung[3], NOH Tae Won[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]CCES, IBS), [3]Department of Materials Science and Engineering, Seoul National University)

C6.06* [12:46 - 12:58]

Enhancing functionalities of Ruddlesden-Popper thin films by suppressing of out-of-phase boundaries / KIM Jinkwon[1,2], KIM Youngdo[1,2], MUN Junsik[3], KIM Jeong Rae[1,2], HAHN Sungsoo[1,2], KIM Miyoung[3], KIM Changyoung[1,2], NOH Tae Won[*1,2] ([1]Center for Correlated Electron Systems, IBS, [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)

C

[C7-co] Strongly Correlated

2021. 04. 22 Thursday 11:10~12:58

Room: 07

좌장 : 이성빈 한국과학기술원

Chair : LEE SungBin (KAIST)

C7.01 [11:10 - 11:22]

Why the Fermi Liquid can appear in strongly correlated system / OH Eunseok[1], YUK Taewon[1], SIN Sang Jin[*1] ([1]Department of Physics, Hanyang University)

C7.02 [11:22 - 11:34]

Many-body localisation in fine-tuned flatband systems / DANIELI Carlo[2], ANDREANOV Alexei[*1,3], FLACH Sergej[1,3] ([1]Center for Theoretical Physics of Complex Systems, IBS, [2]Condensed Matter, Max-Plank Institute for Physics of Complex Systems, [3]Basic Science Program, UST)

C7.03 [11:34 - 11:46]

Strange metal solution of the 2d Hubbard model / KIM Aaram J.[*1,2], WERNER Philipp[1], KOZIK Evgeny[2] ([1]Department of Physics, University of Fribourg, [2]Department of Physics, King's College London)

C7.04* [11:46 - 11:58]

A Subsystem Ginzburg-Landau and SPT Orders Co-existing on a Graph / KIM Jintae[*1], LEE Hyun-Yong[2,3], HAN Jung Hoon[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Applied Physics, Korea University, Sejong, [3]Division of Display and Semiconductor Physics, Korea University, Sejong)

C7.05 [11:58 - 12:10]

Causal smoothing spline approach for analytic continuation of imaginary frequency Green's function / HAN Mancheon[1], CHOI Hyoung Joon[*1] ([1]Department of Physics, Yonsei University)

C7.06 [12:10 - 12:22]

Determine the spatial locality of self-energy of LiFeAs / KIM Minjae[*1,7], MIAO Hu[2], CHOI Sangkook[3], ZINGL Manuel[4], GEORGES Antoine[4,5,6,8], KOTLIAR Gabriel[3,7] ([1]Department of Chemistry, POSTECH, [2]Material Science and Technology Division, Oak Ridge National Laboratory, [3]Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, [4]Center for Computational Quantum Physics, Flatiron Institute, [5]Institut de Physique, College de France, [6]CPHT, Ecole Polytechnique, [7]Department of Physics and Astronomy, Rutgers University, [8]Department of Quantum Matter Physics, University of Geneva)

C7.07* [12:22 - 12:34]

Many-body Order Parameters for Two Dimensional Insulators / LEE Wonjun[1], KANG Byungmin[2], CHO Gil Young[*1,3,4] ([1]Department of Physics, POSTECH, [2]Department of Physics, KIAS, [3]Department of Physics, APCTP, [4]Center for Artificial Low Dimensional Electronic Systems, IBS)

C7.08 [12:34 - 12:46]

Terahertz Time-Domain Spectroscopy of Ferromagnetic van der Waals CrI_3 / KIM Jonghyeon[1], KIM Jangwon[1], SON Suhan[2,3], KIM Junghyun[2,3], PARK Je-Geun[2,3], KIM Jae Hoon[*1] ([1]Department of Physics, Yonsei University, [2]Department of Physics and Astronomy, Seoul National University, [3]Center for Quantum Materials, Seoul National University)

C7.09 [12:46 - 12:58]

Metrology of topological band indices via resonant inelastic x-ray scattering / LEE SANGJIN[*1], KANG Byungmin[2], CHO Gil Young[3,4], KIM Bumjoon[1,3,4] ([1]Department of Physics, APCTP, [2]Department of Physics, KIAS, [3]Department of Physics, POSTECH, [4]Center for Artificial Low Dimensional Electronic Systems, IBS)

[C8-co] Focus: Nano/Mesoscopic system: Quantum Coherence in Condensed Matter

2021. 04. 22 Thursday 11:10~12:58

Room: 08

좌장 : 심흥선 한국과학기술원

Chair : SIM Heung-Sun (KAIST)

C8.01 [11:10 - 11:46]

Simple physics of triboelectricity / KIM Yong-Hyun[*1] ([1]Department of Physics, KAIST)

C8.02 [11:46 - 12:22]

Quantum coherence and ballistic transport in graphene nanostructures / KI DongKeun*[1] ([1]Department of Physics, The University of Hong Kong)

C8.03 [12:22 - 12:58]

Probing the topological Anderson transition with quantum walks / KIM Kun Woo*[1] ([1]Department of Physics, Chung-Ang University)

[C9-ap] 2D materials-II

2021. 04. 22 Thursday 11:10~12:34

Room: 09

좌장 : 김영덕 경희대학교

Chair : KIM Young Duck (Kyung Hee University)

C9.01* [11:10 - 11:22]

Direct tuning of graphene work function via chemical vapor deposition control / YOON TaeGeun[1], WU Qinke[1], YUN Dong-Jin[4], KIM Seong Heon[2], SONG Young Jae*[3] ([1]SKKU Advanced Institute of Nano Technology (SAINT), Sungkyunkwan University, [2]Department of Physics, Myongji University, [3]Department of Nano Engineering and Department of Physics, Sungkyunkwan University, [4]Analytical Engineering Group, Samsung Advanced Institute of Technology)

C9.02* [11:22 - 11:34]

Hydrodynamic Charge Scattering Behavior in Graphene / LEE Jea Jung[1], LEE Heeyeon[1], KIM Hakseong[2], SEO Dongjea[3,4], GONG Yoon Ji[6], KIM Young Dong[1], YOO Keon Ho[1], CHOI Heon-Jin[3], HAN Il Ki[5,6], NAM Youngwoo[7], KIM Young Duck*[1,6,8] ([1]Department of Physics, Kyung Hee University, [2]Korea Research Institute of Standards and Science, KRISS, [3]Materials Science and Engineering, Yonsei University, [4]Electrical and Computer Engineering, University of Minnesota, [5]KHU-KIST Department of Converging Science and Technology, Kyung Hee University, [6]Nanophotonics Research Center, KIST, [7]Department of Physics, Gyeongsang National University, [8]Information Display, Kyung Hee University)

C9.03* [11:34 - 11:46]

Semiconductor-less field emission barristor with I_{ON}/I_{OFF} of 10^6 / LEE Jun-Ho[1], JEONG Nae Bong[1], CHOI Inchul[1], KIM Min Jeong[1], CHUNG Hyun-Jong*[1] ([1]Department of Physics, Konkuk University)

C9.04 [11:46 - 11:58]

Gate-Tunable Photodetector and Ambipolar Transistor / OH Gwang Taek[1], AHN Yeong Hwan[2], PARK Bae Ho*[1] ([1]Konkuk University, [2]Department of Physics and Department of Energy Systems Research, Ajou University)

C9.05* [11:58 - 12:10]

Mechanical properties of graphene resonators in various structures / JE Yugyeong[1], SHIN Dong Hoon[2], LEE Sang-Wook*[1] ([1]Department of Physics, Ewha Womans University, [2]Kavli Institute of Nanoscience, Delft University of Technology)

C9.06* [12:10 - 12:22]

Utilization of Deep Learning Networks for Data Analysis of NEMS-Based Mass detector in Noisy Environment / LEE Sang-Wook*[1], SEO Miri[1], YANG Eun Seo[2] ([1]Department of Physics, Ewha Womans University, [2]Department of Computer Science and Engineering, Ewha Womans University)

C9.07 [12:22 - 12:34]

Unconventional visible light emission in graphene nanogap / CHO Minhyun[1], SEO Dongjea[2,6], GONG Younji[3], CHOI Heon-Jin[2], KIM Young Dong[1], YOO Keon Ho[1], HAN Il Ki[3,5], KANG Seokwon[4], KIM Young Duck*[1,3,4] ([1]Department of Physics, Kyung Hee University, [2]Material Science and Engineering, Yonsei University, [3]KHU-KIST Converging Science and Technology, Kyung Hee University, [4]Information Display, Kyung Hee University, [5]Nanophotonics Research Center, KIST, [6]Electrical and Computer Engineering, University of Minnesota)

[C10-ap] [E] Pioneer: Spintronic Building-Blocks-II

2021. 04. 22 Thursday 11:10~12:46

Room: 10

좌장 : 고경춘 고려대학교

Chair : GO Gyungchoon (Korea University)

C10.01 [11:10 - 11:34]

Orbital for efficient spin manipulation / KIM Junyeon*[1], GO Dongwook[2], TSAI Hanshen[3], JO Daegeun[4], KONDOU Kouta[1], LEE Hyun-Woo[4], OTANI YoshiChika[1,3] ([1]RIKEN-CEMS, [2]Peter Grünberg Institut and Institute for Advanced Simulation, Forschungszentrum Jülich and JARA and Johannes Gutenberg University Mainz, [3]The University of Tokyo, [4]Pohang University of Science and Technology)

C10.02 [11:34 - 11:58]

Self-generated spin torque in spin-orbit coupled ferromagnets / KIM Kyoung-Whan*[1] ([1]Center for Spintronics, KIST)

C10.03 [11:58 - 12:22]

Orbital torque in Cr-based heterostructures: A theoretical perspective / GO Dongwook*[1], JO Daegeun[2], LEE Soogil[3], KANG Min-Gu[3], KIM Kyoung-Whan[4], PARK Byong-Guk[3], BLüGEL Stefan[1], LEE Hyun-Woo[2], MOKROUSOV Yuriy[1] ([1]Peter Grünberg Institut and Institute for Advanced Simulation, Forschungszentrum JülichInstitute of Physics,

Johannes Gutenberg University Mainz, [2]Department of Physics, Pohang University of Science and Technology, [3]Department of Physics, KAIST, [4]Center for Spintronics, Korea Institute of Science and Technology)

C10.04 [12:22 - 12:46]

Orbital Hall effect induced spin-orbit torque through efficient conversion from orbital Hall current to spin current / LEE Soogil*[1], KANG Min-Gu[1], GO Dongwook[2,3], KIM Dohyoung[1], KANG Jun-Ho[4], LEE Taekhyeon[4], LEE Geun-Hee[4], LEE Nyun Jong[5], 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, [3]Institute of Physics, Johannes Gutenberg University Mainz, [4]Department of Physics, KAIST, [5]Department of Physics, University of Ulsan)

[C11-ap] [E] Pioneer: The 6th Korea-Japan joint symposium on Organic Electronics: Recent advances on organic semiconductor materials and devices-II

2021. 04. 22 Thursday 11:10~12:58

Room: 11

좌장 : 임은주 단국대학교

Chair : LIM EunJu (Dankook University)

C11.01 [11:10 - 11:34]

Charge Transport Simulations of Organic Semiconductors for Materials Development / ISHII Hiroyuki*[1] ([1]Department of Applied Physics, Faculty of Pure and Applied Sciences, University of Tsukuba)

C11.02 [11:34 - 11:58]

Efficient Perovskite Solar Cells via Improved Carrier Management and Their Potential Applications / SEO Jangwon*[1] ([1]Energy Materials Research Center, KRICT)

C11.03 [11:58 - 12:22]

Conformable imager for biometric data measurement / YOKOTA Tomoyuki*[1] ([1]Dept. of Electrical Engineering and Information Systems, The University of Tokyo)

C11.04 [12:22 - 12:46]

Molecular doping routes for organic electronics / KANG Keehoon*[1], KIM Youngrok[2], WATANABE Shun[3], SIRRINGHAUS Henning[4], LEE Takhee[2] ([1]Materials Science and Engineering, Yonsei University, [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Advanced Materials Science, University of Tokyo, [4]Cavendish Laboratory, University of Cambridge)

C11.05 [12:46 - 12:58]
A Biomass Derived Nano Porous Graphene Memory Cell / SATTARI-ESFAHLAN Mehdi[1,2], KIM Chang-Hyun*[1] ([1]Department of Electronic Engineering, Gachon University, [2]Material Science and Engineering, Seoul National University)

[C12-ap] Focus: First-principles studies of energy materials-III
2021. 04. 22 Thursday 11:10~12:46
Room: 12
좌장 : 이정훈 KIST
Chair : LEE Jung-Hoon (KIST)

C12.01 [11:10 - 11:34]
Designing Descriptor for Computational Screening of Argyrodite-based Solid State Superionic Conductors / JUN Byeongsun[2], KIM Ji Hoon[2], LEE Sang Uck*[1,2] ([1]Department of Chemical and Molecular Engineering, Hanyang University ERICA, [2]Department of Applied Chemistry, Hanyang University ERICA)

C12.02 [11:34 - 11:58]
Flexoelectric effect in corrugated two-dimensional materials / JIN Yeongrok[1], LEE Jaekwang*[1] ([1]Department of Physics, Pusan National University)

C12.03 [11:58 - 12:22]
Computational catalyst design at electrified solid-liquid interfaces / RINGE Stefan*[1] ([1]Energy Science & Engineering, DGIST)

C12.04 [12:22 - 12:46]
"Atomic Semiconductor" via flat phonon bands / LEE Jun Hee*[1] ([1]School of Energy & Chem. Eng., UNIST)

[C13-st] Complex systems and nonlinear dynamics
2021. 04. 22 Thursday 11:10~12:58
Room: 13
좌장 : 이덕선 고등과학원
Chair : LEE Deok-Sun (KIAS)

C13.01* [11:10 - 11:22]
Analysis of Couped Dynamic Model for Malaria Spreading between Human being and Mosquito with Infected Immigrants / LEE Jae Woo*[1], MAFWELE Biseko Juma[1] ([1]Inha University)

C13.02* [11:22 - 11:34]

The compartment learning model and the core vocabulary in Korean Language / LEE Hae Seong*[1], KIM Beom Jun[1] ([1]Department of Physics, Sungkyunkwan University)

C13.03* [11:34 - 11:46]

Political polarization in the United States House of Representatives / KIM Jonghoon[1], BAEK Seung Ki*[1] ([1]Department of Physics, Pukyong National University)

C13.04* [11:46 - 11:58]

Stability of cooperation in a 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)

C13.05* [11:58 - 12:10]

The feasibility and stability of plant-pollinator networks under mutualism and competition / LEE Hyunwoo[1], LEE Jaewoo[1], LEE Deok-Sun*[2] ([1]Department of Physics, Inha University, [2]School of Computational Sciences, KIAS)

C13.06* [12:10 - 12:22]

Network Analysis of International Trade based on Community Inconsistency / CHO Wonguk*[1], LEE Daekyung[1], KIM Beom Jun[1] ([1]Department of Physics, Sungkyunkwan University)

C13.07* [12:22 - 12:34]

Modified inference algorithm for gravity model / LEE Daekyung*[1], KIM Gunn[2], JEONG Hyeong-Chai[2], KIM Beom Jun[1] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Physics and Astronomy, Sejong University)

C13.08* [12:34 - 12:46]

Discovering conservation laws from trajectories via machine learning / HA Seungwoong[1], JEONG Hawoong*[1,2] ([1]Department of Physics, KAIST, [2]Center for Complex System, KAIST)

C13.09 [12:46 - 12:58]

Mesoscale properties of mutualistic networks in ecosystems / LEE Sang Hoon*[1] ([1]Department of Liberal Arts, Gyeongsang National University)

[C14] No session

[C15-pl] [E] Pioneer: 3D Effects in Tokamak Fusion Plasmas II

2021. 04. 22 Thursday 11:10~12:22

Room: 15

좌장 : 인용균 울산과학기술원

Chair : In Yongkyoon (UNIST)

C15.01 [11:10 - 11:34]

Nonlinear energy flows from low frequency electromagnetic fluctuations to broad-band turbulence during ELMs / GHIM Young-chul*[1], KIM Jaewook[2], CHOI M.J.[2], NAM Y.U.[2], JHANG Hogun[2], BAK J.G.[2], HAHN S.H.[2], SUNG C.[1], CHOE W.[1] ([1]Department of Nuclear and Quantum Engineering, KAIST, [2]Korea Institute of Fusion Energy)

C15.02 [11:34 - 11:58]

Impact of 3D magnetic field on confinement and energetic particle transport in KSTAR / KIM Kimin*[1], KIM Hyunseok[1], KANG Jisung[1], YOO Jeongwon[1], CHOI Minjun[1], KIM Junghee[1], KO Won-Ha[1], LEE Myungwon[1], KWON Jaemin[1] ([1]KFE)

C15.03 [11:58 - 12:22]

3D imaging diagnostics of tokamak plasmas / YUN Gunsu*[1] ([1]POSTECH)

[C16-op] Focus: Terahertz Device

2021. 04. 22 Thursday 11:10~12:46

Room: 16

좌장 : 서민아 한국과학기술연구원

Chair : SEO Min Ah (KIST)

C16.01 [11:10 - 11:34]

In-situ THz spectroscopies for investigating advanced functional materials / AHN Yeong Hwan*[1] ([1]Ajou University)

C16.02 [11:34 - 11:58]

Non-Hermitian metasurfaces based active devices and sensitive sensors / KIM Teun-Teun*[1], BEAK Soojeong[2], PARK Sang Hyun[3], HA Taewoo[4], MIN Bumki[2] ([1]Department of Physics, University of Ulsan, [2]Department of Mechanical Engineering, KAIST, [3]Department of Mechanical Engineering, University of Minnesota, [4]Center for Integrated Nanostructure Physics, IBS)

C16.03 [11:58 - 12:22]

Applications of THz nanoslot antennas for ultrafast dynamics on photo-excited semiconductors / CHOI Geunchang*[1] ([1]Chung-Ang University)

C16.04 [12:22 - 12:46]

광소자 기반 테라헤르츠 부품 개발 및 그 응용 / LEE Eui Su*[1], KIM Mugeon[1], SHIN Jun-Hwan[1], PARK Dong Woo[1], LEE Ilmin[1], PARK Kyung Hyun[1] ([1]Terahertz Research Section, ETRI)

C

[C17-at] Atomic and Molecular Physics II

2021. 04. 22 Thursday 11:10~12:10

Room: 17

좌장 : **허명선** 한국표준과학연구원

Chair : HEO Myoung Sun (KRISS)

C17.01* [11:10 - 11:22]

Spin-exchange relaxation free atomic magnetometer with ^{87}Rb vapor / YU Ye Jin[1], MOON Han Seb*[1] ([1]Pusan National University)

C17.02* [11:22 - 11:34]

Quantum gas microscope of Bosonic atoms with tunable interaction / HUR Junhyeok[1], KWON Kiryang[1], KIM Kyungtae[1], HUH SeungJung[1], CHOI Jae Yoon*[1] ([1]Department of Physics, KAIST)

C17.03 [11:34 - 11:46]

Parametric excitation of star-shaped patterns in Bose-Einstein condensates / KWON Kiryang[1], HUH SeungJung[1], KIM Kyungtae[1], HUR Junhyeok[1], CHOI Jae Yoon*[1] ([1]Department of Physics, KAIST)

C17.04* [11:46 - 11:58]

Quantum computing of maximal independent set problem for non-planar graphs / KIM Kangheun[1], KIM Minhyuk[1], HWANG Jaeyong[1], AHN Jaewook*[1] ([1]Department of Physics, KAIST)

C17.05* [11:58 - 12:10]

Efficient creation of dipolar Bose-Einstein condensate for quantum simulation / SEO Bojeong[1], CHEN Peng[1], CHEN Ziting[1], HUANG Ming chen[1], PARIT Mithilesh Kumar[1], JO Gyu Boong*[1] ([1]Department of Physics, HKUST)

[C18-se] [E] Pioneer: Transferable epitaxy for multifunctional-multistack flexible device fabrications II

2021. 04. 22 Thursday 11:10~12:46

Room: 18

좌장 : 홍영준 세종대학교

Chair : HONG Young Joon (Sejong University)

C18.01 [11:10 - 11:34]

Stability of Graphene on GaN for the Realization of Ⅲ-Nitride Remote Epitaxy / PARK J.-H.[1,2], YANG X.[2], LEE J.-Y.[1], PARK M.-D.[1], LEE D.-S.[*1], BAE S.-Y.[3], AMANO H.[*2] ([1]School of Electrical Engineering and Computer Science (EECS), Gwangju Institute of Science and Technology (GIST), [2]Institute of Materials and Systems for Sustainability (IMaSS), Nagoya University, [3]Energy Materials Center, Korea Institute of Ceramic Engineering and Technology (KICET))

C18.02 [11:34 - 11:58]

Hybrid van der Waals heterostructures for quantum materials research / YOO Jin-kyoung[*1] ([1]Center for Integrated Nanotechnologies, Los Alamos National Laboratory)

C18.03 [11:58 - 12:22]

Challenges and opportunities in remote epitaxy for releasable epilayers on graphene / KIM Jeehwan[*1] ([1]MIT)

C18.04 [12:22 - 12:46]

Compound Semiconductor based Thin-Film and Flexible Optoelectronics / LEE Kyu-sang[*1] ([1]University of Virginia)

[C19-se] Focus: Electric properties of semiconductor

2021. 04. 22 Thursday 11:10~12:46

Room: 19

좌장 : 주민규 숙명여자대학교

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

C19.01 [11:10 - 11:34]

Low-frequency noise characterization in 2-dimensional semiconductor transistors with large interfacial carrier fluctuations / JI Hyunjin[*1], LEE Gwanmu[2], YI Hojoon[2], LIM Seong Chu[2] ([1]School of Electrical Engineering, University of Ulsan, [2]Department of Energy Science, Sungkyunkwan University)

C19.02 [11:34 - 11:58]
옴식 영역에서의 전기 전도도 측정을 통한 MoS_2 에서의 도체-부도체 상전이 연구 / MOON Byoung Hee*1 (1Department of Physics, Incheon National University)

C19.03 [11:58 - 12:22]
테라헤르츠파를 이용한 반도체 및 저차원 소재의 전기적 특성 분석법 / SHIN Hee Jun*1 (1fs-THz, Pohang Accelerator Laboratory)

C19.04 [12:22 - 12:46]
Metal-Insulator Transition and Photocurrent of MoS_2 / LIM Seong Chu*1, SAKONG Won Kil1 (1Department of Energy Science, Sungkyunkwan University)

[C20-bp] Focus: Cell Mechanobiology
2021. 04. 22 Thursday 11:10~12:58
Room: 20
좌장 : 이광록 광주과학기술원
Chair : LEE Gwangrog (GIST)

C20.01 [11:10 - 11:46]
Mechanical Responses of Breast Cancer Cells to Substrates of Varying Stiffness Revealed by Single-Cell Measurements / PARK Hyokeun*1 (1HKUST)

C20.02 [11:46 - 12:10]
Shapes, Motions, and Forces in Cells / SHIN Jennifer H.*1, CHO Youngbin1 (1Department of Mechanical Engineering, KAIST)

C20.03 [12:10 - 12:34]
Molecular tension authenticates apoptotic cells during efferocytosis / MIN Chanhyuk1,2, CHO Hyeokjin1,2, JEON Jaesun1,2, LEE Gwangrog1,2, PARK Daeho*1,2 (1School of Life Sciences, Gwangju Institute of Science and Technology, 2Laboratory for cell mechanobiology, Gwangju Institute of Science and Technology)

C20.04 [12:34 - 12:58]
Single-molecule analysis of integrin tension required for chemotaxis of metastatic cancer cells in confinement / KIM Young1, KIM Kyung Ah1, KIM Byoung Choul*1 (1Major of Nano-Bioengineering, Incheon National University)

[C21-or] 교육위원회 세션: 21세기 대학 일반물리학

2021. 04. 22 Thursday 11:10~12:58

Room: 21

좌장 : 오원근 충북대

Chair : OH Won Kun (Chungbuk National University)

[프로그램]

- 11:10–11:15 인사말(한국물리학회장, 교육위원장)
- 11:15–11:35 21세기형 일반물리학 콘텐츠의 지향, 정진수(충북대)
- 11:35–11:55 IT 기술과 일반물리학의 혁신, 정용욱(경상대)
- 11:55–12:15 일반물리학에서 필요한 것과 불필요한 것, 손창희(UNIST)
- 12:15–12:35 새로운 대학물리교육과정의 개발, 최만수(고려대)
- 12:35–12:58 질의 및 응답

Session CC

2021 April 22(Thu) 13:00-14:00

[CC3-nu] [E] Pioneer: Symposium for Nuclear Experiment I

2021. 04. 22 Thursday 13:00~14:12

Room: 03

좌장 : 채경육 성균관대학교

Chair : CHAE Kyung Yuk (Sungkyunkwan University)

CC3.01 [13:00 - 13:36]

Current status of the development of the mass measurement system (MRTOF-MS) at RAON / MOON Jun Young*[1], SHIN Teaksu[1], LEE Jinho[1], CHAE Kyungyuk[2], NGUYEN Duy Ngoc[2], NGUYEN Kim Uyen[2] ([1]Rare isotope science project, IBS, [2]Department of Physics, Sungkyunkwan University)

CC3.02 [13:36 - 14:12]

Recent experiments and upgrades at the TITAN MR-TOF-MS at TRIUMF / MURBOECK Tobias*[1], DUNLING Eleanor[1,2], JACOBS Andrew[1,3], WALLS Coulter[1,4], KWIATKOWSKI Ania[1,3,5] ([1]TRIUMF, [2]University of York, [3]University of British Columbia, [4]University of Manitoba, [5]University of Victoria)

2021 April 22(Thu) 14:00-15:48

[D1-pa] Accelerator-based particle physics experiments III

2021. 04. 22 Thursday 14:00~15:24

Room: 01

좌장 : 최수용 고려대학교

Chair : CHOI Suyong (Korea University)

D1.01* [14:00 - 14:12]

FPGA-based firmware implementation of a missing transverse momentum algorithm for the CMS Phase-2 Level-1 trigger / MOON Chang-Seong*[1], HONG Jieun[1] ([1]Department of Physics, Kyungpook National University)

D1.02 [14:12 - 14:24]

Physics at SND@LHC / LEE Kang Young*[1], 김성현[1], 김영균[2], 박병도[1], 손종윤[1], 우종관[3], 윤천실[1], 이경세[4], 최기영[5] ([1]Gyeongsang National University, [2]Department of Science Education, Gwangju National University of Education, [3]Department of Physics, Jeju National University, [4]Department of Physics, Korea University, [5]Department of Physics, Sungkyunkwan University)

D1.03 [14:24 - 14:36]

Preproduction of improved RPCs for Phase-2 upgrade of the CMS Muon System / LEE Kyong Sei*[1], KANG Minho[1], JO Youngmin[1], CHOUI Suyong[1] ([1]Korea University)

D1.04* [14:36 - 14:48]

Status of CMS LGAD Sensor Testing in Korea / YOO Jae Hyeok*[1], PADMANABAN Jayashri[1], HWANG In Seong[1] ([1]Physics, Korea University)

D1.05 [14:48 - 15:00]

The CMS Muon High Level Trigger for the High Luminosity LHC / OH Minseok*[1], YOO Hwidong[2] ([1]Department of Physics, Seoul National University, [2]Department of Physics, Yonsei University)

D1.06* [15:00 - 15:12]

Development of boron-cathode based GEM detector for neutron imaging / PARK Inkyu*[1], LEE Jason Sang Hun[1], JUNG Younggun[1], LEE Hyupwoo[1], SONG DongHyun[1] ([1]University of Seoul)

D1.07* [15:12 - 15:24]
Measurements of LGAD sensors with 120 GeV proton beam for CMS MTD Endcap Timing Layer / MOON Chang-Seong*[1], LEE Hakseong[1] ([1]Department of Physics, Kyungpook National University)

[D2-pa] Non-accelerator-based particle physics experiments II
2021. 04. 22 Thursday 14:00~15:24
Room: 02
좌장 : 이무현 기초과학연구원
Chair : LEE Moo Hyun (IBS)

D2.01 [14:00 - 14:12]
Status of Muon Veto detector development for AMoRE-II / KIM Go Woon*[1], LEE Jaison[1], NYANDA Pendo[1], YI Eungseok[1] ([1]CUP, IBS)

D2.02 [14:12 - 14:24]
Study of the decay of ^{180m}Ta using the CAGe / KIM Go Woon*[1], KIM Yeongduk[1], HAHN Insik[2], KANG WoonGu[1], KAZALOV Vladimir[3], LEE EunKyung[1], LEONARD Douglas[1], PARK Su-Yeon[1] ([1]CUP, IBS, [2]CENS, IBS, [3]Institute for Nuclear Research of the Russian Academy of Science, Baksan Neutrino Observatory)

D2.03 [14:24 - 14:36]
Stabilization heaters & drift correction in AMoRE-I / KIM Yong-Hamb*[1,2], KWON Dohyung[1,2] ([1]Center for Underground Physics, IBS, [2]Basic Science, UST)

D2.04* [14:36 - 14:48]
Background study of monopole experiment (KAEM) using GEANT4 simulation / LEE Junghyun*[1], LEE Sehwook[1], HUH Changgi[1], YE Ryonghae[1] ([1]Department of Physics, Kyungpook National University)

D2.05* [14:48 - 15:00]
Axion haloscope experiment using 18T high temperature superconducting magnet and Josephson parametric converter at CAPP/IBS in KAIST / LEE Youngjae*[1], BYEONGSU Yang[2], YOON Hojin[1], AHN Moohyun[3], PARK Heejun[2], KIM DongLak[2], YOO Jonghee[1,2] ([1]Department of Physics, KAIST, [2]CAPP, IBS, [3]Department of Physics and Astronomy, Seoul National University)

D2.06 [15:00 - 15:12]
Characterization of a NaI(Tl)-SiPM detector at low temperatures / LEE Hye Young*[1] ([1]IBS)

D2.07* [15:12 - 15:24]
NaI(Tl) neutron and gamma pulse shape discrimination study around −30℃ / LEE Seo Hyun*[1,2], LEE Hyun Su[1,2], KIM Kyungwon[2] ([1]Basic Science, UST, [2]Center for Underground Physics, IBS)

[D3-nu] Pioneer Symposium for Nuclear Experiment II
2021. 04. 22 Thursday 14:00~15:48
Room: 03
좌장 : 홍병식 고려대학교
Chair : HONG Byungsik (Korea University)

D3.01 [14:00 - 14:36]
Status of construction of NDPS facility / HONG Seung Woo*[1], MOON Dalho[1], GIL Ghoong-Sup[2], KIM Do Heon[2], LEE Young-Ouk[2], SONG Tae-Yung[2], YANG Sung-Chul[2], MOON SEOK HO[3], KWAK DONGHYUN[3], JEONG JUNYEONG[3], CHEON YOOLIM[3], CHUNG Moses[3], LEE Sangjin[4], TSHOO Kyoungho[4], HAM Cheolmin[4], SHIGYO Nobuhiro[5], WATANABE Yukinobu[5], NISHIO Katsuhisa[6], YASHIMA Hiroshi[7], CHIBA Satoshi[8] ([1]Department of Physics, Sungkyunkwan University, [2]Nuclear Physics Application Research Division, KAERI, [3]Department of Physics, UNIST, [4]RISP, IBS, [5]Department of Applied Quantum Physics and Nuclear, Kyushu University, [6]Advanced Science Research Center, JAEA, [7]Research Reactor Institute, Kyoto University, [8]Laboratory for Advanced Nuclear Energy, Tokyo Institute of Technology)

D3.02 [14:36 - 15:12]
Fission study using multinucleon transfer reaction / NISHIO Katsuhisa*[1] ([1]Advances Science Research Center, Japan Atomic Energy Agency)

D3.03 [15:12 - 15:48]
Overview and status of the LAMPS experiments / KWEON Min Jung*[1] ([1]Inha University)

[D4-as] Focus: After the 25th Anniversary of the Astrophysics Division I
2021. 04. 22 Thursday 14:00~15:36
Room: 04
좌장 : 이창환 부산대학교
Chair : LEE Chang Hwan (Pusan National University)

D4.01 [14:00 - 14:24]
물리가 있는 풍경: 감마선 폭발과 중력파(γ-ray bursts and gravitational waves) / 이현규*[1]
([1]한양대학교 물리학과)

D4.02 [14:24 - 14:48]
한국-이태리 천체물리 공동 학술회의 성과와 전망 / KIM Sung Won*1 ([1]Science Education, Ewha Womans University)

D4.03 [14:48 - 15:00]
The 25th anniversary of the astrophysics division JKPS special issue / KWAK Kyujin*1 ([1]School of Natural Science, UNIST)

D4.04 [15:00 - 15:12]
Overview of the 2020 Astrophysics Division Roadmap / KIM Chunglee*1 ([1]Department of Physics, Ewha Womans University)

D4.05 [15:12 - 15:36]
천체물리학에 관한 우주 프로젝트의 기획 및 실현 / PARK IL Hung*1 ([1]Department of Physics, Sungkyunkwan University)

[D5-co] [E] Pioneer: Recent progress on the ARPES study with strain engineering I
2021. 04. 22 Thursday 14:00~15:48
Room: 05
좌장 : 김용관 한국과학기술원
Chair : KIM Yeong kwan (KAIST)

D5.01 [14:00 - 14:36]
Nematicity in $BaFe_2As_2$ studied with strain-dependent ARPES / PFAU Heike*1 ([1]Department of Physics, Stanford University)

D5.02 [14:36 - 15:12]
In situ strain tuning of the nematicity and superconductivity in iron-based superconductors / ZHANG Yan*1 ([1]International Center for Quantum Materials, School of Physics, Peking University)

D5.03 [15:12 - 15:48]
Strain control of topological phases in quasi-1D stacked materials visualized by ARPES / KONDO Takeshi*1 ([1]The Institute for Solid State Physics, The University of Tokyo)

[D6-co] Focus: Physics under high magnetic fields I

2021. 04. 22 Thursday 14:00~15:36

Room: 06

좌장 : 김용민 단국대학교

Chair : KIM Yongmin (Dankook University)

D6.01 [14:00 - 14:24]

Perspective on the optical tools for studies under high magnetic fields / JHO Young Dahl*[1] ([1]School of Electrical and Computer Engineering, GIST)

D6.02 [14:24 - 14:48]

Magneto-optical spectroscopy on the confined exciton in nanostructures / KYHM Kwangseuk*[1] ([1]Optomechatronics, Pusan National University)

D6.03 [14:48 - 15:12]

Quantum transport evidence of isolated topological nodal-line fermions / KIM Jun Sung*[1] ([1]Department of Physics, POSTECH)

D6.04 [15:12 - 15:36]

Zeeman splitting and pressure induced Fermi surface modification in nodal line semimetals / BHOI Dilip*[1,2], SINGHA Ratnadwip[3], SUR Yeahan[2], GOUCHI Jun[1], MIYAKE Atsushi[1], CHATURVEDI Shashank[4,5], PARIDA Prakash[6], GRAF David[7], MURATA Keizo[2], WAGHMARE Umesh V.[4], MANDAL Prabhat[3], TOKUNAGA Masashi[1], KIM Kee Hoon[2], UWATOKO Yoshiya[1] ([1]The Institute for solid state Physics, The University of Tokyo, [2]Department of Physics and Astronomy, CeNSCMR and Institute of Applied Physics, Seoul National University, [3]Saha Institute of Nuclear Physics, HBNI, [4]Chemistry and Physics of Materials Unit, School of Advanced Materials, JNCASR, [5]Theoretical Sciences Unit, JNCASR, [6]Indian Institute of Technology, [7]National High Magnetic Field Lab)

[D7-co] Condensed Matter Computational Physics II

2021. 04. 22 Thursday 14:00~15:24

Room: 07

좌장 : 김영국 성균관대학교

Chair : KIM Youngkuk (Sungkyunkwan University)

D7.01* [14:00 - 14:12]

First Principles studies of Strain-Induced Ferroelectricity in (Sr, Ba)$Fe_{12}O_{19}$ hexaferrite / KIM Inhwan[1], LEE Jaekwang*[1] ([1]Department of Physics, Pusan National University)

D7.02 [14:12 - 14:24]

High-harmonic spectroscopy in 3D topological insulators / BAYKUSHEVA Denitsa[3], CHACON Alexis[*1,2,4], LU Jian[3], BAILEY Trevor P.[5], SOBOTA Jonathan A.[6], SOIFER Hadas[6], KIRCHMANN Patrick S.[6], ROTUNDU Costel R.[6], UHER Ctirad[5], HEINZ Tony F.[3], KIM Dong Eon[1,2], REIS David A.[3], GHIMIRE Shambhu[3] ([1]MPC-AS, Max Planck Center for Attosecond Science, [2]Department of Physics, POSTECH, [3]Stanford PULSE Institute, SLAC national accelerator Laboratory, [4]Center for Nonlinear Studies and Theoretical Division, Los Alamos National Laboratory, [5]Department of Physics, University of Michigan, [6]Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory)

D7.03 [14:24 - 14:36]

The hybrid on-the-fly machine learning algorithm for accelerating Monte Carlo sampling / YOON Hongkee[1], HAN Myung Joon[*1] ([1]Department of Physics, KAIST)

D7.04* [14:36 - 14:48]

First principal study of the coalescence of large grains on a Cu (111) surface / LEE Hyung-June[1], KWON Young-Kyun[*1] ([1]Department of Physics, Kyung Hee University)

D7.05* [14:48 - 15:00]

First-Principles Study of Electronic Structures and Topological Properties of hexagonal networks of carbon / KIM Woochang[1], CHOI Young Woo[1], CHOI Hyoung Joon[*1] ([1]Department of Physics, Yonsei University)

D7.06 [15:00 - 15:12]

First-principles study of interfacial water structures on electrified gold electrodes / KIM Yong-Hoon[*1], LEE Juho[1] ([1]School of Electrical Engineering, KAIST)

D7.07* [15:12 - 15:24]

Second harmonic Hall effect in time-reversal-symmetric insulators / OKYAY Mahmut Sait[1], PARK Noejung[*1] ([1]UNIST)

[D8-co] Nano and mesoscopic physics II

2021. 04. 22 Thursday 14:00~15:24

Room: 08

좌장 : 이성빈 한국과학기술원

Chair : LEE SungBin (KAIST)

D8.01 [14:00 - 14:12]

Electric Quantum Oscillation in Weyl Semimetals / HWANG Kyusung[*1], LEE Woo-Ram[1,2], PARK Kwon[1] ([1]School of Physics, Korea Institute for Advanced Study, [2]Department of Physics, Virginia Tech)

D8.02 [14:12 - 14:24]

Symmetry correspondence in Su-Schrieffer-Heeger and Jackiw-Rebbi models / OH Chang-geun[1], HAN Sang-Hoon[2], CHEON Sang Mo[*2,1] ([1]Research Institute for Natural Sciences, Hanyang University, [2]Department of Physics, Hanyang University)

D8.03 [14:24 - 14:36]

Time-resolved photoemission study for extreme ultrafast dynamics of topology in Floquet-Bloch Dirac cone / KIM Youngjae[1], LEE JaeDong[*1] ([1]Department of Emerging Materials Science, DGIST)

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D8.04 [14:36 - 14:48]

Electron-hole asymmetry and band gaps of commensurate double moire patterns in twisted bilayergraphene on hexagonal boron nitride / SHIN Jiseon[1], PARK Youngju[1], CHITTARI Bheema Lingam[2], SUN Jin-Hua[3], JUNG Jeil[*1,4] ([1]Department of Physics, University of Seoul, [2]Department of Physical Sciences, Indian Institute of Science Education and Research Kolkata, [3]Research Institute of Advanced Technologies, Ningbo University, [4]Department of Smart Cities, University of Seoul)

D8.05 [14:48 - 15:00]

Topological Flat Bands and Optical Conductivity in Trilayer Graphene Boron Nitride Moire Superlattices / JUNG Jeil[*1,2], APPALAKONDAIAH Samudrla[1], JISEON Shin[1], YOUNGJU Park[1], CHITTARI Bheema Lingam[1,3] ([1]Department of Physics, University of Seoul, [2]Department of Smart Cities, University of Seoul, [3]Department of Physical Sciences, Indian Institute of Science Education and Research-Kolkata)

D8.06* [15:00 - 15:12]

Macroscopically degenerate localized zero-energy states of quasicrystalline bilayer systems in strong coupling limit / HA Hyunsoo[1], YANG Bohm Jung[*1] ([1]Department of Physics and Astronomy, Seoul National University)

D8.07 [15:12 - 15:24]

Electronic Structures of twisted bilayer of gapped two-dimensional semi-Dirac materials / NAM Taesik[1], KIM Han-gyu[1], CHOI Hyoung Joon[*1] ([1]Department of Physics, Yonsei University)

[D9-ap] Focus: Quantum Nano-Devices: Quantum phenomena in mechanical oscillators and 2D materials-I

2021. 04. 22 Thursday 14:00~15:48

Room: 09

좌장 : 이동헌 고려대학교

Chair : LEE Donghun (Korea University)

D9.01 [14:00 - 14:36]

Interface between the spin qubit of diamond color center and acoustic phonons using microelectromechanical systems / SOHN Youngik*1 ([1]School of Electrical Engineering, KAIST)

D9.02 [14:36 - 15:12]

Nanomechanical cat-states generated by DC voltage-driven Cooper pair box qubit / RADIC D.[1], CHOI Sang-Jun*2,3, PARK H. C.[2], SHEKHTER R. I.[4], GORELIK L. Y.[5] ([1]Department of Physics, Faculty of Science, University of Zagreb, [2]Center for Theoretical Physics of Complex Systems, IBS (IBS), [3]Institute for Theoretical Physics and Astrophysics, University of Wuerzburg, [4]Department of Physics, University of Gothenburg, [5]Chalmers University of Technology)

D9.03 [15:12 - 15:48]

Approaches toward nanomechanical quantum transducers / KIM Jihwan[1], CHA Jinwoong[1], SHIM Seung-Bo[1], SUH Junho*1 ([1]Quantum Technology Institute, KRISS)

[D10-ap] [E] Pioneer: Prospect of magnetic skyrmion in spin device-I

2021. 04. 22 Thursday 14:00~15:36

Room: 10

좌장 : 민병철 한국과학기술연구원

Chair : MIN Byoung-Chul (KIST)

D10.01 [14:00 - 14:24]

Topological transport of deconfined hedgehogs in magnets / TSERKOVNYAK Yaroslav*1 ([1]Department of Physics and Astronomy, UCLA)

D10.02 [14:24 - 14:48]

Hidden skyrmion diffusion and device for the Brownian computing / MIKI Soma*1, SUZUKI Yoshishige*1,2, TAMURA Eiiti[1], GOTO Minori[1,2], ISHIKAWA Ryo[3], NOZAKI Takayuki[4], TANAKA Yuji[1], ABE Shota[1], NOMURA Hikaru[1,2] ([1]Graduate School of Engineering Science, Osaka University, [2]Center for Spintronics Research Network (CSRN), Osaka University, [3]ULVAC-Osaka University Joint Research Laboratory for Future Technology, Osaka University, [4]Research Center for Emerging Computing Technologies, National Institute of Advanced Industrial Science and Technology(AIST))

D10.03 [14:48 - 15:12]

Stabilization, Creation, Deletion and Shifting of Magnetic skyrmion toward Spintronics application / YANG Seungmo*[1], MOON Kyoung-Woong[1], JU Tae-Seong[1], KIM Changsoo[1], KIM Hyun-Joong[1], KIM Juran[1], HWANG Chanyong[1] ([1]Quantum Spin Team, Korea Research Institute of Standards and Science)

D10.04 [15:12 - 15:36]

Propagating spin wave dynamics in synthetic antiferromagnets / SHIOTA Yoichi*[1] ([1]Institute for Chemical Research, Kyoto University)

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[D11-ap] Organic electronics

2021. 04. 22 Thursday 14:00~15:48

Room: 11

좌장 : 강성준 경희대학교

Chair : KANG Seong Jun (Kyung Hee University)

D11.01 [14:00 - 14:12]

Organic MVL Technology: From Fundamentals to Applications / KIM Chang-Hyun*[1] ([1]Department of Electronic Engineering, Gachon University)

D11.02 [14:12 - 14:24]

Electronic tattoo systems based on silk protein and carbon nanotube for diagnosis and man-machine interfaces / GOGURLA Narendar[1,2], KIM Sunghwan*[1,2] ([1]Physics, Ajou University, [2]Energy Systems Research, Ajou University)

D11.03* [14:24 - 14:36]

Crystallinity-dependent device characteristics of polycrystalline Ruddlesden-Popper perovskite photodetectors / KIM Junwoo[1], LEE Woocheol[1], AHN Heebeom[1], LEE Jonghoon[1], BAEK Kyeong-Yoon[1], KIM Jae-Keun[1], KANG Keehoon[1], LEE Takhee*[1] ([1]Department of Physics and Astronomy, Seoul National University)

D11.04* [14:36 - 14:48]

Photo-excited conduction of halide perovskite crystals and its applications to photodetectors / JUNG Hye Ri[1], CHO Yunae[2], JO William*[1,2] ([1]Department of Physics, Ewha Womans University, [2]New and Renewable Energy Research Center, Ewha Womans University)

D11.05* [14:48 - 15:00]

Current Noise Properties of organo-metal halide perovskite unipolar resistive memory devices / AHN Heebeom[1], KANG Keehoon[1,2], LEE Jae Sung[3], LEE Woocheol[1], KIM Jae-Keun[1], KIM Junwoo[1], LEE Jonghoon[1], BAEK Kyeong-Yoon[1], LEE Takhee*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Materials Science and Engineering, Yonsei University, [3]School of Physics, KIAS)

D11.06* [15:00 - 15:12]

Molecular photodiode with two-dimensional semiconductor / SHIN Jaeho[1], YANG Seunghoon[1], EO Jung Sun[1], JEON Takkyeong[1], LEE Chul-Ho[1], WANG Gunuk*[1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University)

D11.07* [15:12 - 15:24]

Tailored Design-of-Experiments Approach for Device Performance Prediction and Optimization of Flash-Evaporated Organic-Metal-Halide Perovskite-Based Photodetectors / LEE Jonhoon[1], LEE Woocheol[1], LEE Jeongjae[2], BAEK Kyeong-Yoon[1], SHIN Jiwon[1], KIM Jae-Keun[1], KIM Junwoo[1], AHN Heebeom[1], KANG Keehoon[1], LEE Takhee*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]School of Earth and Environmental Sciences, Seoul National University)

D11.08* [15:24 - 15:36]

One-dimensional multi-synapses based on the organic ferroelectric transistor for wearable neuromorphic applications / WANG Gunuk*[1], HAM Seonggil[1], KANG Minji[2], JANG Seonghoon[1], JANG Jingon[1], CHOI Shanghyeon[1], KIM Tae-Wook[2] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Flexible and Printable Electronics, Jeonbuk National University)

D11.09 [15:36 - 15:48]

Single crystalline halide perovskites on polymers by a capping method for flexible photonic devices / CHO Yunae[1], JUNG Hye Ri[2], KIM Yeon Soo[1], JO William*[2,1] ([1]New ans Renewable Energy Research Center, Ewha Womans University, [2]Department of Physics, Ewha Womans University)

[D12-ap] Focus: Advanced Oxide Materials by Design-I

2021. 04. 22 Thursday 14:00~15:48

Room: 12

좌장 : 김태헌 울산대학교

Chair : KIM Tae Heon (University of Ulsan)

D12.01 [14:00 - 14:36]

Discovery of "Topotactic ReRAM" / JUNG Chang Uk*[1,2], NALLAGATLA Venkata Raveendra[1,2] ([1]Department of Physics, Hankuk University of Foreign Studies, [2]Memory and Catalyst Research Center, Hankuk University of Foreign Studies)

D12.02 [14:36 - 15:12]

Directional ionic transport across the oxide interface enables low-temperature epitaxy of rutile TiO_2 / SON Junwoo*[1] ([1]Department of Materials Science and Engineering, POSTECH)

D12.03 [15:12 - 15:48]

Cooperative lattice evolution in oxide heterostructures / MIN Taewon[1], CHOI Wooseon[2], SEO Jinsol[2], HAN Gyeongtak[2], KIM Young-Min[2], OH Sang Ho[2], LEE Jae-kwang[*1] ([1]Department of Physics, Pusan National University, [2]Department of Energy Science, Sungkyunkwan University)

[D13-st] Nonequilibrium systems

2021. 04. 22 Thursday 14:00~15:24

Room: 13

좌장 : 백승기 부경대학교

Chair : BAEK Seung Ki (Pukyong National University)

D13.01 [14:00 - 14:24]

Geometry-induced rectification for an active object / LEE Jae Sung[*1], PARK Jong-Min[1], NOH Jae Dong[2], PARK Hyunggyu[1] ([1]Korea Institute for Advanced Study, [2]University of Seoul)

D13.02* [14:24 - 14:36]

Limit of periodic signal detection in the presence of thermal noise using neural networks / BOICHENKO Nelli[1], AHN Kang Hun[*1] ([1]Bio-inspired Artificial Intelligence Lab., Department of Physics, Chungnam National University)

D13.03* [14:36 - 14:48]

Mechanochemical coupling in the fuel-consuming active heat engine / BAEK Yong-joo[*1], OH Yongjae[1] ([1]Department of Physics and Astronomy, Seoul National University)

D13.04 [14:48 - 15:00]

Disorder-induced long-ranged correlations in scalar active matter / RO Sunghan[*1], KAFRI Yariv[1], KARDAR Mehran[2], TAILLEUR Julien[3] ([1]Faculty of Physics, Technion, [2]Department of Physics, MIT, 3laboratoire Matière et Systèmes Complexes, Université de Paris)

D13.05* [15:00 - 15:12]

Symmetry-breaking transitions and critical phenomena induced by generic negative drag in an active fluid / KIM Ki-Won[1], CHOE Yunsik[1], BAEK Yongjoo[*1] ([1]Department of Physics and Astronomy, Seoul National University)

D13.06 [15:12 - 15:24]

Investigation on the finite-time Otto cycle: When do quantum effects benefit the heat devices? / LEE Sangyun[1], HA Meesoon[*2], JEONG Hawoong[*1] ([1]School of physics, KIAS, [2]Department of Physics Education, Chosun University, [3]Department of Physics, KAIST)

[D14] No session

[D15-pl] Focus: Advanced Beam Physics

2021. 04. 22 Thursday 14:00~15:12

Room: 15

좌장 : 전동오 기초과학연구원

Chair : JEON Dong-O (IBS)

D15.01 [14:00 - 14:24]

High-Brightness Self-seeded X-ray Free Electron Laser covering from 3.5 keV to 14.6 keV / NAM Inhyuk*[1], MIN Chang-ki[1], KIM Gyujin[1], NA Donghyun[1], YANG Haeryong[1], CHO Myung-Hoon[1], KIM Changbum[1], SHIM Chi Hyun[1], KO Jun Ho[1], HOON Heo[1], KIM Minjae[1], KANG Heung-Sik[1] ([1]PAL-XFEL, Pohang Accelerator Laboratory)

D15.02 [14:24 - 14:48]

Round beam generation and its issues on the 4th generation storage ring / 오봉훈*[1] ([1]PAL)

D15.03* [14:48 - 15:00]

Interplay of space-charge driven fourth order resonance and envelope instability and their mitigation by using beam spinning / CHEON Yoolim[1], CHUNG Moses*[1], MOON Seokho[1], JEON Dong-O[2] ([1]Department of Physics, UNIST, [2]RAON, IBS)

D15.04 [15:00 - 15:12]

New non-linear optimization scheme for the 4th generation storage ring / JANG Gyeongsu[1], OH BongHoon[2], KIM Jaehyun[1], SHIN SeungHwan[2], LEE Jaeyu[2], HA Taekyun[2], KIM Dong-Eon[2], YOON Moohyun*[1] ([1]Department of Physics, POSTECH, [2]Pohang Accelerator Laboratory, POSTECH)

[D16-op] Focus: Terahertz Spectroscopy

2021. 04. 22 Thursday 14:00~15:12

Room: 16

좌장 : 전태인 한국해양대학교

Chair : JEON Tae In (Korea Maritime and Ocean University)

D16.01 [14:00 - 14:24]

Optical modulating terahertz transmittance through metal nanowires on a Si substrate / KEE Chul Sik*[1] ([1]GIST)

D16.02 [14:24 - 14:48]

Ultrafast optical-pump THz-probe spectroscopy of 2D systems / SIM Sangwan*1 ([1]Division of Electrical Engineering, Hanyang University ERICA)

D16.03 [14:48 - 15:12]

Perspective of terahertz technologies for the industrial applications / LEE IL-Min*1, LEE Eui Su[1], KIM Mugeon[1], PARK Dong Woo[1], SHIN Jun-Hwan[1], CHOI Da-Hye[1], KIM Younghoon[1], PARK Kyung Hyun[1] ([1]Terahertz Research Section, Future & Basic Technology Research Division, ETRI)

[D17-at] [E] Pioneer: Frontiers in Cold Molecules I

2021. 04. 22 Thursday 14:00~15:48

Room: 17

좌장 : 조범석 울산과학기술원

Chair : ZHAO Bum Suk (UNIST)

D17.01 [14:00 - 14:24]

Feshbach resonances in collisions of ultracold triplet ground state $^{23}Na^{6}Li$ with ^{23}Na / SON Hyungmok*1,2 ([1]Department of Physics, Harvard University, [2]Department of Physics, MIT)

D17.02 [14:24 - 14:48]

Ultracold dipolar molecules: a new platform for quantum simulation and computing / PARK Jee Woo*1 ([1]Department of Physics, POSTECH)

D17.03 [14:48 - 15:24]

Collisions of Ultracold Ground-state NaRb Molecules / WANG Dajun*1 ([1]Department of Physics, The Chinese University of Hong Kong)

D17.04 [15:24 - 15:48]

Torwards ultracold molecular quantum machine / CHAE Eunmi*1 ([1]The Department of Physics, Korea University)

[D18-se] [E] Pioneer: The 3rd Korea-Taiwan Joint Workshop I

2021. 04. 22 Thursday 14:00~16:00

Room: 18

좌장 : 이창열 광주과학기술원

Chair : LEE Chang Lyoul (GIST)

D18.01 [14:00 - 14:24]

Atomistic Simulations of Perovskite Materials from First-Principles to Machine Learn-

ing / PAO Chun-Wei*1 ([1]Research Center for Applied Sciences, Academia Sinica)

D18.02 [14:24 - 14:48]
Exploration of halide perovskites via a classic solid-state reaction / LEE Sangwook*1 ([1]School of Materials Science and Engineering, Kyungpook National University)

D18.03 [14:48 - 15:12]
Defect Manipulation for Perovskite Solar Cells and Light-emitting Diodes / HAN Tae-Hee*1 ([1]Division of Materials Science and Engineering, Hanyang University)

D18.04 [15:12 - 15:36]
Probing the ionic effect in $MAPbBr_3$ perovskite LED / GUO Tzung-Fang* ([1]Department of Photonics, National Cheng-Kung University, [2]Advanced Optoelectronic Technology Center, National Cheng-Kung University)

D18.05 [15:36 - 16:00]
Metal halide Perovskite nanocrystals based highly efficient liquid scintillators / IM Hyunsik*1 ([1]Department of Physics and Semiconductor Science, Dongguk University)

[D19-se] Focus: Optical properties of semiconductor
2021. 04. 22 Thursday 14:00~15:36
Room: 19
좌장 : 공수현 고려대학교
Chair : GONG Su-Hyun (Korea University)

D19.01 [14:00 - 14:24]
Role of the A-site cation in optical properties of $APbBr_3$ (A = Cs, CH_3NH_3) / JANG Joon Ik*1 ([1]Department of Physics, Sogang University)

D19.02 [14:24 - 14:48]
Phase-dependent excitonic properties of metal halide perovskites / CHO Chang-Hee*1 ([1]Department of Emerging Materials Science, DGIST)

D19.03 [14:48 - 15:12]
Simultaneous Raman and photoluminescence mapping studies of few-layer MoS_2 / RHO Heesuk*1 ([1]Department of Physics, Jeonbuk National University)

D19.04 [15:12 - 15:36]
인접 금속판을 이용한 2차원반도체의 양자효율 향상 / KIM Jeongyong*1 ([1]Department of Energy Science, Sungkyunkwan University)

[D20-bp] Biological Physics

2021. 04. 22 Thursday 14:00~15:36

Room: 20

좌장 : 윤태영 서울대학교

Chair : YOON Tae-Young (Seoul National University)

D20.01* [14:00 - 14:12]

HsMSH2-HsMSH6 and HsMLH1-HsPMS2 function on G/T DNA mismatch / LEE Jong-Bong*[1,2], YANG Inho[1], LONDON James[3], LOPEZ Juana Martin[3], LIU JuaQuan[3], FISHEL Richard[3] ([1]Department of Physics, POSTECH, [2]Interdisciplinary Bioscience and Bioengineering, POSTECH, [3]Department of Cancer Biology and Genetics, The Ohio State University Wexner Medical Center)

D20.02* [14:12 - 14:24]

Single-Molecule Imaging Reveals Physical Characteristics of ϕ29 DNA Polymerase and R-loop Collision during Replication / SHIN Woohee[1], LEE Ja Yil*[1] ([1]School of Life Sciences, UNIST)

D20.03* [14:24 - 14:36]

DNA hanger: novel surface-free/multiplexed single-molecule blotting platform / SEOL Jincheol[2], KIM Daehyung[1], KIM Byungju[1], PARK Yeonkyoung[3], JEONG Churlhyun[4], KIM Yoon Ki[3], LEE Jong-Bong*[1,2] ([1]Department of Physics, POSTECH, [2]School of Interdisciplinary Bioscience & Bioengineering, POSTECH, [3]Department of Life Science, Korea University, [4]Center for Theragnosis, Biomedical Research Institute, KIST)

D20.04* [14:36 - 14:48]

Study on the binding affinity of Leucosporidium-derived ice-binding protein (LeIBP) using steered MD simulation / PARK Suhyun[1], KIM Hakjun[2], WU Sangwook*[1] ([1]Department of Physics, Pukyong National University, [2]Department of Chemistry, Pukyong National University)

D20.05 [14:48 - 15:00]

Identification of the core subunit connectivity within the 20S complex / KIM Changwon[2], SHON Min Ju[3], YOON Tae-Young*[2] ([1]Seoul National University, [2]School of Biological Sciences, Seoul National University, [3]Department of Physics, POSTECH)

D20.06 [15:00 - 15:12]

Polymer brush-induced depletion interactions and clustering of membrane proteins / TOM Anvy Moly[1], KIM Won Kyu*[1], HYEON Changbong[1] ([1]School of Computational Sciences, KIAS)

D20.07 [15:12 - 15:24]

The energetic cost of reducing positional error in biological pattern formation / SONG Yonghyun*1 ([1]Computational Sciences, KIAS)

D20.08 [15:24 - 15:36]

Prediction of Biological Effect using Monte carlo Simulation / CHO Il Sung*1, MIN Sun-Hong[1], PARK Chawon[1], KIM Minho[1], MA Sukhwal[1], HONG Bong Hwan[1] ([1]Medical Accelerator Research Team, KIRAMS)

[D21-or] The session on Science Policy(기초연구사업 정책세션)

2021. 04. 22 Thursday 14:00~15:48

Room: 21

좌장 : 강세종 고려대학교

Chair : KAHNG Se-Jong (Korea University)

[프로그램]

- 14:00–14:05 인사말 (한국물리학회장, 정책위원장)
- 14:05–14:30 기초연구사업 현황 및 향후 계획, 김보열 (과학기술정보통신부 기초연구진흥과장)
- 14:30–14:45 패널 의견 제시
  송정현 교수 (건국대)
  정문석 교수 (한양대)
  이홍석 교수 (전북대)
  김현정 교수 (서강대, 정책위원장)
- 14:45–15:00 질의 및 응답
- 15:00 폐회사

Session E

2021 April 22(Thu) 16:10-17:58

[E1-pa] [E] Pioneer: Run III prospects and new wave from CMS experiment II

2021. 04. 22 Thursday 16:10~17:58

Room: 01

좌장 : 김태정 한양대학교

Chair : KIM Tae Jeong (Hanyang University)

E1.01 [16:10 - 16:46]

Exploiting anomaly detection for new physics identification at the LHC / PIERINI Maurizio*1 ([1]CERN, Swiss)

E1.02 [16:46 - 17:22]

EFT exploration with the LHC Run III data / SKOVPEN Kirill*1 ([1]Vrije Universiteit Brussel, Belgium)

E1.03 [17:22 - 17:58]

Long Lived Particles and non-conventional BSM at Run III / ALIMENA Juliette*1 ([1]CERN, Swiss)

[E2-pa] Field and string theory I

2021. 04. 22 Thursday 16:10~17:22

Room: 02

좌장 : 김낙우 경희대학교

Chair : KIM Nak Woo (Kyung Hee University)

E2.01* [16:10 - 16:22]

Classifying pole-skipping points / AHN Yongjun[1], JAHNKE Viktor[1], JEONG Hyun-Sik[2], KIM Keun Young*1, LEE Kyung-Sun[1], NISHIDA Mitsuhiro[1] ([1]Department of Physics, GIST, [2]Department of Physics, Sogang University)

E2.02 [16:22 - 16:34]

Holographic teleportation in higher dimensions / KIM Keun Young*1, AHN Byoungjoon[1], AHN Yongjun[1], BAK Sang-Eon[1], JAHNKE Victor[1] ([1]Department of Physics, GIST)

E2.03* [16:34 - 16:46]

The exponential growth of OTOC without chaos: an inverted harmonic oscillator / HASHIMOTO Koji[1], HUH Kyoung-Bum[2], KIM Keun Young*[2], WATANABE Ryota[1] ([1]Department of Physics, Osaka University, [2]Department of Physics, GIST)

E2.04 [16:46 - 16:58]

Supersymmetric $T\bar{T}$ Deformation and Negative Norm State / YOON Junggi*[1], YI Piljin[1], LEE Kyungsun[2] ([1]Department of Physics, KIAS, [2]Department of Physics, GIST)

E2.05* [16:58 - 17:10]

Supersymmetric $T\bar{T}$ Deformation and String Theory / YOON Junggi*[1], YI Piljin[1], KIM Keun Young[2], LEE Kyung-Sun[2] ([1]School of Physics, KIAS, [2]Department of Physics, GIST)

E2.06 [17:10 - 17:22]

5D BPS quiver and KK towers / DUAN Zhihao[1], GHIM Dongwook*[1], YI Piljin[1] ([1]School of Physics, KIAS)

[E3-nu] Pioneer Symposium for Nuclear Experiment III

2021. 04. 22 Thursday 16:10~17:58

Room: 03

좌장 : 한인식 기초과학연구원

Chair : HAHN Insik (IBS)

E3.01 [16:10 - 16:46]

Effects of symmetry energy on inhomogeneous nuclear matter in core-collapse supernovae / TOGASHI Hajime*[1] ([1]Tohoku University)

E3.02 [16:46 - 17:22]

Study of Nuclear Shapes for Neutron Rich Isotopes / CHOI Seonho*[1,2], HA Jeongsu[1,2], BAE Sunghan[1,2], CHOI Hyunsuk[1,2] ([1]Department of Physics & Astronomy, Seoul National University, [2]Institute for Nuclear & Particle Astrophysics, Seoul National University)

E3.03 [17:22 - 17:58]

Reaching towards N=126 Shell Closure using Multi-Nucleon Transfer Reaction of ^{136}Xe+^{198}Pt / KIM Yung Hee*[1] ([1]Nuclear and particle physics group, Institut Laue Langevin)

[E4-as] Focus: After the 25th Anniversary of the Astrophysics Division II

2021. 04. 22 Thursday 16:10~17:46

Room: 04

좌장 : 곽규진 울산과학기술원

Chair : KWAK Kyujin (UNIST)

E4.01 [16:10 - 16:34]

Ground-based Gravitational Wave Detections and Their Implications / KANG Gung-won*1 ([1]CAU High Energy Physics Center, Chung-Ang University)

E4.02 [16:34 - 16:58]

Studying Fundamental Physics from Early Universe Cosmology / GONG Jinn-Ouk*1 ([1]Department of Science Education, Ewha Womans University)

E4.03 [16:58 - 17:22]

Research on dark universe using large scale structure of the universe / SONG Yong Seon*1 ([1]KASI)

E4.04 [17:22 - 17:46]

Neutron Star Properties from Astrophysical Observations / KIM Young-Min*1, KIM Myungkuk[1], KWAK Kyujin[1], LEE Chang-Hwan[2], CHO Hee-Suk[2], CHOI Yong-Beom[2], HYUN Chang Ho[3] ([1]Department of Physics, UNIST, [2]Department of Physics, Pusan National University, [3]Department of Physics Education, Daegu University)

[E5-co] [E] Pioneer: Recent progress on the ARPES study with strain engineering II

2021. 04. 22 Thursday 16:10~17:58

Room: 05

좌장 : 김근수 연세대학교

Chair : KIM Keun Su (Yonsei University)

E5.01 [16:10 - 16:46]

Strain-controlled transition from a weak to strong topological insulator phase in a quasi-one-dimensional superconductor / KIM Sunghun*1 ([1]Department of Physics, KAIST)

E5.02 [16:46 - 17:22]

Strain tuning of the metal insulator transition of Ca_2RuO_4 in angle resolved photoemission experiments / RICCò S.[1], TAMAI A.[1], KIM M.[2,3], PERRY R.S.[4], GEORGES A.[1,2,3,5], BAUMBERGER F.*1,6 ([1]Department of Quantum Matter Physics, University of Geneva, [2]Centre de Physique Théorique Ecole Polytechnique, CNRS, Universite Paris-Saclay, [3]College de France, [4]London Centre for Nanotechnology and UCL Centre for Materials Discovery, Uni-

versity College London, [5]Center for Computational Quantum Physics, Flatiron Institute, [6]Swiss Light Source, Paul Scherrer Institut)

E5.03 [17:22 - 17:58]

ARPES studies of the uniaxial strain-driven Lifshitz transition in Sr_2RuO_4 / SUNKO V.[1,2], MORALES E. Abarca[1,2], MARKOVIć, I.[1,2], BARBER M.E.[2], MILOSAVLJEVIć D.[2], MAZZOLA F.[1], SOKOLOV D.[2], KIKUGAWA N.[3], CACHO C.[4], WATSON M.D.[4], DUDIN P.[4], ROSNER H.[2], HICKS C.W.[2], MACKENZIE A.P.[1,2], KING Phil*[1] ([1]School of Physics and Astronomy, University of St Andrews, [2]Max Planck Institute for Chemical Physics of Solids, [3]National Institute for Materials Science, [4]Diamond Light Source)

[E6-co] Focus: Physics under high magnetic fields II

2021. 04. 22 Thursday 16:10~17:46

Room: 06

좌장 : 김기훈 서울대

Chair : KIM Kee Hoon (Seoul National University)

E6.01 [16:10 - 16:34]

Development trend for high magnetic field research magnets using ReBCO tapes / LEE SangGap*[1] ([1]KBSI)

E6.02 [16:34 - 16:58]

Temperature dependent anomalous Hall effect in Temperature dependent anomalous Hall effect in itinerant ferromagnets / JO Youn Jung*[1] ([1]Department of Physics, Kyungpook National University)

E6.03 [16:58 - 17:22]

High magnetic field phase diagram of a quasi-two-dimensional square lattice antiferromagnet with strong single-ion anisotropy. / LEE Minseong*[1], SCHOENEMANN Rico Uwe[1], JAIME Marcelo[1], ZAPF Vivien S.[1] ([1]Los Alamos National Laboratory, Los Alamos National Laboratory)

E6.04 [17:22 - 17:46]

Observation of itinerant quantum criticality in La-diluted $CeIn_3$ under pressure / PARK Tuson*[1], LEE Hanoh[1], KIM Suyoung[1], JANG Haraim[1], LEE Sangyun[2], PARK Chan-Koo[1], SEO Soonbeom[1], GU Dachun[1], KIM Sung-Il[1], KIM In-Ceol[1] ([1]Department of Physics, Sungkyunkwan University, [2]MPA-Quantum, Los Alamos National Laboratory)

[E7-co] Condensed Matter Computational Physics III

2021. 04. 22 Thursday 16:10~17:34

Room: 07

좌장 : 서호성 아주대학교

Chair : SEO Hosung (Ajou University)

E7.01 [16:10 - 16:22]

Electronic structure and catalytic behavior of layered Pt_3Te_4 / PARK Karam[1], JEONG Sukmin*[1] ([1]Department of Physics, Jeonbuk National University)

E7.02 [16:22 - 16:34]

Non-Hermitian localizations on the kagome lattice / KIM Sangbum[1], KIM Kihong*[1] ([1]Department of Physics, Ajou University)

E7.03 [16:34 - 16:46]

Strain tuned topological properties in type-II Dirac semimetal $NiTe_2$ / LEE Jaekwang*[1], NGUYEN PHUONG LIEN[1] ([1]Department of Physics, Pusan National University)

E7.04* [16:46 - 16:58]

Synergistic effect between pyridinic and graphitic nitrogen dopants in graphene for oxygen reduction reaction / NOH Min Jong[1], KIM Yong-Hoon*[1] ([1]School of Electrical Engineering, KAIST)

E7.05* [16:58 - 17:10]

Peierls-type metal-insulator transition in NbO_2/MoO_2 superlattices / JUNG Sungyeb[1], JEEN Hyoungjeen[1], LEE Jaekwang*[1] ([1]Department of Physics, Pusan National University)

E7.06* [17:10 - 17:22]

First principle study of shift current mechanism in organic molecular solids and perovskite solids / KIM Bumseop[1], KIM Jeongwoo*[2], PARK Noejung*[1] ([1]UNIST, [2]Department of Physics, Incheon National University)

E7.07* [17:22 - 17:34]

Topological phases in N-layer rhombohedral graphene boron-nitride moire superlattices / GONZALEZ David Andres Galeano[1,2], CHITTARI Bheema Lingam[1,3], PARK Youngju[1], SUN Jin-Hua[4], JUNG Jeil*[1,5] ([1]Department of Physics, University of Seoul, [2]Instituto de Fisica, Universidad de Antioquia, [3]Department of Physical Sciences, Indian Institute of Science Education and Research Kolkata, [4]The Research Institute of Advanced Technologies, Ningbo University, [5]Department of Smart Cities, University of Seoul)

[E8-co] Surface/Interface/Nano materials I

2021. 04. 22 Thursday 16:10~17:34

Room: 08

좌장 : 황춘규 부산대학교

Chair : HWANG Choongyu (Pusan National University)

E8.01* [16:10 - 16:22]

Development of NEMS-based Thermal Hall Bar for Two-dimensional Quantum Fluids / KIM Ryundon[1], CHOI Hyunjin[1], JEONG Jinhoon[1], KIM Kitak[1], SUH Junho[*2], CHOI Hyoungsoon[*1] ([1]Department of Physics, KAIST, [2]Quantum Technology Institute, KRISS)

E8.02* [16:22 - 16:34]

Thermoelectric origin of triboelectric charging and series / SHIN Eui-Cheol[1], KIM Yong-Hyun[*1,2] ([1]Department of Physics, KAIST, [2]Graduate School of Nanoscience and Technology, KAIST)

E8.03* [16:34 - 16:46]

Investigation on surface chemical states of $SrTiO_3$ (001) with Ambient Pressure XPS / SONG Chanyang[1], LIM Hojoon[1], SEO Minsik[1], KIM Dongwoo[1], KIM Geonhwa[2], JUNG Moonjung[1], YU Youngseok[2], KIM Seunghwan[1], KANG Habin[1], KIM Ki-jeong[2], MUN Bongjin Simon[*1] ([1]Department of Physics and Photon Science, GIST, [2]8A2 AP-XPS Beamline, Pohang Accelerator Laboratory)

E8.04* [16:46 - 16:58]

Control over the Dirac plasmon with intense terahertz radiation / LEE Bumjoo[1,2], IN Chihun[2], KIM Tae Hoon[2], CHOI Hyunyong[2], NOH Tae Won[*1,2] ([1]Institute of Basic Science, Center for Correlated Electrons Systems, [2]Department of Physics and Astronomy, Seoul National University)

E8.05* [16:58 - 17:10]

Density functional theory study of ferromagnetic phase diagram of magic-angle twisted bilayer graphene / CHO Yosep[1], CHOI Young Woo[1], CHOI Hyoung Joon[*1] ([1]Department of Physics, Yonsei University)

E8.06* [17:10 - 17:22]

Electrically-induced high-order optical Hall effect in Weyl semimetal / CHOI Young-Gwan[1], DOAN Manh-Ha[1], KIM Youngkuk[2,3], CHOI Gyungmin[*1,3] ([1]Department of Energy Science, Sungkyunkwan University, [2]Department of Physics, Sungkyunkwan University, [3]Center for Integrated Nanostructure Physics, IBS)

E8.07* [17:22 - 17:34]

Study of resonant Auger emission in Pt_3Co alloy with resonant photoemission / MUN Bongjin Simon[*1,2], SEO Minsik[1], KANG Habin[1], KIM Geonhwa[3], JUNG Moonjung[1],

BOURNEL Fabrice[4,5], GALLET Jean-Jacques[4,5], KIM Kijeong[3] ([1]Department of Physics and Photon Science, GIST, [2]Laboratory for Electron Spectroscopy for Surface/Interface Chemical Analysis, Center for Advanced X-ray Science, [3]8A2 AP-XPS Beamline, Pohang Accelerator Laboratory, [4]TEMPO Beamline, Synchrotron SOLEIL, [5]Laboratoire de Chimie Physique-Matière et Rayonnement, Sorbonne Universités, Université Pierre et Marie Curie Paris)

[E9-ap] Focus: Quantum Nano-Devices: Quantum phenomena in mechanical oscillators and 2D materials-II

2021. 04. 22 Thursday 16:10~17:58

Room: 09

좌장 : 박희철 기초과학연구원

Chair : PARK Hee Chul (IBS)

E9.01 [16:10 - 16:46]

Electrical manipulation of quantum light sources in 2D hexagonal boron nitride / LEE Jieun*[1] ([1]Department of Physics and astronomy, Seoul National University)

E9.02 [16:46 - 17:22]

Symmetry Dictated Grain Boundary State in a Two-Dimensional Topological Insulator / KANG Seoung-Hun*[1] ([1]Korea Institute for Advanced Study)

E9.03 [17:22 - 17:58]

Resonance Effects in Two-dimensional Semiconductors / LEE Jae-Ung*[1] ([1]Department of Physics, Ajou University)

[E10-ap] [E] Pioneer: Prospect of magnetic skyrmion in spin device-II

2021. 04. 22 Thursday 16:10~17:46

Room: 10

좌장 : 문경웅 한국표준과학연구원

Chair : MOON Kyoung-Woong (KRISS)

E10.01 [16:10 - 16:34]

Néel-type multilayer skyrmions stabilized at high temperature / KWON Hee Young[1], SONG Kyung Mee[1], JEONG Juyoung[2,3], LEE Ah-Yeon[4], PARK Seung-Young[4], KIM Jeehoon[3], WON Changyeon[5], MIN Byoung-Chul[1], CHANG Hye Jung[2], CHOI Jun Woo*[1] ([1]Center for Spintronics, KIST, [2]Advanced Analysis Center, KIST, [3]Department of Physics, POSTECH, [4]Division of Scientific Instrumentation & Management, KBSI, [5]Department of Physics, Kyung Hee University)

E10.02 [16:34 - 16:58]

Dzyaloshinskii-Moriya interaction at single metallic interfaces / YU Ji-Sung[1], LEE Seong-Hyub[1], MOON Joon[1], CHOE Sug-Bong[*1] ([1]Department of Physics and Astronomy, Seoul National University)

E10.03 [16:58 - 17:22]

Skyrmion dynamics – from individual ultrafast motion to diffusion and collective crystallization of 2D lattices / KLäUI Mathias[*1,2] ([1]Institut für Physik and Graduate School of Excellence Materials Science in Mainz, Johannes Gutenberg-Universität Mainz, [2]Centre for Quantum Spintronics, NTNU)

E10.04 [17:22 - 17:46]

Stabilization of zero-field skyrmions in ferromagnetic and synthetic antiferromagnetic systems / CROS V.[*1], AJEJAS F.[1], SASSI Y.[1], LEGRAND W.[1], COLLIN S.[1], BOUZEHOUANE K.[1], REYREN N.[1], FERT A.[1], FINCO A.[2], HAYKAL A.[2], TANOS R.[2], FABRE F.[2], ROBERT-PHILIPP I.[2], JACQUES V.[2], KIM J. V.[3], DEVOLDER T.[3], LEVEILLé C.[4], BURGOS E.[4], POPESCU H.[4], JAOUEN N.[4] ([1]Unité Mixte de Physique CNRS, Thales, Université Paris-Saclay, [2]Laboratoire Charles Coulomb (L2C), [3]Centre de Nanosciences et Nanotechnologies C2N, CNRS, Univ. Paris-Saclay, [4]SOLEIL Synchrotron)

[E11-ap] Focus: Optics in complex media: deep tissue imaging

2021. 04. 22 Thursday 16:10~17:46

Room: 11

좌장 : **장무석** 한국과학기술원

Chair : JANG Mooseok (KAIST)

E11.01 [16:10 - 16:34]

Label-free adaptive optical imaging of mouse brain through intact skull / YOON Seokchan[*1,2], LEE Hojun[1,2], HONG Jin-Hee[1,2], LIM Yong-Sik[3], CHOI Wonshik[1,2] ([1]Center for Molecular Spectroscopy and Dynamics, IBS, [2]Department of Physics, Korea University, [3]Department of Nano Science and Mechanical Engineering and Nanotechnology Research Center, Konkuk University)

E11.02 [16:34 - 16:58]

Non-interferometric holographic imaging and diffraction tomography via space-domain Kramers-Kronig relations / BAEK YoonSeok[1], PARK YongKeun[*1] ([1]Department of Physics, KAIST)

E11.03 [16:58 - 17:22]

Fourier holographic endoscopy for label-free imaging through a narrow and curved passage / CHOI Wonshik[*1], CHOI Wonjun[1], KANG Munkyu[1] ([1]Department of Physics, Korea University)

E11.04 [17:22 - 17:46]

Disorder-based coherent imaging / LEE KyeoReh*[1], LIM Jun[2], LEE Su Yong[2], PARK YongKeun*[1] ([1]Department of Physics, KAIST, [2]Pohang Accelerator Laboratory, POSTECH)

[E12-ap] Focus: Advanced Oxide Materials by Design-II

2021. 04. 22 Thursday 16:10~17:58

Room: 12

좌장 : **양찬호** 한국과학기술원

Chair : YANG Chan-Ho (KAIST)

E12.01 [16:10 - 16:46]

Photoelectrodes for Efficient Photoelectrochemical Water Splitting: from Oxides to Organometallic Halide Perovskite / LEE Sanghan*[1] ([1]School of Materials Science and Engineering, GIST)

E12.02 [16:46 - 17:22]

Transition-metal oxide devices based on metal-insulator transition or Rashba spin-orbit interaction / LEE Jin Hong*[1], TRIER Felix[1], HARADA Takayuki[2], GODEL Florian[1], CORNELISSEN Tom[1], PREZIOSI Daniele[3], BOUZEHOUANE Karim[1], TSUKAZAKI Atsushi[2,4], VALENCIA Sergio[5], BIBES Manuel*[1] ([1]Unité Mixte de Physique, CNRS, Thales, Université Paris Sud, Université Paris-Saclay, [2]Institute for Materials Research, Tohoku University, [3]Institut de Physique et Chimie des Matériaux de Strasbourg, [4]Center for Spintronics Research Network, Tohoku University, [5]Helmholtz-Zentrum Berlin für Materialien und Energie)

E12.03 [17:22 - 17:58]

Remote-epitaxially grown single-crystalline complex oxide for the integrated system / 김성규*[1] ([1]세종대학교 나노신소재공학과)

[E13-st] Phase transition & critical phenomena

2021. 04. 22 Thursday 16:10~17:10

Room: 13

좌장 : **조영설** 전북대학교

Chair : CHO Young Sul (Jeonbuk National University)

E13.01 [16:10 - 16:22]

Numerical approach for phase transitions in infinite-dimensional dissipative quantum systems / JO Minjae[1], JHUN Bukyoung[1], KAHNG Byungnam*[1] ([1]Department of Physics and Astronomy, Seoul National University)

E13.02* [16:22 - 16:34]
Quantum contact process in scale-free networks / JHUN Bukyoung[1], JO Minjae[1], KAHNG Byungnam*[1] ([1]Department of Physics and Astronomy, Seoul National University)

E13.03 [16:34 - 16:46]
Scaling behaviors of information entropy in explosive percolation transitions / CHO Young Sul*[1], KANG Yejun[1] ([1]Department of Physics, Jeonbuk National University)

E13.04 [16:46 - 16:58]
Finite-size scaling of Lee-Yang zeros of the 2D XY model: Loop-TNR study / HONG Seongpyo[1], KIM Dong-Hee*[1] ([1]Department of Physics and Photon Science, GIST)

E13.05* [16:58 - 17:10]
Probing the quantum criticality of antiferromagnetic long-range transverse-field Ising chain with variational neural-network quantum states / KIM Dongkyu[1], KIM Dong-Hee*[1] ([1]Department of Physics and Photon Science, GIST)

[E14] No session

[E15-pl] Accelerator, Beam & Laser
2021. 04. 22 Thursday 16:10~17:22
Room: 15
좌장 : 박성희 고려대학교
Chair : PARK Seong Hee (Korea University)

E15.01* [16:10 - 16:22]
Rapid, uniform, and efficient heating of dense matter using laser-driven protons with a finite energy spread / SONG Chiwan[1,2], WON Junho[1,2], KIM Jaeyu[1], SONG Jae-hyun[1,2], BANG Woosuk*[1,2] ([1]Department of Physics and Photon Science, GIST, [2]Center for Relativistic Laser Science, IBS)

E15.02 [16:22 - 16:34]
Experimental Setup and Preliminary Results of EBIS Charge Breeder for RAON Facility / YOO Kyoung-Hun[1,2], CHUNG Moses*[1], HEO Seongjin[2,3], LIM ChaeYoung[2,3], PARK Young-Ho[2], LEE Jin Ho[2], SHIN Taeksu[2] ([1]Department of Physics, UNIST, [2]Rare Isotope Science Project, IBS, [3]Department of Accelerator Science, Korea University)

E15.03 [16:34 - 16:46]
Advanced laser-plasma accelerator R&D plans at PAL-ITF / NAM Inhyuk*[1], KIM Minseok[1], CHO Myung-Hoon[1], JANG Dogeun[1], KWON Sung-hoon[1], SUNG Chang-Kyu[2], KIM Seong-Yeol[2], LEE Si-hyun[3], KIM Changbum[1] ([1]PAL-XFEL, Pohang Accelerator Laboratory, [2]Department of Physics, UNIST, [3]Department of Physics and Photon Science, GIST)

E15.04* [16:46 - 16:58]

Highly charged Argon ion spectroscopy experiment with the UNIST-EBIT / PARK SungNam[1], SHIN Bokkyun[1], CHUNG Moses*[1] ([1]Department of Physics, UNIST)

E15.05 [16:58 - 17:10]

Achievement and Prospect of PAL-XFEL / KANG Heung-Sik*[1] ([1]Pohang Accelerator Laboratory, POSTECH)

E15.06 [17:10 - 17:22]

High-power bursts of THz radiation during the injection of electron beam into magnetized plasma / KUMAR Manoj[1], HUR Min Sup*[1] ([1]Department of Physics, UNIST)

[E16-op] Nanophotonics and Plasmonics

2021. 04. 22 Thursday 16:10~17:34

Room: 16

좌장 : 한상윤 대구경북과학기술원

Chair : HAN Sangyoon (DGIST)

E16.01 [16:10 - 16:34]

Fully-Printed Active Plasmonic Metafilms / JEONG Hyeon-Ho*[1] ([1]School of Electrical Engineering and Computer Science, GIST)

E16.02 [16:34 - 16:58]

Ultrastrong Light-Matter Interactions in Two-Dimensional Materials Enabled by Surface Polaritons / LEE In-Ho*[1], YOO Daehan[2], AVOURIS Phaedon[3], LOW Tony[2], OH Sang-Hyun[2] ([1]Post-silicon Semiconductor Institute, KIST, [2]Department of Electrical and Computer Engineering, University of Minnesota, [3]IBM T.J. Watson Research Center, Yorktown Heights, USA)

E16.03* [16:58 - 17:10]

Probing single-molecule conformational heterogeneity at room temperature via hyperspectral tip-enhanced Raman imaging / KANG Mingu[1], KIM Hyunwoo[2], OLEIKI Elham[3], KOO Yeonjeong[1], LEE Hyeongwoo[1], EOM Taeyong[4], LEE Geunsik[3], SUH Yung Doug[2,5], PARK Kyoung-Duck*[1] ([1]Department of Physics, UNIST, [2]Laboratory for Advanced Molecular Probing (LAMP), KRICT, [3]Chemistry, UNIST, [4]Thin Film Materials Research Center, KRICT, [5]Chemical Engineering, Sungkyunkwan University)

E16.04* [17:10 - 17:22]

Observation of Multiple Interactions between Metallic Probe and Surface Plasmon Polariton on Mono-Crystalline Noble Metals Flakes / WOO Hwi Je[1], SONG Young Jae*[1,4], KIM Minwoo[2], KWON Nayoung[3], LIM Byungkwon[3] ([1]Depart. of Nano Engineer-

ing and Department of Physics, Sungkyunkwan University, [2]Yonesei Center for Research Facilities (YCRF), Yonsei University, [3]School of Advanced Materials Science and Engineering, Sungkyunkwan University, [4]Department of Nano Engineering, Department of Physics, Sungkyunkwan University)

E16.05 [17:22 - 17:34]

Fano-resonant hybrid colloids / CHO Yongdeok[1], LEE Seungwoo*[1,2,3,4] ([1]Graduate School of Converging Sci & Tech & Dept. of Integrative Energy Engineering, Korea University, [2]Department of Biomicrosystem Technology, Korea University, [3]Department of Integrative Energy Engineering, Korea University, [4]KU Photonics Center, Korea University, Korea University)

[E17-at] [E] Pioneer: Frontiers in Cold Molecules II

2021. 04. 22 Thursday 16:10~18:22

Room: 17

좌장 : 채은미 고려대학교

Chair : CHAE Eunmi (Korea University)

E17.01 [16:10 - 16:34]

Measuring the electron electric dipole moment using an array of ultracold molecules / LIM Jongseok*[1] ([1]Imperial College London)

E17.02 [16:34 - 17:10]

Collisions between cold molecules in a superconducting magnetic trap / NAREVICIUS Edvardas*[1] ([1]Chemical Department of Physics, Weizmann Institute of Science)

E17.03 [17:10 - 17:46]

Cold-molecule techniques for ultrafast-dynamics studies / KüPPER Jochen*[1,2,3,4] ([1]Center for Free-Electron Laser Science, Deutsches Elektronen-Synchrotron DESY, [2]Department of Physics, Universität Hamburg, [3]Department of Chemistry, Universität Hamburg, [4]Center for Ultrafast Imaging, Universität Hamburg)

E17.04 [17:46 - 18:22]

Optical cycling of Aluminium Monofluoride (AlF) – towards a high-density gas of laser cooled polar molecules / TRUPPE Stefan*[1] ([1]Fritz Haber Institute of the Max Planck Society)

[E18-se] [E] Pioneer: The 3rd Korea-Taiwan Joint Workshop II

2021. 04. 22 Thursday 16:10~18:10

Room: 18

좌장 : 조창희 대구경북과학기술원

Chair : CHO Chang-Hee (DGIST)

E18.01 [16:10 - 16:34]

Two-Photon-Pumped Perovskite Plasmonic Nanolasers / LU Yu-Jung*[1,2] ([1]Research Center for Applied Sciences, Academia Sinica, [2]Department of Physics, National Taiwan University)

E18.02 [16:34 - 16:58]

Realization of High Efficient and Stable Perovskite Quantum Dots for Light Emitting Diodes / LEE Chang-Lyoul*[1] ([1]Advanced Photonics Research Institute (APRI), Gwangju Institute of Science and Technology (GIST))

E18.03 [16:58 - 17:22]

Enhanced Stability of Cesium Lead Halide Quantum Dots through Nickel Substitution and Ligand Exchange / KIM Soo Young*[1] ([1]Department of Materials Science and Engineering, Korea University)

E18.04 [17:22 - 17:46]

Unveiling the Nucleation Kinetics of Nanoparticle-Seeded Perovskite Solar Cells by Time-Resolved GIXS / JENG U-Ser*[1,2], LIN Chung-Yao[1], LI Shao-Sian[3], CHANG Je-Wei[1], CHIA Hao-Chung[1], HSIAO Yu-Yun[4], SU Chun-Jen[2], WEN Cheng-Yen[4], HUANG Shao-Ku[4], WU Wei-Ru[4], CHEN Chun-Wei*[3] ([1]Department of Chemical Engineering, National Tsing Hua University, [2]National Synchrotron Radiation Research Center, Hsinchu Science Park, [3]Graduate Institute of Biomedical Optomechatronics, Taipei, Medical University, [4]Department of Materials Science and Engineering, National Taiwan University)

E18.05 [17:46 - 18:10]

Bipolar Metal Oxide Charge Transporting Layers for Efficient Perovskite Solar Cells / SINGH Mriganka[1], YANG Rei-Ting[1], WENG Da-Wei[1], HU Hanlin[1], SINGH Anupriya[1], MOHAPATRA Anisha[1], LU Yu-Jung[1], GUO Tzung-Fang[1], LIN Hong-Cheu[1], CHU Chih-Wei*[1] ([1]Research Center for Applied Sciences, Academia Sinica)

[E19-se] [E] Pioneer: The 2nd Korea-North Macedonia Joint Workshop I

2021. 04. 22 Thursday 16:10~18:10

Room: 19

좌장 : 김종수 영남대학교

Chair : KIM Jong Su (Yeungnam University)

E19.01 [16:10 - 16:34]

Exploring Defect-induced Raman mode of Transition Metal Dichalcogenides monolayer using tip-enhanced resonance Raman spectroscopy / JEONG Mun Seok*1 ([1]Department of Physics, Hanyang University)

E19.02 [16:34 - 16:58]

Electron transport on the molecular scale via examples of π-conjugated oligomers: *ab* initio simulations and models / PETRESKA Irina*1, PEJOV Ljupco[2], KOCAREV Ljupco[3] ([1]Faculty of Natural Sciences and Mathematics, Institute of Physics, Ss. Cyril and Methodius University in Skopje, [2]Faculty of Natural Sciences and Mathematics, Institute of Chemistry, Ss. Cyril and Methodius University in Skopje, [3]Macedonian Academy of Sciences and Arts)

E19.03 [16:58 - 17:22]

Synthesis of single-crystal two-dimensional monolayer films on a wafer scale / KIM Ki Kang*1,2 ([1]Department of Energy Science, Sungkyunkwan University, [2]Center for Integrated Nanostructure Physics (CINAP), IBS (IBS))

E19.04 [17:22 - 17:46]

Refined modeling of leakage and capacitance characteristics of nanostructures / NOVKOVSKI Nenad*1 ([1]Institute of Physics, Faculty of Natural Sciences and Mathematics, University Ss. Cyril and Methodius)

E19.05 [17:46 - 18:10]

Performance Improvement of $Li_4Ti_5O_{12}$ based materials as anode for Li-ion batteries and a new composite solid state electrolyte / KIM Jae Hyun*1 ([1]Division of Energy Convergence Research, DGIST)

[E20-bp] Focus: Biophysics of Intrinsically Disordered Proteins

2021. 04. 22 Thursday 16:10~17:22

Room: 20

좌장 : 유제중 성균관대학교

Chair : YOO Jejoong (Sungkyunkwan University)

E20.01 [16:10 - 16:34]

IDP Phase Separation: Models and Implications / CHOI Jeong-Mo*1 ([1]Department of Chemistry, Pusan National University)

E20.02 [16:34 - 16:58]
Development of High-Resolution NMR Techniques to Investigate Intrinsically Disordered Proteins in Solution / LEE Jung Ho*1 ([1]Department of Chemistry, Seoul National University)

E20.03 [16:58 - 17:22]
Local disorder of transthyretin modulates its aggregation-prone propensity / KIM Jin Hae*1 ([1]Department of New Biology, DGIST)

E

[E21-or] AI in Physics(인공지능과 물리학)
2021. 04. 22 Thursday 16:10~17:46
Room: 21
좌장 : 장현주 한국화학연구원
Chair : CHANG Hyun Ju (KRICT)

E21.01 [16:10 - 16:34]
인공지능과 입자물리학 / CHO Kihyeon*1 ([1]UST, KISTI)

E21.02 [16:34 - 16:58]
Exploring super-functional materials with artificial intelligence / LEE In-Ho*1 ([1]Korea Research Institute of Standards and Science)

E21.03 [16:58 - 17:22]
Emergence of AI research topics from the calculation scale / SHIN Jeongkyu*1, PARK Jonghyun[1], HWANG Eunjin[1] ([1]Lablup Inc.)

E21.04 [17:22 - 17:46]
Magnetic Hamiltonian parameter estimation using deep learning techniques / KWON Hee Young*1, YOON Han Gyu[2], LEE Chanki[2], CHEN Gong[3], LIU Kai[4], SCHMID Andreas K[5], WU Yi Zheng[6], CHOI Jun Woo[1], WON Changyeon*2 ([1]Korea Institute of Science and Technology (KIST), [2]Kyung Hee University, [3]University of California, Davis, [4]Georgetown University, [5]Lawrence Berkeley National laboratory, [6]Fudan University)

[EE18-se] Emerging 2D materials and devices

2021. 04. 22 Thursday 18:10~19:46

Room: 18

좌장 : 한강희 인천대학교

Chair : HAN Gang Hee (Incheon National University)

EE18.01* [18:10 - 18:22]

Study on transport properties in a zigzag MoS_2 nanoribbon with interactive quantum structures / JEONG You Su*1, KIM Heesang[1], PARK Dae Han[1], KIM Nammee[1] ([1]Physics, Soongsil University)

EE18.02* [18:22 - 18:34]

Ultra-sensitive graphene-barristor biosensor / JEONG Nae bong[1], LEE Jun-Ho[1], CHOI Inchul[1], KIM Min Jeong[1], LEE Hakho[2], CHUNG Hyun-Jong*1 ([1]Department of Physics, Konkuk University, [2]Center of Systems Biology, Massachusetts General hospital)

EE18.03* [18:34 - 18:46]

Abrupt Conductance Enhancement of Multilayer ReS_2 / JOO Min-Kyu*1, KIM Soo yeon[2] ([1]Department of Applied Physics, Sookmyung Women's University, [2]Department of Physics, Sookmyung Women's University)

EE18.04* [18:46 - 18:58]

Frequency Doubler and Universal Logic Gate with Low Power Consumption based on Ambipolar type Two Dimensional Transition Metal Dichalcogenide / KIM Tae Wook[1,2], RA Hyun Soo[1], AHN Jongtae[1], JANG Jisu[1], SONG Seungho[1], HWANG Do Kyung*1 ([1]Post-Silicon Semiconductor Institute, Center for Opto-Electronic Materials and Devices, Korea Institute of Science and Technology (KIST), [2]Department of Electronic Engineering, Korea University)

EE18.05 [18:58 - 19:10]

Epitaxial single-crystal growth of transition metal dichalcogenide monolayers via atomic sawtooth Au surface / CHOI Soo Ho[2], KIM Hyung-Jin[3], SONG Bumsub[4], KIM Yong In[4], HAN Gyengtak[4], THANH Huong Nguyen Thi[4], KO Hayoung[4], BOANDOH Stephen[2], OH Chang Seok[4], JIN Jeong Won[4], WON Yo Seob[4], LEE Byung Hoon[4], YUN Seok Joon[2], JEONG Hu Young[5], KIM Young-Min[1], HAN Young-Kyu[3], LEE Young Hee[1], KIM Soo Min[6], KIM Ki Kang*1 ([1]Department of Energy Science and Center for Integrated Nanostructure Physics (CINAP), IBS (IBS), Sungkyunkwan University, [2]Center for Integrated Nanostructure Physics (CINAP), IBS (IBS), Sungkyunkwan University, [3]Department of Energy and Materials Engineering, Dongguk University, [4]Department of Energy Science, Sungkyunkwan University, [5]UNIST Central Research Facilities, School of Materials Science and Engineering, UNIST, [6]Department of Chemistry, Sookmyung Women's University)

EE18.06 [19:10 - 19:22]

Room-temperature ferromagnetism in monolayer WSe_2 semiconductor via vanadium dopant / KIM Ki Kang*[1,2], YUN Seok Joon[1,2], LEE Young Hee[1,2] ([1]Department of Energy Science and Center for Integrated Nanostructure Physics (CINAP), IBS (IBS), Sungkyunkwan University, [2]Center for integrated nanostructure and physics, Institute of basic science)

EE18.07* [19:22 - 19:34]

Two-dimensional deep ultraviolet light emitter based hexagonal boron nitride / PARK Seungmin[1], SEO Dongjae[2,3], PARK Kyungho[1], CHO Minhyun[1], PARK Sunho[1], LEE Seungjoon[1], CHOI Heon-jin[3], KIM Young Dong[1], YOO Keon-ho[1], HAN Il Ki[4,6], KWON Young-Kyun[1,5], KIM Young Duck*[1,5,6] ([1]Physics, Kyung Hee University, [2]Department of Electrical and Computer Engineering, University of Minnesota, [3]Department of Materials Science and Engineering, Yonsei University, [4]Nano Photonics Research Center, KIST, [5]Department of Information Display, Kyung Hee University, [6]Department of Converging Science and Technology, Kyung See University-KIST)

EE18.08* [19:34 - 19:46]

Fabrication and characterizations of MoS_2/SiO_2-nanopillar array photodetectors / CHOI Hyeji[1], SONG Jungeun[1], NGUYEN Anh Thi[1], LIM Jaerang[1], AN Bojung[1], LEE Byoung Hoon[2], KIM Dong-Wook*[1] ([1]Department of Physics, Ewha Womans University, [2]Division of Chemical Engineering and Materials Science, Ewha Womans University)

[EE19-se] [E] Pioneer: The 2nd Korea-North Macedonia Joint Workshop II

2021. 04. 22 Thursday 18:10~20:10

Room: 19

좌장 : **변지수** 경북대학교

Chair : BYEON Clare Chisu (Kyungpook National University)

EE19.01 [18:10 - 18:34]

Unoccupied states in oxide thin film transistor using analysis of electronic structure / CHUNG Kwun Bum*[1] ([1]Division of Physics and Semiconductor Science, Dongguk University)

EE19.02 [18:34 - 18:58]

Effects of O_2 annealing on the stress induced interface states of Al_2O_3/HfO_2 multilayer based memory devices / SKEPAROVSKI Aleksandar*[1], NOVKOVSKI Nenad[1], PASKALEVA Albena[2], SPASSOV Dencho[2] ([1]Faculty of Natural Sciences and Mathematics, Institute of Physics, Ss. Cyril and Methodius University in Skopje, [2]Institute of Solid State Physics, Bulgarian Academy of Science)

EE19.03 [18:58 - 19:22]

Influence of thermal treatment of thin films of SnS with $SnCl_2$ solution on their structural and optical properties / TANUSHEVSKI Atanas*1 ([1]Institute of Physics, Faculty of Natural Sciences and Mathematics, University Ss. Cyril and Methodius)

EE19.04 [19:22 - 19:46]

Inhomogeneity of calcium alginate hydrogels inspected by dynamic light scattering / RENDEVSKI Stojan*1,2 ([1]Nazarbayev Intellectual School, [2]Institute of Physics, Faculty of Natural Sciences and Mathematics, University Ss. Cyril and Methodius)

EE19.05 [19:46 - 20:10]

2D dimensional van der Walls heterostructure for advanced optoelectronic applications / HWANG Do Kyung*1 ([1]Post-Silicon Semiconductor Institute, Center for Opto-Electronic Materials and Devices, KIST)

[EE21-or] Ten Science Books of 2020 – Authors Lectures (APCTP 저자강연)

2021. 04. 22 Thursday 19:00~20:50

Room: 21

좌장 : 손승우 한양대

Chair : SON Seung-Woo (Hanyang University)

[프로그램]

- 19:00–19:05 프로그램 소개 및 강연자 소개
- 19:05–20:00 1부 저자 강연 (한정훈 성균관대 물리학과 교수, "물질의 물리학")
- 20:00–20:30 2부 패널 대담
  (APCTP 과학문화위원 – 손승우, 이은희, 이정원, 황정아)
- 20:30–20:50 질의 및 응답

2021 April 23(Fri) 09:00-10:48

[F1-pa] Accelerator-based particle physics experiments IV

2021. 04. 23 Friday 09:00~10:36

Room: 01

좌장 : 김시연 중앙대학교

Chair : KIM Siyeon (Chung-Ang University)

F1.01* [09:00 - 09:12]

Beam-test Results of Silicon PIN Photodiode at PAL-XFEL / BAEK Jongmin[1], HWANG Sunmin[2], HYUN Hyojung[2], JANG Hoyoung[2], KIM Jinyong[1], KIM Seonghan[2], LEE Seungcheol[1], PARK Hwanbae*[1] ([1]Kyungpook National University, [2]XFEL Beamline Division, Pohang Accelerator Laboratory)

F1.02 [09:12 - 09:24]

Study of Neutron Induced Electro-magnetic Backgrounds to an Axion-like Particle Search at the DAMSA Experiment / RYU Min Sang*[1,9], JANG Wooyoung[2], KIM Doojin[3], KONG Kyoungchul[4], KWON Youngjoon[5], PARK Jong-Chul[6], SHIN Seodong[7], YANG Un-Ki[8], YU Jaehoon[2] ([1]The Center for High Energy Physics, Kyungpook National University, [2]Department of Physics, University of Texas at Arlington, [3]Department of Physics, Texas A&M University, [4]Department of Physics, University of Kansas, [5]Department of Physics, Yonsei University, [6]Department of Physics, Chungnam National University, [7]Department of Physics, Jeonbuk National University, [8]Department of Physics, Seoul National University, [9]Natural Science Research Center, University of Seoul)

F1.03 [09:24 - 09:36]

A Simulation Study of Neutron Production and Modulation for an Axion-like Particle Search at the DAMSA Experiment of the ARIAA Project / JANG Wooyoung*[1], KIM Doojin[2], RYU Min Sang[3,4], KONG Kyongchul[5], KWON Youngjoon[6], PARK Jong-Chul[7], SHIN Seodong[8], YANG Un-Ki[9], YU Jaehoon[1] ([1]Department of Physics, University of Texas at Arlington, [2]Department of Physics and Astronomy, Texas A&M University, [3]Natural Science Research Institute, University of Seoul, [4]The Center for High Energy Physics (CHEP), Kyungpook National University, [5]Department of Physics and Astronomy, University of Kansas, [6]Department of Physics, Yonsei University, [7]Department of Physics, Chungnam National University, [8]Department of Physics, Jeonbuk National University, [9]Department of Physics and Astronomy, Seoul National University)

F1.04 [09:36 - 09:48]

Search for Axion-like Particles at the DAMSA experiment / KIM Doojin[1], JANG Wooyoung[2], KONG Kyoungchul[3], KWON Youngjoon[4], PARK Jong-Chul[5], RYU Min Sang[6,7], SHIN Seodong[8], YANG Un-ki[*9], YU Jaehoon[2] ([1]Department of Physics and Astronomy, Texas A&M University, [2]Department of Physics, University of Texas at Arlington, [3]Department of Physics and Astronomy, University of Kansas, [4]Department of Physics, Yonsei University, [5]Department of Physics, Chungnam National University, [6]Natural Science Research Institute, University of Seoul, [7]Department of Physics, Kyungpook National University, [8]Department of Physics, Jeonbuk National University, [9]Department of Physics and astronomy, Seoul National University)

F1.05 [09:48 - 10:00]

Progress of DUNE (Deep Underground Neutrino Experiment) / JEONG Yu Seon[*1] ([1]High Energy Physics Center, Chung-Ang University)

F1.06 [10:00 - 10:12]

A segmented scintillator detector for 3-D positioning of neutrino interactions using neutron detection / HA Chang Hyon[*1] ([1]Department of Physics, Chung-Ang University)

F1.07 [10:12 - 10:24]

Flux constraining for anti-neutrino charged current interaction in 3DST with low-ν method / GWON Sunwoo[*1] ([1]Department of Physics, Chung-Ang University)

F1.08* [10:24 - 10:36]

Reconstruction of anti-neutrino event at Dune near detector SAND(3DST): / JUNG KiYoung[*1] ([1]Department of Physics, Chung-Ang University)

[F2-pa] Non-accelerator-based particle physics experiments III

2021. 04. 23 Friday 09:00~10:24

Room: 02

좌장 : 서선희 기초과학연구원

Chair : SEO Seon Hee (IBS)

F2.01 [09:00 - 09:12]

Data understanding for Neutrino Elastic-scattering Observation with NaI(Tl)(NEON) experiment in IBS headquarters(Deajeon) / PARK ByungJu[*2,1] ([1]IBS, UST, [2]Center for Underground Physics, IBS)

F2.02 [09:12 - 09:24]

Status of Neutrino Elastic-scattering Observation with NaI(Tl) experiment (NEON) / LEE In soo[*1] ([1]Center for underground physics, IBS)

F2.03 [09:24 - 09:36]

Seasonal variation of solar neutrino in Super-Kamiokande 3 and 4 periods / YANG JEONGYEOL*[1] ([1]Department of Physics and Astronomy, Seoul National University)

F2.04 [09:36 - 09:48]

New Photon Trap Design proposed for IceCube-Gen2, Hyper-Kamiokande and KNO / CHOI Koun*[1], ROTT Carsten[1] ([1]Sungkyunkwan University)

F2.05 [09:48 - 10:00]

Measurement of cosmogenic Li/He production rate at RENO / LEE Hyungi*[1], PAC Myoung Youl[4], CHOI Juneho[4], JANG Hanil[3], KWON Eunhyang[2], KIM Sang yong[1], SEO Hyunkwan[1], KIM Jonggun[2], SEO Jiwoong[2], YU Intae[2], JEON Sanghoon[2], JUNG Daeun[2], KIM Jaeyool[7], MOON Dongho[7], SHIN Changdong[7], JOO Kyungkwang[7], LIM Intaek[7], JANG Jeeseung[5], YOO Jonghee[6], YOON Seok-Gyeong[6], KIM Soo-Bong[2] ([1]Department of Physics, Seoul National University, [2]Department of Physics, Sungkyunkwan University, [3]Department of Physics, Seoyeong Univsersity, [4]Department of Physics, Dongshin University, [5]Department of Physics, GIST, [6]Department of Physics, KAIST, [7]Department of Physics, Chonnam National University)

F2.06* [10:00 - 10:12]

Measurement Search for sterile neutrino oscillation using RENO and NEOS data / YOON Seok-Gyeong[1], YOO Jonghee*[1], YANG Byeongsu[1], JANG Jeeseung[2], LIM Intaek[3], KIM Baro[3], JOO Kyungkwang[3], KIM Jaeyool[3], MOON Dongho[3], JOHAAIB Atif[3], SHIN Changdong[3], KIM Soo-Bong[4], YU Intae[4], KWON Eunhyang[4], JUNG Daeun[4], SEO Jiwoong[4], JEON Sanghoon[4], KIM Jonggun[4], KIM Sangyong[5], SEO Hyunkwan[5], LEE Hyungi[5], JANG Hanil[6], PARK Myoung-Youl[7], CHOI Juneho[7], OH Yoonmin[8], HAN Boyoung[9], JANG Changhwan[10], JEON Eunju[8], KIM Hongjoo[11], KIM Hyunsoo[12], KIM Jinyu[12], KIM Yeonguk[8,12,13], KO Yongju[8], LEE Jason[8], LEE Jooyoung[11], LEE Moohyun[8], PARK Hyangkyu[14], PARK KangSoon[8], SEO KyungMin[12], KIM Simeon[10], SUN Gwangmin[9] ([1]KAIST, [2]GIST, [3]전남대학교, [4]성균관대학교, [5]서울대학교, [6]서영대학교, [7]동신대학교, [8]IBS, [9]KAERI, [10]중앙대학교, [11]경북대학교, [12]세종대학교, [13]UST, [14]고려대학교)

F2.07 [10:12 - 10:24]

Spectrum Decomposition for Prompt Energy of Reactor Antineutrinos at NEOS-II / KIM Jinyu*[1] ([1]Department of Physics, Sejong University)

F

[F3-nu] Heavy-ion collision

2021. 04. 23 Friday 09:00~10:48

Room: 03

좌장 : 김용선 세종대학교

Chair : KIM Yongsun (Sejong University)

F3.01* [09:00 - 09:12]

Model study on the collective behavior in small collision systems / LEE Sangyun*1, LIM Sanghoon[1], PARK Woohyeong[1] ([1]Department of Physics, Pusan National University)

F3.02* [09:12 - 09:24]

Long-range correlations in small systems with ALICE / KIM Junlee*1, KIM Eun-Joo[1], KIM Beomkyu[2] ([1]Division of Science Education, Jeonbuk National University, [2]Department of Physics, Pusan National University)

F3.03* [09:24 - 09:36]

Measurement of jet fragmentation function in ALICE / RYU Jaehyeok*1, LIM Sanghoon[1], KIM Beomkyu[1] ([1]Department of Physics, Pusan National University)

F3.04* [09:36 - 09:48]

Charmed baryon measurements in pp, p-Pb and Pb-Pb collsions with ALICE at the LHC / SEO Jinjoo*1 ([1]Department of Physics, Inha University)

F3.05* [09:48 - 10:00]

Study of multiplicity dependent J/ψ and ψ(2S) production in pp collisions / OH JongHo*1, LIM SangHoon[1], KIM Chong[1] ([1]Department of Physics, Pusan National University)

F3.06* [10:00 - 10:12]

Review and future prospects of Upsilon measurements in pp, p-Pb, and Pb-Pb in the CMS Detector / LEE Soohwan[1], HONG Byungsik*1 ([1]Department of Physics, Korea University)

F3.07* [10:12 - 10:24]

Study on long-range two-particle correlation in p-Pb collisions in ALICE / JI Su-Jeong*1, LIM Sanghoon[1], KIM Beomkyu[1], KIM Junlee[2] ([1]Department of Physics, Pusan National University, [2]Division of Science Education, Jeonbuk National University)

F3.08 [10:24 - 10:36]

The study on the medium parton distribution from momentum kick model in Heavy-Ion Collisions / YOON Jin-Hee*1, CHO Soyeon[1] ([1]Department of Physics, Inha University)

F3.09 [10:36 - 10:48]

Ξ_c^0 production in p+Pb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV / BOK Jeongsu*1 ([1]Inha University)

[F4-as] Astrophysics Experiments/Observations

2021. 04. 23 Friday 09:00~10:24

Room: 04

좌장 : 최기영 성균관대학교

Chair : CHOI Ki-Young (Sungkyunkwan University)

F4.01 [09:00 - 09:12]

Search for secluded dark matter with 6 years of IceCube data / CHRISTOPH Toennis*1 ([1]Department of Physics, Sungkyunkwan University)

F4.02 [09:12 - 09:24]

The potential of the Korea Neutrino Observatory for High Energy Cosmic Neutrino Research / CHUNG Moses*1, SHIN Bokkyun[1], LEE Namuk[1], HA Ji-Hoon[1], RYU Dongsu[1] ([1]Department of Physics, UNIST)

F4.03 [09:24 - 09:36]

Deployment of the IceCube upgrade camera in the SPIceCore hole / CHRISTOPH Toennis*1, KIM Danim[1] ([1]Department of Physics, Sungkyunkwan University)

F4.04* [09:36 - 09:48]

Search for Decaying Dark Matter in Galaxy Clusters and Galaxies with IceCube / JEONG Minjin*1 ([1]Department of Physics, Sungkyunkwan University)

F4.05* [09:48 - 10:00]

Dark Matter Deficient Galaxies Produced via High-velocity Galaxy Collisions in High-resolution Numerical Simulations / SHIN Eun-jin[1], JUNG Minyong[1], KWON Goo-jin[2], KIM Ji-hoon*1, LEE Joohyun[1], JO Yongseok[1], OH Boon Kiat[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Physics, University of Cambridge)

F4.06* [10:00 - 10:12]

Study of Cosmic-ray Heavy Nuclei Spectra Using the ISS-CREAM Instrument / KANG Sinchul[1], KIM Hong Joo*1, PARK Hwanbae[1], LEE Jik[1], JEONG Dongwoo[1], PARK Jeongmin[2], LEE Moohyun[3] ([1]Department of Physics, Kyungpook National University, [2]Advanced Radiation Technology Institute, KAERI, [3]Center for Underground Physics, IBS)

F4.07* [10:12 - 10:24]

Result of the cosmic-ray proton spectrum for the ISS-CREAM experiment / CHOI Gwangho[1], TAKEISHI Ryuji[1], PARK IL Hung*1 ([1]Department of Physics, Sungkyunkwan University)

F

[F5] No session

[F6-co] Focus: Emergent quantum phenomena in symmetry-manipulated oxides I

2021. 04. 23 Friday 09:00~10:36

Room: 06

좌장 : **박성균** 부산대학교

Chair : PARK Sungkyun (Pusan National University)

F6.01 [09:00 - 09:24]

Discovery of Superconductivity in (Ba,K)SbO_3 / KIM Minu*[1], MCNALLY Graham M.[1], KIM Hun-Ho[1], OUDAH Mohamed[2], GIBBS Alexandra[3], MANUEL Pascal[3], GREEN Robert[4], TAKAYAMA Tomohiro[1], YARESKO A.[1], WEDIG Ulrich[1], ISOBE Masahiko[1], KREMER Reinhard K.[1], BONN Douglas[2], KEIMER Bernhard[1], TAKAGI Hidenori[1,5] ([1]Max Planck Institute for Solid State Research, [2]Stewart Blusson Quantum Matter Institute, University of British Columbia, [3]ISIS Facility, STFC Rutherford Appleton Laboratory, Harwell Science and Innovation Campus, [4]Department of Physics & Engineering Physics, University of Saskatchewan, [5]Department of Physics, University of Tokyo)

F6.02 [09:24 - 09:48]

Oxygen sponge effects on structure and magnetism of manganite thin film / KANG Kyeong Tae[1], ZHANG Bruce[1,2], SHARMA Yogesh[1], PAUDEL Binod[1,3], WANG Haiyan[2], CHEN Aiping*[1] ([1]Center for Integrated Nanotechnologies (CINT), Los Alamos National Laboratory, [2]School of Materials Engineering, Purdue University, [3]Department of Physics, New Mexico State University)

F6.03 [09:48 - 10:12]

Oxygen incorporation induced stabilization of M3-phase VO_2 / LEE Dooyong[1,2,3], SONG Sehwan[1], KIM Hyegyeong[4], KIM Jiwoong[1], BAE Jong-Seong[5], KIM Yooseok[2], LEE Jouhahn[2], PARK Sungkyun*[1] ([1]Department of Physics, Pusan National University, [2]Advanced Nano Surface Research Group, Korea Basic Science Institute, [3]Chemical Engineering & Materials Science, University of Minnesota, [4]Core Research Facilities, Pusan National University, [5]Busan Center, Korea Basic Science Institute)

F6.04 [10:12 - 10:36]

Emergent phenomena and interface symmetry in delafossite oxide heterostructures: Opportunities and challenges / YOON Sangmoon[1], OK Jong Mok[1], YOON Mina[2], YEOM Sinchul[3], ICHIBA Tomohiro[1], REBOREDO Fernando A.[1], HUON Amanda[1], LUPINI Andrew R.[2], LEE Ho Nyung*[1] ([1]Materials Science and Technology Division, Oak Ridge National Laboratory, [2]Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, [3]Department of Physics and Astronomy, University of Tennessee)

[F7-co] Magnetism/Superconductivity

2021. 04. 23 Friday 09:00~10:12

Room: 07

좌장 : 김용관 한국과학기술원

Chair : KIM Yeong kwan (KAIST)

F7.01 [09:00 - 09:12]

Spinon and triplon excitations in the anisotropic triangular antiferromagnet $Ca_3ReO_5Cl_2$ / CHOI Youngsu[1,2], LEE Suheon[1,2], LEE Je-Ho[2], LEE Seungyeol[2], SEONG Maeng-Je[2], CHOI Kwang Yong*[1,2] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Physics, Chung-Ang University)

F7.02 [09:12 - 09:24]

Electronic structure of CeNiSn investigated by soft X-ray ARPES / SEONG Seung-Ho[1], DENLINGER J. D.[2], KIM Kyoo[3], MIN B. I.[4], TAKABATAKE T.[5], KANG Jeongsoo*[1] ([1]Department of Physics, The Catholic University of Korea, [2]ALS, Lawrence Berkeley National Lab, [3]Advanced Materials Research Division, KAERI, [4]Department of Physics, POSTECH, [5]Graduate School of Advanced Sciences of Matter, Hiroshima University)

F7.03 [09:24 - 09:36]

Parity violation and new physics in superconductors / HONG Deog Ki*[1] ([1]Department of Physics, Pusan National University)

F7.04 [09:36 - 09:48]

Room-temperature superconducting T_c driven by strong electron correlation / KIM Hyun-Tak*[1] ([1]ETRI)

F7.05 [09:48 - 10:00]

Anisotropic electron-boson coupling in the electron-doped high-T_c cuprates / KIM Changyoung*[1], SONG Dongjoon[1] ([1]Department of Physics and Astronomy, Seoul National University)

F7.06 [10:00 - 10:12]

The Angular dependent Wigner solid transport on ^{3}He Stripe phase / KIM Kitak[1], IKEGAMI Hiroki[2], CHOI Hyoungsoon*[1] ([1]Department of Physics, KAIST, [2]the Center for Emergent Matter Science (CEMS), RIKEN)

F

[F8-co] Surface/Interface/Nano materials II

2021. 04. 23 Friday 09:00~10:12

Room: 08

좌장 : **장영준** 서울시립대학교

Chair : CHANG Young Jun (University of Seoul)

F8.01 [09:00 - 09:12]

빛의 전방 산란을 이용한 콜로이드 입자 크기 측정 / JU Gyeongbin[1], LEE Hyungil[2], HAN Younghee[2], LEE Manhee[*1] ([1]Department of Physics, Chungbuk National University, [2]R&D, LTH Corp.)

F8.02 [09:12 - 09:24]

결정질 SiO_2의 볼밀링에 의한 비정질화 기작에 대한 NMR 연구 / KWEON Jin Jung[*1], KHIM Hoon[1], LEE Sung Keun[1,2] ([1]School of Earth and Environmental Sciences, Seoul National University, [2]Institute of Applied Physics, Seoul National University)

F8.03 [09:24 - 09:36]

전도도에 따른 세리아 슬러리의 분산 안정성 변화 / KWON Dohyeon[1], LEE Manhee[*1], SUK Eumine[2], KWOUN Hounsoo[2], JANG Yunseo[2], BAE Sanghyun[2] ([1]Department of Physics, Chungbuk National University, [2]synopex, synopex)

F8.04 [09:36 - 09:48]

Stacking-dependent quasiparticle band structure, spontaneous polarization, and spin-splitting in few-layer and bulk γ-GeSe / KIM Han-gyu[1], CHOI Hyoung Joon[*1] ([1]Department of Physics, Yonsei University)

F8.05 [09:48 - 10:00]

Study on improvement of Low-Energy Inverse Photoemission Spectroscopy (LEIPS) performance using mirror / PARK Yongsup[*1], HONG Jong-Am[1] ([1]Kyung Hee University)

F8.06 [10:00 - 10:12]

Tip-Substrate Shear Interaction in Quartz Tuning Fork-Based Atomic Force Microscopy in Air / CHOI Hyoju[1], KIM Dongwon[1], CHOI Myugnchul[*2], LEE Manhee[*1] ([1]Department of Physics, Chungbuk National University, [2]Division of Scientific Instrumentation & Management Center for Scientific Instrumentation, Cheongju, Republic of Korea, Korea Basic Science Institute)

[F9-ap] 2D materials-III

2021. 04. 23 Friday 09:00~10:12

Room: 09

좌장 : 김튼튼 울산대학교

Chair : KIM Teun-Teun (University of Ulsan)

F9.02* [09:00 - 09:12]

Positive charge mediated phase transition in MBE grown $MoTe_2$ / JEONG Jaehun[2], CHO Mann Ho*[2], KIM Hyeonsik[2], KWON Gihyeon[2] ([1]Yonsei University, [2]Department of Physics, Yonsei University)

F9.03* [09:12 - 09:24]

Synthesis and characterization of hexagonal GeSe / LEE Sol[1,2], JUNG Joong-Eon[1], KIM Han-gyu[1], LEE Yangjin[1,2], PARK Je Myoung[3], JANG Jeongsu[1], YOON Sangho[4,5], GHOSH Arnab[1], KIM Minseol[1], NA Woongki[3], KIM Jonghwan[4,5], CHOI Hyoung Joon[1], CHEONG Hyeonsik[3], KIM Kwanpyo*[1,2] ([1]Department of Physics, Yonsei University, [2]Center for Nanomedicine, IBS, [3]Department of Physics, Sogang University, [4]Materials Science and Engineering, POSTECH, [5]Center for Artificial Low Dimensional Electronic Systems, IBS)

F9.04* [09:24 - 09:36]

Phase transition in $GeTe/Sb_2Te_3$ superlattices through Ge vacancies ordering / CHO Mann Ho*[1], LEE Chang Woo[1], LIM Hyeon Wook[1], KIM Da sol[1] ([1]Yonsei University)

F9.05* [09:36 - 09:48]

Charge-trapping memory device based on a heterostructure of MoS_2 and $CrPS_4$ / PARK Bae Ho*[1], SHIN Minjeong[1], LEE Mi Jung[1], YOON Chansoo[1], PARK Je-Geun[2], LEE Sungmin[2] ([1]Department of Physics, Konkuk University, [2]Department of Physics and Astronomy, Seoul National University)

F9.06* [09:48 - 10:00]

Atomically Thin Multiferroic van der Waals Material NiI_2 / JU Hwiin[1], LEE Youjin[2,3,4], CHOI In Hyuk[1], ROH Chang Jae[1], SON Suhan[2,3,4], PARK Pyeongjae[2,3,4], KIM Jae Ha[5], JUNG Taek Sun[5], KIM Jae Hoon[5], PARK Je-Geun[2,3,4], LEE Jong Seok*[1] ([1]Department of Physics and Photon Science, GIST, [2]Center for Quantum Materials, Seoul National University, [3]Department of Physics and Astronomy, Seoul National University, [4]Institute of Applied Physics, Seoul National University, [5]Department of Physics, Yonsei University)

F

F9.07 [10:00 - 10:12]

Ordering of Fe–Ge pairs in van der Waals ferromagnetic Fe_5GeTe_2 / LY Trinh Thi[1], PARK Jungmin[2], KIM Kyoo[3], DUVJIR Ganbat[1], LAM Nguyen Huu[1], LEE Changgu[4], KIM Sanghoon[1], KIM Jungdae[*1] ([1]Physics, University of Ulsan, [2]Center for Scientific Instrumentation, Division of Scientific Instrumentation & Management, Korea Basic Science Institute, Daejeon 34133, Korea, [3]Korea Atomic Energy Research Institute, Daejeon 34057, Korea, [4]School of Mechanical Engineering, Sungkyunkwan University, Suwon 16419, Korea)

[F10-ap] [E] Focus: Resonant Inelastic X-ray Scattering for Quantum Materials

2021. 04. 23 Friday 09:00~10:36

Room: 10

좌장 : 장서형 중앙대학교

Chair : CHANG Seo Hyoung (Chung-ang University)

F10.01 [09:00 - 09:24]

Strong Superexchange in a $d^{9-\delta}$ Nickelate Revealed by Resonant Inelastic X-Ray Scattering / DEAN Mark[*1] ([1]Brookhaven National Laboratory)

F10.02 [09:24 - 09:48]

Resonant inelastic X-ray scattering studies on Kitaev spin liquid candidates, honeycomb iridates A_2IrO_3 (A = Na, Li) / CHUN SAE HWAN[*1] ([1]XFEL Division, Pohang Accelerator Laboratory)

F10.03 [09:48 - 10:12]

Spin waves in a $Sr_2IrO_4/Sr_3Ir_2O_7$ superlattice / KIM Bumjoon[*1] ([1]Department of Physics, POSTECH)

F10.04 [10:12 - 10:36]

RIXS study of Infinite-layer Nickelate Superconductors / LEE Wei-Sheng[*1] ([1]Stanford Institute of Materials and Energy Sciences, SLAC National Accelerator Lab)

[F11-ap] Focus: Quantum Information based on superconducting devices

2021. 04. 23 Friday 09:00~10:36

Room: 11

좌장 : 이길호 포항공과대학교

Chair : LEE Gil-Ho (POSTECH)

F11.01 [09:00 - 09:24]

Multi-qubit system based on superconducting qubit in circuit QED / CHOI Gahyun[*1], LEE Sunkyung[1] ([1]Quantum Technology Institute, KRISS)

F11.02 [09:24 - 09:48]
Tunable Cavity QED system with parametrically induced dispersive shifts / NOH Taewan*1 ([1]National Institute of Standards and Technology (NIST))

F11.03 [09:48 - 10:12]
Waveguide quantum electrodynamics in superconducting circuits / KIM Eunjong*1,2 ([1]Thomas J. Watson Sr., Laboratory of Applied Physics and Kavli Nanoscience Institute, California Institute of Technology, [2]Institute for Quantum Information and Matter, California Institute of Technology)

F11.04 [10:12 - 10:36]
High-fidelity two-qubit gates using a tunable coupler / SUNG Youngkyu*1 ([1]Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology)

[F12-ap] Focus: Advanced Oxide Materials by Design-III
2021. 04. 23 Friday 09:00~10:48
Room: 12
좌장 : 진형진 부산대학교
Chair : JEEN Hyoung Jeen (Pusan National University)

F12.01 [09:00 - 09:36]
Ferroelectricity with stable subloop behavior of Si-doped HfO_2 thin film / CHAE Seung Chul*1 ([1]Department of Physics Education, Seoul National University)

F12.02 [09:36 - 10:12]
Delafossite oxides: A natural heterostructure with a great variety of physical properties / OK Jong Mok*1 ([1]Department of Physics, Pusan National University)

F12.03 [10:12 - 10:48]
First-principles calculation of two dimensional 1T oxides / KIM Inseo[1], LEE Hyungwoo[1], CHOI Minseok*1 ([1]Department of Physics, Inha University)

[F13] No session

[F14-te] Diversity in Physics Education Research

2021. 04. 23 Friday 09:00~10:24

Room: 14

좌장 : 김민철 공주대학교

Chair : KIM Minchul (Kongju National University)

F14.01 [09:00 - 09:12]

물리식의 존재론적 의미와 인식론적 의미에 대한 학생들의 이해 / 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)

F14.02 [09:12 - 09:24]

Collaborative exams for learning: Challenging problems and more opportunities / JANG Hyewon*[1] ([1]Strategic planning center, KAIST)

F14.03* [09:24 - 09:36]

Derivation of Jacobian Formula with Dirac Delta Function / KIM Dohyun[1], EE June-Haak[1], YU Chaehyun[1], LEE Jungil*[1] ([1]Korea University)

F14.04* [09:36 - 09:48]

Determination of Eigenvectors with Lagrange Multiplier / HAN Wooyong[1], JUNG Dong-Won[1], LEE Jungil*[1], YU Chaehyun[1] ([1]Korea University)

F14.05 [09:48 - 10:00]

수평잡기를 이용한 저울의 민감도를 높이는 간단한 방법 제안 / CHEONG Yong Wook*[1] ([1]Department of Physics education, Gyeongsang National University)

F14.06 [10:00 - 10:12]

Changes in The Concept of Mechanical Energy of 3rd Graders in Middle School Through Pendulum Motion Video Analysis Activity / OH Won Kun*[1], JEONG Hyeon[1] ([1]Department of Physics Education, Chungbuk National University)

F14.07 [10:12 - 10:24]

역량중심 교육과정에서의 물리 교과 '지식'의 방향성 -2015 개정 교육과정과 IB의 비교 분석을 중심으로- / KIM Hyojoon*[1], SONG Jinwoong[1], KIM Eiseul[1], HAN Chaerin[1] ([1]Department of Physics Education, Seoul National University)

[F15-pl] Focus: KSTAR

2021. 04. 23 Friday 09:00~10:24

Room: 15

좌장 : **윤시우** 한국핵융합에너지연구원

Chair : YOON Si-Woo (KFE)

F15.01 [09:00 - 09:24]

Overview of KSTAR Experiment / KO Won-Ha*[1], YOON S.W.[1], KIM W.C.[1], KWAK J.G.[1], PARK K. L.[1], NAM Y. U.[1], WANG S.J.[1], CHUNG J.[1], PARK B.H.[1], PARK G.Y.[1], LEE H.H.[1], HAN H.S.[1], CHOI M.J.[1], NA Y.S.[2], YUN G.S.[3], IN Y.[4], CHOE W.H.[5], KWON J.M.[1], LEE J.P.[6], JEON Y.M.[1], NA B.K.[1], KO J.S.[1], LEE J.H.[1], SHIN G.W.[1], LEE K. D.[1], KIM J.[1], LEE J.[1], HAHN S.H.[1], LEE J.W.[1], KIM H.S.[1], KIM M.[1], BAK J. G.[1], LEE S. G.[1], KANG J.S.[1], LEE Y.H.[1], JEON J.H.[1], WOO M.H.[1], KIM J.H.[1], JUHN J.W.[1], YOO J.W.[1], KIM G.[1], CHU Y.[1], KIM K. P.[1], KIM H.S.[1], KIM J.S.[1], JOUNG M.[1], PARK S.H.[1], KIM H.J.[1], WI H.M.[1], HONG J.S.[1], SEO D.C.[1], SEO S.H.[1], LEE Y.S.[1], KIM Y.S.[1], JANG J.H.[1], LEE K.C.[1], KIM K.[1], JHANG H.G.[1], LEE J.K.[1], SON S.H.[1], KO S.H.[1], LEE W.[1], RHEE T.[1], YEOM J.H.[1], KIM J.W.[1], HAN K.S.[4], SEOL J.[1], LEE M.W.[1], JUNG L.[1], LEE S.I.[1], LEE Y.J.[1], PARK H.T.[1], CHO W.[1], CHOI D.J.[1], KIM S.G.[1], WI H.H.[1], HAN J.W.[1], RHEE I.H.[1], JANG K.H.[1], LEE H.Y.[1], LEE H.J.[1], QI L.[1], SEO J.H.[1], BANG E.N.[1], AHN H.J.[1], WOO I.S.[1], KIM Y.O.[1], LEE T.G.[1], YUN S.W.[1], LEE S.J.[1], LEE K.S.[1], KWON G.I.[1], KONG J.D.[1], KIM S.T.[1], KWAG S.W.[1], JIN J.K.[1], KIM C.H.[1], AHN H.S.[1], PARK D.S.[1], CHOI J.H.[1], SUNG C.[5], YOON J.H.[5], PARK M.S.[5], KIM B.S.[2], HWANG J.H.[5], SHIN H.W[5], PARK J.M.[7], KIM S.K.[2,8], PARK J. K.[8], LOGAN N.C.[8], YANG S.M.[8], HU Q.[8], KOLEMEN E.[8], SHOUSHA R.[8], BARR J.[9], PAZ-SOLDAN C.[9], WEHNER W.[9], PARK Y. S.[10], SABBAGH S. A.[10], OGAWA K.[11], KIM S.[12], LOARTE A.[12], SCHUSTER E.[13], HOLE M.[14], NAZIKIAN R.[8], GILSON E.[8], ELDON D.[9], SCHMITZ O.[15], NAKANO T.[16], TALA T.[17], NELSON A.O.[8], OKABAYASHI M.[8], PARK H.[4], **The KSTAR Team**[1] ([1]Korea Institute of Fusion Energy, [2]Seoul National University, [3]Pohang University of Science and Technology, [4]Ulsan National Institute of Science and Technology, [5]Korea Advanced Institute of Science and Technology, [6]Hanyang University, [7]Oak Ridge National Laboratory, [8]Princeton Plasma Physics Lab, [9]General Atomics, [10]Columbia University, [11]National Institute of Fusion Science, [12]ITER Organization, Saint-Paul-lès-Durance, [13]Lehigh University, [14]Australian National University, [15]University of Wisconsin-Madison, [16]National Institutes for Quantum and Radiological Science and Technology, [17]VTT Technical Research Center)

F15.02 [09:24 - 09:48]

핵융합 시뮬레이션 기술과 가상 KSTAR 개발 / KWON Jae Min*[1] ([1]KFE)

F15.03 [09:48 - 10:12]

Investigating runaway electrons from the induced radio frequency emissions / KIM M.H.[1,2], THATIPAMULA Shekar G.[1], KIM J.[2], LEE J.[2], KIM J.H.[2], YUN G.S.*[1] ([1]Pohang University of Science and Technology, [2]Korea Institute of Fusion Energy)

F

F15.04 [10:12 - 10:24]

Feedforward Beta Control by Deep Reinforcement Learning in KSTAR / SEO J.[1], NA Y.-S.[*1], KIM B.[1], LEE C.Y.[1], PARK M.S.[1], PARK S.J.[1], LEE Y.H.[2] ([1]Department of Nuclear Engineering, Seoul National University, [2]Korea Institute of Fusion Energy)

[F16-op] Lasers and Interferometry

2021. 04. 23 Friday 09:00~10:12

Room: 16

좌장 : **김명기** 고려대학교

Chair : KIM Myung Ki (Korea University)

F16.01 [09:00 - 09:12]

Light perturbed by gravitational wave / PARK Chan[*1] ([1]Division of Basic Researches for Industrial Mathematics, NIMS)

F16.02* [09:12 - 09:24]

Nd:Y_2O_3 광대역 NIR 투과율 측정을 위한 스캐닝 백색광 간섭계 개발 / LEE Hee Su[1], HWANG Seung Jin[4], LEE Sung Yoon[2,4], CHO Seryeyohan[3], PARK Dae Woong[2], LEE Gun Hui[2], CHO Han Jin[2], OH Hyeon Myeong[5], PARK Young Jo[5], KO Jae Woong[5], KIM Ha Neul[5], YU Tae Jun[*2,4] ([1]Department of Information and Communication Engineering, Handong Global University, [2]Department of Advanced Convergence, Handong Global University, [3]Advanced AI Talent Education and Research Group for Industrial Innovation, Handong Global University, [4]R&D, Hil Lab. Inc., [5]Department of Engineering Ceramics, Korea Institue of Materials Science)

F16.03 [09:24 - 09:36]

고출력 피코초 레이저용 CVBG 광 압축기의 열적 효과 모델 및 보상 설계 / CHO Seryeyohan[*1,2,3], LEE Heesu[2], YU Tae Jun[*1,2], NOVAK Ondrej[3], SMRZ Martin[3], MOCEK Tomas[3] ([1]Department of Advanced Convergence, Handong Global University, [2]Dept. of Information and Communication Engineering, Handong Global University, [3]Advanced Laser Development group, HiLASE Centre)

F16.04* [09:36 - 09:48]

텐덤 펌핑용 고출력 1018 nm Yb 광섬유 레이저 / OH Ye Jin[1], PARK Hye Mi[1], KIM Jin Pil[1], PARK Eun Ji[1], PARK Jong Seon[1,2], KIM Ji Won[*1], JEONG Hoon[2] ([1]Hanyang University ERICA, [2]research institute of sustainable manufacturing system, KITECH)

F16.05* [09:48 - 10:00]

Attosecond photoemission delay in two-dimensional atomic arrangements: A velocity cone of earlier electron emission / PARK Hyosub[1], KIM Youngjae[1], LEE JaeDong[*1] ([1]Department of Emerging Materials Science, DGIST)

F16.06* [10:00 - 10:12]

Universal time delays in the inelastic photoelectron emission of metals / BAE Gimin[1], PARK Hyosub[1], LEE JaeDong*[1] ([1]Department of Emerging Materials Science, DGIST)

[F18-se] Low-dimensional (0D/1D/2D) materials and novel quantum phenomena

2021. 04. 23 Friday 09:00~10:48

Room: 18

좌장 : 오혜민 군산대학교

Chair : OH Hye Min (Kunsan National University)

F18.01* [09:00 - 09:12]

Inducing and probing localized excitons via tip-enhanced cavity-spectroscopy / LEE Hyeongwoo[1], PARK Kyoung-Duck*[1] ([1]Department of Physics, UNIST)

F18.02 [09:12 - 09:24]

Enhanced Production Yield of MoS_2 Quantum Dots / BYEON Clare Chisu*[1], ALI Luqman[1], KAGOIYA Ng'ang'a Douglas[1], LEE Yong Joong[1] ([1]School of Mechanical Engineering, Kyungpook National University)

F18.03* [09:24 - 09:36]

Hexagonal boron nitride encapsulation passivates defects of 2D materials / JUNG Jin-Woo[1], CHOI Hyeon-Seo[1], LEE Young-Jun[1], KIM Dohun[1], KIM Youngwook[1], CHO Chang-Hee*[1] ([1]Department of Emerging Materials Science, DGIST)

F18.04* [09:36 - 09:48]

Observance of Negative Differential Resistance without Heterojunctions / KIM Yeeun[1], JOO Min-Kyu*[2] ([1]Department of Physics, Sookmyung Women's University, [2]Department of Applied Physics, Sookmyung Women's University)

F18.05 [09:48 - 10:00]

Switched Valley Polarization of Intralayer Exciton via One-Step-Grown WS_2/MoS_2 Vertical Heterostructure / LE Chinh Tam[1], LEE Je-Ho[2], KIM Jungcheol[3], SEONG Maeng-Je[2], JANG Jon Ik[3], KIM Yong Soo*[1] ([1]Department of Physics, University of Ulsan, [2]Department of Physics, Chung-Ang University, [3]Department of Physics, Sogang University)

F18.06 [10:00 - 10:12]

Auger process of the electron-hole pair in anisotropic quantum rings / KYHM Kwangseuk*[1,2], KIM Minju[2] ([1]Optomechatronics, Pusan National University, [2]cogno-mechatronics engineering, Pusan National University)

F18.07* [10:12 - 10:24]

Electric field induced giant valley polarization in two dimensional ferromagnetic $WSe_2/CrSnSe_3$ heterostructure / MARFOUA Brahim[1], HONG Ji Sang*[1] ([1]Physics, Pukyong National University)

F18.08* [10:24 - 10:36]

Tip-induced strain engineering of a single metal halide perovskite quantum dots / LEE Hyeongwoo[1], PARK Kyoung-Duck*[1] ([1]Department of Physics, UNIST)

F18.09* [10:36 - 10:48]

Tip-induced nano-engineering of strain, bandgap, and exciton funneling in 2D semiconductors / PARK Kyoung-Duck*[1], KOO Yeonjeong[1], KIM Yongchul[2], CHOI Soo Ho[3], LEE Hyeongwoo[1], CHOI Jinseong[1], LEE DongYun[1], KANG Mingu[1], LEE HyunSeok[4], KIM Ki Kang[3,6], LEE Geunsik[2,5] ([1]Department of Physics, UNIST, [2]Chemistry, UNIST, [3]Center for Integrated Nanostructure Physics (CINAP), IBS (IBS), Sungkyunkwan University, [4]Department of Physics, Research Institute for Nanoscale Science and Technology, Chungbuk National University, [5]Center for Wave Energy Materials, UNIST, [6]Energy Science, Sungkyunkwan University)

[F19-se] Device and applications

2021. 04. 23 Friday 09:00~11:00

Room: 19

좌장 : 임성주 성균관대학교

Chair : LIM Seong Chu (Sungkyunkwan University)

F19.01 [09:00 - 09:12]

전계 효과로 반응을 조절할 수 있는 박막트랜지스터 기반의 압력 감지 센서 및 이의 해석적 모델 / 오홍석*[1] ([1]숭실대학교 물리학과)

F19.02* [09:12 - 09:24]

All-optical photoacoustic measurement on Rhodamine-6G / KYHM Kwangseuk*[1,2], KIM Minwoo[2] ([1]Optomechatronics, Pusan National University, [2]cognomechatronics, Pusan National University)

F19.03* [09:24 - 09:36]

Optical imaging of dentinal tubules with two-photon microscopy / KYHM Kwangseuk*[1,2], LEE Seunghwan[2] ([1]Optomechatronics, Pusan National University, [2]Cogno-mechatronics, Pusan National University)

F19.04 [09:36 - 09:48]
Buckling tip-based atomic force microscope for nonlinear sensor, negative elasticity, nanoscratching, and nanolithography / AN Sangmin*[1] ([1]Department of Physics, Institute of Photonics and Information Technology, Jeonbuk National University)

F19.05 [09:48 - 10:00]
Epitaxial ZnTe thin flims for Ovonic threshold switching selector device / KIM Min-Jay[1,2], LEE InHak[1], KIM HyukJin[1], CHOI ByungKi[1], LEE KyeongJun[3], HEO JinEun[3], KIM JaeYeon[4], SOHN HyunChul[4], CHANG Young Jun*[1,2] ([1]Department of Physics, University of Seoul, [2]Smart Cities, University of Seoul, [3]Department of Physics, Chung-Ang University, [4]Department of Material Science and Engineering, Yonsei University)

F19.06* [10:00 - 10:12]
Effects of dielectric passivation on device performance of AlGaN/GaN high-electron-mobility transistors / KIM Jaeho[1], CHO Jaehee*[1] ([1]Department of Semiconductor Science and Technology, Jeonbuk National University)

F19.07* [10:12 - 10:24]
Lead-free (K,Na)NbO_3 thick films for flexible non-volatile memory applications / KWAK Yeong Min[1], LEE Tae Kwon[1], KONG Dae Sol[1], KO Young Joon[1], JEONG Dong Geun[1], JUNG Jong Hoon*[1] ([1]Inha University)

F19.08 [10:24 - 10:36]
Perovskite quantum dot hybrid light-emitting transistors for display applications / SEO Jung Hwa*[1], PARK Yu Jung[1], KIM Minseong[2], SONG Aeran[3], KIM Jin Young[2], CHUNG Kwun-Bum[3], WALKER Bright[4], WANG Dong Hwan[2] ([1]Department of Physics, Dong-A University, [2]School of Intergrative Engineering, Chung-Ang University, [3]Division of Physics and Semiconductor, Dongguk University, [4]Department of Chemistry, Kyung Hee University)

F19.09 [10:36 - 10:48]
Influences of ionic moieties on energy band structures of organic and hybrid semiconducting devices and their functions / KHAN Yeasin[1], 서정화*[1] ([1]Department of Physics, Dong-A University)

F19.10 [10:48 - 11:00]
Orbital gating in $MoTe_2$ tunneling opto-electronic device / HWANG Geunwoo[2], KIM Eunah[2], SUN Linfeng[2], YANG Heejun*[1] ([1]Department of Physics, KAIST, [2]Department of Energy Science, Sungkyunkwan University)

Session G

2021 April 23(Fri) 11:10-12:58

[G1-pa] [E] Focus: Status report on Belle II Heavy Flavor Experiment

2021. 04. 23 Friday 11:10~12:46

Room: 01

좌장 : 천병구 한양대학교

Chair : CHEON Byung Gu (Hanyang University)

G1.01 [11:10 - 11:34]

Dark Matter and New Physics from Belle II Experiment / LEE Hyun Min*1 ([1]Department of Physics, Chung-Ang University)

G1.02 [11:34 - 11:58]

The SuperKEKB & Belle II status / KIM Doris Yangsoo*1 ([1]Department of Physics, Soongsil University)

G1.03 [11:58 - 12:22]

Belle II result on Heavy Flavor Physics / KANG Kookhyun*1 ([1]Kyungpook National University)

G1.04 [12:22 - 12:46]

Dark Sector study at Belle II / PARK Seokhee[2], KWON Youngjoon*1 ([1]Department of Physics, Yonsei University, [2]IPNS, High Energy Accelerator Research Organization, KEK)

[G2-pa] Field and string theory II

2021. 04. 23 Friday 11:10~12:34

Room: 02

좌장 : 김근영 광주과학기술원

Chair : KIM Keun Young (GIST)

G2.01 [11:10 - 11:22]

Relativistic spinning particle and twistor theory / LEE Sangmin*1, KIM Jung-Wook[2], KIM Joon-Hwi[3] ([1]College of Liberal Studies, Seoul National University, [2]Department of Physics, Queen Mary University of London, [3]Department of Physics and Astronomy, Seoul National University)

G2.02 [11:22 - 11:34]

Spinning particles in external fields: from spin precession to twistors / LEE Sang-min*[1], KIM Jung-Wook[2], KIM Joon-Hwi[3] ([1]College of Liberal Studies, Seoul National University, [2]Department of Physics, Queen Mary University of London, [3]Department of Physics and Astronomy, Seoul National University)

G2.03* [11:34 - 11:46]

Scrutinizing the Dynamics of Conformal Gravity Using Free Differential Algebras and Unfolding Strategy / KIM Mingi*[1], BOULANGER Nicolas[2], JOUNG Euihun[1], KIM Yu-jin[1] ([1]School of Science, Department of Physics, Kyung Hee University, [2]Department of Theoritical Physics, Universite de Mons)

G2.04* [11:46 - 11:58]

Classifying Gravitational Systems / KIM Yujin*[1], BOULANGER Nicolas[2], JOUNG Euihun[1], KIM Mingi*[1] ([1]Kyung Hee University, [2]Department of Physics, University of Mons)

G2.05 [11:58 - 12:10]

Thermodynamic properties of strongly interacting non-Dirac materials / SEO Yun-seok*[1], SIN Sang-Jin[2], SONG Geunho[2] ([1]College of General Education, Kookmin University, [2]Department of Physics, Hanyang University)

G2.06* [12:10 - 12:22]

The emergence of Strange metal and Topological Liquid in a solvable model of Quantum Phase Transitions / SIN Sang Jin*[1], OH Eunseok[1], YUK Taewon[1] ([1]Department of Physics, Hanyang University)

G2.07* [12:22 - 12:34]

Topological Material in Holography / SIN Sang Jin*[1], YUK Taewon[1] ([1]Department of Physics, Hanyang University)

[G3-nu] Heavy-ion collision & Nuclear Experiment

2021. 04. 23 Friday 11:10~12:58

Room: 03

좌장 : 김은주 전북대학교

Chair : KIM Eun Joo (Jeonbuk National University)

G3.01* [11:10 - 11:22]

Simulation of the beam drift chamber for LAMPS at RAON / HONG Byungsik*[1], HWANG Jaein*[1], MOON Dongho[2], KIM Hyunchul[2], LEE Jongwon[1], HWANG Sanghoon[3], SEO Junhu[2] ([1]Department of Physics, Korea University, [2]Department of Physics, Chonnam National University, [3]Center for Ionizing Radiation, KRISS)

G3.02* [11:22 - 11:34]
Status of the bent ALPIDE chip beam test data Analysis for ITS3 upgrade / KWEON Min Jung*[1], CHO Jae Yoon[2] ([1]Inha University, [2]Department of Physics, Inha University)

G3.03* [11:34 - 11:46]
A three-dimensional electromagnetic sampling calorimeter for the future future $K_L^0 \to \pi^0 \nu\bar{\nu}$ experiment / KIM Young Jun*[1], KIM Jun Lee[2], LIM Gei Youb[3], KIM Eun-Joo[2], AHN Jung Keun[1] ([1]Department of Physics, Korea University, [2]Division of Science Education, Jeonbuk National University, [3]IPNS, High Energy Accelerator Research Organization, KEK)

G3.04* [11:46 - 11:58]
Beauty production with ALICE / PARK Jong Han*[1] ([1]Inha University)

G3.05 [11:58 - 12:10]
Probing the gluonic intial state with inclusive dijets in p-Pb and exclusive dijets in ultra-peripheral Pb-Pb collision at 5.02 TeV with the CMS experiment / KIM Yongsun*[1] ([1]Sejong University)

G3.06 [12:10 - 12:22]
Study of Monte Carlo simulation for quarkonia production in heavy-ion collisions / LIM Sang Hoon*[1], LEE Su Houng[2], HONG Juhee[2], KIM Eun-Joo[3], KWEON MinJung[4], PARK Jaebeom[5], KIM Junlee[3], SEO Jinjoo[4] ([1]Department of Physics, Pusan National University, [2]Department of Physics, Yonsei University, [3]Division of Science Education , Jeonbuk National University, [4]Department of Physics, Inha University, [5]Department of Physics, Korea University)

G3.07 [12:22 - 12:34]
HPGe and Alpha counting measurements of detector material samples at Yangyang underground laboratory / KIM Yeongduk*[1,2], LEE Eunkyung[1], HAHN Insik Kevin[3], KANG Woongu[1], KIM Gowoon[1], LEE Moo Hyun[1,2], LEONARD Douglas S.[1], PARK Su-yeon[1], KAZALOV Vladimir[4] ([1]IBS Center for Underground Physics, IBS, [2]Department of Physics, University of Science and Technology, [3]IBS Center for Exotic Nuclear Studies, IBS, [4]Baksan Neutrino Pbservatory, INR)

G3.08 [12:34 - 12:46]
Active Target Development for Multiple Nuclear Astrophysics Experiments at CENS / AHN Sunghoon(Tony)*[1], KIM Dahee[1], HAHN Kevin Insik[1], MOON Byul[1], CHAE Kyungyuk[2], CHA Soomi[1,2], KIM Minju[2], KIM Chanhee[2] ([1]Center for Exotic Nuclear Studies, IBS, [2]Department of Physics, Sungkyunkwan University)

G3.09 [12:46 - 12:58]
Simulation study on beam test at KOMAC of prototype detectors for LAMPS / KIM

Yongjun*1, KIM Chong1, KIM Beomkyu1, LIM Sanghoon1 (1Department of Physics, Pusan National University)

[G4] No session

[G5-co] [E] Focus: Topology in 2D materials

2021. 04. 23 Friday 11:10~12:46

Room: 05

좌장 : 전상준 중앙대학교

Chair : JEON Sangjun (Chung-ang University)

G5.01 [11:10 - 11:34]

Cascade of electronic transitions and strongly correlated topological phases in magic-angle twisted bilayer graphene / OH Myungchul*1 (1Princeton University)

G5.02 [11:34 - 11:58]

Correlated topological phases in moiré flat bands / XIE Yonglong*1 (1Harvard University)

G5.03 [11:58 - 12:22]

Higher-Order topology in Twisted Bilayer Graphene / PARK Moon Jip*1 (1Department of Physics, KAIST)

G5.04 [12:22 - 12:46]

Flat bands and the geometry of Bloch wave function / RHIM Jun Won*1, HWANG Yoonseok2, YANG Bohm-Jung2 (1Department of Physics, Ajou University, 2Department of Physics & Astronomy, Seoul National University)

[G6-co] Focus: Emergent quantum phenomena in symmetry-manipulated oxides II

2021. 04. 23 Friday 11:10~12:46

Room: 06

좌장 : 양상모 서강대학교

Chair : YANG Sang Mo (Sogang University)

G6.01 [11:10 - 11:34]

Large-gap insulating dimer ground state in monolayer $IrTe_2$ / HWANG Jinwoong*1,2,3, KIM Kyoo4, ZHANG Canxun5,6,7, ZHU Tiancong5,6, HERBIG Charlotte5,6, KIM Sooran8, KIM Bongjae9, ZONG Yong1,2, SALAH Mohamed1,10, EL-DESOKY Mohamed M.1,10, SHEN Zhi-Xun2,11, HWANG Choongyu3, CROMMIE Michael F.5,6,7, MO Sung-Kwan*1 (1Advanced Light

Source, Lawrence Berkeley National Laboratory, [2]Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, [3]Department of Physics, Pusan National University, [4]Korea Atomic Energy Research Institute, [5]Department of Physics, University of California, [6]Materials Science Division, Lawrence Berkeley National Laboratory, [7]Kavli Energy NanoSciences Institute, University of California, [8]Department of Physics Education, Kyungpook National University, [9]Department of Physics, Kunsan National University, [10]Department of Physics, Faculty of Science, Suez University, [11]Geballe Laboratory for Advanced Materials, Department of Physics and Applied Physics, Stanford University)

G6.02 [11:34 - 11:58]

Hund's metallic properties of ruthenates / KIM Choong Hyun*[1] ([1]Seoul National University)

G6.03 [11:58 - 12:22]

Understanding the normal state of nickelate superconductors: recent progress and open problems / RYEE Siheon[1], CHOI Sangkook[2], HAN Myung Joon*[1] ([1]Department of Physics, KAIST, [2]CMPMS Department, Brookhaven National Lab.)

G6.04 [12:22 - 12:46]

Observation of the Chiral Spin structure in Ferromagnetic $SrRuO_3$ Thin Film / KIM Bongju*[1,3,4], HUANG Hai[2], LEE Sang-Jun[2], SOHN Byungmin[3,4], CHANG Seo Hyoung[6], BOMBARDI Alessandro[7], PORTER Dan. G.[7], KIM Changyoung[3,4], KAO Chi-Chang[5], LEE Jun-Sik[2] ([1]Department of Energy Science, Sungkyunkwan University, [2]Stanford Synchrotron Radiation Lightsource, SLAC National Accelerator Laboratory, [3]Department of Physics and Astronomy, Seoul National University, [4]Center for Correlated Electron Systems, IBS, [5]SLAC National Accelerator Laboratory, SLAC National Accelerator Laboratory, [6]Department of Physics, Chung-Ang University, [7]Diamond Light Source Ltd, Harwell Science and Innovation Campus)

[G7-co] Superconductivity

2021. 04. 23 Friday 11:10~12:34

Room: 07

좌장 : **박승룡** 인천대학교

Chair : PARK Seung Ryong (Incheon National University)

G7.01 [11:10 - 11:34]

Density functional theory studies of superconducting infinite-layer nickelate / LEE Kwan-Woo*[1] ([1]Division of Display and Semiconductor Physics, Korea University)

G7.02 [11:34 - 11:58]

Nature of electronic correlations in the infinite-layer nickelates and hidden Hund's physics / KANG Chang-Jong*[1] ([1]Department of Physics, Chungnam National University)

G7.03 [11:58 - 12:10]

First-principles study of superconducting $Ba_2CuO_{3+\delta}$ / JIN Hyo-Sun[1], LEE Kwan-Woo*[1] ([1]Division of Display and Semiconductor Physics, Korea University)

G7.05* [12:10 - 12:22]

Proposals to detect Bogoliubov Fermi surfaces / OH Hanbit[1], MOON Eun-Gook*[1] ([1]Department of Physics, KAIST)

G7.06* [12:22 - 12:34]

Formation of buried superconducting Mo_2N by nitrogen-ion-implantation / JEEN Hyoung Jeen*[1], LEE Joonhyuk[1], PARK Jun Kue[2], LEE Joon Woo[3], HEO Yunseok[1], OH Yoon Seok[3], LEE Jae S.[2], CHO Jinhyoung[4] ([1]Department of Physics, Pusan National University, [2]Korea Multi-Purpose Accelerator Complex, KAERI, [3]Department of Physics, UNIST, [4]Department of Physics Education, Pusan National University)

[G8] No session

[G9-ap] Surface and interface

2021. 04. 23 Friday 11:10~12:10

Room: 09

좌장 : 조두희 연세대학교

Chair : CHO Doohee (Yonsei University)

G9.01* [11:10 - 11:22]

Fabrication of silicon nano-/microstructures by fab-free process and analysis of hole behavior during metal-assisted chemical etching / JO Jeong-Sik[1], HONG Young Ki[2], JANG Jae Won*[1] ([1]Division of Physics and Semiconductor Science, Dongguk University, [2]Department of Physics, Gyeongsang National University)

G9.02* [11:22 - 11:34]

Reducing surface roughness of sputtered $CoFe_2O_4$ films using two-step growth mode / LEE Hyunkyung[1], SONG Sehwan[1], KIM Byeongwan[1], PARK Sungkyun[1], KANG Haeyong*[1] ([1]Department of Physics, Pusan National University)

G9.03* [11:34 - 11:46]

Acoustic phonon transmission spectroscopy on metal-semiconductor interfaces / LEE Jong Seok*[1], JEONG Do Gyeom[1] ([1]Department of Physics and Photon Science, GIST)

G9.04 [11:46 - 11:58]

Optical Horn Effect via Hourglass type Nanoslit Nanostructure II / CHOI Seong Soo*[1,2], PARK Myoung Jin[4], BAE Byoung Seong[3], KIM Hyun Tae[5], CHOI Soo Bong[5], LEE Yong Min[2] ([1]Sun Moon University, [2]Research Center for Nano-Bio Science, SunMoon University, [3]Display, Hoseo University, [4]Department of Physics, Korea Military Academy, [5]Department of Physics, Incheon National University)

G9.05 [11:58 - 12:10]

Gas Cluster Ion Beam Sputtering Yield Measurement on Silicon and OLED Surfaces / CHO Jinwan[1,2], CHOI Myongchul[2], LEE Sangju[2], LEE Manhee*[1] ([1]Department of Physics, Chungbuk National University, [2]Division of Scientific Instrumentation % Management Center for Scientific Instrumentation, Cheongju, Republic of Korea, Korea Basic Science Institute)

[G10-ap] Oxide and spin

2021. 04. 23 Friday 11:10~12:34

Room: 10

좌장 : 김갑진 한국과학기술원

Chair : KIM Kab-Jin (KAIST)

G10.01* [11:10 - 11:22]

Anisotropic ionic conduction in Ca-doped bismuth ferrite thin films measured by electrochromism and impedance spectroscopy / SUH Jeonghun[1,2], LIM Ji Soo[1,2], PARK Heung-Sik[1,2], YANG Chan-Ho*[1,2,3] ([1]Department of Physics, KAIST, [2]Center for Lattice Defectronics, KAIST, [3]KAIST Institute for the NanoCentury, KAIST)

G10.02* [11:22 - 11:34]

The Role of Ferroelectric toward High Synaptic Performance 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], LEE Ji Hye[2,3], PARK Sanghyun[4], KANG Bo Soo[4], KIM Young Heon[5] ([1]Department of Physics, Konkuk University, [2]Center for Correlated Electron Systems (CCES), Institute of Basic Science (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)

G10.03* [11:34 - 11:46]

Systematic studies on ferroelectric properties in epitaxial Mn-doped $(K,Na)NbO_3$ thin films / DUONG Nguyen Xuan[1], AHN Chang Won[1], THUY Nguyen Bich[1], KIM Gyehyeon[2], BAE Jong-Seong[3], SHEERAZ Muhammad[1], LEE Myang Hwan[4], HAN Hyoung-Su[5], CHO Shinuk[1], SONG Tae Kwon[4], SOHN Changhee[2], KIM Ill Won[1], KIM Tae Heon*[1] ([1]Department of Physics, University of Ulsan, [2]Department of Physics, Ulsan National Institute of Science and Technology (UNIST), [3]Busan Center, Korea Basic Science Institute (KBSI), [4]School of Materials Science and Engineering, Changwon National University, [5]School of Materials Science and Engineering, University of Ulsan)

G10.04* [11:46 - 11:58]

Nanoscale mapping of local conductance changes at different temperatures in an epitaxial VO_2 thin film / KIM Ahyoung[1], PARK Jung Hyun[2], LIM Soo Yeon[1], CHUNG Jin-Seok[2], CHEONG Hyeonsik[1], KO Changhyun[3], YOON Jong-Gul[4], YANG Sang Mo[*1] ([1]Department of Physics, Sogang University, [2]Department of Physics, Soongsil University, [3]Department of Applied Physics, Sookmyung Women's University, [4]Department of Physics, The University of Suwon)

G10.05* [11:58 - 12:10]

Spin-orbit Torque Magnetization Switching in an All-Van der Waals WTe_2/Fe_3GeTe_2 Heterostructure / SHIN Inseob[1], CHO Won Joon[2], AN Eun-Su[1,3], PARK Sungyu[3], JEONG Hyeon-Woo[1], JANG Seong[1], BAEK Woon Joong[2], PARK Seong Yong[2], YANG Dong-Hwan[4], SEO Jun Ho[1], KIM Gi-Yeop[4], ALI Mazhar Nawaz[5], CHOI Si-Young[4], LEE Hyun-Woo[1,6], KIM Jun Sung[1,3], KIM Sungdug[2], LEE Gil-Ho[*1,6] ([1]Department of Physics, POSTECH, [2]Material Research Center, Samsung Advanced Institute of Technology, [3]Center for Artificial Low Dimensional Electronic Systems, IBS, [4]Department of Materials Science and Engineering, POSTECH, [5]Microstructure Physics, Max Plank Institute, [6]Theoretical Physics, Asia Pacific Center)

G10.06* [12:10 - 12:22]

Observation of Weak Antilocalization in Co-dusted Graphene films / DO Thi Nga[1,2], LEE Sehee[3], HWANG Chanyong[3], KIM Tae Hee[*1,2] ([1]Center for Quantum Nanoscience, Ewha Womans University, [2]Department of Physics, Ewha Womans University, [3]Quantum Spin Team, KRISS)

G10.07* [12:22 - 12:34]

자구벽 운동에서 임계 전류의 이해 / CHANG Jun-Young[1,2], PARK Min-Ho[1], YU Ji-Sung[1], NAM Yune-Seok[1], KIM Myeong-hoe[1], KIM Dae-Yun[3], KIM Duck-Ho[*2], CHOE Sug-Bong[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Spintronics, Korea Institute of Science and Technology (KIST), [3]Department of Electrical and Computer Engineering, National University of Singapore)

[G11-ap] Organic and photonics

2021. 04. 23 Friday 11:10~12:58

Room: 11

좌장 : **서정화** 동아대학교

Chair : SEO Jung Hwa (Dong-A University)

G11.01 [11:10 - 11:22]

Parametrization of the Gaussian Disorder Model to Account for the High Carrier Mobility in Disordered Organic Transistors / JUNG Sungyeop[*1,2,3], LEE Yongjeong[4],

PLEWS Andrew[6], NEIJIM Ahmed[6], SIMONETTI Olivier[7], GIRAUDET Louis[7], BARANOVSKII Sergei D.[5,8], GEBHARD Florian[8], MEERHOLZ Klaus[5], JUNG Sungjune[2,3], HOROWITZ Gilles[4], BONNASSIEUX Yvan[4] ([1]Advanced Institute of Convergence Technology, [2]Future IT Innovation Laboratory, POSTECH, [3]Department of Convergence IT Engineering, POSTECH, [4]LPICM, CNRS UMR 7647, Ecole Polytechnique, [5]TCAD Division, Silvaco Europe Ltd., [6]LRN-EA 4682, Universite de Reims Champagne Ardenne, [7]Faculty of Physics and Material Sciences Center, Philipps-Universitat, [8]Department für Chemie, Universität zu Köln)

G11.02 [11:22 - 11:34]

Improvement on Performance of Perovskite Solar Cells Introducing Cu:PSS as a Hole Transport Material / KANG JuHwan[1], ALI Azmat[1,2], PARK YuJung[1], KHAWAJA Kausar Ali[1], SEO JungHwa*[1,2] ([1]physis, Dong-A University, [2]Graduate School of Chemical Engineering, Dong-A University)

G11.03* [11:34 - 11:46]

Time-dependent Evolution of Structural and Optical Properties of Mechanochemically Synthesized Zero Dimensional Cesium Lead Bromide Perovskite / BAEK Kyeong Yoon[1], LEE Woocheol[1], LEE Jeongjae[2], KIM Jaeyoung[1], LIM Hyungbin[1], LEE Jonghoon[1], AHN Heebeom[1], KIM Junwoo[1], KANG Keehoon[1], LEE Takhee*[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]School of Earth and Environmental Sciences, Seoul National University)

G11.04* [11:46 - 11:58]

Impact of sodium lignosulfonate interlayer in perovskite and organic solar cells / SHIN Woojin[1,2], KIM Wonsik[1,2], CHOI Seungsun[1,2], JUNG Sehyun[1], OH Hyesung[1], KO Moonseock[1], LEE Hyun Bok*[1,2] ([1]Department of Physics, Kangwon National University, [2]Institute for Accelerator Science, Kangwon National University)

G11.05* [11:58 - 12:10]

Layer-specific, in situ Analysis of OLED for Unraveling the Degradation Mechanism / 손정배[1], 강주연[1], 배소현[1], 민경석[2], 양기영[3], 한종석[3], 이창희[3], 김성근*[1,2] ([1]서울대학교 화학부, [2]서울대학교 생물물리 및 화학생물학과, [3]서울대학교 전기 • 정보공학부)

G11.06* [12:10 - 12:22]

Polarized-Raman scattering study of crystal structure in methylammonium lead halide chloride single crystals $CH_3NH_3PbCl_3$ / YOON Seokhyun*[1], KIM Yejin[1], PARK Joohee[1], JUNG Hyeri[1], JO William[1], BAE Soungmin[2], RAEBIGER Hannes[2], NGUYEN Trang Thi Thu[3] ([1]Department of Physics, Ewha Womans University, [2]Department of Physics, Yokohama National Univeristy, [3]Department of Physics, Danang University of Science and Technology)

G11.07* [12:22 - 12:34]

Analyze of optical property of Photonic Glass with high refractive index sphere particle / IM Eunji[1], LEE Seungwoo*[1,2,3,4] ([1]Department of Biomicrosystem Technology, Korea University, [2]KU-KIST Graduate School of Converging Science and Technology, Korea University, [3]Graduate School of Converging Sci & Tech & Dept. of Integrative Energy Engineering, Korea University, [4]KU Photonics Center, Korea University)

G11.08* [12:34 - 12:46]

Topological interface states between trivial and nontrivial two-dimensional Su-Schrieffer-Heeger circuits / KIM Yung[1], PARK Jagang[1], KYUNG Minwook[1], LEE Kyungmin[1], MIN Bumki*[1] ([1]KAIST)

G11.09 [12:46 - 12:58]

High quality factor toroidal metasurfaces for enhanced light-matter interactions / JEONG Jeeyoon*[1] ([1]Department of Physics, Kangwon National University)

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[G12-ap] Focus: Advanced Oxide Materials by Design-IV

2021. 04. 23 Friday 11:10~12:58

Room: 12

좌장 : 채승철 서울대학교

Chair : CHAE Seung Chul (Seoul National University)

G12.01 [11:10 - 11:46]

Two-dimensional electron gas and its applications to electronic devices using thin film oxide heterostructures grown by atomic layer deposition / LEE Sang Woon*[1] ([1]Ajou University)

G12.02 [11:46 - 12:22]

Low-temperature growth of epitaxial ferroelectric $BaTiO_3$ ultrathin film by molecular beam epitaxy / SHIN Yeongjae*[1] ([1]Applied Physics, Yale)

G12.03 [12:22 - 12:58]

Design of Transition Metal Oxides for Neuromorphic Synaptic and Neuronal Devices / 우지용*[1] ([1]경북대학교 전자공학부)

[G13] No session

[G14-te] Focus: High School Credit System and Physics Education

2021. 04. 23 Friday 11:10~12:46

Room: 14

좌장 : 유준희 서울대학교

Chair : YOO June Hee (Seoul National University)

G14.01 [11:10 - 11:34]

고교학점제 기반 교육과정 논의와 과학교육 / KWON Oh-Hyun*1 ([1]Department of German Language Education, Seoul National University)

G14.02 [11:34 - 11:58]

새로운 시대의 물리학 인재 양성을 위한 교육과정 변화의 필요성 / JHO Hunkoog*1 ([1]Graduate School of Education, Dankook University)

G14.03 [11:58 - 12:22]

고교학점제에 따른 물리교육의 현안과 과제 / HONG Oksu*1 ([1]Office of Science & Math Education Development, KOFAC)

G14.04 [12:22 - 12:46]

고등학교 현장에서의 고교학점제와 물리교육 / CHOI Kyungmi*1 ([1]Hyehwa Girls' High school)

[G15-pl] Nuclear Fusion, Basic Plasma, Plasma Application

2021. 04. 23 Friday 11:10~12:34

Room: 15

좌장 : 문세연 전북대

Chair : MOON Se Youn (Chonbuk National University)

G15.01* [11:10 - 11:22]

Quantitative measurement of plasma radiation power during disruption in KSTAR / BAE Sehyun[1], LEE Min Uk[1], THATIPAMULA Shekar Goud[1], KIM Jayhyun[2], YUN GUNSU*1 ([1]Department of Physics, POSTECH, [2]MHD Stability Research Team, Korea Institute of Fusion Energy)

G15.02* [11:22 - 11:34]

KSTAR Ohmic Start-Up Runaway/Supra-Thermal Electrons 2020 / LEE Yeongsun[1], NA Yong Su*1, VRIES Peter De[2] ([1]Nuclear Engineering, Seoul National University, [2]Science Division, ITER Organization)

G15.03* [11:34 - 11:46]

산소 추가에 따른 저온 대기압 플라즈마의 특성 변화 및 표면처리 연구 / BAE JINHEE[1], JOH HEAMIN*1, CHUNG TAEHUN[1] ([1]physics, Dong-A University)

G15.04* [11:46 - 11:58]
Afterpeak mechanism and parametric dependence in terms of energy release timescale / YUN GUNSU*[1,2], JEONG Seokyong[1], NAM Woojin[1] ([1]Department of Physics, POSTECH, [2]Division of Advanced Nuclear Engineering, POSTECH)

G15.05 [11:58 - 12:10]
Aggregation growth and morphology of icy dust grains formed in astrophysically-relevant laboratory experiment / CHAI Kil-Byoung*[1] ([1]Nuclear Physic Engineering Research Division, KAERI)

G15.06* [12:10 - 12:22]
Mode transitions (γ-α) and hysteresis in microwave-driven low-temperature plasmas / KIM KyungTae[1], NAM WOOJIN[2], YUN GUNSU*[1,2] ([1]Division of Advanced Nuclear Engineering, POSTECH, [2]Department of Physics, POSTECH)

G15.07* [12:22 - 12:34]
Observation of metal-atom transport at the plasma-liquid interface / NAM WOO-JIN[1], YUN GUNSU*[1,2] ([1]Department of Physics, POSTECH, [2]Division of Advanced Nuclear Engineering, POSTECH)

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[G16-op] Quantum Optics
2021. 04. 23 Friday 11:10~12:22
Room: 16
좌장 : 신희득 포항공과대학교
Chair : SHIN Heedeuk (POSTECH)

G16.01 [11:10 - 11:34]
Photonic variational quantum eigensolver for quantum computational chemistry applications / REHMAN Junaid Ur[1,3], LEE Donghwa[1,2], LEE Jinil[1,2], CHO Young-Wook[1], LIM Hyang-Tag[1,2], KIM Yong-Su*[1,2] ([1]Center for Quantum Information, KIST, [2]Division of Nano & IT Technology, UST, [3]Department of Electronics and Convergence Engineering, Kyung Hee University)

G16.02 [11:34 - 11:46]
Anti-PT symmetry in effective band structure of photonic Floquet media / PARK Jagang[1], CHO Hyukjoon[1], LEE Seojoo[1], LEE Kyungmin[1], LEE Kanghee[1], MIN Bumki*[1] ([1]KAIST)

G16.03 [11:46 - 11:58]
Shannon entropy around an exceptional point in an open microcavity / AN Kyungwon*[1], PARK Kyu-Won[1], KIM Jinuk[1], MOON Songky[1] ([1]Department of Physics and Astronomy, Seoul National University)

G16.04* [11:58 - 12:10]
칩 스케일 세슘 증기 셀에서 광자-쌍 생성 / KIM HeeWoo[1], PARK JiHo[1], HONG Hyun Gue[2], KWON Taeg Yong[2], MOON Han Seb[*1] ([1]Pusan National University, [2]Time and Frequency Group, KRISS)

G16.05 [12:10 - 12:22]
A broadband solid-immersion-lens planar-microcavity quantum-dot single-photon emitter / AHN Daehyun[2], JANG Yudong[3], BAEK Jongseo[2], SCHNEIDER Christian[4], HÖFLING Sven[5], LEE Donghan[*1,2,3] ([1]Chungnam National University, [2]Department of Physics, Chungnam National University, [3]Institute of Quantum Systems, Chungnam National University, [4]Institute of Physics, University of Oldenburg, [5]Technische Physik, Universität Würzburg)

[G17] No session

[G18-se] Focus: Application of Emerging Semiconductor Materials
2021. 04. 23 Friday 11:10~12:46
Room: 18
좌장 : 차승남 성균관대학교
Chair : CHA SeungNam (Sungkyunkwan University)

G18.01 [11:10 - 11:34]
III-V족 화합물반도체 기반 센서 기술 / 박경호[*1] ([1]한국나노기술원 소자기술개발본부)

G18.02 [11:34 - 11:58]
Light Emitting Materials for Post-OLED Technology / CHANG Kiseok[*1] ([1]LG Display, LG Science Park)

G18.03 [11:58 - 12:22]
Understanding the optoelectronic properties of metal halide perovskite single crystals / LIM Jongchul[*1], LEE Won Jong[1] ([1]Graduate School of Energy Science and Technology (GEST), Chungnam National University)

G18.04 [12:22 - 12:46]
Characteristics and Applications of Graphene by Nitrogen Atoms Doped with Various Structures / KIM Keun Soo[*1] ([1]Department of Physics & Graphene Research Institute, Sejong University)

[G19-se] Energy materials and devices

2021. 04. 23 Friday 11:10~12:34

Room: 19

좌장 : **박혜성** 울산과학기술원

Chair : PARK Hyesung (UNIST)

G19.01* [11:10 - 11:22]

Unbiased and Enhanced Photoelectrochemical water splitting performance of Au-NPs decorated gallium nitride Nanowires photoanode / ABDULLAH Ameer[1], WASEEM Aadil[1], RYU Sang Wan*[1] ([1]Department of Physics, Chonnam National University)

G19.02* [11:22 - 11:34]

Spin orbit coupling induced high thermoelectric performance in two dimensional chalcogenides systems: GaSe and GaTe / MARFOUA Brahim[1], HONG Ji Sang*[1] ([1]Department of Physics, Pukyong National University)

G19.03* [11:34 - 11:46]

GaN/Al_2O_3 Core-shell Nanowire based Flexible and Stable Piezoelectric Energy Harvester / WASEEM Aadil[1], RYU Sang Wan*[1] ([1]Department of Physics, Chonnam National University)

G19.04* [11:46 - 11:58]

슈퍼커패시터 응용을 위해 전기화학적 성능 개선된 구리망간산화물 나노입자 연구 / KRISHNA B. N. Vamsi[2], YU Jae Su*[1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department of Electronics and Information Convergence Engineering, Kyung Hee University)

G19.05* [11:58 - 12:10]

GaP photoanodes coated with nickel oxyhydroxide cocatalyst for stable photoelectrochemical water splitting reactions / BAGAL Indrajit V.[1], ARUNACHALAM Maheswari[2], KANG Soon Hyung[2], RYU Sang Wan*[1] ([1]Department of Physics, Chonnam National University, [2]Department of Chemistry Education, Chonnam National University)

G19.06* [12:10 - 12:22]

고성능 슈퍼커패시터용 배터리형 전극 소재로 금속 인산염기반 복합물질 합성 / BHIMANABOINA Ramulu[2], S. Chandra Sekhar[1], S. Junide Arbaz[1], YU Jae Su*[1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department of Electronics and Information Convergence Engineering, Kyung Hee University)

G19.07* [12:22 - 12:34]

Phase boundary engineering for active hydrogen evolution reaction at large-scale $MoTe_2$ / YANG Heejun*[1], LEE Yongjoon[2], LING Ning[2], KIM Dohyun[2], ZHAO Mali[2], ESHETE Yonas Assefa[2], KIM Eunah[2], CHO Suyeon[3] ([1]Department of Physics, KAIST, [2]Department of Energy Science, Sungkyunkwan University, [3]Department of Chemical Engineering & Material science, Ewha Womans University)

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[G20] No session

[G21-or] 오창 다목적 방사광가속기 특별세션

2021. 04. 23 Friday 11:10~12:20

Room: 21

좌장 : 송창용 포항공과대학교

Chair : SONG Changyong (POSTECH)

[프로그램]

- 11:10–11:15 인사말 (한국물리학회장, 정책위원장)
- 11:15–11:40 오창 방사광 가속기 사업(안) 경과 보고 (과학기술정보통신부)
- 11:40–12:40 패널 의견 제시 (패널 5인)
- 12:05–12:20 질의 및 응답

2021 April 23(Fri) 14:00-14:50

[GG21-or] Women in Physics(여성위원회 특별 패널 토의)

2021. 04. 23 Friday 14:00~15:30

Room: 21

좌장 : 이현정 한국핵융합에너지연구원

Chair : LEE Hyun Jung (KFE)

[프로그램]

- 14:00–14:05 인사말 (한국물리학회회장, 여성위원회 위원장)
- 14:05–14:45 패널 소개 및 주제 발언 (패널 8인)
- 14:45–15:10 설문결과 공유 및 설문에 대한 패널 의견 제시
- 15:10–15:30 질의 및 응답

Session H

2021 April 23(Fri) 15:00-16:48

[H1-pa] Accelerator-based particle physics experiments V

2021. 04. 23 Friday 15:00~16:36

Room: 01

좌장 : 유휘동 연세대학교

Chair : YOO Hwidong (Yonsei University)

H1.01* [15:00 - 15:12]

Search for Long-Lived Particle Using Delayed Photons with CMS / MOON Chang-Seong*[1], SEO YeongDeok[1], PEñA Cristián Herrera[3], NGUYEN Thong[2], XIE Si[2] ([1]Department of Physics, Kyungpook National University, [2]Department of Physics, Caltech, [3]Particle Physics Division, Fermi National Accelerator Laboratory)

H1.02* [15:12 - 15:24]

Search for new physics in dilepton events using asymmetry / YANG Un-ki*[1], SEO HyonSan[1], LEE Sang Eun[1], JEON Si Hyun[1], JUN Won[1] ([1]Department of Physics and Astronomy, Seoul National University)

H1.03* [15:24 - 15:36]

Search for heavy neutrinos in di-lepton events at 13 TeV using the CMS detector / YANG Un-ki*[1], LEE Haneol[1] ([1]Department of Physics and astronomy, Seoul National University)

H1.04* [15:36 - 15:48]

Search for pair production of heavy Majorana neutrinos using Full Run2 proton-proton collision data of the LHC at 13 TeV collected by the CMS detector / YANG Un-ki*[1], OH SungBin[1] ([1]Department of Physics and Astronomy, Seoul National University)

H1.05* [15:48 - 16:00]

Search for high mass spin-0 resonances in semileptonic WW to $\ell\nu qq$ final state at $\sqrt{s}$ = 13TeV in CMS experiment / CHOI Junho[1], LEE Sangeun[1], YANG Un-ki*[1] ([1]Department of Physics and Astronomy, Seoul National University)

H1.06* [16:00 - 16:12]

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], JUN Won[1], LEE Sangeun[1], KIM Jihun[1], SEO Hyonsan[1], LEE Haneol[1] ([1]Department of Physics and Astronomy, Seoul National University)

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H1.07* [16:12 - 16:24]

Search for new physics using non-isolated leptons at the LHC / LEE Joon-Bin[1], YANG Un-ki*[1] ([1]Department of Physics and Astronomy, Seoul National University)

H1.08* [16:24 - 16:36]

Search for Z' bosons decaying into tau pairs in bottom fermion fusion process / PARK Inkyu*[1], LEE Jason Sang Hun[1], ROH Youn Jung[1], WATSON Ian James[1], KANG Day-oung[1] ([1]University of Seoul)

[H2-pa] Particle physics theory II

2021. 04. 23 Friday 15:00~16:24

Room: 02

좌장 : 김정한 충북대학교

Chair : KIM Jeong Han (Chungbuk National University)

H2.01 [15:00 - 15:12]

The Clockwork Standard Model / LEE Hyun Min*[1], KANG Yoo-Jin[1] ([1]Department of Physics, Chung-Ang University)

H2.02* [15:12 - 15:24]

Selection rules for the decay of a particle into two identical massless particles of any spin / JEONG Jae Hoon*[1], CHOI SeongYoul[1] ([1]Department of Physics, Chonbuk National University)

H2.03* [15:24 - 15:36]

Higgs to dimuon discovery using quark/gluon tagging of ISR / CHO Won Sang[1], HAN Subin[1], KIM Hyung-do*[1], LEE Dongsub[1] ([1]Department of Physics and Astronomy, Seoul National University)

H2.04 [15:36 - 15:48]

A study of in-medium property of quarkonium using NRQCD on a anisotropic quenched lattices / KIM Se Yong*[1] ([1]Department of Physics, Sejong University)

H2.05* [15:48 - 16:00]

Decay Constant Analysis of $B_{(s)}$ and $D_{(s)}$ meson using the Oktay-Kronfeld Action / LEE Weonjong*[1], JANG Yong-Chull[2], PARK Sungwoo[3], CHOI Benjamin Jaedon[1], LEE Sunkyu[1], JWA Seungyeob[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Physics, Columbia University, [3]Center for Nonlinear Studies/T-2, Los Alamos National Laboratory)

H2.06 [16:00 - 16:12]

Machine learning study on the Dirac eigenvalue spectrum of staggered quarks / LEE Sunkyu[1], JEONG Hwancheol[2], JUNG Chulwoo[3], JWA Seungyeob[1], KIM Jangho[4], KIM Jeehun[1], KIM Nam Soo[5], KIM Sunghee[1], LEE Weonjong[*1], LEE Youngjo[6], PAK Jeonghwan[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Physics, Indiana University Bloomington, [3]Department of Physics, Brookhaven National Laboratory, [4]Institut fur Theoretische Physik, Goethe University, [5]Department of Electrical and Computer Engineering and the Institute of New Media and Communications, Seoul National University, [6]Department of Statistics, Seoul National University)

H2.07 [16:12 - 16:24]

Data analysis of staggered meson spectrum in lattice QCD / PAK JEONGHWAN[1], LEE Weonjong[*1] ([1]Department of Physics and Astronomy, Seoul National University)

[H3-nu] Nuclear Experiment

2021. 04. 23 Friday 15:00~16:48

Room: 03

좌장 : 문동호 전남대학교

Chair : MOON Dong Ho (Chonnam National University)

H

H3.01* [15:00 - 15:12]

Research and Development of LAMPS starting counter / KWEON Min Jung[*1], LEE Hyungjun[1] ([1]Inha University)

H3.02* [15:12 - 15:24]

Status Report of the Prototype Beam Drift Chamber (BDC) for the LAMPS Experiment at RAON / SEO Junhu[*1], MOON Dongho[1], KIM Hyunchul[1], HWANG Jaein[2], LEE Jongwon[2], HWANG Sanghoon[3] ([1]Department of Physics, Chonnam National University, [2]Department of Physics, Korea University, [3]KRISS)

H3.03 [15:24 - 15:36]

High-precision mass measurement of exotic neutron-rich nuclei / KORKULU Zeren[*1] ([1]Center for Exotic Nuclear Studies (CENS), IBS (IBS))

H3.04 [15:36 - 15:48]

Exploration of next generation heavy ion collision experiment at LHC / JUNGEOL Kim[*1,2], YOUNGIL Kwon[1] ([1]DuDu IT., [2]Department of Physics, Yonsei University)

H3.05 [15:48 - 16:00]

Production test of ALPIDE chips at Yonsei University / KIM Taejun[*1,2] ([1]ALICE Collaboration, ALICE Collaboration, [2]Yonsei University)

H3.06 [16:00 - 16:12]
Alignment and Correction for Deformation of a Precision Tracker by Artificial Intelligence / KIM Jaehyun*[1], JEONG Jae Young[2], KIM Yong Kyun[2], KWON Youngil[1] ([1]Physics, Yonsei University, [2]Department of Nuclear Engineering, Hanyang University)

H3.07 [16:12 - 16:24]
ALICE FoCal용 PIN 실리콘 센서 디자인 / KIM DONG GEON[2], KIM YOONSEOK[1], KWON YOUNGIL[1], HAN YOUNGHOON*[1] ([1]Department of Physics, Yonsei University, [2]Department of nuclear physics, Hanyang university)

H3.08 [16:24 - 16:36]
ALICE실험 FoCal 검출기에 사용할 PIN구조를 갖는 실리콘 센서 공정 / KIM Yoonseok*[1], KIM Donggeon[2], JEONG Jaeyoung[2], HAN Younghoon[1], KIM Yongkyun[2], KWON Youngil[1] ([1]Department of Physics, Yonsei University, [2]Nuclear Engineering, Hanyang University)

H3.09 [16:36 - 16:48]
Design of a RPC Detection System for Monitoring Nuclear ReactorsDesign of a RPC Detection System for Monitoring Nuclear Reactors / LEE Kyong Sei*[1], KANG Minho[1], JO Youngmin[1] ([1]Korea University)

[H4-H13] No session

[H14-te] Focus: Physics Education in the Age of Population Cliffs
2021. 04. 23 Friday 15:00~16:36
Room: 14
좌장 : 조광희 조선대학교
Chair : JO Kwang Hee (Chosun University)

H14.01 [15:00 - 15:24]
학령 인구 감소에 따른 물리 교사 양성 과정의 변화 / JO Kwang Hee*[1] ([1]Chosun University)

H14.02 [15:24 - 15:48]
인구절벽으로 인한 미래형 학교 모델의 도입에 따른 물리교사 역량의 변화 / JI Young rae*[1] ([1]Department of Physics education, Sunchon National University)

H14.03 [15:48 - 16:12]
누구를 위한 물리교육인가: 지역기반 물리교육의 필요성 / KIM Heekyong*[1] ([1]Division of Science Education, Kangwon National University)

H14.04 [16:12 - 16:36]
물리교육의 위기에 대한 역사적 교훈: 20년 전의 정책 연구를 중심으로 / IM Sung Min*1 ([1]Department of Physics Education, Daegu University)

[H15-H16] No session

[H17-at] Focus: Quantum Simulation I
2021. 04. 23 Friday 15:00~17:00
Room: 17
좌장 : 이재훈 한국표준과학연구원
Chair : LEE Jae Hoon (KRISS)

H17.01 [15:00 - 15:36]
Benchmarking near-term quantum devices based on quantum chaos / CHOI Joonhee[1], SHAW Adam L.[1], MADJAROV Ivaylo S.[1], XIE Xin[1], CONVEY Jacob P.[1], COTLER Jordan[2], MARK Daniel K.[3], HUANG Hsin-Yuan[1], KALE Anant[2], PICHLER Hannes[4], BRANDAO Fernando[1], CHOI Soonwon*5, ENDRES Manuel*1 ([1]Caltech, [2]Harvard, [3]MIT, [4]University of Innsbruck, [5]UC Berkeley)

H17.02 [15:36 - 16:12]
Quantum simulation of nonidentical SU(N) fermions interacting identically / JO Gyu Boong*1 ([1]Department of Physics, HKUST)

H17.03 [16:12 - 16:36]
Quantum many-body physics studied with QAOA / MOON Eun-Gook*1 ([1]Department of Physics, KAIST)

H17.04 [16:36 - 17:00]
Quantum Simulation using ultracold atoms at KRISS / MUN Jongchul*1 ([1]Quantum Technology Institute, KRISS)

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[H18-se] Quantum electronics, photonics, and quantum information

2021. 04. 23 Friday 15:00~16:24

Room: 18

좌장 : 김제형 울산과학기술원

Chair : KIM Je Hyung (UNIST)

H18.01* [15:00 - 15:12]

InP계 리지 도파로 구조에서 활성층-수동층 버트 조인트의 광결합 효율 최적화 연구 / 송연수[1], 명기환[2], 김인[2], 유준상[2], RYU Sang Wan*[1] ([1]Department of Physics, Chonnam National University, [2]연구개발부, (주)오이솔루션)

H18.02 [15:12 - 15:24]

Relaxation process of exciton-polariton vortex in non-resonant Laguerre-Gaussian pumping / CHOI Daegwang[1], PARK Min[1], OH Byoung Yong[1], KWON Min-Sik[1], PARK Suk In[2], KANG Sooseok[2], SONG Jin Dong[2], CHOI Hyoung Soon[1], CHO Yong Hoon*[1] ([1]KAIST, [2]Center for Opto-Electronic Convergence Systems, KIST)

H18.03* [15:24 - 15:36]

Improvement of optical properties of III-nitride quantum dot based single photon source using quasi-resonant excitation / JUN Seongmoon[1], CHOI Minho[1], CHO Yong Hoon*[1] ([1]KAIST)

H18.04* [15:36 - 15:48]

Tunable Rabi Splitting of Exciton-Polaritons in Phase-changing Lead Halide Perovskites / CHO Chang-Hee*[1], LEE Taejin[1], KO Minjee[1], JUNG Jin-Woo[1], LEE Young-Jun[1], HEO Jin-Hee[2] ([1]Department of Emerging Materials Science, DGIST, [2]Materials Analysis and Evaluation Department, Korea Institute of Materials Science)

H18.05* [15:48 - 16:00]

나노 양자링 구조의 미세 에너지 구조의 자기의존성 및 비선형성 연구 / KYHM Kwangseuk*[1], YANG Hanyi[1] ([1]Optomechatronics, Pusan National University)

H18.06* [16:00 - 16:12]

Engineering the spatial and temporal modes of singled photons from solid-state quantum emitters / KIM Kyu Young[1], KIM Je Hyung*[1] ([1]Department of Physics, UNIST)

H18.07* [16:12 - 16:24]

Bright and fast single photon source from defect in point defect-stacking fault complex in silicon carbide nanowires / KIM Je Hyung*[1], LEE Jin Hee[1] ([1]Department of Physics, UNIST)

[H19-se] Focus: Physics and applications of 2D-materials moire patterns

2021. 04. 23 Friday 15:00~17:24

Room: 19

좌장 : **최석호** 경희대학교

Chair : CHOI Suk-Ho (Kyung Hee University)

H19.01 [15:00 - 15:24]

Quasiparticle interference in twisted bilayer graphene / HWANG Euy Heon*1, LI Jinshu[1] ([1]Sungkyunkwan University)

H19.02 [15:24 - 15:48]

무아레 초격자의 전자구조 / MOON Pilkyung*1 ([1]Arts and Sciences, New York University Shanghai)

H19.03 [15:48 - 16:12]

Infrared absorption of gate-tuned twisted bilayer graphene / CHOI E. J.*1, YU Kwangnam[1], LUAN Nguyen Van[2], KIM Taesoo[2], JEON Jiwon[2], KIM Jiho[1], MOON Pilkyung[1], LEE Young Hee[2] ([1]University of Seoul, [2]Center for Integrated Nanostructure Physics, IBS (IBS), Sungkyunkwan University, [3]NYU-ECNU Institute of Physics at NYU Shanghai, New York University Shanghai, [4]Department of Physics, New York University, [5]State key Laboratory of Precision Spectroscopy, East China Normal University)

H19.04 [16:12 - 16:36]

Doping and electric-field dependences of electronic structures in twisted graphene layers / CHOI Hyoung Joon*1 ([1]Department of Physics, Yonsei University)

H19.05 [16:36 - 17:00]

Recent transport experiments in twisted bilayer-bilayer graphene / JEONG Hyeon-Woo[1], JEONG Gyouil[2], KIM Jiho[3], KIM Zee Hwan[2], LEE Gil-Ho*1 ([1]Department of Physics, POSTECH, [2]Pohang Accelerator Laboratory, Pohang Accelerator Laboratory, [3]Department of Chemistry, Seoul National University)

H19.06 [17:00 - 17:24]

Odd integer quantum Hall states with interlayer coherence in twisted bilayer graphene / KIM Youngwook*1 ([1]Department of Emerging Materials Science, DGIST)

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Session I

2021 April 23(Fri) 17:10-18:58

[I3-nu] Nuclear Astrophysics and Engineering, Hadron Physics

2021. 04. 23 Friday 17:10~18:58

Room: 03

좌장 : 현창호 대구대학교

Chair : HYUN Chang Ho (Daegu University)

I3.01* [17:10 - 17:22]

Dynamical screening effects on nuclear astrophysics / HWANG EUNSEOK[1], CHEOUN Myung Ki[*1], PARK KIWAN[*1], JANG DUKJAE[2] ([1]Department of Physics, Soongsil University, [2]Center for Relativistic Laser Science, IBS)

I3.02* [17:22 - 17:34]

INVESTIGATION OF MULTI-REFLECTION TIME-OF-FLIGHT MASS ANALYZER OPERATING / NGUYEN Uyen Kim[*1], CHAE KyungYuk[1], NGUYEN NgocDuy[1], JUN Young-Moon[2] ([1]Department of Physics, Sungkyunkwan University, [2]Daejeon, IBS)

I3.03 [17:34 - 17:46]

Variations in predicted β^--decay half-lives and isotopic abundance in the r-process / NGUYEN Duy Ngoc[*1], CHAE KyungYuk[1], NGUYEN KimUyen[1] ([1]Department of Physics, Sungkyunkwan University)

I3.04 [17:46 - 17:58]

Generation of the primordial magnetic field due to neutrino interaction / PARK Ki-wan[*1], CHEOUN Myung-Ki[1] ([1]Department of Physics, Soongsil University)

I3.05 [17:58 - 18:10]

Comparison and analysis between ASTRA and C2 transport codes coupled with MMM anomalous transport model in various KSTAR shots / PARK Kyoung-Chan[*1] ([1]Energy Systems Engineering, Seoul National University)

I3.06 [18:10 - 18:22]

Collective neutrino oscillation including the sterile neutrino in the core-collapse supernovae neutrino process / KO Heamin[1], JANG Dukjae[2], CHEOUN Myung Ki[*1] ([1]Department of Physics, Soongsil University, [2]Center for Relativistic Laser Science, IBS)

I3.07 [18:22 - 18:34]
Production of a hidden-strangeness pentaquark-molecular bound state / NAM Seung-il*[1] ([1]Department of Physics, Pukyong National University)

I3.08 [18:34 - 18:46]
Near-threshold photoproduction of J/ψ mesons off the proton / KIM Sangho*[1], NAM Seung-il[1] ([1]Department of Physics, Pukyong National University)

I3.09 [18:46 - 18:58]
Quark matter in a rotating frame via instanton vacuum / NAM Seung-il*[1] ([1]Department of Physics, Pukyong National University)

[I17-at] Focus: Quantum Simulation II
2021. 04. 23 Friday 17:10~17:58
Room: 17
좌장 : 이재훈 한국표준과학연구원
Chair : LEE Jae Hoon (KRISS)

I17.01 [17:10 - 17:34]
Topological Floquet engineering of a 1D optical lattice via resonantly shaking with two harmonic frequencies / SHIN Yong-il*[2,1], KANG Jin Hyoun[2,1] ([1]Center for Correlated Electron Systems, IBS, [2]Department of Physics and Astonomy, Seoul National University)

I17.02 [17:34 - 17:58]
Quantum annealing with Rydberg atoms / AHN Jaewook*[1] ([1]Department of Physics, KAIST)

Session W

2021 April 23(Fri) 20:00-22:00

[W21-or] Science Communication Special Session
(대중화위원회 온라인 특별 공연: 나 혼자 푼다-물리편)

2021. 04. 23 Friday 20:00~22:00

장소: 유튜브 채널 "사피엔스 스튜디오", "카오스 재단", "과학과 사람들"에서 동시 방송

진행: 한국물리학회 물리대중화특별위원회

[프로그램]

- 20:00–20:15 오프닝 영상 상영과 출연자 소개
- 20:15–21:45 퀴즈 프로그램 진행과 심사
- 21:45–22:00 시상및 클로징

포스터발표논문 시간표

Poster session schedule

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual poster room

P1-ap.101*

Ultrasensitive MoS_2 Avalanche Phototransistors / SEO Junseok[1], PAK Jinsu[1], KIM Jae-Keun[1], LEE Jin Hee[2], CHO Kyungjune[3], KIM Jaeyoung[1], JANG Juntae[1], LIM Seong Chu[2], CHUNG Seungjun[4], KANG Keehoon[5], LEE Takhee[*1] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Energy Science, Sungkyunkwan University, [3]-, Max-Planck Institute of Microstructure Physics, [4]Soft Hybrid Materials Research Center, KIST, [5]Department of Materials Science and Engineering, Yonsei University)

P1-ap.102*

Interlayer modes in 2H-$MoTe_2$/hBN heterostructure / NGUYEN Manh Hong[1], LIM Soo Yeon[1], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University)

P1-ap.103*

Study of multi-bit floating gate memory characteristics / GWON Oh Hun[1], KIM Jong Yun[1], KANG Seok-Ju[1], YU Young-Jun[*1] ([1]Department of Physics, Chungnam National University)

P1-ap.104*

Electrically Controllable Neuromodulation Emulated by 2D Weight-Tunable Memristor for Neuromorphic Electronics / 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[4], WANG Gunuk[1,5], LEE Chul-Ho[*1,5] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Physics, Korea University, [3]School of Materials Science and Engineering, UNIST, [4]UNIST Central Research Facilities, UNIST, [5]Department of Integrative Energy Engineering, Korea University)

P1-ap.105

Chemical Vapor Deposition of Graphene on Metal-Coated Carbon Micro Fiber Filament / KIM Minjae[1], KO Yong-il[1], LEE Gilyong[1], LEE Bumjin[1], KIM Keun Soo[*1] ([1]Department of Physics and Astronomy, Sejong University)

P1-ap.106*

Van der Waals metal-semiconductor field-effect transistor with the Fermi-level pinning-free Schottky gate approaching the intrinsic Boltzmann switching limit / KIM Yeon Ho[1], LEE Donghun[1], KIM Jong Chan[2], HUH Woong[1], KIM Tae Soo[3], SO Jae-Pil[4], PARK Hong-Gyu[1,4], KANG Kibum[3], JEONG Hu Young[2], LEE Chul-Ho[*1,5] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]UNIST Central Research

Facilities (UCRF) and Department of Materials Science and Engineering, UNIST, [3]Department of Materials Science and Engineering, KAIST, [4]Department of Physics, Korea University, [5]Department of Integrative Energy Engineering, Korea University)

P1-ap.107

Ferroelectric behavior of In_2Se_3 Nanomaterials for 2D Synaptic Devices / KANG Seok-Ju[1,2], KIM Jong Yun[1,2], GWON Oh Hun[1], YU Young-Jun[*1] ([1]Department of Physics, Chungnam National University, [2]Institute of Quantum Systems (IQS), Chungnam National University)

P1-ap.108

Chirality of Fingerprint / LEE Jaebeom[*1], HWANG Siyeong[2] ([1]Chemistry, Chungnam National University, [2]Chemical Engineering and Applied Chemistry, Chungnam National University)

P1-ap.109

Ab initio study of electronic properties of defects in monolayer GeS / CHOI Hyeongkyu[1], CHA Janghwan[1], HONG SukLyun[*1] ([1]Sejong University)

P1-ap.110*

Enhanced Raman mode in WS_2/ReS_2 heterostructure / NA Woongki[1], KWON Yongjae[1], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University)

P1-ap.111

In-situ microscopy studies of electromechanical response of ZnO microwires / TRAN Thi Hue[1], JE Yugyeong[1], JEONG Hyunjeong[1], LEE Sang-Wook[*1] ([1]Department of Physics, Ewha Womans University)

P1-ap.112*

Electronic properties of Y_2C/graphene/Y_2C van der Waals heterostructures / CHOI Chang-Gyu[1], KIM Junghwan[1], CHA Janghwan[1], HONG SukLyun[*1] ([1]Sejong University)

P1-ap.113*

Interlayer Vibration Modes of Bilayer-Monolayer MoS_2/WSe_2 Heterostructure / OH Siwon[1], CHEONG Hyeonsik[*1], KIM Jungcheol[1] ([1]Department of Physics, Sogang University)

P1-ap.114

Artificial ultrasensitive synapses based on 2D material $CrPS_4$ / PARK Bae Ho[*1], LEE Mi Jung[1], YOON Chansoo[1], AHN Jae-Pyoung[2], KIM Sung-Hoon[2] ([1]Department of Physics, Konkuk University, [2]Advanced Analysis Center, KIST)

P1-ap.115*

Surface Charge Transfer Doping of MoS_2 by AlO_x Overlayer / PARK Beomjin[1,2], GU Minseon[1], HAN Moonsup[*1] ([1]Department of Physics, University of Seoul, [2]Department of Smart Cities, University of Seoul)

P1-ap.116*

Fabrication and characterization of p-WSe_2/n-WS_2 heterojunction diode on SiO_2 and h-BN substrates / SHARMA Pradeep Raj[1], GAUTAM Praveen[1], AFZAL Amir Muhammad[2], PARK Byoungchoo[2], NOH Hwayong[*1] ([1]Sejong University, [2]Department of Electrical and Biological Physics, Kwangwoon University)

P1-ap.118

WS_2 Photo-Luminance Polarization Control using Microcavity Coupling / LEE Sanghoon[1], PARK Q-Han[*1] ([1]Korea University)

P1-ap.119*

Electrical and Photo-responsive Characteristics of FPS-K coated WS_2- and $MoSe_2$-Based Field-Effect Transistors with treatment of conjugated polymers / JOO Jinsoo[*1], KWON Dayeong[1] ([1]Depsrtment of Physics, Korea University)

P1-ap.120*

Optical axis and domain structure in sub-domain ReS_2 samples / PARK Je Myoung[1], NA Woongki[1], CHOI Yun[1], LEE Sol[2], KIM Kwanpyo[2], CHEONG Hyeonsik[*1] ([1]Department of Physics, Sogang University, [2]Department of Physics, Yonsei University)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-ap.201*
Ionic and electronic transport in lead halide perovskites by optimizing contact area and thickness of SnO_2 charge transport layers / YOUN Sarah Su-O[1,2], GO Un[2], JO William*[1], KIM Gee Yeong[2] ([1]Department of Physics, Ewha Womans University, [2]Advanced Photovoltaics Research Center, KIST)

P1-ap.202
Electronic structure of tantalum oxide depending on oxygen vacancies / CHANG Seo Hyoung*[1], HEO Jin Eun[1], HONG Seungbum[2], LEE Myoung-Jae[3], CHATTOPADHYAY Soma[4], SHIBATA Tomohiro[5], MAGYARI-KOPE Blanka[6], KADUK James A.[7], KIM Young-Bae[8], KIM Jungho[9] ([1]Department of Physics, Chung-ang University, [2]Department of Materials science and Engineering, KAIST, [3]Department of Nanotechnology, DGIST, [4]Department of Engineering and Astronomy, Elgin Community College, [5]Materials Science, Kennametal Inc., [6]Department of Electric Engineering, Stanford University, [7]Department of Chemistry, Illinois Institute of Technology, [8]Semiconductor Device Laboratory, Samsung Advanced Institute of Technology, [9]Advanced Photon Source, Argonne National Laboratory)

P1-ap.203*
Deterministic and stable single-photon emission in phase-patterned in-plane WSe_2/WO_x quantum wells / KIM Yoon Seok[1], SO Jae-Pil[2], YANG Seunghoon[1], PARK Hong-Gyu[1,2], LEE Chul-Ho*[1,3] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Physics, Korea University, [3]Department of Integrative Energy Engineering, Korea University)

P1-ap.204
Laser Scribed Carbon Nanomaterials for Gas Sensor based on Polyacrylonitrile-Copper composite / KO Yong-il[1], KIM Min Jae[1], JANG A-Rang[2], KIM Keun Soo*[1] ([1]Department of Physics and Astronomy, Sejong University, [2]Department of Electrical Engineering, Semyung University)

P1-ap.205*
Fluorocarbon과 접촉하는 그래핀의 홀도핑 전하수송 특성 / YI Yoonhyuck[1], YUN Yoojoo[1], LEE Sangjin[2], JEON Jinho[1], KIM Byeongwan[1], LEE Hyunkyung[1], OH Jinseok[1], KANG Haeyong*[1] ([1]Department of Physics, Pusan National University, [2]화학소재솔루션센터, KRICT)

P1-ap.206

X-ray 분광법에 의한 마그네슘 합금 표면에 대한 화학반응 / LEE Youn Seoung*[1], RHA Sa Kyun[2] ([1]Hanbat National University, [2]신소재공학과, Hanbat National University)

P1-ap.207*

Bragg Coherent X-ray imaging of chiral photonics nanocrystal / CHOI Sungwook[1], IM Sang won[2], KIM Sungwon[1], KIM Jaeseung[1], SPRUNG M.[3], LEE Su Yong[4], CHA Wonsuk[5], NAM Ki Tae[2,5], KIM Hyunjung*[1] ([1]Physics, Sogang University, [2]Department of Materials Science and Engineering, Seoul National University, [3]P10 beamline, Deutsches Elektronen-Synchrotron, [4]9C beamline, Pohang Accelerator Laboratory, [5]34ID-C beamline, Advanced Photon Source, Argonne National Laboratory)

P1-ap.208*

Energy and charge transfer between MoS_2 monolayers and luminescent organic molecules / KWON Soyeong[1], SONG Jungeun[1], NGUYEN Anh Thi[1], LEE Jinjoo[1], JEONG Dong Yeun[2], CHOI Soo Ho[3], WON Yo Seb[3], KIM Ki Kang[3], CHAE Weon-Sik[4], YOO Youngmin[2], CHOI Taeyoung[1], KIM Dong-Wook*[1] ([1]Department of Physics, Ewha Womans University, [2]Division of Chemical Engineering and Materials Science, Ewha Womans University, [3]3Center for Integrated Nanostructure Physics (CINAP), Institute of Basic Science (IBS), Sungkyunkwan University, [4]Analysis Research Division, Daegu Center, Korea Basic Science Institute (KBSI))

P1-ap.209*

Interface study on lead halide perovskite and hole transport layer / GO Un*[1], KIM Gee Yeong[2] ([1]Advanced Photovoltaics Research Center, KIST, [2]Advanced Photovoltaics Research Center, KIST)

P1-ap.210*

Study on friction force of 2D materaials with Lateral Force Microscopy / KIM Min Jeong[1], CHOI Inchul[1], JEONG Nae bong[1], LEE Jun-ho[1], CHUNG Hyun-Jong*[1] ([1]Department of Physics, Konkuk University)

P1-ap.211

Synthesis of gold nanoparticles by citrate reduction and their optical sensing properties / YEWALE Manesh A.[1], NGUYEN Linh Nhat[1], PANERU Ramhari[1], LAMICHHANE Pradeep[1], CHOI Eun Ha[1], LEE GeonJoon*[1] ([1]Kwangwoon University)

P1-ap.212*

Study on spatially resolved transconductance of the graphene-WS_2 junction using scanning gate microscopy. / CHOI Inchul[1], LEE Jun-ho[1], JEONG Nae bong[1], KIM Min Jeong[1], CHUNG Hyun-Jong*[1] ([1]Department of Physics, Konkuk University)

P1-ap.213

Heterojunction structure of p-CuO/n-TiO_2 for high performance gas sensor / LEE Gunhee[1], UMESH NAKATE[1], HONG Chang-Hee[1], SUH Eunkyung*[1] ([1]School of semiconductor and Chemical Engineering, Jeonbuk National University)

P1-ap.214

Interface Change of AZ31-CFRP by Thermal Laser Joining : NEXAFS and XPS investigation / LEE Youn Seoung*[1], ASHONG Andrews Nsiah[2], KIM Jeoung Han[2] ([1]Department of Information & Communication Engineering, Hanbat National University, [2]Department of Materials Science & Engineering, Hanbat National University)

P1-ap.215*

Hybrid Structure of MoS_2-Si Quantum Dots for Photoconductors / GU Minseon[1], LEE Keun Wook[1,2], PARK Beomjin[1,2], HAN Moonsup*[1] ([1]Department of Physics, University of Seoul, [2]Department of Smart Cities, University of Seoul)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-ap.301*

Stacking faults and anti-site domain boundaries in chalcopyrites: a density functional theory calculation study / PARK Kanghyeon[1], JEONG Byeong-Hyeon[1], PARK Ji-Sang[*1] ([1]Department of Physics, Kyungpook National University)

P1-ap.302*

Doping of alkali elements into Cu(In,Ga)Se_2 solar cells: aggregation of passivated sites for improvement of charge carrier transport / PARK Ha Kyung[1], CHO Yunae[1,2], KIM Kihwan[3], JEONG Inyoung[3], YUN Jae Ho[3], GWAK Jihye[3], JO William[*1,2] ([1]Department of Physics, Ewha Womans University, [2]New and Renewable Energy Research Center (NREC), Ewha Womans University, [3]Photovoltaic Laboratory, KIER)

P1-ap.303*

Piezoelectricity and flexoelectricity of randomly aligned ZnO nanorods based flexible nanogenerator / ABEN Dimaral[*1], YAN Yan[1], SHIN Dong-Myeong[2], HWANG Yoon-Hwae[1] ([1]Nano Fusion Technology, Pusan National University, [2]Mechanical Engineering , University of Hong Kong)

P1-ap.304

Orbital-selective observation of Ir 5d in IrO_2 epitaxial thin films using resonant inelastic x-ray scattering / LEE Kyeong Jun[1], CHO Byeong-Gwan[2], KIM Woo Jin[3], SONG Jeongkeun[3], KIM Chanseok[4], HEO Jin Eun[1], LEE Jun Hee[4], NOH Tae Won[3], KOO Tae Young[2], KIM Jungho[5], CHANG Seo Hyoung[*1] ([1]Department of Physics, Chung-ang University, [2]Pohang Accelerator Laboratory, POSTECH, [3]Department of Physics, Seoul National University, [4]School of Energy and Chemical Engineering, UNIST, [5]Advanced Photon Source, Argonne National Laboratory)

P1-ap.305*

Fabrication of Self-Adhesive Triboelectric Nanogenerator Sensor / LEE Hee Jin[1], HWANG TaeSeung[1], YEO Junyeob[*1] ([1]Department of Physics, Kyungpook National University)

P1-ap.306*

Piezoelectricity and Flexoelectricity Characterizations for Organic Material based Flexible Energy Harvesting Devices / YAN Yan[1], DONG Myeong Shin[2], HWANG Yoon Hwae[*1] ([1]Department of Nanoenergy Engineering, Pusan National University, [2]School of Mechanical Engineering, University of Hong Kong)

P1-ap.307*

Biocompatible and Biodegradable Triboelectric generators Based on Hyaluronic Acid Hydrogel Film / KIM Hyunki[1], PARK Sang Hyeok[1], CHOI Jinhyeok[1], LEE Minbaek*[1] ([1]Department of Physics, Inha University)

P1-ap.308

Temperature dependent triboelectric charge of PVDF ferroelectric polymers / KO Young Joon[1], LEE Dong Woo[1], AHN Hyun Soo[1], JUNG Jong Hoon*[1] ([1]Inha University)

P1-ap.309

Effect of Dielectric Constant of Composite Polymer ZnO Films on Piezoelectric Nanogenerator Applications / AMANGELDINOVA Yerkezhan*[1], ABEN Dimaral[1], SHIN Dong-Myeong[2], HWANG Yoon-Hwae[1] ([1]Nano Fusion Technology, Pusan National University, [2]Mechanical Engineering, University of Hong Kong)

P1-ap.310*

SiO_x Nanorod-Structured Artificial Neuron for Unconventional Computing Applications / CHOI Sanghyeon[1], KIM Gwang Su[1,3], CHO Haein[1], YANG Jehyeon[1], KANG Chong-Yun[1,3], WANG Gunuk*[1,2] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Integrative Energy Engineering, Korea University, [3]Center for Electronic Materials, KIST)

P1-ap.311*

Conducting states and pathways of flexible HfO_x thin films / KWON Suhyoun[1], KIM Yeon Soo[2], CHUNG Harry[1], KIM Jihyun[1], JO William*[1,2] ([1]Department of Physics, Ewha Womans University, [2]New and Renewable Research Center, Ewha Womans University)

P1-ap.312

Ferroelectric $Hf_{0.5}Zr_{0.5}O_2$ ultrathin film epitaxially grown on the $SrTiO_3$(001) substrate / RYU Woohyeon[1], YOON Chansoo[1], WOO Yewon[1], PARK Bae Ho*[1] ([1]Department of Physics, Konkuk University)

P1-ap.313*

Generalized Equation for Magnetic Domain Wall Chirality with Consideration of Domain Wall Tilting / PARK Jung Hyun[1], KIM Dae Yun[2], NAM Yune Seok[1], WHANG Hyun Seok[1], CHOE Sug Bong*[1] ([1]Department of Physics, Seoul National University, [2]department of Electrical and Computer Engineering, National University of Singapore)

P1-ap.314

A two-terminal perpendicular spin-transfer-torque based stochastic spiking neuron device / KIM Jichan[1,2], BAEK Jongung[1,3], JUN Hansol[1,3], CHOI Jinyoung[1,2], CHOI Yohan[1,3], PARK Jeagun*[1,2,3] ([1]Hanyang University, [2]MRAM center, Department of Electronic Engineering, Hanyang University, [3]MRAM center, Department of Nanoscale Semiconductor Engineering, Hanyang University)

P1-ap.315*

The experimental study of helical-type electromagnetic pump using liquid lithium /

LEE GeunHyeong*[1], KIM HeeReyoung[1] ([1]Department of Nuclear Engineering, UNIST)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-ap.401*
공기 방울 산란입자와 적색 콜로이드 양자점을 활용한 백색 LED 조명의 광특성 시뮬레이션 연구 / LEE Gijung[1], KO Jaehyeon*[1], HONG Seungchan[1], LEE Junggyun[1], PARK Tahee[2], KO Youngwook[2] ([1]School of Nano Convergence, Hallym University, [2](주)지엘비젼, (주)지엘비젼)

P1-ap.402*
Construction of helical resonator for trapped-ion based quantum computer / LEE Hyein[2], KIM Hyerin[1], HONG Yura[3], CHOI Taeyoung*[1] ([1]Department of Physics, Ewha Womans University, [2]Department of Computer Science and Engineering, Ewha Womans University, [3]Department of Electronic and Electrical Engineering, Ewha Womans University)

P1-ap.403*
적색 양자점 필름을 이용한 고연색지수의 조명 연구 High color rendering index lighting using red quantum dot film / KO Jaehyeon*[1], HONG Seungchan[1], LEE Gijung[1], GWAK Sungtae[1], PARK Seri[1], LEE Junggyun[1], KO Youngwook[3], KIM Youngduk[2] ([1]School of Nano Convergence, Hallym University, [2]CPRI(철원플라즈마산업기술연구원), [3](주)지엘비젼)

P1-ap.404
산화철-은 나노입자와 인지질 이중층 간의 상호작용 연구 / BACK Sung Jin[1], KOTHANDAN Vinoth Kumar[3], HWANG Seung Rim[2,3], JUNG Gyeong Bok*[1] ([1]Physics Education, Chosun University, [2]College of Pharmacy, Chosun University, [3]Department of Biomedical Sciences Graduate School, Chosun University)

P1-ap.405*
Pad design with high permittivity material for B_1^+ homogenization in 7T MRI / YOON Kyoungsub[1], NOH Hansol[1], PARK Namkyoo*[1] ([1]Electrical and Computer Engineering, Seoul National University)

P1-ap.406
Frequency Doubler Utilizing the Off-State Leakage Behavior of Organic Field-Effect Transistors / KO Eun-Hye[1], KIM Chang-Hyun*[1] ([1]Department of Electronic Engineering, Gachon University)

P1-ap.407
Device Simulation on the Mobility Effects in Perovskite Photovoltaics / LEE Hyuna[1], KIM Chang-Hyun*[1] ([1]Department of Electronic Engineering, Gachon University)

P1-ap.408*

Improvement of charge transport in organic TIPS semiconductor device by using crystalized eco-friendly plastic cellulose nanowhisker / LIM EunJu[*1], CHO Seongjib[1] ([1]Convergent Systems Engineering, Dankook University)

P1-ap.409*

Vertical energetic analysis of degraded exciplex-based blue phosphorescent OLEDs using gas cluster ion beam / KIM Kiwoong[1], PARK Soohyung[2], CHUNG Wonjae[3], LEE Junyeob[3], YI Yeonjin[*1] ([1]Department of Physics, Yonsei University, [2]Advanced Analysis Center, KIST, [3]School of Chemical Engineering, Sungkyunkwan University)

P1-ap.410

Backbone modification of co-absorbing polymer for ternary polymer solar cell / PARK Sung Heum[*1], YANG Hyun-Seock[1], SEO Hyo Jin[1], SHIN Insoo[1] ([1]Department of Physics, Pukyong National University)

P1-ap.411

Identification of ion migration in $MAPbI_3$ films through electronic structure analysis / LEE Hyun Bok[*1,2], PARK Soohyung[*5], CHOI Seungsun[1,2], KIM Wonsik[1,2], SHIN Woojin[1,2], KIM Kitae[3,4] ([1]Department of Physics, Kangwon National University, [2]Accelerator Science, Kangwon National University, [3]Department of Physics and Applied Physics, Yonsei University, [4]van der Waals Materials Research Center, Yonsei University, [5]Advanced Analysis Center, KIST)

P1-ap.412

Effect of ultraviolet-ozone treatment on solution-processed tetra-tert-butyl copper phthalocyanine film / KIM Wonsik[1,2], CHOI Seungsun[1,2], SHIN Woojin[1,2], OH Jaewon[1,2], JUNG Sehyun[1], OH Hyesung[1], KO Moonseock[1], RYU Mee-Yi[1,2], LEE Hyun Bok[*1,2] ([1]Department of Physics, Kangwon National University, [2]Institute for Accelerator Science, Kangwon National University)

P1-ap.413*

혼합 용매로 제작된 유기 반도체 소자의 UV-vis 분석 / PARK Keon Joo[1], KIM Chae Won[1], SUNG Min Jae[1], KIM Kyoung Hwa[1], AHN Hyung Soo[1], YI Sam Nyung[1], CHUN Young Tea[*1] ([1]Division of Electronics and Electrical Information Engineering, Korea Maritime and Ocean University)

P1-ap.414*

Effect of molecular dipole orientations in a molecular heterostructure with two-dimensional semiconductors / WANG Gunuk[*1], EO Jung Sun[1], SHIN Jaeho[1] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University)

P1-ap.415*

Stamp를 이용해 패터닝한 유기 반도체 소자의 전기적 특성의 비교 / KIM Chae Won[1], SUNG Min Jae[1], PARK Keon Joo[1], KIM Kyoung Hwa[1], YI Sam Nyung[1], AHN Hyung Soo[1], CHUN Young Tea*[1] ([1]Division of Electronics and Electrical Information Engineering, Korea Maritime and Ocean University)

P1-ap.416

콘쥬게이션 폴리머의 발광 특성을 이용한 니트로기의 센싱 특성 연구 / NOH DaeGwon[1], AMPADU Emmanuel Kwame[1], OH Eunsoon*[1] ([1]Department of Physics, Chungnam National University)

P1-ap.417*

Micro-pattern된 고분자 반도체의 AFM 표면 분석 / SUNG Min Jae[1], KIM Chae Won[1], PARK Keon Joo[1], KIM Kyoung Hwa[1], AHN Hyung Soo[1], YI Sam Nyung[1], CHUN Young Tea*[1] ([1]Division of Electronics and Electrical Information Engineering, Korea Maritime and Ocean University)

P1-ap.418*

A Study on the Correlation between the Morphology and Device Characteristics by Small Molecular Hole Material Doping in Quantum Dot Emission Layer / KIM Jaeseung[1], HYEON Min Woo[2], SUH Min Chul[2], KIM Hyunjung*[1] ([1]Physics, Sogang University, [2]Information Display, Kyung Hee University)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-ap.501
A novel cyan phosphor of Eu^{2+} ion doped magnesium cordierite, $Mg_2Al_4Si_5O_{18}$ for WLED applications / PARK Jin Young[1], HONG Woo Tae[2], CHUNG Jong Won[1], YANG Hyun Kyoung[*1] ([1]Department of Electrical, Electronics and Software Engineering, Pukyong National University, [2]Marine-bionics convergence technology center, Pukyong National University)

P1-ap.502*
Air-processable and Stable Perovskite Planar Solar Cells with Organic Seeding Layer Induced 2D/3D Heterointerface / SHIN Insoo[1], HANGOMA Pesi Mwitumwa[1], SON Semo[2], PARK Sung Heum[*1] ([1]Department of Physics, Pukyong National University, [2]2Department of Graphic Arts Information Engineering, Pukyong National University)

P1-ap.503
Spatiotemporally modulated coupled mechanical resonators for synthetic frequency dimension / MIN Bumki[*1], KYUNG Minwook[1], PARK Jagang[1], KIM Yung[1], LEE Kyungmin[1] ([1]KAIST)

P1-ap.504*
Grain Boundary Passivation and Faster Hole Extraction by Polymer Permeation Strategy for Highly Efficient and Stable Perovskite Solar Cell / KIM Danbi[1], PARK Woon Ik[2], SEO Hyo Jin[1], PARK Sung Heum[*1] ([1]Department of Physics, Pukyong National University, [2]Department of Materials Engineering, Pukyong National University)

P1-ap.505
Phenylethylammonium Iodide Induced Bilateral Interface Engineering for Efficient and Stable Perovskite Solar Cells / ZHANG Yuanyuan[1], LEE Bo Ram[1], PARK Sung Heum[*1] ([1]Department of Physics, Pukyong National University)

P1-ap.506*
The Fabrication of Cesium Based Perovskite through Thermal Evaporation and its Application on Green Light Emitting Diode / KIM Junho[1], KANG Donghee[1], JUNG Na Eun[1], LEE Hyunbok[*2], PARK Soohyung[*3], YI Yeonjin[*1] ([1]Department of Physics, Yonsei University, [2]Department of Physics, Kangwon National University, [3]Advanced Analysis Center, KIST)

P1-ap.507

Synthesis and Characterization of Carbon Dots using Fine Dust in Hepa Filter / CHUNG Jong Won[1], PARK Jin Young[1], YANG Hyun Kyoung[*1] ([1]Department of Electrical, Electronics and Software Engineering, Pukyong National University)

P1-ap.508

Characteristics of chase of principal states of polarization using two ports of polarization beam splitter in optical fiber communications / HAN Ki Ho[*1] ([1]Department of Optical Engineering, Kongju National University)

P1-ap.509*

The effect of sodium silicate powder addition for $Mg_2Al_4Si_5O_{18}:Eu^{2+}$ synthesis / LEE Woo Cheol[1], YANG Hyun Kyoung[*2] ([1]Interdisciplinary Graduate Program of Artificial Inteligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, [2]Department of Electrical, Electronics and Software Engineering, Pukyong National University)

P1-ap.510*

Enhanced photodetection characteristics of solution-processed ZnO phototransistor via Li doping / JEONG Jun Hyung[1], PARK Sung Ho[1], KIM Byung Jun[1], HEO Su Been[1], KIM Tae Yeon[1], SHIN Jae Seung[1], MA JinHyun[1], KANG Seong Jun[*1] ([1]정보전자신소재공학과, Kyung Hee University)

P1-ap.511*

Color alteration of carbon dots via solvent changes / PARK Sung Jun[1], MOON Byung Kee[2], YANG Hyun Kyoung[*3] ([1]Interdisciplinary Graduate Program of Artificial Inteligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, [2]Department of Physics, Pukyong National University, [3]Department of Electrical, Electronics and Software Engineering, Pukyong National University)

P1-ap.512

Investigation of circuit noise influence on optical signal to noise ratio acquisition in optical communication systems / HAN Ki Ho[*1] ([1]Department of Optical Engineering, Kongju National University)

P1-ap.513*

Efficient and Air-Stable Halide Perovskite Solar Cells via Surface Structural Modification / KIM Tae hyun[1], JU Byeong Kwon[1], KWAK Joon Young[3], KIM Junghwan[*2] ([1]School of Electrical Engineering, Korea University, [2]Department of Materials System Engineering, Pukyong National University, [3]Center for Neuromorphic Engineering, KIST)

P1-ap.514*

Study on efficient quantum-dot light-emitting diodes using metal-doped inorganic hole injection layer / SHIN Jae Seung[1], KANG Seong Jun[*1] ([1]정보전자신소재공학과, Kyung Hee University)

P1-ap.515

Bandgap engineering of nitrogen doped carbon dots / HONG Woo Tae[1], MOON Byung Kee[2], YANG Hyun Kyoung*[3] ([1]Marine-Bionics convergence technology center, Pukyong National University, [2]Department of Physics, Pukyong National University, [3]Department of Electrical, Electronics and Software Engineering, Pukyong National University)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-as.001
Detecting signature of fast radio burst associated with soft gamma repeater by using machine learning / SONG Hyung Seon[1], HUR Min Sup[*1] ([1]Department of Physics, UNIST)

P1-as.002
Extending the search for neutrinos from cosmic ray interactions in the Sun to the Solar minimum with IceCube / ROELLINGHOFF Gerrit Leon[*1] ([1]Department of Physics, Sungkyunkwan University)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-at.001*
The influence of the optical pump beam on the transverse spin relaxation of ^{129}Xe / LEE Deok-Young[1], KIM Minwoo Moca[1], YIM Sin Hyuk[1], SHIM Kyu Min[1], LEE Sangkyung[*1] ([1]Agency for Defense Development)

P1-at.002
Total photoionization cross-section of the collinear eZe model with Z>2 / LEE Min-Ho[*1], CHOI Nark Nyul[1] ([1]School of Liberal Arts and Teacher Training, Kumoh National Institute of Technology)

P1-at.003*
주기적 온도 변화에 의한 편광 유지 광섬유의 편광 안정화 / LEE Sanglok[1], JEONG Jeongyoun[1], HWANG Sungi[1], BAEK Jaeuk[1], MOON Geol[*1] ([1]Department of Physics, Chonnam National University)

P1-at.004
고출력 레이저 개발을 위한 아르곤 플라즈마 내의 준안정 준위 밀도 측정 / SHIM Sungyong[1], LEE Wonwook[1,2], OH Cha-Hwan[*1] ([1]Hanyang University, [2]Research Institute for Natural Sciences, Hanyang University)

P1-at.005
유도 결합 플라즈마에서의 He $2^3S \rightarrow 2^3P$ 전이선의 미세 준위 측정 / SHIM Sungyong[1], LEE Wonwook[1,2], OH Cha-Hwan[*1] ([1]Hanyang University, [2]Research Institute for Natural Sciences, Hanyang University)

P1-at.006
Origin of the asymmetries in the pump-probe EIA spectra of ^{85}Rb atoms / KIM Jin-Tae[*4], JADOON Zeeshan Ali Safdar[1], HASSAN Aisar Ul[2], NOH Heung-Ryoul[3] ([1]Dept. of Photonic Eng., Chosun University, [2]Dept. of Photonic Eng., Chosun University, [3]Department of Physics, Chonnam National University, [4]Dept. of Photonic Eng., Chosun University)

P1-at.007*
Measuring the ratio between the enhancement factors for Rb-^{129}Xe and Rb-^{132}Xe / KIM Minwoo Moca[1], LEE Sangkyung[*1], LEE Deok Young[1], YIM Sin Hyuk[1] ([1]Advanced Defense Technology Research Institute, Agency for Defense Development)

P1-at.008*

Scattering of matter waves from various optical reflection gratings under grazing incident conditions / KIM LeeYeong[1], LEE JuHyeon[2], KIM Yun-Tae[3], LEE Chang Young[4], SCHOLLKOPF Wieland[5], ZHAO Bum Suk*[6] ([1]Department of Physics, UNIST, [2]Department of Chemistry, Fritz-Haber-Institut der Max-Planck-Gesellschaft, [3]Department of Biomedical Engineering, UNIST, [4]Department of Chemical Engineering, UNIST, [5]., Fritz-Haber-Institut der Max-Planck-Gesellschaft, [6]Department of Chemistry, Department of Physics, UNIST)

P1-at.009*

Spin transport in ferromagnetic spinor Bose-Einstein condensates / HUH SeungJung[1], KIM Kyungtae[1], CHOI Jae Yoon*[1] ([1]Department of Physics, KAIST)

P1-at.010

Clock spectroscopy of ^{174}YB BEC in a crossed optical dipole trap / JUNG Haejun[2], HAN Jeong Ho[1], LEE Jae Hoon[3], LEE Won-kyu[3], CHOI Jae-yoon[2], MUN Jongchul*[1] ([1]Quantum Technology Institute, KRISS, [2]Department of Physics, KAIST, [3]Physical Metrology, KRISS)

P1-at.011

Quantifying non-Gaussianity of a quantum state by the negentropy of quadrature distributions / PARK Jiyong*[1], LEE Jaehak[2], BAEK Kyunghyun[2], NHA Hyunchul[3] ([1]School of Basic Sciences, Hanbat National University, [2]School of Computational Sciences, Korea Institute for Advanced Study, [3]Department of Physics, Texas A&M University at Qatar)

P1-at.012

A photonic engine fueled by an atomic beam / KIM Jinuk[1], AN Kyungwon*[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-at.013*

안정된 이온 포획을 위한 나선형 RF 공진기의 제작 및 특성 조사 / LEE Hyegoo*[1], KIM Myunghun[1], HONG Jungsoo[1], LEE Wonchan[1], SHIN Yongha[1], LEE Moonjoo[1] ([1]Electrical Engineering, POSTECH)

P1-at.014*

이터븀과 칼슘을 동시에 포획할 수 있는 이온 트랩 기반의 양자컴퓨터 / KIM Myunghun*[1], HONG Jungsoo[1], LEE Hyegoo[1], SHIN Yongha[1], LEE Wonchan[1], LEE Moonjoo[1] ([1]Department of Electrical Engineering, POSTECH)

P1-at.015

광자의 도달 시간 정보를 이용한 이온의 양자 상태 측정 신뢰도 향상 / JEONG Junho[1], KIM Jaeun[2], JUNG Changhyun[1], KIM Taehyun[2], CHO Dongil Dan*[1] ([1]Dept. of Electrical and Computer Engineering, ASRI/ISRC, Seoul National University, [2]Dept. of Computer Science and Engineering, ICT/ASRI/ISRC, Seoul National University)

P1-at.016

Analytic treatment of quantum search on complete graphs using interpolated quantum walks / LEE Min-Ho[1], TANNER Gregor[2], CHOI Nark Nyul*[1] ([1]School of Liberal Arts and Teacher Training, Kumoh National Institute of Technology, [2]School of Mathematical Sciences, University of Nottingham)

P1-at.017

Classified graph-entanglements of interacting Rydberg atoms / KIM Kangjin[1], AHN Jaewook*[1] ([1]Physics, KAIST)

P1-at.018*

Novel characterization of an optical cavity with small mode volume. 작은 모드 볼륨을 가진 광학 공진기의 새로운 특성 조사. / LEE Dowon*[1], KIM Myunghun[1], HONG Jungsoo[1], KIM Junwoo[1], KIM Keumhyun[1], BAE Seunghun[1], LEE Moonjoo[1] ([1]Electrical Engineering, POSTECH)

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P1-bp.001*
An exact theory for the transverse force-extension relation of stiff polymers / LIM Chan[1], JEON Jae-Hyung*[1] ([1]Department of Physics, POSTECH)

P1-bp.002
AP_1 structure predictions in CASP14 / KIM Hyung-Rae*[1] ([1]School of Basic Sciences, Hannam University)

P1-bp.003*
FAST AND ACCURATE MICROBIAL SPECIES IDENTIFICATION BY FLUORESCENCE IN SITU HYBRIDIZATION WITH PEPTIDE NUCLEIC ACID / KIM Hajin*[1], KIM Sungho[1], IM Jae-Kyung[1], HYUN Hwi[1], LEE Min Seok[1], KANG Joo H.[1], KWON Taejoon[1] ([1]UNIST)

P1-bp.004
Application of Ago-FISH to general RNA quantification / KANG Chanshin[1], HOHNG Sungchul*[1] ([1]Seoul National University)

P1-bp.005
Comparing Various Background Noise Suppression Techniques in STED Optical Nanoscopy / JEONG Sejoo[1], KIM Jaeyong[1], LEE Jong-Chan*[1] ([1]Department of New Biology, DGIST)

P1-bp.006*
Study of transparent flexible photosynthetic microbial fuel cell / LIM EunJu*[1], CHO Seongjib[1], KIM Seonghyun[1] ([1]Dankook University)

P1-bp.007*
Condensation of PCNA-Associating Factor 15 in cells / BU Gayun[1], SEOL Jincheol[2], KIM Daehyung[1], LEE Jong-Bong*[1,2] ([1]Physics, POSTECH, [2]School of Interdisci plinary Bioscience and Bioengineering, POSTECH)

P1-bp.008
Transcription of Arc mRNA induced by electrical burst stimulation / KIM Dong Wook[1], MOON Hyungseok C.[1], LEE Byung Hun[1], SHIM Jae Youn[1], PARK Hyeyoon*[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-bp.009

Biophysical principles regarding the formation and the regulation of biomolecular condensates / KIM Jinkwang[*1], GWAK Eunha[1], LEE Jong-Chan[1] ([1]Department of New Biology, DGIST)

P1-bp.010

1-Dimensional Diffusion of RNA Polymersae in the Cell. / SONG Minseok[1], HOHNG Sungchul[*1] ([1]Seoul National University)

P1-bp.011

MRI compatible multi-site fiber photometry to record neural activities in living animal brain / LEE Ga-Young[1], JOO Bitna[2,3], KOO Ja Wook[2,3], KIM Kipom[*1] ([1]Brain Research Core Facilities, Korea Brain Research Institute, [2]Emotion, Cognitive, & Behavior Research Group, Korea Brain Research Institute, [3]Department of Brain and Cognitive Sciences, DGIST)

P1-bp.012*

DNA base pair is more stable in heavy water / KIM Sung Eun[1,2], MOON Hyeon-Min[1], LEE Il-Buem[1], HONG Seok-Cheol[*1,2,3] ([1]Center for Molecular Spectroscopy and Dynamics, IBS (IBS), [2]Department of Physics, Korea University, [3]School of Computational Sciences, Korea Institute for Advanced Study (KIAS))

P1-bp.013

Single-molecule studies on co-transcriptional formation mechansim of R-loop / LIM Gunhyoung[1], HOHNG Sungchul[*1] ([1]Seoul National University)

P1-bp.014*

Single-molecule Studies on Rho-dependent Transcription Termination / SONG Eunho[1,2], UHM Heesoo[1,2,3], HOHNG Sungchul[*1,2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Institute of Applied Physics, Seoul National University, [3]Department of Physics, University of Oxford)

P1-bp.015*

Mechanistic basis for human DNA polymerase θ-directed microhomology-mediated end-joining / KIM Chanwoo[1], SUNG Yubin[1], TAKATA Kei-ichi[1], KIM Hajin[*1] ([1]UNIST)

P1-bp.016

A hierarchical folding pathway of a human glucose transporter facilitated by ER membrane protein complex and lipids / CHOI Hyun-Kyu[2], KANG Hyunook[1], LEE Chanwoo[1], KIM Hyun Gyu[1], PARK Soohyung[3], HONG Heedeok[4], IM Wonpil[3], MILLER Elizabeth A.[5], CHOI Hee-Jung[1], YOON Tae-Young[*1] ([1]Seoul National University, [2]Coulter Department of Biomedical Engineering, Georgia Institute of Technology, [3]Departments of Biological Sciences and Chemistry, Lehigh University, [4]Department of Chemistry and Department of Biochemistry & Molecular Biology, Michigan State University, [5]Medical Research Council (MRC) Laboratory of Molecular Biology, Cambridge Biomedical Campus)

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P1-co.101

A Detailed Numerical Analysis for High-Temperature Superconductivity Phase Diagrams Based on U(1) and SU(2) Slave-Boson Approaches to the t-J Hamiltonian

/ AHN Sul-Ah*1, CHO Hyeyoung[1], SALK Sung-Ho S.[2] ([1]National Supercomputing Center, Korea Institute of Science and Technology Information, [2]Department of Physics, Pohang University of Science and Technology)

P1-co.102

Numerical modeling of high-temperature superconducting tapes with the critical state model

/ KIM Mu Yong*1 ([1]Optics, InLC Technology)

P1-co.103

Effect of the sample work function on alkali metal dosing induced electronic structure change

/ JUNG Saegyeol[1,2], HUH Soonsang[1,2], KIM Changyoung*1,2 ([1]CCES, CCES (IBS), [2]Department of Physics and Astronomy, Seoul National University)

P1-co.104

Temperature dependence of superconducting gap in Nb thin films

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

P1-co.105*

B_{1g} phonon anomaly above superconducting transition temperature in $YBa_2Cu_3O_{7-\delta}$

/ OH Dongjin[1,2], SONG Dongjoon[1,2], MIYASAKA Shigeki[3], TAJIMA Setsuko[3], PARK Seung Ryong[4], KIM Changyoung*1,2 ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Correlated Electron Systems, IBS, [3]Department of Physics, Osaka University, [4]Department of Physics, Incheon National University)

P1-co.106*

Momentum dependent $d_{xz/yz}$ band splitting in LaFeAsO

/ HUH Soonsang[1], KIM Younsik[1], KIM Changyoung*1 ([1]Department of Physics and Astronomy, Seoul National University)

P1-co.107

$La_{1.85}Sr_{0.15}CuO_4$ thin film growth and in-situ ARPES

/ KIM Youngdo[1,2], KIM Changyoung*1,2 ([1]Center for Correlated Electron Systems, IBS, [2]Department of Physics and Astronomy, Seoul National University)

P1-co.108
Pt/(Co/Pt)$_3$/FeMn 박막에서 FeMn 두께와 온도에 따른 보자력과 수직 교환바이어스 / JUN Minsuk[1], PARK Yeonjung[1], KIM Jungbea[1], DHO Joonghoe[*1] ([1]Kyungpook National University)

P1-co.109
자기 이중층에서 자기장에 의한 자구벽 운동 / MOON Joon[1], YOON Jaesung[1], KIM Kitae[1], LEE Seong-Hyub[1], CHOE Sug Bong[*1] ([1]Department of Physics, Seoul National University)

P1-co.110
중금속/강자성체 이종접합 구조에서 발현되는 단방향 스핀 홀 자기저항에서 마그논의 기여도에 관한 연구 / JANG Heechan[1,2], PARK Eunkang[1], LEE Ki-Seung[3], JEONG Seyeop[1], LEE Donghyeon[1], KIM Jisu[1], KIM Kwangsu[1,4], THAN Vu Minh[1], LEE Soogil[5], PARK Byong Guk[5], KIM Kyoung-Whan[4], YOU Chun-Yeol[3], LEE Nyun Jong[*1], KIM Sanghoon[1], ONO Teruo[2] ([1]Department of Physics and EHSRC, University of Ulsan, [2]Institute for Chemical Research, Kyoto University, [3]Department of Emerging Materials Science, DGIST, [4]Center for Spintronics, KIST, [5]Department of Materials Science and Engineering, KAIST)

P1-co.111*
Volume dependence of anomalous Hall effect in compensated ferrimagnet Mn$_3$Al / RHIM Sonny[*1,3], HAN Guihyun[1], PARK Minkyu[2], HONG Soon Cheol[1,3] ([1]Department of Physics, University of Ulsan, [2]Research Institute of Basic Sciences, University of Ulsan, [3]Energy Harvest-Storage Research Center, University of Ulsan)

P1-co.112*
Strain effect on magnetic properties of monolayer Fe$_3$GeTe$_2$ / RHIM Sonny[*1], KIM G Hye[1], AIN Qurat Ul[1], HONG SoonCheol[1] ([1]Department of Physics, University of Ulsan)

P1-co.113
(110) NiCo$_2$O$_4$ 에피탁시 박막의 결정구조와 자기적 특성 / KIM Jungbea[1], JUN Minsuk[1], PARK Yeonjung[1], DHO Joonghoe[*1] ([1]Kyungpook National University)

P1-co.114*
Multistage development of anisotropic magnetic correlations in the Co-based honeycomb lattice Na$_2$Co$_2$TeO$_6$ / LEE Chan Hyeon[1], LEE Suheon[1], CHOI Youngsu[1], JANG Z. H.[2], KALAIVANAN R.[3], SANKA R.[3], CHOI Kwang Yong[*4] ([1]Department of Physics, Chung-Ang University, [2]Department of Physics, Kookmin University, [3]Institute of physics, Academia Sinica, [4]Department of Physics, Sungkyunkwan University)

P1-co.115
Random singlet magnetism in the Kitaev honeycomb iridate K$_2$IrO$_3$ / LEE Suheon[*1,2], LEE Chan Hyeon[2], CHEN Wei-Tin[3], CHOI Kwang Yong[*2,4] ([1]IBS CINAP, Sungkyunkwan University, [2]Department of Physics, Chung-Ang University, [3]Center for Condensed Matter Sciences, National Taiwan University, [4]Department of Physics, Sungkyunkwan University)

P1-co.116

Magnetic compensation state in new phase of metal tellurate $(Mn,Ni)_3TeO_6$ / WON Choong Jae*[1], KIM Jungkyu[1], PARK Jaehoon[1], CHEONG Sangwook[2] ([1]Max Planck POSTECH/ Korea Research Initiative, [2]Department of physic and astronomy, Rutgers University)

P1-co.117*

표적 지향적 약물전달시스템 기술에 적용되는 초상자성 나노입자 제조 및 물성연구 / YANG Chan Woo[1], CHOI Ye Ji[1], HEO Jin Yong[1], CHOI Hyeon Kyung[2], KIM Chul Sung[2], KIM Sung Baek*[1] ([1]Department of Biomedical materials, Konyang University, [2]Department of Physics, Kookmin University)

P1-co.118*

온열치료용 초상자성 나노입자의 제조 및 물성연구 / YANG Yoon Hee[1], CHA Min Gyeong[1], AN Hyeon Ho[1], CHOI Hyeon Kyung[2], KIM Chul Sung[2], KIM Sung Baek*[1] ([1]Department of Biomedical materials, Konyang University, [2]Department of Physics, Kookmin University)

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P1-co.201*
The Effect of Gamma-Ray Irradiation on Ferroelectric Characteristics of $Hf_{0.5}Zr_{0.5}O_2$ / NAMKUNG Jin[1], CHAE Seung Chul*[1] ([1]Department of Physics Education, Seoul National University)

P1-co.202
Structural analysis of deuterium-substituted hydrogen bonded systems using high-resolution NMR / KIM Se Hun*[1] ([1]Jeju National University)

P1-co.203*
Thickness-dependent dielectric properties of polymorphic Ga_2O_3 epitaxial thin films / KWAK Seungyeop[1], EOM Tae Hwa[1], KIM Ki Seok[1], LEE Sang A*[1], HWANG Jae-Yeol*[1] ([1]Department of Physics, Pukyong National University)

P1-co.204
Attempt to chemically reduce barium oxide and barium carbonate with hydrogen / OH Ju Hyun[1], KANG Mijeong[2], JEONG Jung Hyun[1], LEE Seunghun*[1] ([1]Department of Physics, Pukyong National University, [2]Department of Optics and Mechatronics Engineering, Pusan National University)

P1-co.205*
Temperature dependent Raman spectroscopic study of Methylammonium Lead Bromide ($MAPbBr_3$) / KANG Dong hoon[1], KO Jaehyeon*[1], AHN Changwon[2], KIM Taeheon[2] ([1]School of Nano Convergence, Hallym University, [2]Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan)

P1-co.206*
Synthesis and Raman spectroscopic investigation of mixed hybrid halides $MAPbBr_{3-x}Cl_x$ with x=0, 2, 2.5, 3 / NAQVI Furqanul Hassan[1], KO Jaehyeon*[1], AHN Changwon[2], KIM Taeheon[2] ([1]School of Nano Convergence, Hallym University, [2]Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan)

P1-co.207

Growth optimization and atomically resolved ferroelectricity mapping of ferroelectric Bi_2WO_6 thin film / JEONG Jihwan[1,2], MUN Junsik[2,3], DAS Saikat[1,2], 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 System, IBS, [3]3Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)

P1-co.208

Epitaxial growth control of oxygen vacancies in Co_3O_4 thin films for two-dimensional topological superconductivity / NOH Tae Won[*1], SHIN Min Soo[1], LEE Han-Gyeol[1] ([1]Department of Physics and Astronomy, Seoul National University, [2]IBS, Center for Correlated Electron Systems)

P1-co.209

$Nd_{0.8}Sr_{0.2}NiO_2$ thin films synthesized by physical oxygen reduction method / MAENG Jin Young[2], SONG Jong Hyun[*1,2] ([1]Chungnam National University, [2]Department of Physics, Chungnam National University)

P1-co.210

Studies in critical thickness of $SrTiO_3/LaAlO_3/SrTiO_3$ and superconducvity / KWAK Yongsu[1], HAN Woojoo[2], LEE Jonn Sung[3], KIM Jinhee[4], SONG Jong Hyun[*1] ([1]Chungnam National University, [2]Department of Nanoscience, UST, [3]Display and Semiconductor Physics, Korea University, [4]플랑크상수질량팀, KRISS)

P1-co.211*

Evolution of electronic structure in the bilayered perovskite $Sr_3(Ir_{1-x}Mn_x)_2O_7$ / KIM Dong Wook[*1], AHN G.[1], SCHMEHR J.[2], WILSON S. D.[2], MOON S.J.[*1] ([1]Department of Physics, Hanyang University, [2]Materials Department, UCSB)

P1-co.212

Fabrication of fully-strained 5d Pyrochlore iridate thin films / SONG Jeongkeun[1,2], NOH Tae Won[*1,2], KIM Woo Jin[1,2], MUN Junsik[1,2], KO Eunkyo[1,2], KIM Jinkwon[1,2], LI Yangyang[1], KIM Miyoung[3], KIM Tae Heon[4] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Correlated Electron systems, IBS, [3]Department of materials science and engineering, Seoul National University, [4]Department of Physics, University of Ulsan)

P1-co.213*

Temperature dependence of crystal structure for epitaxial perovskite ruthenates ($ARuO_3$, A = Ca, Sr, and Ba) / EOM Tae Hwa[1], LEE Sang A[*1], HWANG Jae-Yeol[*1] ([1]Department of Physics, Pukyong National University)

P1-co.214

Signature of Kondo hybridization with an orbital-selective Mott phase in 4d $Ca_{2-x}Sr_xRuO_4$ / KIM Minsoo[1,2], KWON Junyoung[1,2], KIM Choong H[1,2], KIM Younsik[1,2], CHUNG Daun[3], RYU Hanyoung[1,2], JUNG Jongkeun[1,2], KIM Beom Seo[1,2], SONG Dongjoon[1,2], DELINGER Jonathan D[4], HAN Moonsup[5], YOSHIDA Yoshiyuki[6], MIZOKAWA Takashi[7], KYUNG Wonshik[1,2], KIM Changyoung[*1,2] ([1]Center for Correlated Electron Systems, IBS, [2]Department of Physics and Astronomy, Seoul National University, [3]College of Liberal Studies, Seoul National University, [4]Advanced Light Source, Lawrence Berkeley National Laboratory, [5]Department of Physics, University of Seoul, [6-], National Institute of Advanced Industrial Science and Technology, [7]Department of Applied Physics, Waseda University)

P1-co.215

Capping & gating control of anomalous Hall effect and hump structure in ultra-thin $SrRuO_3$ film / KIM Donghan[1,2,3], SOHN Byungmin[1,2,3], KIM Minsoo[1,2,3], HAHN Sungsoo[1,2,3], KIM Youngdo[1,2,3], KIM Jong Hyuk[3], CHOI Young Jai[3], KIM Changyoung[*1,2] ([1]CCES (IBS), CCES (IBS), [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Physics, Yonsei University)

P1-co.216

Observation of Kondo lattice behavior in an antiferromagnetic metal FeTe / KIM Younsik[1,2], HUH Soonsang[1,2], JUNG Saegyeol[1,2], KIM Jong Hyuk[3], CHOI Young Jai[3], KIM Changyoung[*1,2] ([1]Center for Correlated Electron Systems, IBS, [2]Department of Physics and Astronomy, Seoul National University, [3]Department of Physics, Yonsei University)

P1-co.217

Visible-UV Optical spectra of Cu_3TeO_6 / KIM Jae Ha[1], SIM Kyung Ik[2], CHAKRABORTY Tirthankar[3], PARK Je Geun[4,5,6], KIM Jae Hoon[*1] ([1]Department of Physics, Yonsei University, [2]Center for Integrated Nanostructure, IBS, [3]Chemical Physics of Solids, Max Planck, [4]Center for Quantum Materials, Seoul National University, [5]Department of Physics and Astronomy, Seoul National University, [6]Institute of Applied Physics, Seoul National University)

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P1-co.301
Coherent acoustic phonon in van der Waals heterostructure / PARK Tae Gwan[2], JEON Jae Ho[1], CHUN Seung-Hyun[1], LEE Sunghun[*1], ROTERMUND Fabian[2] ([1]Department of Physics and Astronomy, Sejong University, [2]Department of Physics, KAIST)

P1-co.302
Effects of Magnetically Ordered Atoms on the Properties of Edge States in Two-Dimensional Topological Insulators / LEE Teresa[1], JEON Gun Sang[*1] ([1]Ewha Womans University)

P1-co.303
산화주석의 주성장면 변화에 관한 연구 / JEONG Jin[*1] ([1]Department of Physics, Chosun University)

P1-co.304
Observation of the back-donation π-bonding states near Fermi level with ARPES / KIM Changyoung[*1], JUNG Jongkeun[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-co.305*
The influence of defect states in ZnO quantum dot on the energy level alignment / KIM Ahyoung[1], KIM HongHee[2], KIM Kitae[1,3], KANG Heekyung[1], YI Yeonjun[3], CHOI Wonkook[2], PARK Soohyung[*1] ([1]KIST, [2]Center for Optoelectronic Materials and Devices, KIST, [3]Institute of Physics and Applied Physics, Yonsei University)

P1-co.306*
A Photoelectron spectroscopy study on the electronic structure of 2-dimensional perovskites / KIM Kitae[1,2], KIM Ahyoung[2], KWON Namhee[2], PARK Soohyung[*2], LEE Hyunbok[*3], YI Yeonjin[*1] ([1]Department of Physics, Yonsei University, [2]Advanced Analysis Center, KIST, [3]Department of Physics, Kangwon National University)

P1-co.307*
Correlation between crystal structure and electronic properties of $SrRuO_3$/$CaRuO_3$ superlattices / KIM Ki Seok[1], LEE Sang A[*1], HWANG Jae-Yeol[*1] ([1]Department of Physics, Pukyong National University)

P1-co.308*

Wettability of Cu thin films depending on surface morphology and oxidation / NAM Kideuk[1], CHEON Miyeon[2], KIM Young-Hoon[3], OH Ju Hyun[1], PARK Sung Heum[1], KIM Young-Min[3], JEONG Se-Young[4], LEE Seunghun*[1] ([1]Department of Physics, Pukyong National University, [2]Crystal Bank Research Institute, Pusan National University, [3]Department of Energy Science, Sungkyunkwan University, [4]Department of Optics and Mechatronics Engineering, Pusan National University)

P1-co.309

Beating effect in Aharonov-Bohm oscillations in topological insulator / SONG Jong Hyun*[1], KWON Du Hyuk[1,2], BAE Myung-Ho[2], DOH Yong-Joo[3] ([1]Chungnam National University, [2]Electromagnetic Standard Group, KRISS, [3]Department of Physics and Photon Science, GIST)

P1-co.310

Characterization of a GaAs/AlGaAs heterojunction-based single-electron-transistor as a charge sensor / GHEE Young-Seok[1], KIM Bum-Kyu[1], PARK Suk-In[2], SONG Jindong[2], KIM Wan-Seop[1], BAE Myung-Ho[1], KIM NAM*[1] ([1]KRISS, [2]Center for Electronic Materails, KIST)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
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P1-co.401

Ab initio study of electronic structure of metal monochalcogenides GaX and janus GaXY (X, Y = S, Se, Te) / HONG SukLyun*[1], KIM Junghwan[1] ([1]Sejong University)

P1-co.402*

High mobility two-dimensional electron gas in $PbZr_{0.5}Ti_{0.5}O_3/BaSnO_3$ heterostructure / HWANG Jaejin[1], BYUN Jinho[1], LEE Jaekwang*[1] ([1]Department of Physics, Pusan National University)

P1-co.403

Circular dichroism in high-order harmonic generation: Heralding topological phases and transitions in Chern insulators / CHACON Alexis*[1,2,3], KIM Dasol[1,2], ZHU Wei[3], KELLY Shane Patrick[3,4], DAUPHIN Alexandre[5], PISANTY Emilio[5], MAXWELL Andrew S.[5,6], PIĆóN Antonio[5,7], CIAPPINA Marcelo F.[5,8], KIM Dong Eon[1,2], TICKNOR Christopher[3], SAXENA Avadh[3], LEWENSTEIN Maciej[5] ([1]MPC-AS, Max Planck Center for Attosecond Science, [2]Department of Physics, POSTECH, [3]Center for Nonlinear Studies and Theoretical Division, Los Alamos National Laboratory, [4]Department of Physics and Astronomy, University of California Riverside, [5]ICFO, The Barcelona Institute of Science and Technology, [6]Department of Physics and Astronomy, University College London, [7]Departamento de Qu ı mica, Universidad Autonoma de Madrid, [8]Institute of Physics of the ASCR, ELI-Beamlines project)

P1-co.404*

First-principles studies of doped SnO_2 for photocatalytic applications / JIN Yeongrok[1], LEE Jaekwang*[1] ([1]Department of Physics, Pusan National University)

P1-co.406*

Interface engineered TER optimization in HfO_2-based FTJ / LEE Jaekwang*[1], BYUN Jinho[1], LEE Joonbong[2], CHOI Taekjib[2] ([1]Department of Physics, Pusan National University, [2]Hybrid Materials Research Center and Department of Nanotechnology and Advanced Materials Engineering, Sejong University)

P1-co.407*

Strain induced topological phase transition of Si_2Bi_2 : First-Principles Study / JEONG Dameul[1], YOO Seungwoo[1], JEON Junyeop[1], LEE Seungjun[1], KWON Young-Kyun*[1] ([1]Department of Physics, Kyung Hee University)

P1-co.408

First-principles studies of Novel 2D Intrinsic Ferromagnetic Materials with High Curie Temperature / KANG Mingi[1], JIN Yeongrok[1], LEE Jaekwang*[1] ([1]Department of Physics, Pusan National University)

P1-co.409*

A Simulation Web Platform for Analyzing Electronic Structures of Semiconductors / KIM Sowon[1,2], KEMBAY Assel[1], LEE Jungho[3], JANG Semi[3], KIM Seungchul*[1] ([1]Computational Science Research Center, KIST, [2]Department of Chemistry, Hanyang University, [3]., Virtual Lab. Inc.)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
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P1-co.501*
Correlation between in situ structural and electrical characterization of the Metal-Insulator Transition (MIT) of VO_2/C-Al_2O_3 thin films during thermal cycling / KANG Hyon Chol*1, OH Ho Jun[2], HA Sung Soo[2], KWON Oh Young[2], CHOI Suk June[2], YUN Young Min[2], KANG Sae Hyun[2], LEE Su Yong[3] ([1]Department of Materials Science and Engineering, Chosun University, [2]1Department of Physics and Photon Science (DPH), GIST, [3]9C beamline, Pohang Accelerator Laboratory)

P1-co.502*
네마틱 액정을 이용한 Carbon Fiber의 양방향 제어에 관한 연구 / 이준용[1], 유정선[2], 김종현*1 ([1]Department of Physics, Chungnam National University, [2]Institute of Quantum Systems, Chungnam National University)

P1-co.503
Near-ultraviolet light induced red emission in Sm^{3+}-activated $NaYb(MoO_4)_2$ phosphors for solid-state illumination / ZHANG Angi[1], CHOI Byung Chun[1], PARK Sung Heum*1, JEONG Jung Hyun[1] ([1]Department of Physics, Pukyong National University)

P1-co.504
In-situ intramolecular synthesis of tubular carbon nitride S-scheme homojunctions with exceptional in-plane exciton splitting and mechanism insight / LIU Fengwu[1], KIM Junghwan[2], PARK Sung Heum*1 ([1]Department of Physics, Pukyong National University, [2]Department of materials system engineering, Pukyong National University)

P1-co.505
Electrocatalytic properties of polymorphic $BaRuO_3$ epitaxial thin films / LI Ying[1], KIM Ki Seok[1], EOM Tae Hwa[1], LEE Sang A*1, HWANG Jae-Yeol*1 ([1]Department of Physics, Pukyong National University)

P1-co.506
Calculation of the depth information of grains in poly-chromatic X-ray micro-diffraction of poly-crystals using two metal absorption filters / CHUNG Jin Seok*1, WI Sang Won[1] ([1]Department of Physics, Soongsil University)

P1-co.507*

Laser induced ultrafast structural evolution of bismuth selenide / SUNGWON Kim[1], YOUNGSAM Kim[2], KIM Jaeseung[1], CHOI Sungwook[1], YUN Kyuseok[1], KIM Dongjin[1], LIM Soo Yeon[1], KIM Sunan[3], CHUM Sae Hwan[3], PARK Jaeku[3], EOM Intae[3], KIM Kyung Sook[3], KOO Tae-Yeong[3], OU Yunbo[4], KATMIS Ferhat[4], CHEONG Hyonsik[1], SIM Eunji[2], MOODERA Jagadeesh[4], KIM Hyunjung*[1] ([1]Department of Physics, Sogang University, [2]Chemistry, Yonsei University, [3]XSS, Pohang Accelerator Laboratory, [4]Francis Bitter Magnet Laboratory, MIT)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
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P1-nu.001*
Proton decay of ^{23}Mg / KIM Chanhee*[1], CHAE Kyungyuk[1], CHA Soomi[1], KIM Minju[1], KWAG Minsik[1] ([1]Department of Physics, Sungkyunkwan University)

P1-nu.002
Dependence on annealing temperature of lifetimes in zircon / HONG Duk Geun*[1], LEE Su Hyeong[1], LEE Seung Woo[1] ([1]Department of Physics, Kangwon National University)

P1-nu.003*
Design study of quasi-mono energetic neutron source based on ^{9}Be(p,n) reaction using the GEANT4 / KIM Gui Nyun*[1], LEE Chang Hui[1] ([1]Department of Physics, Kyungpook National University)

P1-nu.004*
Luminescence Study of Eu^{2+}-doped Li_2O-$GdBr_3$-Al_2O_3-$CaCO_3$-P_2O_5 Glasses / SAHA Sudipta[1], KIM Hong Joo*[1], NTARISA Amos[1], QUANG Nguyen Duy[1] ([1]Department of Physics, Kyungpook National University)

P1-nu.005*
Internet of things upgrade and characterization of Raspberry Pi pulse counter board / JEONG Dongwoo[1], KIM Hong Joo*[1], PARK Hyeoungwoo[1], KHAN Arshad[1] ([1]Department of Physics, Kyungpook National University)

P1-nu.006*
Luminescence and scintillation properties on self-reduction of Yb^{3+} to Yb^{2+} in $LaCl_3$ crystal / WANTANA Nuanthip[1,2], VUONG Phan Quoc[3], QUANG Nguyen Duy[3], LUAN Nguyen Thanh[3], KAEWKHAO Jakrapong[1,2], KIM Hong Joo*[3] ([1]Physics Program, Faculty of Science and Technology, Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand, [2]Center of Excellence in Glass Technology and Materials Science (CEGM, Nakhon Pathom Rajabhat University, Nakhon Pathom, 73000, Thailand, [3]Department of Physics, Kyungpook National University)

P1-nu.007*
Performance of a prototype Active Target Time Projection Chamber / KIM Yongsun*[1], KIM Geunwoo[1] ([1]Sejong University)

P1-nu.008

Study of nuclear structure lying in the transition path between dynamic symmetries / LEE Su-youn*[1], LEE Young-jun[1] ([1]Division of Basic Sciences, Dong-Eui University)

P1-nu.009

Measurement of Relative Cross Section of $^{nat}W(p,xn)^{176}Re$ and $^{nat}W(p,xn)^{180}Re$ Reaction by 100-MeV Proton Accelerator / LEE Samyol*[1], YOON Jungran[2] ([1]Department of Radiological Science, Dongseo University, [2]Department of New Material Physics, Dong-A University)

P1-nu.010

Dirac analyses of proton scatterings from Sn isotopes / SHIM Sugie*[1], LIM Hoseong[1] ([1]Kongju National University)

P1-nu.011

Calculation using Monte Carlo simulations of the beam quality correction factor k_Q for relative positions of SOBP and ionization chamber / 권용철[1,2], JO Hyon-Suk*[1], 이세병*[2], 신욱근[3] ([1]Department of Physics, Kyungpook National University, [2]Proton Therapy Center, National Cancer Center, [3]Radiation Oncology, Seoul National University Hospital)

P1-nu.012

6인치 웨이퍼 양성자빔 조사를 위한 로드락 챔버시스템 개발 / KIM Kye-Ryung*[1], JUNG Won-Hyeok[1], KWON Hyeok-Jung[1], CHO Yong-Sub[1] ([1]Korea Multi-purpose Accelerator Complex, KAERI)

P1-nu.013

Development of EPICS-IOC for measuring magnetic field of pre-mass separator / MOON Jun Young*[1], LEE SuYeong[1,2], YIM HeeGoong[1], KIM JaeHong[1], SHIN Taeksu[1], LEE JinHo[1], LEE DongHoon[2] ([1]Rare isotope science project, IBS, [2]Electrical and Electronic Communication Engineering, Tongmyong University)

P1-nu.014

Encapsulation and Characterization of a 1.5-inch EJ-276 Plastic Scintillator for Neutron Detection / NGUYEN Duy Quang[1], KIM Hong Joo*[1], NTARISA Amos Vincent[1], KIM Jae Hyeok[1] ([1]Department of Physics, Kyungpook National University)

P1-nu.015

Fabrication and study of Ce^{3+} doped phosphate glass for alpha and gamma detection / NTARISA Amos Vincent[1], KIM Hong Joo*[1], SAHA Sudipta[1], ARYAL Pabitra[2], KHAN Arshad[1], QUANG Nguyen Duy[1], PANDEY Indra Raj[2], KAEWKHAO Jakrapong[3], KOTHAN Suchart[4] ([1]Department of Physics, Kyungpook National University, [2]Center for Underground Physics, CCES (IBS), [3]Center of Excellence in Glass Technology and Materials Science, Nakhon Pathom Rajabhat University, [4]Center of Radiation Research and Medical Imaging, Department of Radiologic Technology, Faculty of Associated Medical Sciences, Chiang Mai University)

P1-nu.016

Study the gamma and alpha pulse shape discrimination of intrinsic $Cs_3Cu_2I_5$ and $Cs_3Cu_2I_5$:Ag scintillation crystals / NGUYEN Luan Thanh[1], KIM Hong Joo*[1,2] ([1]Department of Physics, Kyungpook National University, [2]The Center for High Energy Physics, Kyungpook National University)

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P1-op.001
Large scale simulation of nanophotonics: performance analysis of parallelized Hybrid PSTD-FDTD method / PARK Q-Han*1, LEE DongGun[1], KIM Taehyung[1] ([1]Korea University)

P1-op.002*
인접 방법 최적화를 활용한 광대역 고효율 TE/TM 광편광 분배기 설계 / KIM Doyoung[2], GOUDARZI Kiyanoush[2], HAN Haewook*1,2 ([1]POSTECH, [2]Electrical and electric engineering, POSTECH)

P1-op.003*
Enhanced Raman scattering properties of plasma-synthesized gold nanoparticles loaded on filter paper / NGUYEN Linh Nhat[1], CHOI Eun Ha[1], LEE GeonJoon*1 ([1]Kwangwoon University)

P1-op.004
Reproducing a multimode Fano resonance line shape by imaging mode patterns in an acoustic cavity / AN Kyungwon*1, KIM Juman[1], FUKUSHIMA Takehiro[2] ([1]Department of Physics and Astronomy, Seoul National University, [2]Faculty Building of Computer Science and System Engineering, Okayama Prefectural Univeresity)

P1-op.005*
Deep-Tissue Super-Resolution Microscopy Using Closed-Loop Accumulation of Single-Scattering Algorithm / PARK Sanghyeon[1,2], CHOI Wonshik*1,2 ([1]Department of Physics, Korea University, [2]IBS CMSD, Korea University)

P1-op.006*
실리콘 전자렌즈의 라만 산란 특성 연구 / KIM Ho-seob*1,2,3, LEE GeonWoo[1,2], LEE Youngbok[1,2], BAEK Dong-Hyun[2] ([1]Physics and Nanoscience, Sun Moon University, [2]Center for Next-Generation Semiconductor Technology, Sun Moon University, [3]Display and Semiconductor Engineering, Sun Moon University)

P1-op.007
Non-destructive inspection of defects in XLPE insulation material using CW-THz imaging / 배민규*1, 조수빈[1], 이중욱[1] ([1]Department of Physics, Chonnam National University)

P1-op.008

Resonance characteristics of the THz transmission based on the combination effect of two different types of meta-structures / JO Subin*[1], BAE Mingyu[1], LEE Joongwook[1] ([1]Department of Physics, Chonnam National University)

P1-op.009

Quantitative Label-free Terahertz Sensing of Transdermal Nicotine Delivered to Human Skin / HAN Haewook*[1], MOON Youngil[1], LEE Gyuseok[1], LEE Haneol[1], KIM Doyoung[1] ([1]Department of Electrical Engineering, POSTECH, [2]POSTECH)

P1-op.010*

Photonic structure design with deep neural network / HAN Haewook*[1], KIM Sunwook[1], LEE Jonggen[1], KIM Nanhee[1] ([1]Department of Electrical Engineering, POSTECH, [2]POSTECH)

P1-op.011*

Phase retrieval algorithm for the wavefront reconstruction of a high-power laser beam / KWON Tae Yong[1], KIM Kyung Taec*[1,2] ([1]Department of Physics and Photon Science, GIST, [2]Center for Relativistic Laser Science, IBS)

P1-op.012

광섬유 격자 기반의 깊이 측정 방법 / LEE Seung Seok[1], KANG Hwi One[1], CHOI Eun Seo*[1] ([1]Department of Physics, Chosun University)

P1-op.013*

1018 nm 발진 고출력 Yb 광섬유 레이저 / PARK Hye Mi[1], OH Ye Jin[1], KIM Jin Pil[1], PARK Eun Ji[1], PARK Jong Seon[1,2], KIM Ji Won*[1], JEONG Hoon[2] ([1]Hanyang University ERICA, [2]Research Institute of Sustainable Manufacturing System, KITECH)

P1-op.014*

CW operation of Diode-Pumped Yb:KGW laser / PARK Byeong Jun[1], LEE Seong Yeon[1], SONG Ji Yeon[1], YEE Ki Ju*[1] ([1]Department of Physics, Chungnam National University)

P1-op.015

Three Dimensional Displacement Sensor using FBGs Embedded in the Two Cross Jointed Metal Ring / JEONG Soong Hyeon*[1] ([1]Research Institude, Alfa windows & door Co.,Ltd)

P1-op.016*

YIG를 이용한 양자 주파수 변환 효율 향상 방안 / KIM DongHwan[1], LEE Su-Yong[1], KIM Duk Y.[1], IHN Yong Sup[1], KIM Zaeill[1], JEONG Taek*[1] ([1]Quantum Physics Technology Directorate, Agency for Defense Development)

P1-op.017*

Nd:YAG 레이저 이득 모듈의 성능 평가를 위한 열 효과 및 증폭 효율의 정밀 측정 방법 / PARK DaeWoong[1], CHO Seryeyohan[1], HWANG Seungjin[2], JEONG Jihoon[3], YU Tae Jun[*1,2] ([1]Handong Global University, [2]R&D, Hil Lab. Inc., [3]R&D, SEMES Co. Ltd.)

P1-op.018

펄스형 레이저 다이오드를 이용한 노면 위의 얼음과 눈 기상 상태의 판별 / KIM Yong Gi[*1], LEE Kiwon[1], HONG SaYong[1] ([1]College of Natural Science, Kongju National University)

P1-op.019*

Autocorrelator to Measure Ultrashort Laser Pulse Width / SONG Ji Yeon[1], YEE Ki Ju[*1] ([1]Department of Physics, Chungnam National University)

P1-op.020

Neutron detection in security inspection system / PARK Jae Yeon[*1], MUN Jung Ho[1], LEE Jae Hyun[1], YEON Yoeng Heum[1], CHAE Moon Sik[1], LEE Nam Ho[1] ([1]Radiation Research Division, KAERI)

P1-op.021

Lightwave reflected from a plasma mirror / PARK Seong Cheol[1], KIM Yang Hwan[1], CHO Wosik[1], YUN Hyeok[2], KIM Kyung Taec[*1,2] ([1]Department of Physics and Photon Science, GIST, [2] Center for Relativistic Laser Science, IBS)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
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P1-pa.101*
The strategy to study CP violation with the $D^0 \to \pi^+\pi^-$ and $D^0 \to K^+K^-$ channels using the Belle II experiment / NA Ijeong[1], KIM Doris Yangsoo*[1] ([1]Department of Physics, Soongsil University)

P1-pa.102
Search for $B^0 \to \ell\tau$ decays at Belle experiment / KIM Kyungho[1], KWON Youngjoon*[1] ([1]Department of Physics, Yonsei University)

P1-pa.103
Search for $B^0 \to K_s K_s\gamma$ in the Belle II experiment / LEE Seungcheol[1], KANG Kookhyun[1], KIM Hongjoo[1], LI Jin[1], PARK Hwanbae*[1] ([1]Kyungpook National University)

P1-pa.104
Dark sector searches at Belle experiment / KIM Yongkyu[1], CHO Sungjin[1], KWON Youngjoon*[1] ([1]Department of Physics, Yonsei University)

P1-pa.105
Archiver System Management for Belle II Detector Operation / KWON Youngjoon*[1], CHO Sungjin[1] ([1]Department of Physics, Yonsei University)

P1-pa.106
Quality Control Procedure of New RPCs for Phase-2 upgrade of the CMS Muon System / JO Youngmin*[1], KANG Minho[1], LEE Kyong Sei[1] ([1]Department of Physics, Korea University)

P1-pa.107
New Facilities and Procedures for Construction of Detector Electrodes of Improved RPCs for Phase-2 CMS Muon System / KANG Minho*[1], JO Youngmin[1], LEE Kyong Sei[1] ([1]Department of Physics, Korea University)

P1-pa.108*
On Improving Top Quark Tagging using Convolutional Neural Network / OH Young Do*[1], SHIN Jin Yong[1], KIM Dong Hee[1] ([1]Kyungpook National University)

P1-pa.109*

Study of $WZ\gamma$ production in the fully leptonic final state at High-Luminosity LHC environment / YANG Yu Chul*[1], LEE Dong yub[1] ([1]Kyungpook National University)

P1-pa.110

Measurement of range using electron beams with new liquid scintillator based on alcohol / KIM Byoung Chan*[1,2], KIM Do Yeon[2], SONG Ye Sung[2], CHOI Ji Young[2], KIM Ye Ji[2], WOO Hee Jin[2], BAK Seon Young[2], CHOI Ji Won[2], JOO Kyoung Kwang[2] ([1]Department of Oncology, Chonnam National University Hwasun Hospital, [2]Department of Physics, Chonnam National University)

P1-pa.111

A study on color image analysis with liquid scintillators / JOO Kyung Kwang*[1], CHOI Ji Won[1], 우희진[1], 김병찬[1], 김예지[1], 김도연[1], 송예성[1], 박선영[1], 최지영[1] ([1]Department of Physics, Chonnam National University)

P1-pa.112

A simulation study of the Antiproton Trap for the GBAR experiment / LEE Byungchan*[1], YOO K. H.[2], KIM S. K.[1], KIM B. H.[3], PARK K. H.[1], WON D. H.[1], KIM E. S.[4], CHUNG M.[2], LIM E. H.[4] ([1]Department of Physics and Astronomy, Seoul National University, [2]Department of Physics, UNIST, [3]Center for Underground Physics, IBS, [4]Department of Accelerator Science, Korea University)

P1-pa.113*

The status of Antiproton trap for GBAR and electron beam measurements. / WON Donghwan[1], KIM S.K.[1], LEE Byungchan*[1], PARK K.H.[1], KIM B.H.[2], JANG S.C.[1], LEE H.B.[1], LIM E.H.[4], KIM E.S.[4], YOO K.H.[3], CHUNG M.S.[3] ([1]Department of Physics and Astronomy, Seoul National University, [2]Center for Underground Physic, IBS, [3]Department of Physics, UNIST, [4]가속기과학과, Korea University)

P1-pa.114

Updated measurement of the cosmic ray induced background at the JSNS^2 experiment. / JEON Hyoungku*[1], ROTT Carstem[1], KIM S.B[1], YU I.T[1], JEON S.H[1], JUNG D.E[1], ROELLINGHOFF Gerrit[1], KIM J.Y[2], JOO K.K[2], MOON D.H[2], SHIN C.D[2], LIM I.T[2], PARK R.G[2], PAC M.Y[3], CHOI J.H[3], YEO I.S[3], JANG J.S[4], KIM E.J[5], GOH J.H[6], KIM W.Y[7], JANG H.I[8], KANG S.K[9], CHEON M.K[7] ([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]Division of Science Education, Jeonbuk National University, [6]Department of Physics, Kyung Hee University, [7]Department of Physics, Kyungpook National University, [8]Department of Fire Safety, Seoyeong Univsersity, [9]School of Liberal Arts, Seoul National University of Science and Technology, [10]Department of Physics, Soongsil University)

P1-pa.115

Beam induced gamma background at the JSNS^2 / JUNG Da Eun*[1], YU I.[1], ROTT C.[1], JEON S.[1], JEON H.[1], ROELLINGHOFF G.[1], CHOI J.W.[2], JANG M.C.[2], JOO K.K.[2], KIM J.Y.[2], LIM I.T.[2], MOON D.H.[2], PARK R.G.[2], SHIN C.D.[2], ZOHAIB A.[2], CHOI J.H.[3], PAC M.Y.[3], YEO I.S.[3], JANG J.S.[4], KIM E.J.[5], LEE D.H.[6], GOH J.[7], LEE S.[7], YOO C.[7], KIM W.[8], JANG H.I.[9], KANG S.K.[10], CHEOUN M.K.[11] ([1]Department of Physics, Sungkyunkwan University, [2]Department of Physics, Chonnam National University, [3]Department of Radiology, Dongshin University, [4]Department of Physics, GIST, [5]Division of Science Education, Jeonbuk National University, [6]., High Energy Accelerator Research Organization, KEK, [7]Department of Physics, Kyung Hee University, [8]Department of Physics, Kyungpook National University, [9]Department of Physics, Seoyeong Univsersity, [10]School of Liberal Arts, Seoul National University of Science and Technology, [11]Department of Physics, Soongsil University)

P1-pa.116*

$e^+e^- \rightarrow \mu^+\mu^- A'$ with $A' \rightarrow \mu^+\mu^-$ / PARK Kihong[1], CHO Kihyeon*[1] ([1]UST, KISTI)

P1-pa.117*

Fast simulation for Dual-Readout calorimeter using GAN / PARK Inkyu*[1], LEE Sehwoook[2], KIM Bobae[2], LEE Junghyun[2], KO Sanghyun[4], LEE Jason Sang Hun[1], RYU Minsang[1], WATSON Ian James[1], LEE Yunjae[1], KIM Doyeong[1], YOO Hwidong[3], HA Seungkyu[3], KIM Minsoo[3], HWANG Kyuyeong[3], EO Yun[3], KIM Sungwon[3] ([1]University of Seoul, [2]Department of Physics, Kyungpook National University, [3]Department of Physics, Yonsei University, [4]Department of Physics, Seoul National University)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
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P1-pa.201
Pulse shape discrimination analysis with COSINE-100 / JU Han wool*1, LEE Hyunsu2, KIM Kyungwon2 (1Department of Physics and astronomy, Seoul National University, 2Center for Underground Physics, IBS)

P1-pa.202*
Background modeling for 4-years COSINE-100 data / YU Gyunho*1 (1Department of Physics, Sungkyunkwan University)

P1-pa.203
Further lowering the COSINE-100 energy threshold to 0.5 keV using ^{22}Na calibration data / NEAL Robert John*1 (1Centre for Underground Physics, IBS)

P1-pa.204*
^{232}Th components alpha measurement of COSINE-100 / LEE Hyunseok*1 (1Basic Science, UST)

P1-pa.205
Low temperature scintillation measurement of Czochrlaski grown pure NaI crystal / PARK Sedong1, KHAN Arshad1, KIM Hong Joo*1 (1Department of Physics, Kyungpook National University)

P1-pa.206*
Weighted K-mean clustering for localization of positronium annihilation / KIM Hong Joo*1, JEGAL Jin1, PARK Hyeoung Woo1, JEONG Dong Woo1 (1Department of Physics, Kyungpook National University)

P1-pa.207*
Glass-Metal sealing for the development of SiPMT / KIM Hong Joo*1, LEE Jik1, NASIR Hamza1, ANJUM Faizan1 (1Department of Physics, Kyungpook National University)

P1-pa.208
Metal Photocathode fabrication and photocurrent measurement of SiPMT demonstrator / ANJUM Faizan1, NASIR Hamza1, LEE Jik1, KIM Hong Joo*1 (1Department of Physics, Kyungpook National University)

P1-pa.209
Monte Carlo simulations of scintillation photons for a SiPMT detector prototype for KNO / 정제경[1], JO Hyon-Suk*[1], KIM Hong Joo[1], LEE Jik[1] ([1]Department of Physics, Kyungpook National University)

P1-pa.210
Characterization of bi-alkali and MCP Photomultiplier Tube / KIM Geon Woo[1], KIM Hong Joo*[1], LEE Jik[1] ([1]Department of Physics, Kyungpook National University)

P1-pa.211*
Neutrino Event Reconstruction in the KNO Detector / YU Seonghyeon*[1], YU Intae[1], KWON Eunhyang[1], SEO Jiwoong[1], HONG Jaejin[1], KIM Hyunsoo[2], JANG Jeeseung[3], LEE Youngmin[4], SHIN Bokkyun[5] ([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)

P1-pa.212*
Reconstruction of low energy electron in the KNO detector / HONG JaeJin*[1], SEO JiWoong[1], YU SeongHyeon[1], KWON EunHyang[1], YU InTae[1], KIM HyunSoo[2], JANG JeeSeung[3], LEE YoungMin[4], SHIN BokKyun[5] ([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)

P1-pa.213
Image processing analysis for machine learning applications in particle experiments / CHOI Ji Young[1], 김도연[1], 김병찬[1], 김예지[1], 송예성[1], 우희진[1], 최지원[1], JOO Kyung Kwang*[1] ([1]Department of Physics, Chonnam National University)

P1-pa.214*
Development of water-based liquid scintillators based on hydrophile-lipophile balance index / JOO Kyung Kwang*[1], WOO Heejin[1], 최지영[1], 김병찬[1], 최지원[1], 김예지[1], 김도연[1], 송예성[1], 박선영[1] ([1]Department of Physics, Chonnam National University)

P1-pa.215
A Camera System for the calibration of the IceCube Upgrade. / CHRISTOPH Toennis*[1], CARSTEN Rott[1], KANG Woosik[1], ROELLINGHOFF Gerrit[1], LEE Jiwoong[1] ([1]Department of Physics, Sungkyunkwan University)

P1-pa.216
Understanding of Gaussian Shape Noise for the NEON experiment / CHOI Jaejin*[1] ([1]Department of Physics and Astronomy, Seoul National University)

P1-pa.217
Update of photon simulation for AMoRE-Pilot experiment / MAILYAN Bagrat*[1], JEON Eunju[1] ([1]Center for Ungerground Physics, IBS)

P1-pa.218
^{210}Pb background simulation from lead shield for AMoRE-II / SEO Jeewon[1], JEON Eun Ju*[2], LEE Moo Hyun[2,1] ([1]IBS school, University of Science and Technology, [2]Center for Underground Physics, IBS)

P1-pa.219*
Low-energy background study for AMoRE-Pilot / JEON Eun Ju*[1], SARI Mona Berlian[1,2], KIM HongJoo[3], DJAMAL Mitra[2] ([1]Center for Underground Physics, IBS, [2]Department of Physics, Bandung Institute of Technology, [3]Department of Physics, Kyungpook National University)

P1-pa.220
PSD study using rise times of the heat signals / WOO Kyungrae*[1,2], LIM HoSeong[2,3] ([1]IBS, UST, [2]Center for Underground Physics, IBS, [3]Department of Physics, Kongju National University)

P1-pa.221
Scintillation decay time study from AMoRE-I signals of CMOs and LMOs / WOO Kyungrae*[1,2] ([1]IBS, UST, [2]Center for Underground Physics, IBS)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
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P1-pl.101

Modeling a numerical dispersion free in the longitudinal direction for PIC / CHO Myung Hoon*[1], KIM Minseok[1], NAM Inhyuk[1] ([1]Pohang Accelerator Laboratory)

P1-pl.102*

Non-equilibrium clustering and droplet formation in supercritical fluids and their effects on the laser-produced plasmas / LEE Juho[1], LEE Seungtaek[1], KIM Dong Eon[1,3], YUN GUNSU*[1,2] ([1]Department of Physics, POSTECH, [2]Division of Advanced Nuclear Engineering, POSTECH, [3]Max Planck POSTECH/KOREA research Initiative, Max Planck Center for Attosecond Science)

P1-pl.103*

Development and characterization of 1 TW Ti:sapphire laser amplifier for THz-wave generation. / PHUNG Vanessa Ling Jen[1], JEON Seongjin[1], KANG Keekon[1], ROH Kyungmin[1], KIM Jinju[1], SUK Hyyong*[1] ([1]Department of Physics and Photon Science, GIST)

P1-pl.104*

K-shell emission spectroscopy of Si nanowire array plasmas / CHO Byoung Ick*[1,2], SOHN Janghyeob[1], KANG Gyeongbo[1,2], LEE Gyusang[1,2], LEE Chang Hoo[1], CHO Min Sang[1] ([1]GIST, [2]Center for Relativistic Laser Science, IBS)

P1-pl.105

Laser induced plasma in a helium gas flow at atmospheric pressure / TRAN Tuyen Ngoc[1], LEE Wonwook[1,2], OH Cha-Hwan*[1] ([1]Hanyang University, [2]Research Institute of Natural Sciences, Hanyang University)

P1-pl.107

Electromagnetic-Mechanical Coupled Analysis of Half-Wave Resonator for KOMAC Proton Linac / DANG Jeongjeung*[1], KWON Hyeok-Jung[1], KIM Han-Sung[1], LEE Seung-hyun[1], CHO Yong-Sub[1] ([1]KAERI)

P1-pl.108

Preliminary optimization study of superconducting linac for KOMAC proton linac energy upgrade to 1 GeV / LEE Seunghyun*[1], KWON Hyeok-Jung[1], DANG Jeong-Jeung[1], KIM Han-Sung[1], CHO Yong-Sub[1] ([1]KOMAC, KAERI)

P1-pl.109
1 MeV/n 고주파 사중극의 저출력 고주파 특성 시험 / KIM Han Sung*[1], KWON Hyeok-Jung[1], DANG Jeong-Jeung[1], KIM Kyung-Hyun[1], JUNG Won-Hyeok[1], KIM Dong-Hwan[1], CHO Yong-Sub[1] ([1]KOMAC, KAERI)

P1-pl.110
KOMAC 양성자가속기의 200 MeV 에너지 업그레이드를 위한 고주파 증폭기 운전값 분석 / KWON Hyeok-Jung*[1], KIM Han-Sung[1], JEONG Hae-Sung[1], DANG Jeong-Jeung[1], LEE Seunghyun[1], CHO Yong-Sub[1] ([1]KOMAC, KAERI)

P1-pl.111
핵융합 재료 표면 분석을 위한 KAHIF 기반 이온빔 분석의 타당성 기초연구 / CHO Yong-Sub*[1], HUH SungRyul[1], CHANG Dae-Sik[1], KIM Kye-Ryung[2], LEE Dong Won[1] ([1]Nuclear Physics Application Research Division, KAERI, [2]KOMAC, KAERI)

P1-pl.112
beta = 0.3 부근에서 HWR과 SSR의 공학적 관점에서의 비교 / CHO Yong-Sub*[1] ([1]Nuclear Physics Application Research Division, KAERI)

P1-pl.113
SASE FEL intensity enhancement by considering impact of self-seeding section on the micro-bunching in the electron beam / SHIM Chi Hyun*[1] ([1]Accelerator Control Team, Pohang Accelerator Laboratory)

P1-pl.114
Design study for the re-buncher system of KoBRA experimental facility / LEE Yumi[1], KIM Eun San*[1], JANG Siwon[1], BAHNG Jungbae[1], JIN Hyunchang[2], JANG Ji-Ho[2], SHIN Taeksu[2] ([1]Department of Accelerator Science, Korea University, [2]Rare Isotope Science Project, IBS)

P1-pl.115*
Optical emission spectroscopic analysis of plasma properties in the 2.45 GHz microwave ion source for the KOMAC / KIM Dong-Hwan[1,2], DANG Jeong-Jeung[1], KWON Hyeok-Jung*[1], KIM Han-Sung[1], CHOE Kyu-Min[1], KIM Dae-Il[1], JUNG Won-Hyeok[1], CHUNG Kyuong-Jae[2], HWANG Yong-Seok[2] ([1]KOMAC, KAERI, [2]Department of Nuclear Engineering, Seoul National University)

P1-pl.116
A brief overview of accelerator-driven neutron sources, and the applications of neutron instruments / LEE Pilsoo*[1] ([1]Korea Multi-purpose Accelerator Complex, KAERI)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
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P1-pl.201

Shearing rate of ExB vortex flow in a magnetic island / HAHM Taik Soo*[1], KIM Yong Jik[1], DIAMOND Patrick[2], CHOI Gyung Jin[3] ([1]Seoul National University, [2]Center for Astrophysics and Space Sciences, UCSD, [3]Department of Physics and Astronomy, UC Irvine)

P1-pl.202*

Analysis of divertor heat load in large-scale Tokamaks / RA Ookjoo[1], KWON Kyu Been[1], HUR Min Sup*[1] ([1]Department of Physics, UNIST)

P1-pl.203*

Automated postprocessing and distribution of big image data on the KSTAR tokamak / KIM Dong Kwon[1], LEE Jieun[1], CHOI Minjun Jung[2], LEE Jaehyun[3], YUN Sangwon[4], YUN GUNSU*[1] ([1]Department of Physics, POSTECH, [2]MHD Stability Research Team, KFE, [3]Pedestal Stability Research Team, KFE, [4]KSTAR Control Team, KFE)

P1-pl.204*

Impact of Nitrogen seeding location in KSTAR PFC upgrade / KWON KyuBeen[1], LEE Hyung Ho[2], RA Ookjoo[1], HUR Min Sup*[1] ([1]Department of Physics, UNIST, [2]Pedestal Stability Research Team, KFE)

P1-pl.205*

Implementation and Simulation of NTM Stabilizing EC mirror Controller Via Minimum Seeking Method for Island Width Growth Rate / CHA MinSoo[1], WOO Minho[2], HAHN Sanghee[2], NA Yong Su*[1] ([1]Nuclear Engineering, Seoul National University, [2]KSTAR research center, Korea Institute of Fusion Energy)

P1-pl.206*

Inference of spatially continuous kinetic profiles with Gaussian processes and neural networks in KSTAR / KIM Minseok[1], JOUNG Semin[1], KO W.H.[2], LEE J.H.[2], GHIM Young Chul*[1] ([1]KAIST, [2]Korea Institute of Fusion Energy, KFE)

P1-pl.207

Plasma wave diagnostic system based on the modulation of electron cyclotron emission in KSTAR plasma / KIM Minho[2], KIM Jayhyun[3], LEE Jaehyun[4], THATIPAMULA Shekar Goud[2], YUN GUNSU*[1,2] ([1]Department of Physics, POSTECH, [2]Division of Advanced Nuclear Engineering, POSTECH, [3]MHD Stability Research Team, KFE, [4]Pedestal Stability Research Team, KFE)

P1-pl.208

Measurement of Deuterium Transport Parameters in Hastelloy and SS316LN / NOH Seung Jeong*[1,2], SEO H. J.[1,2], KIM H. S.[2], BYEON W. J.[3], CHUNG Bo-Hyun[4] ([1]Department of Physics, Dankook University, [2]Applied Physics, Dankook University, [3]Center for Scientific Instrumentation, Korea Basic Science Institute, [4]Physico-Technology Laboratory, Korea Accelerator and Plasma Research Association)

P1-pl.209*

Visualization of Core Magnetohydrodynamic-Instability Structures in Versatile Experiment Spherical Tokamak / HWANG Yong Seok*[1], JUNG Eui Chan[1], KIM Seongcheol[1], JEONG Won Ik[1] ([1]Seoul National University)

P1-pl.211

Nonlinear dynamics of charged particles in a uniform magnetic field / KANG Teyoun[1], HUR Min Sup*[1] ([1]Department of Physics, UNIST)

P1-pl.212

New concept of MHD accelerator by using a microwave source / LEE Kiyong*[1], JANG Soo-ouk[1] ([1]Fundamental Technology Research Division, KFE)

P1-pl.213*

Observation and characteristics of kink instability of flux ropes in Versatile Experiment Spherical Torus (VEST) / HWANG Yong Seok*[1], PARK Jong Yoon[1], JUNG EC[1] ([1]Seoul National University)

P1-pl.214

저온 플라즈마 광진단을 위한 알곤, 헬륨 충돌복사 모델 개발 / CHAI Kil-Byoung*[1], KWON Duck-Hee[1], LEE Minkyu[1] ([1]Nuclear Physic Engineering Research Division, KAERI)

P1-pl.215

Zernike polynomial을 이용한 스펙트럼 보정법 / LEE Minkyu*[1], CHAI Kil-Byoung[1], KWON Duck-Hee[1] ([1]Nuclear Physics Application Research Division, KAERI)

P1-pl.216

전극 구조 변화에 따른 용량성 결합 플라즈마 특성의 유체 시뮬레이션과 Particle-in-Cell 시뮬레이션 비교 / KIM Hwan Ho[1], KIM Chang Ho[1], SHIN Ji Hyun[1], LEE Hae June*[1] ([1]Pusan National University)

P1-pl.217

Effect of a target on helium atmospheric pressure plasma jet / TRAN Tuyen Ngoc[1], KIM Bumsoo[1], LEE Wonwook[1,2], OH Cha-Hwan*[1] ([1]Hanyang University, [2]Research Institute of Natural Sciences, Hanyang University)

P1-pl.218

Measurement of the chromium ion beam current and charge distribution with the MEVVA ion source / LEE Seung Ho[1,3], CHO Yong-Sub[2,3], KIM Han Sung[1,3], KWON Hyeok-Jung*[1,3] ([1]Accelerator Development and Operation Division, KOMAC, KAERI, [2]Nuclear Physics Application Research Division , KAERI, [3]Department of Accelerator and Nuclear Fusion physics engineering, UST)

P1-pl.219

디버터 모사장치에 대한 PIC code와 ERO code를 사용한 표면 반응 예측 / PARK Heesung[2], CHAI Kil-Byoung[3], KWON Duck-Hee[3], LEE Hae June*[2], HUR Min Sup*[4] ([1]Pusan National University, [2]Department of Electrical Engineering, Pusan National University, [3]Nuclear Data Center, KAERI, [4]Department of Physics, UNIST)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-se.101
육방정 $Cd_{0.98}Mn_{0.02}S$ 단결정 박막의 결정구조와 광학적 특성 / LEE Jongwon*2, KIM Daejung1
(1School of Basic Sciences, Hanbat National University, 2Department of New Materials Engineering, Hanbat National University)

P1-se.102*
육각형 마이크로 바늘 모양 Si의 성장과 특성 / PARK Jung Hyun1, AHN Hyung Soo*1, LEE Gang Seok1,2, KIM Kyung Hwa1,2, LEE Jae Hak1, CHUN Young Tea1, YANG Min1, YI Sam Nyung1, KIM Suck-Whan3, LEE Won-Jae4 (1Electronic Materials Engineering, Korea Maritime and Ocean University, 2Compound Semiconductor Education Center, Korea Maritime and Ocean University, 3Department of Physics, Andong National University, 4Division of Advanced Materials Engineering, Dong-Eui University)

P1-se.103
HVPE Al(N) 나노구조 Seed에 의한 Si micro 결정의 성장 및 특성 / LEE Gang Seok1,2, KIM Kyung Hwa1,2, PARK Jung Hyun1, AHN Hyung Soo*1, LEE Jae Hak1, CHUN Young Tea1, YANG Min1, YI Sam Nyung1, KIM Suck-Whan3, LEE Won-Jae4 (1Electronic Materials Engineering, Korea Maritime and Ocean University, 2Compound Semiconductor Education Center, Korea Maritime and Ocean University, 3Department of Physics, Andong National University, 4Division of Advanced Materials Engineering, Dong-Eui University)

P1-se.104
Atomic and electronic structure of acetonitrile molecules on Si(111)-(7x7) / HONG SukLyun*1, PARK Jinwoo1 (1Sejong University)

P1-se.105*
Temperature gradient modulation of $MoTe_2$ for Phase and composition engineering via van der Waals encapsulation / RYU Huije1, LEE Yunah1, JUNG Jae Hwan2, LEE Yangjin3, CHEON Yeryun4, WATANABE Kenji5, TANIGUCHI Takashi6, KIM Kwanpyo3, CHEONG Hyeonsik4, LEE Gwan-Hyoung*1 (1Department of Materials Science and Engineering, Seoul National University, 2Department of Materials Science and Engineering, Yonsei University, 3Department of Physics, Yonsei University, 4Department of Physics, Sogang University, 5Research Center for Functional Materials, National Institute for Materials Science, 6International Center for Materials Nanoarchitectonics, National Institute for Materials Science)

P1-se.106

디지털 합금 InGaAlAs 다중 양자 우물의 열처리 온도에 따른 광학적 특성 연구 / KIM Jong Su*[1], PARK Gyoung Du[1], JO Hyun Jun[1], RYU Mee Yi[2], SONG Jin Dong[3] ([1]Yeungnam University, [2]Department of Physics, Kangwon National University, [3]Center for Opto-Electronic Materials and Devices, KIST)

P1-se.107

Characterization of GaN epilayers grown by MOCVD for vertical power device application / AHN Chang Wan[1], BONG Chung-Jong[1], BAE Sung-Bum[2], KIM Eun Kyu*[1] ([1]Department of Physics, Hanyang University, [2]RF/전력부품연구실, ETRI)

P1-se.108

장벽형 InGaAsSb/GaSb 이중대역 적외선 검출기의 시분해 광전류 특성 평가 / KIM Jong Su*[1], KWAK Minsoo[1], JO Hyun-Jun[1], LEE SANG JUN[2], KIM Yeungho[2] ([1]Yeungnam University, [2]smart device team, KRISS)

P1-se.109

MOCVD를 이용한 금속 기판 위의 Ga_2O_3 박막 성장 및 수직형 다이오드 특성 / YANG MIN*[1], AHN NamJun[1], LEE JUNG BOK[1], KIM SO YOON[1], AHN Hyung Soo[1], KIM Kyoung Hwa[1], BANG Hyo Jin[1] ([1]Korea Maritime and Ocean University)

P1-se.110*

Sensing mechanical responses of the tens of water molecules / KIM Hyensu[1], AN Sangmin*[1] ([1]Department of Physics, Institute of Photonics and Information Technology, Jeonbuk National University)

P1-se.111*

Exciton-polariton trapping in a locally strained transition metal dichalcogenides layer / UHEON Choi[1], SU-HYUN Gong*[1], JUNG-HYUN Sung[1] ([1]Department of Physics, Korea University)

P1-se.112*

cubic ZnP_2 나노선의 성장 / OH Suenghwan[1], KIM Yong*[1] ([1]Dong-A University)

P1-se.114*

Population dynamics of excitons and biexcitons in a 2D halide perovskite single crystal / NAM Seohyun[1], YANG Jae hyun[2], YI Yeon jin[2], JANG Joon Ik*[1] ([1]Department of Physics, Sogang University, [2]Department of Physics, Yonsei University)

P1-se.115*

Gate-Tunable Different Types of Diodes and Current Fluctuation in BP/ReS_2 Broken-Gap Heterojunction / JOO Min-Kyu*[1], SEO Youkyung[1], LEE Byung Chul[2] ([1]Department of Applied Physics, Sookmyung Women's University, [2]School of Electrical Engineering, Korea University)

P1-se.116

MAPbCl$_{3-x}$ Br$_x$ 결정에서 할로겐 원소 비에 따른 Rashba-Polaron 효과 / KIM Yongmin*[1], JEONG Moon Seok[2], PARK Daeyoung[2], SHIN Yong Ho[1] ([1]Department of Physics, Dankook University, [2]Department of Physics, Hanyang University)

P1-se.117

MOCVD 방법에 의해 형성된 Ga_2O_3/SiC 박막의 결정성 및 다이오드 특성 / YANG MIN*[1], KIM SO YOON[1], LEE JUNG BOK[1], AN NAM JUN[1], AHN Hyung Soo[1], KIM Kyoung Hwa[1] ([1]Korea Maritime and Ocean University)

P1-se.118*

Raman study of two-dimensional MoS_2 under uniaxial tensile stress / KIM Young Chan[1], LEE Taegeon[1], RHO Heesuk*[1] ([1]Department of Physics, Jeonbuk National University)

P1-se.119

MOCVD를 이용한 Si 기판 위의 β-Ga2O3 나노 와이어 성장과 다이오드 특성 / YANG MIN*[1], LEE JUNGBOK[1], KIM SOYOON[1], AHN NAMJUN[1], AHN HYUNGSOO[1], KIM KYUNGHWA[1] ([1]Korea Maritime and Ocean University)

P1-se.120*

Facile synthesis of white light emission Cu, Mn co-doped ZnSe/ZnS core-shell quantum dots / KIM Ju Seok[1], KIM Sung Hun[1], LEE Hong Seok*[1] ([1]Department of Physics, Jeonbuk National University)

P1-se.121*

Selective area wavelength tuning of CdSe nanocrystals via laser irradiation/ KIM Yong Bin[1,2], KIM Sung Hun[1], YIM Sang-Youp[2], LEE Hong Seok*[1] ([1]Department of Physics, Jeonbuk National University, [2]Advanced Photonics Research Institute, GIST)

P1-se.122*

Effect of reaction parameters on optical properties of $CsPbBr_3$ Nanocrystals / KIM Sung Hun[1], LEE Hong Seok*[1] ([1]Department of Physics, Jeonbuk National University)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-se.201*

Ag가 증착된 crater 구조 내에서의 증가된 표면 플라즈몬 분석 / RYU Jae-Hoon[1], KIM Sung-Hyun[1], KIM Han-Sol[1], BYEON Jae Yeop[1], LEE Ha Young[1], CHUN Young Tea[1], AHN Hyung Soo[1], HA Dong Han[2], YI Sam Nyung*[1] ([1]Korea Maritime and Ocean University, [2]Materials and Convergence Measurement Institute, KRISS)

P1-se.202

PbS 양자점을 이용한 다중색상 근적외선 photodiode / 장세환[1,3], 김지훈[2], 박홍규[3], 송진동*[1] ([1]Center for Opto-Electronic Convergence Systems, Korea Institute of Science and Technology, [2]Quantum-Functional Semiconductor Research Center, Donguk University, [3]Department of Physics, Korea University)

P1-se.203*

Molecular-Dipole-assisted Fermi-level Engineering of vdW Schottky Junctions for 2D Semiconductor Photovoltaics / YANG Seunghoon[1], SHIN Jaeho[1], LEE Jaeho[1], EO Jung Sun[1], WANG Gunuk[1,2], LEE Chul-Ho*[1,2] ([1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Department of Integrative Energy Engineering, Korea University)

P1-se.204*

물과 열에 안정성을 가지는 친환경 할라이드 페로브스카이트 신틸레이터 / IM Hyun Sik*[1], KIM Hyunsang[1], NOH Samkyu[1], JO Yongcheol[1], CHO Sangeun[1], HAN Jonghoon[1], PARK Sunjung[1], SHIN Giho[1], YEON Seungun[1] ([1]Dongguk University)

P1-se.205*

하이브리드 슈퍼커패시터용 증기성장 탄소섬유와 통합된 망간 코발트 산화물 나노입자의 합성 / MANCHI Nagaraju[2], S. Chandra Sekhar[1], BHIMANABOINA Ramulu[2], S. Junied Arbaz[2], YU Jae Su*[1,2] ([1]Department of Electronic Engineering, Kyung Hee University, [2]Department of Electronics and Information Convergence Engineering, Kyung Hee University)

P1-se.206

MoS_2 Quantum Dots based Colorimetric Biosensor for Detection of Lactobacillus Bacteria / BYEON Clare Chisu*[1], ALI Luqman[2], BOBY Naila[3], PARK Seung Chun[3], LEE Yong Joong[1] ([1]School of Mechanical Engineering, Kyungpook National University, [2]Department of Mechanical Engineering, Kyungpook National University, [3]Department of Veterinary Medicine, Kyungpook National University)

P1-se.207*

MAPbI$_3$ solar cell fabrication using anti-solvent dropping time depending on ambient temperature / YANG JungYup[*1], SIN Jaegwan[1], KIM Gisung[1], KIM MoonHoe[1], KIM Mijoung[1], PARK Geon[1], JANG Hyoseong[1], KIM Jaeho[1], KIM Mina[1], OH Juyoung[1] ([1]Department of Physics, Kunsan National University)

P1-se.208*

할라이드 페로브스카이트 기반 폴리머 신틸레이터 필름 제작 / IM Hyun Sik[*1], PARK Sun jung[1], KIM Hyung sang[1], NO Sam kyu[1], CHO Sang eun[1], HAN Jong hoon[1], HONG Seong su[1], YEON Seung un[1], JO Yong cheol[1] ([1]Dongguk University)

P1-se.209*

할라이드 페로브스카이트 기반의 고성능 플렉시블 신틸레이터 제작 / IM Hyun Sik[*1], SHIN Giho[1], HAN Jonghoon[1], JO Yongcheol[1], CHO Sangeun[1], HONG Seongsoo[1], PARK Sunjung[1], YEON Seungun[1], NOH Samkyu[1], KIM Hyungsang[1] ([1]Dongguk University)

P1-se.210*

Solar blind UV detector with Lead free $Cs_3Cu_2I_5$ nanocrystal as a wavelength converter / IM Hyun Sik[*1], HAN Jonghoon[1], JO Yongcheol[1], CHO Sangeun[1], HONG Seongsoo[1], PARK Sunjung[1], YEON Seungun[1], SHIN Giho[1], NOH Samkyu[1], KIM Hyunsang[1] ([1]Dongguk University)

P1-se.211

Interlayer interaction in MoO_3/graphene heterostructure grown by van der Waals epitaxy / KIM Hangyel[1], KIM Jong Hun[5], KIM Jungcheol[6], PARK Kwanghee[7], BAEK Ji-Hwan[1], SHIN June-Chul[1], RYU Sunmin[7], CHEONG Hyeonsik[6], LEE Gwan-Hyoung[*1,2,3,4] ([1]Department of Materials Science and Engineering, Seoul National University, [2]Research Institute of Advanced Materials, Seoul National University, [3]Institute of Engineering Research, Seoul National University, [4]Institute of Applied Physics, Seoul National University, [5]Department of Materials Science and Engineering, Yonsei University, [6]Department of Phyiscs, Sogang University, [7]Department of Chemistry, POSTECH)

P1-se.212

The electronic properties of the magnetic quantum ring in bilayer graphene / DAEHAN Park[1], HSKIM Kim[1], NAMMEE Kim[*1] ([1]Department of Physics, Soongsil University)

P1-se.213

N- to p-type conversion of the MoS_2 surface using He ion sputtering / HAN Sang Wook[*1], YUN Won Seok[2], KIM D.-H.[3], KIM Hyesun[4], RYU S.[4] ([1]Basic science research institute, University of Ulsan, [2]Convergence Research Institute, DGIST, [3]Beamline Research Division, Pohang Accelerator Laboratory, [4]Department of Chemistry, POSTECH)

P1-se.214*

Effects of Oxygen plasma treatments on the MoS_2-based device / LEE Jeongwoo[1], YANG Woochul*[1] ([1]Department of Physics, Dongguk University)

P1-se.215*

Efficient Photo Electrochemical Water Splitting using Dibenzo[b,f][1,5] diazocines/ ZnO Organic/inorganic hybrid Photoelectrodes / SISSEMBAYEVA Yana[1], CHO Soo Kyung[1], HWANG Yoon Hwae*[1] ([1]Department of Nanoenergy Engineering, Pusan National University)

P1-se.216*

Role of Interface Reaction on Resistive-Switching of Al_2O_3/AZO Bi-layer. / SEO Sunae*[1], SONG Hyeon-kyo[1], LEE Myoung-Jae[2], KIM Taekwang[1], DU Hyewon[1], KIM Seonyeong[1] ([1]Department of Physics, Sejong University, [2]Division of Nanotechnology, DGIST)

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Si 마이크로 바늘의 가시광 발광 특성 / LEE Gang Seok[1,2], PARK Jung Hyun[1], KIM Kyung Hwa[1,2], AHN Hyung Soo*[1], LEE Jae Hak[1], CHUN Young Tea[1], YANG Min[1], YI Sam Nyung[1], KIM Suck-Whan[3], LEE Won-Jae[4] ([1]Electronic Materials Engineering, Korea Maritime and Ocean University, [2]Compound Semiconductor Education Center, Korea Maritime and Ocean University, [3]Department of Physics, Andong National University, [4]Division of Advanced Materials Engineering, Dong-Eui University)

P1-se.218

올-이차원 그래핀/MoS_2/그래핀의 수직 이종접합 반투명 유연 광검출소자 / 이원준[1], 고정선[1], 장찬욱[1], 김성[2], 신동희[3], CHOI Suk-Ho*[1] ([1]Department of Applied Physics, Kyung Hee University, [2]Humanitas College, Kyung Hee University, [3]Department of Physics, Andong National University)

P1-se.219

2D/3D 페로브스카이트 이종접합 구조의 압전 및 광압전 효과(piezo-electric and -phototronic effects) 특성 연구 / 장찬욱[1], 이원준[1], 김재국[1], 김성[2], 신동희[3], CHOI Suk-Ho*[1] ([1]Department of Applied Physics, Kyung Hee University, [2]Humanitas College, Kyung Hee University, [3]Department of Physics, Andong National University)

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Fabrication and Characterizations of PTB7-Th/MoS_2 Hybrid Heterostructures / SONG Jungeun[1], NGUYEN Anh Thi[1], CHOI Hyeji[1], BYEON Heekyung[2], JANG Yujin[1], BAEK Suyeun[1], LEE Byoung Hoon[2], YOON Seokhyun[1], KIM Dong-Wook*[1] ([1]Department of Physics, Ewha Womans University, [2]Division of Chemical Engineering and Materials Science, Ewha Womans University)

P1-se.221*

Ag crater 구조에서의 서로 다른 유전체 효과에 대한 표면 플라즈몬 세기의 FDTD simulation 분석 / KIM Han-Sol[1], RYU Jae-Hoon[1], KIM Sung-Hyun[1], BYEON Jae Yeop[1], LEE Ha Young[1], CHUN Young Tea[1], AHN Hyung Soo[1], HA Dong Han[2], YI Sam Nyung*[1] ([1]Korea Maritime and Ocean University, [2]Materials and Convergence Measurement Institute, KRISS)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

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Quantifying Stock Price using Social Media / YOON JINJOO[1], PARK DANBI[1], OH GABJIN*[1] ([1]Division of Business Administration, Chosun University)

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Divergence of the Density of the Yang-Lee Zeros for the Honeycomb-Lattice Ising Model / KIM Seung-Yeon*[1] ([1]School of Liberal Arts and Sciences, Korea National University of Transportation)

P1-st.004
Specific Heat of the One-Dimensional Ising Antiferromagnet in an External Magnetic Field / KIM Seung-Yeon*[1] ([1]School of Liberal Arts and Sciences, Korea National University of Transportation)

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Statistical Physics of Star-shaped Block Copolymers Forming Tube-like Nanostructure in Thin Film / JEONG Hyeon U[1], KIM Jaeup*[1] ([1]Department of Physics, UNIST)

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Magnetic Field Effects on Spontaneously Twisted Liquid Crystal in a Cylindrical Confinement / LEE Junghoon[1], JEONG Joonwoo*[1] ([1]Department of Physics, UNIST)

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Anomalous diffusion of active Brownian particles attached to a wormlike chain / HAN HyeongTark[1], JOO Sungmin[1], JEON Jae-Hyung*[1] ([1]Department of Physics, POSTECH)

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Quantifying entropy production and dissipation map of Brownian movies via neural networks / BAE Youngkyoung[1], KIM Dong-Kyum[1], JEONG Hawoong*[1,2] ([1]Department of Physics, KAIST, [2]Center for Complex Systems, KAIST)

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Struggle between aggressive and coexistent inhabitants / CHAE Sunhee[1], LEE Nahyeon[1], BAEK Seung Ki[2], JEONG Hyeong-Chai*[1] ([1]Department of Physics and Astronomy, Sejong University, [2]Department of Physics, Pukyong National University)

P1-st.012*

Predator-prey model from the perspective of cooperation and evolution / LEE Nahyeon[1], CHAE Sunhee[1], JEONG Hyeong-Chai*[1] ([1]Department of Physics and Astronomy, Sejong University)

P1-st.013

Nonequilibrium kinetics of excess defect generation and dynamic scaling in the Ising spin chain under slow cooling / JEONG Kangeun*[1], KIM Bongsoo[2], LEE Sung Jong[3] ([1]Departmentof Physics, Changwon National University, [2]Department of Physics and Institute for Soft and Bio Matter Science, Changwon National University, [3]IBSs, Changwon National University)

Presentation: April. 19, 12:00 ~ April. 23, 18:00
On-line Discussion(mandatory): Apr. 21, 16:00-16:50 & Apr. 23, 14:00-14:50
Room: Virtual Poster room

P1-te.001
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※ 초록제출시 입력 오류로 인해 성/이름의 순서가 바뀐 경우가 있을 수 있는 점 양해해주십시요

A

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- 분리하여 운반, 설치
- 전원사용 편리 (220V/110V)
- 차단기 내장하여 과부하시 자동 전원차단
- 계측기류 선반에 배치 가능

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KS I ISO 14001

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12.5mm 홀가공 제작

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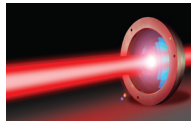
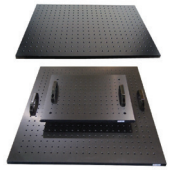
- 자동수평유지
- 전방향 제진능력

LASERS | MOTION CONTROL | OPTICS | OPTICAL TABLES



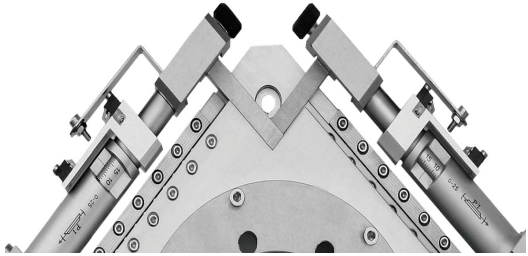
CLEANBOOTH

SOLID ALUMINUM BREADBOARD



DESKTYPE WORKSTATION / CLEAN WORKSTATION

OPTO-MECHANICAL PRODUCTS



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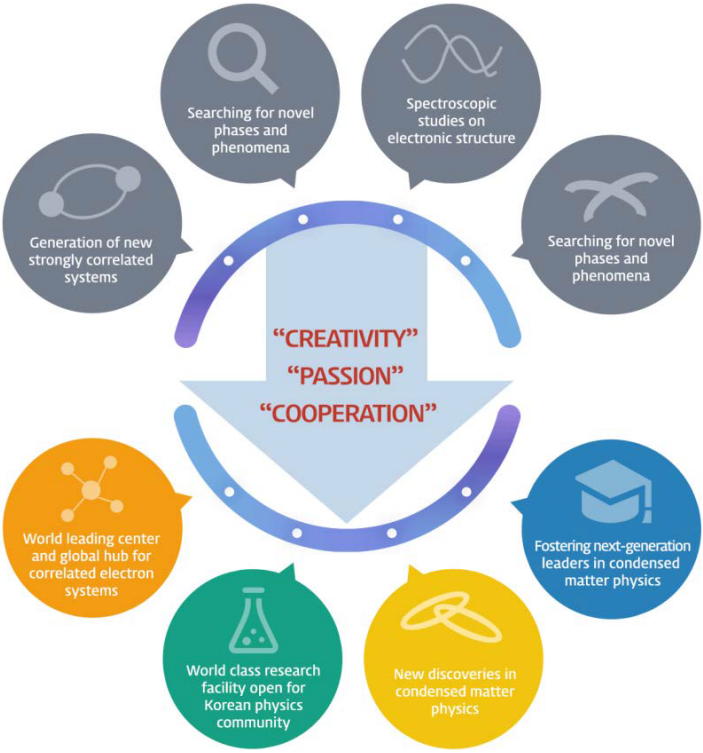

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Piezo Ultrasonic Drive

U-723

치 수 : 42 x 42 x 14 mm
이동범위 : 22 x 22 mm
정 밀 도 : 100 nm
속 도 : 200 mm/s
가반하중 : 0.5 kg

DC & Stepper Motor

M-11x

치 수 : 60 x 62 x 20 mm
이동범위 : 5 - 25 mm
정 밀 도 : 50 - 200 nm
속 도 : 2 mm/s
가반하중 : 3 kg

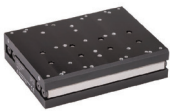
DC & Stepper Motor

L-402

치 수 : 124 x 24 x 23 mm
이동범위 : 13 mm
정 밀 도 : 50 - 100 nm
속 도 : 5 mm/s
가반하중 : 1 kg

Linear Motor

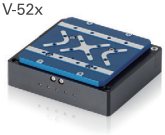
V-408



치 수 : 80 x 80 x 25 mm
이동범위 : 25 - 50 mm
정 밀 도 : 20 nm
속 도 : 700 mm/s
가반하중 : 8 kg

Voice Coil Direct Drive

V-52x



치 수 : 80 x 80 x 26 mm
이동범위 : 5 -20 mm
정 밀 도 : 20 nm
속 도 : 250 mm/s
가반하중 : 10 kg

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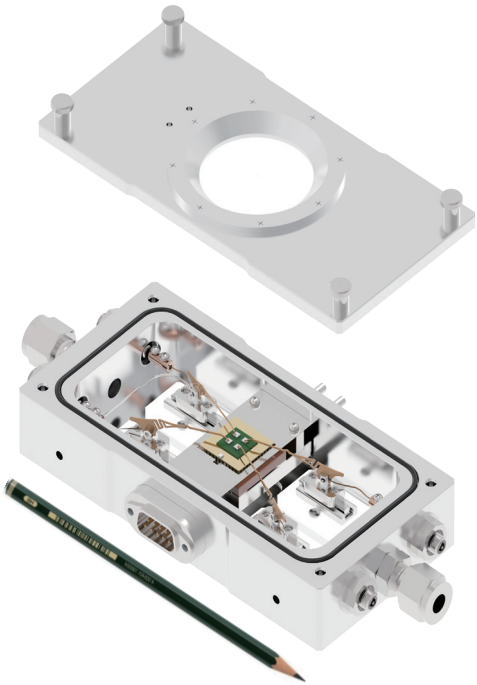

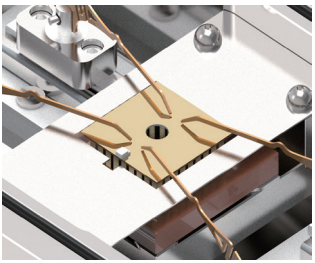

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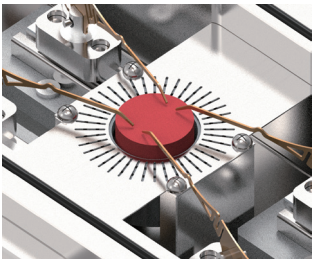

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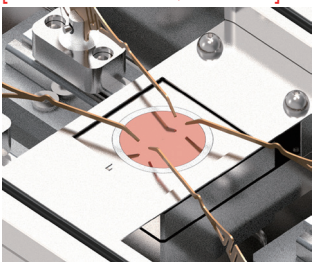
[RT~450℃ / RT~750℃ / RT~1000℃]



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