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- 한국물리학회 회보

2020 KPS Fall Meeting

2020년 가을 학술논문발표회 및 임시총회

2020년 11월 4일(수)~6일(금)
Virtual Conference



C o n t e n t s

- 03 등록 및 발표장 안내
- 05 2020 한국물리학회 가을 학술논문발표회 및
임시총회 전체일정표
- 13 구두발표논문 시간표
- 129 포스터발표논문 시간표
- 189 발표자 색인

이번 호의 표지는 김요섭 (공동 제1저자), Yong Siah Teo (공동 제1저자), 안대건, 임동길, 조영욱, 정현석, 김윤호 회원의 최근 논문 Universal Compressive Characterization of Quantum Dynamics, Phys. Rev. Lett. 124, 210401 (2020) 에서 모티브를 채택했다. 이 논문에서는 효율적이고 신뢰할 수 있는 양자 채널 진단을 위한 적응형 압축센싱 방법을 제안하고 이를 실험으로 시연하였다. 이번 가을학술논문발표회 B11-ap 세션에서 김요섭 회원이 관련 주제에 대해서 발표할 예정(B11.02)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	Subscription (Student member)	1 journal	40,000
	Nonmember (invited speaker or student)	150,000		2 journals	60,000
Membership	Fellow	100,000	Enrolling fee	New member	10,000
	Regular member	50,000			
	Student member	20,000			

3. Virtual Conference Rooms

Division	Oral sessions (Zoom rooms)	Poster sessions	Special sessions (Zoom rooms)
Particle and Field Physics	01, 02	Virtual Poster rooms (Nov. 2~Nov. 6)	<ul style="list-style-type: none"> • General Assembly: 20 • KPS Fellow Meeting: 20 • NPSM Senior Invited Lecture: 20 • Heavy Ion Accelerator Complex, RAON: 19 • Computational science: 20 • New accelerator: 20 • KPS-KOFWST Young Researcher Award: 20 • APCTP Authors Lectures: 20 • [APCTP-KPS-JPS Meeting] Distinguished Lectures
Nuclear Physics	03		
Condensed Matter Physics	05, 06, 07, 08		
Applied Physics	09, 10, 11		
Statistical Physics	12		
Physics Teaching	13		
Plasma Physics	14		
Optics and Quantum Electronics	15		
Atomic and Molecular Physics	16		
Semiconductor Physics	17, 18		
Astrophysics	04	On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50	
Biological Physics	19		

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) 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 (Nov. 2, 12:00 ~ Nov. 6, 18:00).
- All presenters are required to attend the e-Poster Online Discussion Sessions, scheduled on Nov. 5 and 6, and answer the questions through the comment window.

Session	Date and Time	Presentation Method
e-Poster Release	Nov. 2(Mon.) - Nov. 6(Fri.)	Poster presenters daily check the comments on their presentation.
e-Poster Online Discussion	Nov. 5(Thu.) 13:00-13:50 Nov. 6(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. 5)) 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 2020 KPS Fall Meeting

Virtual Conference (Nov. 4-6, 2020)

Session	Division	Particle phys		Nuclear phys	Astrophys	Condensed matter phys				Applied phys			Statistical phys	Physics teaching	Plasma phys	Optical phys	Atomic & molecular phys	Semiconductor phys		Biological physics	Special Sessions and KPS Events	
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19		20
Nov. 4 (Wed.)	Session A 13:00-14:48	A1-pa High Energy Phenomenology	A2-pa Accelerator I	A3-nu Nucl. Exp.		A5-co [F] Symmetry-manipulated oxides I	A6-co [F] Berry/Topology/Spin I	A7-co [F] Ultimate X-ray	A8-co Superconductivity	A9-ap [F] BN Nanomat. I	A10-ap Oxide/Energy Mater.		A12-st [F] Covid19 Outbreak I			A15-op [F] Colloidal Plasmonics & Metamaterials I						A20-or NPSM Senior Invited Lecture
	Break 14:48-15:00																					
	Session B 15:00-16:48		B2-pa Accelerator II	B3-nu Nucl. Exp. & HIC	B4-as [F] KNO	B5-co [F] Symmetry-manipulated oxides II	B6-co [F] Berry/Topology/Spin II	B7-co [F] vdW superconductors	B8-co Magnetism/Superconductivity	B9-ap [F] BN Nanomat. II	B10-ap Magnetism/Energy Mater.	B11-ap Quantum information and processing	B12-st [F] Covid19 Outbreak II			B15-op [F] Colloidal Plasmonics & Metamaterials II					B19-or Heavy Ion Accelerator Complex	B20-or computational science
	Break 16:48-17:10																					
	17:10-18:10				T1-as [T] Dark Energy and Universe	T2-co [T] Condensed Matter Physics				T3-ap [T] First-principles Modeling						T4-pl [T] Plasma fluid/kinetic theory						General Assembly (17:10-18:10)
18:10-18:40																						
Nov. 5 (Thu.)	Session C 09:00-10:48	C1-pa [F] Future collider I		C3-nu HIC		C5-co [F] Excitons	C6-co [F] High-pressure I	C7-co Dielectric/Functional Oxides	C8-co Magnetism	C9-ap [F] Quantum info. processing	C10-ap [F] Direct visualization of defects	C11-ap [F] Next-generation display tech.	C12-st Complex System I		C14-pl Accelerator, Beam, Laser, Radiation sources	C15-op Optics I			C17-se [F] Future Optoelectronic	C18-se Devices - electronic		e-Poster Session (Nov. 2-6)
	Break 10:48-11:10																					
	Session PL 11:10-12:00	PL1-or Plenary																				
	Lunch Break 12:00-13:00																					
	Session P1 13:00-13:50	e-Poster On-line Discussion - I																				
	Break 13:50-14:00																					
	Session D 14:00-15:48	D1-pa [F] Future collider II	D2-pa Non-accelerator I	D3-nu [F] Phys. of CENuM	D4-as Astrophysics Exp./Obs.	D5-co [F] Quantum Coherence	D6-co [F] High-pressure II	D7-co [F] Spin-orbitronics	D8-co Strongly Correlated I	D9-ap [F] Frontiers of CAP I	D10-ap [F] Magnetic 2D Mat.	D11-ap [F] Organic electronics	D12-st Complex Systems II		D14-pl [F] Advanced Accelerators & Radiation Sources	D15-op [F] Quantum computing & simulation I	D16-at [F] Atomic Sensors I	D17-se [F] Organic - inorganic photovoltaic	D18-se Devices - energy	D19-bp Biological physics I		
Break 15:48-16:10																						
Session E 16:10-17:58	E1-pa [F] Future Collider III	E2-pa Field and String theory	E3-nu Nucl. Reac. & Str.	E4-as Astrophysics Exp./Obs. and Th.	E5-co [F] Graphene and Topological Materials	E6-co [F] High-pressure III	E7-co [F] Synchrotron x-ray studies I	E8-co Strongly Correlated II	E9-ap [F] Frontiers of CAP II	E10-ap [F] Chiral Magnetism and Topology	E11-ap Energy and bio materials	E12-st Phase Trans Crit Pheno		E14-pl Nuclear Fusion & Basic Plasma	E15-op [F] Quantum computing & simulation II	E16-at [F] Atomic Sensors II	E17-se [F] Future Optoelectronic	E18-se nano-materials	E19-bp Biological physics II		E20-or KPS-KOPFST Young Researcher Award	
17:58-																						
Nov. 6 (Fri.)	Session F 09:00-10:48	F1-pa Non-accelerator II	F2-pa Accelerator III	F3-nu [F] APCTP-KPS-JPS: Strong QCD and Hadrons	F4-as [F] APCTP-KPS-JPS: Astroph. I	F5-co [F] APCTP-KPS-JPS: New trends I	F6-co Nano-Meso/Surf-Interf I	F7-co [F] Synchrotron x-ray studies II	F8-co Condensed Matter Computational I	F9-ap Surf. and Interface	F10-ap 2D materials I		F12-st Nonequilibrium systems	F13-te [F] Physics teacher education	F14-pl [F] Basic Fusion R&D Program I	F15-op [F] Integrated photonics I	F16-at AMO I	F17-se [F] Nano-optical characterizations I	F18-se Nitride & oxide			
	Break 10:48-11:10																					
	Session G 11:10-12:58	G1-pa [F] APCTP-KPS-JPS: XeIT	G2-pa Accelerator IV	G3-nu Had. Phys. & Nucl. Astrophys.	G4-as [F] APCTP-KPS-JPS: Astroph. II	G5-co [F] APCTP-KPS-JPS: New trends II	G6-co Nano-Meso/Surf-Interf II	G7-co [F] Synchrotron x-ray studies III	G8-co Condensed Matter Computational II	G9-ap [F] 100th Anniversary Ferroelectricity I	G10-ap 2D materials II		G12-st Granular-SoftMat-Biophys	G13-te [F] Changes due to IT technology	G14-pl [F] Basic Fusion R&D Program II	G15-op [F] Integrated photonics II	G16-at AMO II	G17-se [F] Nano-optical characterizations II	G18-se Semiconductor growth	G19-bp [F] Comp. Biophysics		
	Lunch Break 12:58-14:00																					
	Session P2 14:00-14:50	e-Poster On-line Discussion - II																				
	Break 14:50-15:00																					
Session H 15:00-16:48	H1-pa Non-accelerator III	H2-pa Accelerator V							H9-ap [F] 100th Anniversary Ferroelectricity II			H12-st Econophysics	H13-te Physics Education in Diverse Setting			H15-op Optics II				H19-bp [F] Dynamics in Cells	APCTP-KPS-JPS meeting: Distinguished Lecture	

■ 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 : **Nov. 2, 12:00 ~ Nov. 6, 18:00**

- On-line Discussion(mandatory): **Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50**

P1-pa.1 Particle physics I	P1-pa.2 Particle physics II	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 Surface / Nano	P1-ap.3 Magnetism/ Oxide/Energy/ Computational	P1-ap.4 Organic electronics and photonics	P1-ap.5 Photonics and quantum information	P1-st Statistical Physics	P1-te 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 growth, transport & optical properties	P1-se.2 Low dimensional nano-materials	P1-as Astrophysics Experiments/ Observations and Theories	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
Nov. 4 (Wed)	13:00-14:48	Session A	e-Poster Session (Nov. 2 ~ 6)
	14:48-15:00	Break	
	15:00-16:48	Session B	
	16:48-17:10	Break	
		Tutorial (17:10-18:10)	
Nov. 5 (Thu)	09:00-10:48	Session C	e-Poster Session (Nov. 2 ~ 6)
	10:48-11:10	Break	
	11:10-12:00	Plenary	
	12:00-13:00	Lunch Break	
	13:00-13:50	e-Poster On-line Discussion I	
	13:50-14:00	Break	
	14:00-15:48	Session D	
	15:48-16:10	Break	
Nov. 6 (Fri)	16:10-17:58	Session E	e-Poster Session (Nov. 2 ~ 6)
	09:00-10:48	Session F	
	10:48-11:10	Break	
	11:10-12:58	Session G	
	12:58-14:00	Lunch Break	
	14:00-14:50	e-Poster On-line Discussion II	
	14:50-15:00	Break	
15:00-16:48	Session H		
			NPSM Senior Invited Lecture Break Heavy Ion Accelerator Complex / Computational Science Break General Assembly (17:10-18:10) KPS Fellow Meeting (18:10-18:40) Status and future outlook of new accelerator KPS-KOFWST Young Researcher Awardee's Presentation APCTP Best Science Books of This Year - Authors Lectures (19:00-20:00) APCTP-KPS-JPS meeting: Distinguished Lectures (15:00-18:00)

Plenary Lecture

[PL-or] Plenary Session	15
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Tutorial sessions

[T1-as] Dark energy and accelerating universe	16
[T2-co] Condensed matter physics	17
[T3-ap] First-principles modeling: Bridging fundamentals to edge-cutting technology	17
[T4-pl] A moment approach to plasma fluid/kinetic theory	18

Sessions organized by KPS committees

[A20-or] NPSM Senior Invited Lecture "I was a physicist. From now on..."	19
[B19-or] Status of Heavy Ion Accelerator Complex, RAON	19
[B20-or] How can you introduce computational science to your research?	20
[D20-or] Status and future outlook of new accelerator	20
[E20-or] "KPS-KOFWST Young Researcher Award" – Applicant's presentation and selection	20
[H20-or] [E] [APCTP-KPS-JPS Meeting] Distinguished Lectures	21
[W20-or] APCTP Best Science Books of This Year – Authors Lectures	22

List of Award Winners' Presentations

[C11.02] Metal halide perovskite LEDs prepared by ultrasonic spray coating process	23
[A8.02] Proposals to detect Bogoliubov Fermi surfaces	23
[C17.03] Ultrasensitive Plasmon-free Surface-enhanced Raman Spectroscopy with Femtomolar Detection Limit from 2D van der Waals Heterostructure	23
[A8.04] Distinct nodal and nematic superconducting phases in the 2D Ising superconductor NbSe ₂	23

A: November 4(Wed) 13:00-14:48

[A1-pa] High Energy Phenomenology	24
[A2-pa] Accelerator I	25
[A3-nu] Nuclear Experiment	26
[A4] No session	27
[A5-co] [F] Emergent quantum phenomena in symmetry-manipulated oxides I	28
[A6-co] [E] [F] Berry curvature, Topology, and Spin transport I	28
[A7-co] [F] Ultimate X-ray Science	29
[A8-co] Superconductivity	30
[A9-ap] [F] Boron Nitrided based nanomaterials I	31
[A10-ap] Oxide and energy materials	31
[A11] No session	33
[A12-st] [F] Understanding of Covid-19 outbreak I	33
[A13-A14] No session	33
[A15-op] [F] Colloidal Plasmonics & Metamaterials I	33
[A16-A19] No session	34
[A20-or] NPSM Senior Invited Lecture "I was a physicist. From now on..."	34

B: November 4(Wed) 15:00-16:48

[B1] No session	35
[B2-pa] Accelerator II	35
[B3-nu] Nuclear Experiment & Heavy-ion Collision	36
[B4-as] [F] Korean Neutrino Observatory as an Astrophysical Neutrino Telescope	37
[B5-co] [F] Emergent quantum phenomena in symmetry-manipulated oxides II	37
[B6-co] [E] [F] Berry curvature, Topology, and Spin transport II	38
[B7-co] [F] Van der Waals type superconductors	39
[B8-co] Magnetism/Superconductivity	40
[B9-ap] [F] Boron Nitrided based nanomaterials II	41
[B10-ap] Magnetism and energy materials	41
[B11-ap] Quantum information and processing	42
[B12-st] [F] Understanding of Covid-19 outbreak II	44
[B13-B14] No session	44
[B15-op] [F] Colloidal Plasmonics & Metamaterials II	44
[B16-B18] No session	45
[B19-or] Status of Heavy Ion Accelerator Complex, RAON	45
[B20-or] How can you introduce computational science to your research?	45

C: November 5(Thu) 09:00-10:48

[C1-pa] [F] Cornerstone for future collider projects I	46
[C2] No session	46
[C3-nu] Heavy-ion collision	46
[C4] No session	47
[C5-co] [F] Excitons in quantum matter	47
[C6-co] [E] [F] High-pressure physics I	48
[C7-co] Dielectric/Functional Oxides	49
[C8-co] Magnetism	50
[C9-ap] [F] Quantum information processing using atoms and devices	51
[C10-ap] [F] Direct visualization of defects and reconstruction in 2D layered crystals	51
[C11-ap] [F] Next-generation display technology based on nanomaterials	52
[C12-st] Complex Systems I	52
[C13] No session	53
[C14-pl] Accelerator, Beam, Laser Plasma, Radiation Sources, and Pulsed Power Systems	53
[C15-op] Optics I	54
[C16] No session	55
[C17-se] [F] Future Optoelectronic Materials and Devices	56
[C18-se] Devices – electronic, optoelectronic, organic & flexible	56

D: November 5(Thu) 14:00-15:48

[D1-pa] [F] Cornerstone for future collider projects II	58
[D2-pa] Non-accelerator I	58
[D3-nu] [E] [F] Physics of CENuM	60
[D4-as] Astrophysics Experiments/Observations	60
[D5-co] [F] Nano/Mesoscopic system: Quantum Coherence in Condensed Matter	61

[D6-co] [E] [F] High-pressure physics II	62
[D7-co] [F] Theoretical progress of Spin-orbitronics	63
[D8-co] Strongly Correlated I	63
[D9-ap] [F] Frontiers of Current Applied Physics I	64
[D10-ap] [F] Magnetic 2D materials	65
[D11-ap] [F] Nano/bio/medical organic electronic device	66
[D12-st] Complex Systems II	66
[D13] No session	67
[D14-p] [F] Plasma-based Advanced Accelerators and Radiation Sources	67
[D15-op] [F] Quantum computing & simulation I	68
[D16-at] [F] Atomic Sensors I	68
[D17-se] [F] Organic – inorganic photovoltaic materials and devices	69
[D18-se] Devices – energy harvesting & storage	69
[D19-bp] Biological physics I (invited)	71
[D20-or] Status and future outlook of new accelerator	71

E: November 5(Thu) 16:10-17:58

[E1-pa] [F] Cornerstone for future collider projects III	72
[E2-pa] Field and String theory	72
[E3-nu] Nuclear Reaction & Structure	74
[E4-as] Astrophysics Experiments/Observations and Theories	74
[E5-co] [F] Nano/Mesoscopic system, Graphene and Topological Materials	75
[E6-co] [E] [F] High-pressure physics III	76
[E7-co] [F] Synchrotron x-ray studies for advanced electronic materials and quantum mechanical properties I	76
[E8-co] Strongly Correlated II	77
[E9-ap] [F] Frontiers of Current Applied Physics II	79
[E10-ap] [F] Chiral Magnetism and Topological Properties	79
[E11-ap] Energy and bio materials	80
[E12-st] Phase transition and critical phenomena	81
[E13] No session	82
[E14-p] Nuclear Fusion and Basic Plasma Phenomena	82
[E15-op] [F] Quantum computing & simulation II	83
[E16-at] [F] Atomic Sensors II	83
[E17-se] [F] Future Optoelectronic Materials and Devices II	84
[E18-se] Low dimensional nano-materials	84
[E19-bp] Biological physics II	85
[E20-or] *KPS-KOFWST Young Researcher Award” – Applicant’s presentation and selection	87

F: November 6(Fri) 09:00-10:48

[F1-pa] Non-accelerator II	88
[F2-pa] Accelerator III	89
[F3-nu] [E] [F] [APCTP-KPS-JPS Meeting] New Prospects on Strong QCD and Hadrons	91
[F4-as] [E] [F] [APCTP-KPS-JPS Meeting] Current Topics in Astrophysics I	91
[F5-co] [E] [F] [APCTP-KPS-JPS Meeting] New trends in quantum and topological matters under extreme condition I	92

[F6-co] Nano-Meso/Surface-Interface I	92
[F7-co] [F] Synchrotron x-ray studies for advanced electronic materials and quantum mechanical properties II	93
[F8-co] Condensed Matter Computational Physics I	94
[F9-ap] Surface and Interface	95
[F10-ap] 2D materials I	96
[F11] No session	97
[F12-st] Nonequilibrium systems	98
[F13-te] [F] Curriculum revision and direction of physics teacher education	99
[F14-pl] [F] Symposium for the Basic Fusion R&D Program I	99
[F15-op] [F] Special approaches in integrated photonics I	100
[F16-at] Atomic, Molecular and Optical Physics I	100
[F17-se] [F] Nano-optical characterizations of semiconducting materials I	101
[F18-se] Nitride & oxide semiconductors	102

G: November 6(Fri) 11:10-12:58

[G1-pa] [E] [F] [APCTP-KPS-JPS Meeting] Xe1T anomaly	103
[G2-pa] Accelerator IV	103
[G3-nu] Hadron physics & Nuclear Astrophysics	105
[G4-as] [E] [F] [APCTP-KPS-JPS Meeting] Current Topics in Astrophysics II	106
[G5-co] [E] [F] [APCTP-KPS-JPS Meeting] New trends in quantum and topological matters under extreme condition II	107
[G6-co] Nano-Meso/Surface-Interface II	107
[G7-co] [F] Synchrotron x-ray studies for advanced electronic materials and quantum mechanical properties III	108
[G8-co] Condensed Matter Computational Physics II	109
[G9-ap] [F] The 100th anniversary of ferroelectricity : achievement and future I	110
[G10-ap] 2D materials II	111
[G11] No session	112
[G12-st] Granular systems, Soft matters, and biophysics	112
[G13-te] [F] Changes in physics education due to IT technology	114
[G14-pl] [F] Symposium for the Basic Fusion R&D Program II	114
[G15-op] [F] Special approaches in integrated photonics II	115
[G16-at] Atomic, Molecular and Optical Physics II	115
[G17-se] [F] Nano-optical characterizations of semiconducting materials II	116
[G18-se] Semiconductor growth, transport & optical properties	117
[G19-bp] [F] Frontiers in Computational Biophysics	118

H: November 6(Fri) 15:00-16:48

[H1-pa] Non-accelerator III	119
[H2-pa] Accelerator V	121
[H3-H8] No session	123
[H9-ap] [F] The 100th anniversary of ferroelectricity : achievement and future	123
[H10-H11] No session	123
[H12-st] Econophysics	123

[H13–te] Physics Education in Diverse Setting	124
[H14] No session	124
[H15–op] Optics II	125
[H16–H18] No session	126
[H19–bp] [F] Dynamic Processes in the Cells	126
[H20–or] [E] [APCTP–KPS–JPS Meeting] Distinguished Lectures	126

P1: e-Poster Release - Nov. 2(Mon), 12:00 ~ Nov. 6(Fri), 18:00

*** e-Poster Online Discussion - Nov. 5(Thu.) 13:00-13:50 and Nov. 6(Fri.) 14:00-14:50**

[P1–ap.1] 2D materials	131
[P1–ap.2] Surface / Nano	135
[P1–ap.3] Magnetism/Oxide/Energy/Computational	138
[P1–ap.4] Organic electronics and photonics	141
[P1–ap.5] Photonics and quantum information	144
[P1–as] Astrophysics Experiments/Observations and Theories	147
[P1–at] Atomic, Molecular and Optical Physics	148
[P1–bp] Biological Physics	150
[P1–co.1] Magnetism/Superconductivity	152
[P1–co.2] Strongly Correlated/Dielectrics/Functional Oxides	155
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구두발표논문 시간표

Oral session schedule

기조강연 Plenary Lecture

[E] [PL1-or] Plenary Session

2020. 11. 05 Thursday 11:10~11:58

Room: 01

좌장 : 유재준 서울대학교

Chair : YU Jaejun (Seoul National University)

PL1.01 [11:10 - 11:58]

The Fascinating Quantum World of Atomically Thin Two-dimensional Materials / LOUIE Steven G.^{*1,2} (¹Physics Department, University of California at Berkeley, ²Lawrence Berkeley National Lab, U.S.A.)



STEVEN GWON SHENG LOUIE is a computational condensed-matter physicist. He is a professor of physics at the University of California, Berkeley and senior faculty scientist in the Materials Sciences Division at Lawrence Berkeley National Laboratory, where his research focuses on nanoscience. He is honored with numerous awards including 2019 Fellow of Materials Research Society (MRS) and 2018 Kodosky Lecturer at Rensselaer Polytechnic Institute. Professor Louie's research spans a broad spectrum of topics in theoretical condensed matter physics and nanoscience. He is known for his pioneering work on the ab initio GW method, which led to his resolution of the bandgap problem in semiconductors and founding of the field of first-principles study of excited-state properties of materials, and for his seminal work on surfaces and interfaces, nanostructures, and reduced-dimensional systems. He was a founding scientific director of the Molecular Foundry, a DOE national nanoscience center. He is identified by the ISI Web of Science as one of the most highly cited researchers in physics and nanoscience.

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Abstract

Many fascinating phenomena in nature owe their emergence from the interactions of large number of particles. In particular, symmetry, interaction and topological effects dominate many of the quantum properties of reduced-dimensional systems. These effects often lead to manifestation of counter-intuitive concepts and phenomena that may not be so prominent or have not been seen in the bulk. In this talk, I present some fascinating quantum phenomena discovered in recent studies of atomically thin one- and two-dimensional materials. A number of interesting and unexpected behaviors have been found - e.g., strongly bound excitons (electron-hole pairs) with unusual energy level structures; tunable magnetism and plasmonic properties; novel topological phases; correlated 3- and 4-particle excitations; etc. - adding to the promise of these materials for exploration of new science and valuable applications.

Tutorial Sessions

[T1-as] Dark energy and accelerating universe

2020. 11. 04 Wednesday 17:10~17:58

Room: 04

좌장 : 이창환 부산대학교 물리학과

Chair : LEE Chang Hwan (Pusan National University)

[SCOPE]

물리학과 우주론의 주요 화두 중 하나인 암흑에너지, 우주 팽창, 허블 상수에 대한 튜토리얼 세션을 갖고자 한다.

T1.01 [17:10 - 17:58]

Dark energy or Dark delusion?: Evidence for a decelerating universe from supernova cosmology / LEE Young-Wook^{*1} (Department of Astronomy, Yonsei University)

Supernova (SN) cosmology is based on the assumption that the corrected luminosity of SN Ia would not evolve with redshift. Recently, our age dating of early-type host galaxies (ETGs) from high-quality spectra has shown that this key assumption is most likely in error. It has been argued though that the age-Hubble residual (HR) correlation from ETGs is not confirmed from the age datasets measured from multi-band optical photometry of host galaxies of all morphological types. We find, however, that the statistical analysis involved is affected by "regression dilution bias", severely underestimating both the slope and significance of the age-HR correlation. Remarkably, when we apply regression analysis with a standard posterior sampling method to this dataset comprising a large sample of host galaxies, very significant (4.3 sigma) correlation is obtained between the population age and HR with the slope highly consistent with our previous spectroscopic result from ETGs. We also show that the light curve parameters (x_1 & c) of high-redshift SNe are consistent with those of SNe from young progenitors. This confirms that the systematic bias with redshift (luminosity evolution) is inevitable due to an over-correction in standardization. The corresponding luminosity evolution is significant enough to fully explain the observed dimming of SN with redshift without the dark energy. When the luminosity evolution is properly taken into account, SN data now strongly support a decelerating cosmic expansion! Since the SN cosmology has long been considered as the most direct evidence for the accelerating universe, an important avenue of future investigations would be to see how this new result from SNe can be reconciled with other cosmological probes.

[T2-co] Condensed matter physics

2020. 11. 04 Wednesday 17:10~17:58

Room: 05

좌장 : 장영준 서울시립대학교 물리학과

Chair : CHANG Young Jun (University of Seoul)

[SCOPE]

라만 분광학은 응집물리에서 유용하게 활용되는 분광법으로, 응집물질계에서 저차원 물질들의 물성 연구에 라만 분광법이 널리 활용되면서 더욱 주목받고 있다. 특히 최근에는 저차원 물질들의 격자, 이방성, 전자구조, 스핀정렬 등 다양한 물성 현상과 더불어 응용 소재 분석에 이르기까지 그 연구의 폭이 넓어지고 있다. 본 튜터리얼 강의에서는 라만 분광법의 기본 원리 및 활용법을 소개하고, 연구 현황 및 향후 전망을 논의하고자 한다.

T2.01 [17:10 - 17:58]

Fundamentals of Raman scattering spectroscopy / YOON Seokhyun* (*Department of Physics, Ewha Womans University)

Raman scattering refers to inelastic scattering of light. In this tutorial, I will briefly introduce basics of Raman scattering spectroscopy that utilizes inelastic scattering phenomena due to inhomogeneity inside materials induced by various elementary excitations. Focus will be given for scattering by phonons among the elementary excitations and brief introduction to applying symmetry selection rules to Raman spectroscopic measurements will also be presented. As applications of Raman scattering spectroscopy, I will present results especially on low dimensional systems such as 1D and 2D materials. Through the examples, I will show that Raman scattering spectroscopy can provide a very useful mean to study basic characteristics such as optical properties and structural properties of various materials systems. In addition, I will introduce methodology that spectroscopically "focusing and controlling" light below the diffraction limit by applying techniques from SERS (surface enhanced Raman scattering).

[T3-ap] First-principles modeling: Bridging fundamentals to edge-cutting technology

2020. 11. 04 Wednesday 17:10~17:58

Room: 09

좌장 : 김용현 한국과학기술원 나노과학기술대학원

Chair : KIM Yong-Hyun (KAIST)

[SCOPE]

제일원리에 기반한 계산을 통해, 자연계의 가장 복잡하고 난해한 현상을 그대로 모사함과 동시에 이를 기존에 상상치 못한 기술로 연결하는 방법을 강의하고자 한다. 강유전성, 자성, 촉매 등의 분야에서 기존의 공학이 인지못한 새로운 현상이나 소재를 제시할 수 있음을 우리의 다양한 사례를 통해 제시하고 물리 전공 학생들이 쉽게 접근할 수 있는 방법론을 강의한다. 끝으로 제일원리 계산과 "평평한 띠" 이론을 융합하여, 기존의 거대 도메인 없이 유닛셀 원자 자체가 도메인이 되는, 스케일링이 완

전히 극복된 "원자 반도체" 의 발견[1] 을 성공사례의 정점으로 들고자 한다.

T3.01 [17:10 - 17:58]

First-principles modeling : Bridging fundamentals to edge-cutting technology / LEE Jun Hee^{*1} (*School of Energy and Chemical Engineering, UNIST)

When the Physicist R. Feynmann was asked to think of a single sentence that would convey the most important scientific knowledge we possess, he answered "Everything made of atoms". First-principles modeling is one of the most crucial methods to directly deal with arrangement of atoms and their unexpected physical consequences. Combined with our physics knowledge, this method can make great synergy in inventing ground-breaking technology. First, I will teach how to understand the basics principles of first-principles approach based on density-functional theory. Then, I will teach how to apply this method to understand and define the various setbacks to the technological breakthrough and to solve the problems for the renovations in various fields such as semiconductor and energy industry. I will end up with showing our recent successful examples of the real-life fairy tale [1] in densest ferroelectric memories [2], topological superconductor [3], solar cells [4], batteries [5], and hydrogen-catalysts [6].

[1] Noheda et al., Science 369, 1300 (2020)

[2] Lee et al., Science 369, 1343 (2020)

[3] Lee et al., 4, 034202, Phys. Rev. Mater 4, 034202 (2020)

[4] Min et al., Science 366, 749 (2019)

[5] Ryu et al., Nat. Comms. 10, 2351 (2019)

[6] Seo et al., Appl. Catal. B 260, 118186 (2019)

[T4-pl] A moment approach to plasma fluid/kinetic theory

2020. 11. 04 Wednesday 17:10~17:58

Room: 14

좌장 : **나용수** 서울대학교 원자핵공학과

Chair : **NA Yong Su** (Seoul National University)

[SCOPE]

볼츠만 방정식으로부터 유체방정식을 유도하는데 있어 걸림돌이 되는 closure 문제를 moment approach를 통해 해결하여 플라즈마 현상을 이해하는 유체모델을 수립하는 과정을 다루고 이의 적용에 대해 논의하고자 한다.

T4.01 [17:10 - 17:58]

A moment approach to plasma fluid/kinetic theory / Jl Jeong-Young^{*1} (*Department of Physics, Utah State University)

A system of exact fluid equations always involves more unknowns than equations. This is called the closure problem. An important aspect of obtaining quantitative closures is an accurate account of collisional effects. In this talk, I introduce how to convert the kinetic

equation into an equivalent set of moment equations with exact collisional moments. Then I present how to solve the moment equations to obtain (1) fluid closures for collision-dominated plasmas with short mean free paths and (2) parallel closures for magnetized plasmas with arbitrary mean free paths. In particular, I highlight the effect of long mean free path on parallel heat transport.

학회주관세션 Sessions organized by KPS Committees

[A20-or] NPSM Senior Invited Lecture “I was a physicist. From now on...”

2020. 11. 04 Wednesday 13:00~14:48

Room: 20

좌장 : 조성래 울산대학교 물리학과

Chair: CHO Sung Lae (University of Ulsan)

A20.01 [13:05 - 13:45]

Fate of university in the post coronavirus world / 정윤희* (POSTECH)

A20.02 [13:45 - 14:25]

물리가 있는 풍경-Gamma ray bursts and gravitational waves / 이현규* (한양대)

A20.03 [14:25 - 14:48]

새물리 발전 방향 / 조성래* (울산대, 새물리 편집위원장)

[B19-or] Status of Heavy Ion Accelerator Complex, RAON

2020. 11. 04 Wednesday 15:00~16:50

Room: 19

좌장 : 권영관 기초과학연구원 중이온가속기건설구축사업단

Chair: KWON Young-Kwan (IBS)

B19.01 [15:00 - 15:24]

중이온가속기 현황 및 향후 계획 / 권면* (기초과학연구원 중이온가속기건설구축사업단)

B19.02 [15:24 - 16:08]

중이온가속기 가속장치 구축현황 / 손영욱* (기초과학연구원 중이온가속기건설구축사업단)

B19.03 [16:08 - 16:50]

중이온가속기 실험장치 구축현황 / 신택수* (기초과학연구원 중이온가속기건설구축사업단)

[B20-or] How can you introduce computational science to your research?

2020. 11. 04 Wednesday 15:00~16:48

Room: 20

좌장 : 박민규 (주)버추얼랩

Chair : PARK Minkyu (Virtual Lab. Inc.)

B20.01 [15:00 - 15:48]

How can you introduce computational science to your research? / KIM Young-Kwang*¹ (Virtual Lab. Inc.)

[D20-or] 출연연특별세션: 신규 방사광가속기 구축 현황 및 미래전망(Status and future outlook of new accelerator)

2020. 11. 05 Thursday 14:00~15:48

Room: 20

좌장 : 임종선 한국화학연구원

Chair : LIM Jong Sun (KRICT)

[14:00 - 14:05]

출연연활설화특별위원회 위원장 인사말 / 이주한 (한국기초과학지원연구원)

D20.01 [14:05 - 14:30]

미래 방사광가속기의 이용 기술과 사이언스 / 김현정*¹ (서강대)

D20.02 [14:30 - 14:55]

신규방사광가속기에서의 분광실험 발전 방향 / 고경태*¹ (한국기초과학지원연구원)

D20.03 [14:55 - 15:20]

Design of Korean 4GSR and its beam characteristic / 이재유*¹ (포항가속기연구소)

D20.04 [15:20 - 15:45]

KAERI의 다목적 방사광가속기 구축 인력 리뷰 / 김유종*¹ (한국원자력연구원)

[E20-or] “KPS-KOFST 젊은 연구자상” 후보자 논문 발표 및 선정(“KPS-KOFWST Young Researcher Award” – Applicant’s presentation and selection)

2020. 11. 04 Wednesday 12:00 - 11. 06 Friday 18:00 (Release on the website)

2020. 10. 21 Wednesday 14:10~16:30 (Presentation)

Room: 20

좌장 : 류미이 강원대학교 물리학과

Chair : RYU Mee-Yi (Kangwon National University)

[14:00 - 14:10]

회장 · 여성위원회 위원장 인사말 / 이범훈(서강대) · 김현정(서강대)

E20.01 [14:10 - 14:30]

Oxygen Vacancy Engineering for Highly Tunable Ferromagnetic Properties: A Case of SrRuO₃ Ultrathin Film with a SrTiO₃ Capping Layer / 고은교*¹ (서울대/IBS)

E20.02 [14:30 - 14:50]

Layering Transition and Novel Topological Defects of Chiral Nematic Liquid Crystals Confined in a Cylinder / 은종희*¹ (UNIST)

E20.03 [14:50 - 15:10]

Instability of $j=3/2$ Bogoliubov Fermi-surfaces / 오한빛*¹ (KAIST)

E20.04 [15:10 - 15:30]

Off-diagonal singlet state in the infinite-layer nickelate with Ni²⁺ ion / 진효선*¹ (고려대)

E20.03 [15:30 - 15:50]

Identification of Additional Jets in the $t\bar{t}b\bar{b}$ Events by Using Deep Neural Network / 최지은*¹ (한양대)

E20.03 [15:50 - 16:10]

Optical absorption and anomalous photoconductivity in Methylammonium lead mixed halide single crystals / 변혜령*¹ (서강대)

E20.03 [16:10 - 16:30]

Study of event Jettiness in the $H \rightarrow ZZ^* \rightarrow 4l$ decay channel / 김미란*¹ (성균관대)

[H20-or] [E] [APCTP-KPS-JPS Meeting] Distinguished Lectures

2020. 11. 06 Friday 15:00~18:00

Room: 20

Chair 1: ISHIBASHI Nobuyuki (Tokyo Institute of Technology)

Chair 2: KIM Changyoung (Seoul National University)

Chair 3: SIN Sang-Jin (Hanyang University)

Chair 4: TAJIMA Setsuko (JPS)

[15:00 - 15:15]

Opening Remark / BANG Yunkyu (APCTP), NAGAE Tomofumi (JPS), SUGAWARA Hiro-taka (OIST)

H20.01 [15:15 - 15:55]

Chair 1: ISHIBASHI Nobuyuki (Tokyo Institute of Technology)

Quantum chaos and black holes / HASHIMOTO Koji*¹ (Osaka Univ.)

H20.02 [15:55 - 16:35]

Chair 2: KIM Changyoung (Seoul National University)

Towards room-temperature T_c in van der Waals layered magnetic semiconductors / LEE Young Hee*¹ (¹Sungkyunkwan Univ., IBS)

H20.03 [16:35~17:15]

Chair 3: SIN Sang-Jin (Hanyang University)

Recent advances with neutrino program in Korea / KIM Yeongduk*¹ (¹IBS)

H20.04 [17:20~17:55]

Chair 4: TAJIMA Setsuko (JPS)

Emergent electromagnetic phenomena from topological magnets / TOKURA Yoshi-nori*¹ (¹RIKEN, Univ. of Tokyo)

[17:55~18:00]

Closing Remark / LEE Bum-Hoon (KPS)

**[W20-or] APCTP 선정 과학도서 저자 강연
(APCTP Best Science Books of This Year – Authors Lectures)**

2020. 11. 05 Thursday 19:00~20:00

Room: 20

좌장 : 손승우 한양대학교 응용물리학과

Chair : SON Seung-Woo (Hanyang University)

W20.01 [19:00 - 20:00]

〈호기심의 과학〉 / 유재준*¹ (¹서울대)

LIST of Award Winners' Presentatoins

[2020 논문상 수상자 발표]

C11.02 (초) 2020.11.05 Thursday 09:24-09:48

Room: 11

Metal halide perovskite LEDs prepared by ultrasonic spray coating process / IM Sang Hyuk¹ (¹Department of Chemical and Biological Engineering, Korea University)

[2020 우수여성대학원생상 수상자 발표]

A8.02 2020.11.04 Wednesday 13:12 - 13:24

Room: 02

Proposals to detect Bogoliubov Fermi surfaces / OH Hanbit¹, MOON Eun-Gook^{*1} (¹physics, KAIST)

[2020 신진과학자상 수상자 발표]

C17.03 (초) 2020.11.05 Thursday 09:48 - 10:12

Room: 17

Ultrasensitive Plasmon-free Surface-enhanced Raman Spectroscopy with Femtomolar Detection Limit from 2D van der Waals Heterostructure / PARK HYESUNG^{*1} (¹Department of Materials Science and Engineering, UNIST)

[2020 응집물질물리학 MSM상 수상자 발표]

A8.04 2020.11.04 Wednesday 13:36 - 13:48

Room: 02

Distinct nodal and nematic superconducting phases in the 2D Ising superconductor NbSe₂ / CHO Chang-woo^{*1,2}, LYU Jian^{2,3}, HAN Tianyi^{2,4}, NG Cheuk Yin², GAO Yuxiang², LI Gaomin³, HUANG Mingyuan³, WANG Ning², SCHMALIAN Joerg⁵, LORTZ Rolf² (¹Grenoble High Magnetic Field Laboratory, Centre National de la Recherche Scientifique, CNRS, ²Department of Physics, The Hong Kong University of Science and Technology, ³Department of Physics, Southern University of Science and Technology, ⁴Department of Physics, Massachusetts Institute of Technology, ⁵Institute for Theory of Condensed Matter and Institute for Solid State Physics, Karlsruhe Institute of Technology)

Session A

2020 November 4(Wed) 13:00~14:48

[A1-pa] High Energy Phenomenology

2020. 11. 04 Wednesday 13:00~15:12

Room: 01

좌장 : 김정한 충북대학교

Chair : KIM Jeong Han (Chungbuk National University)

A1.01 [13:00 - 13:12]

Conformal window from conformal expansion / LEE Jong-Wan^{*1} (1Department of Physics, Pusan National University)

A1.02 [13:12 - 13:24]

Thermal transition of QCD with $N_f=2+1$ flavors of Wilson quark / KIM Se Yong^{*1} (1Department of Physics, Sejong University)

A1.03 [13:24 - 13:36]

Reconciling dark cosmology with condensates of gravitational fluctuations / VAN PUTTEN Maurice H^{*1} (1Physics and Astronomy, Sejong University)

A1.04 [13:36 - 13:48]

Phenomenological constraints on the family-dependent extra U(1) gauge bosons / KYAE Bum Seok^{*1}, CHOI Kang Sin², SEO Min-Seok³ (1Pusan National University, 2Scranton College, Ewha Womans University, 3Dep. of Physics Edu., Korea National University of Education)

A1.05 [13:48 - 14:00]

Unitarity and the dilaton effective theory / KIM Gyurin^{*1}, HONG Deog Ki¹, LEE Yejin¹, PARK Jun Beom¹ (1Physics, Pusan National University)

A1.06 [14:00 - 14:12]

Gravitational probes of flavor models with the continuum Clockwork / KANG Yoo-Jin¹, KIM Soonbin¹, LEE Hyun Min^{*1} (1Department of Physics, Chung-Ang University)

A1.07 [14:12 - 14:24]

The effective theory of nuclear scattering for a WIMP of arbitrary spin / SCOPEL Stefano^{*1}, KANG Sunghyun¹, PAOLO Gondolo², TOMAR Gaurav³ (1Physics, Sogang University, 2Physics, University of Utah, 3Physics, Munich Tech. University)

A1.08 [14:24 - 14:36]

Self-interacting dark matter via massive spin-2 mediator / LEE Hyun Min¹, KANG Yoojin¹ (¹Department of Physics, Chung-Ang University)

A1.09 [14:36 - 14:48]

Searching for Boosted Dark Matter mediated by a new Gauge Boson / CHO Won-sub¹, CHOI Ki-young¹, YOO Seong Moon¹ (¹Department of Physics, Sungkyunkwan University)

A1.10 [14:48 - 15:00]

Boosted Dark Matter at Dark Matter Direct Detection Experiments / GIUDICE Gian F.¹, KIM Doojin², PARK Jong-Chul³, SHIN Seodong⁴ (¹Theoretical Physics Department, CERN, ²Department of Physics and Astronomy, Texas A&M University, ³Department of Physics, Chungnam National University, ⁴Department of Physics, Jeonbuk National University)

A1.11 [15:00 - 15:12]

Implications of the XENON1T Excess on the (energetic) Dark Matter Interpretation / SHIN Seodong¹, PARK Jong-Chul², KIM Doojin⁵, KONG Kyoungchul³, MOHLABENG Gopolang⁴, ALHAZMI Haider³ (¹Physics, Jeonbuk National University, ²Physics, Chungnam National University, ³Physics and Astronomy, University of Kansas, ⁴Physics, Brookhaven National Laboratory, ⁵Physics and Astronomy, TAMU)

[A2-pa] Accelerator I

2020. 11. 04 Wednesday 13:00~14:48

Room: 02

좌장 : 고정환 경희대학교

Chair: GHO Junghwan (Kyung Hee University)

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

Differential cross section measurement of $t\bar{t}b\bar{b}$ in lepton+jets channel with the full Run 2 dataset using deep learning / CHOI Jieun¹, KIM Taejeong¹, AN Seohyeon¹ (¹Department of Physics, Hanyang University)

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

Search for chromoelectric dipole moment of top quark in pp collisions at $\sqrt{s} = 13$ TeV using 2016 data / HA Seung kyu¹, CHOI Suyong², LEE Sehwook³, LIM Jaehoon², YOO Hwidong¹ (¹Yonsei University, ²Department of Physics, Korea University, ³Department of Physics, Kyungpook National University)

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

Measurement of CP violation by using an angular distribution in single top t-channel @ 13 TeV / PARK Inkyu¹, KO Byeonghak¹, LEE Jason Sang Hun¹, KIM Hyunsoo² (¹Uni-

versity of Seoul, ²Department of Physics, Sejong University)

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

Study of event Jettiness in the Higgs to 4 lepton decay / KIM Mi Ran^{*1}, ORTONA Giacomo² (¹Department of Physics, Sungkyunkwan University, ²Particle physics, National Institute for Nuclear Physics (INFN))

A2.05 [13:48 - 14:00]

Study for a direct Vts measurement in top pair production at LHC 13 TeV / WATSON Ian James^{*1}, JANG Woojin¹, LEE Jason^{*1}, PARK Inkyu^{*1} (¹Department of Physics, University of Seoul)

A2.06 [14:00 - 14:12]

Search for LFV in top quark sector with charm, muon, and tau final states / CHOI JIEUN¹, CHOI SU YONG², KIM TAE JEONG¹, LIM JONGWON^{*1}, SONG JUHEE¹, RYOU YEONSU¹, YUN SOOHYUN¹ (¹Department of Physics, Hanyang University, ²Department of Physics, Korea University)

A2.07 [14:12 - 14:24]

Search for Supersymmetry with Compressed Mass Spectrum in the Vector Boson Fusion Topology with 0-lepton Final State at 13 TeV / LEE Jason Sang Hun^{*1}, PARK Kyungmin¹, PARK Inkyu¹ (¹Department of Physics, University of Seoul)

A2.08 [14:24 - 14:36]

The measurement of forward-backward asymmetry in Drell-Yan with single b-jet events at LHC / YANG Un-ki^{*1}, JUN Won¹, SEO HyonSan¹ (¹Department of physics and astronomy, Seoul National University)

A2.09 [14:36 - 14:48]

Hadronic showers in Fast Simulation / PAK Sang Il^{*1}, BEIN Samuel Luis², SEKMEN Sezen¹, GOLDOUZIAN Reza³, LEE Sehwook¹ (¹Physics, Kyungpook National University, ²Physics, Hamburg University, ³Physics, University of Notre Dame)

[A3-nu] Nuclear Experiment

2020. 11. 04 Wednesday 13:00~14:24

Room: 03

좌장 : 홍승우 성균관대학교

Chair : HONG Seung Woo (Sungkyunkwan University)

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

Overview of Nuclear Data Production System at RAON / LEE Sangjin¹, HAM Cheolmin^{*1}, GIL Choeng-Sup², MOON Dalho³, KIM Do Heon², KWAK Donghyun⁴, JEONG

Junyeong⁴, TSHOO Kyungho¹, CHUNG Moses⁴, MOON Seok Ho⁴, HONG Seung-Woo³, YANG Sung-Chul², SONG Tae-Yung², CHEON Yoo-Lim⁴, LEE Young-Ouk² (¹Rare Isotope Science Project, Institute for Basic Science, ²Nuclear physics application research division, Korea Atomic Energy Research Institute, ³Department of Physics, Sungkyunkwan University, ⁴Department of Physics, UNIST)

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

RAON/NDPS의 세부장치 설계 / YANG Sung-Chul^{*1}, 송태영¹, 이영욱¹, 길충섭¹, 김도헌¹ (¹Nuclear Data Center, KAERI)

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

RAON/NDPS 빔광학 설계 / LEE Young-Ouk^{*1}, YANG Sung-Chul¹, SONG Tae-young¹, GIL Choong-SUp¹, KIM Do-Heon¹, CHAE Kil-Byoung¹ (1Nuclear Data Center, KAERI)

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

고해상도 TOF (Time of Flight) 중성자 실험을 위한 단일 번치 빔 생성 방법 연구 / MOON SeokHo¹, KWAK Donghyun¹, JEONG Junyeong¹, CHUNG Moses¹, CHAE GilByung² (¹Department of Physics, UNIST, ²Department of Nuclear Physics Application Research, KAERI)

A3.05 [13:48 - 14:00]

The detection system of Nuclear Data Production System / MOON Dalho¹, HAM Cheolmin², HONG Seung Woo^{*1} (¹Sungkyunkwan University, ²Rare Isotope Science Project, Institute for Basic Science)

A3.06 [14:00 - 14:12]

High Statistics Measurements of $^{12}\text{C}(\text{K}^-, \text{p})$ Reaction at J-PARC / CHOI Sung Wook¹, AHN Jung Keun^{*1}, For the J-PARC E42 Collaboration (¹Department of Physics, Korea University)

A3.07 [14:12 - 14:24]

A three-dimensional electromagnetic sampling calorimeter for the future $K_L^0 \rightarrow \pi^0 \nu \bar{\nu}$ experiment / KIM Young Jun¹, KIM Jun Lee², LIM Gei Youb³, KIM Eun-Joo², AHN Jung Keun^{*1} (¹Department of Physics, Korea University, ²Division of Science Education, Jeonbuk National University, ³High Energy Accelerator Research Organization, KEK, IPNS)

[A4] No session

[A5-co] [F] Emergent quantum phenomena in symmetry-manipulated oxides I

2020. 11. 04 Wednesday 13:00~14:36

Room: 05

좌장 : 박성균 부산대학교

Chair: PARK Sungkyun (Pusan National University)

A5.01 [13:00 - 13:24]

Electric structure studies of SrRuO₃ films in the ultrathin limit – spin structures and topological features / KIM Changyoung*¹ (¹Department of Physics and Astronomy, Seoul National University)

A5.02 [13:24 - 13:48]

Mimicking superconductivity of Sr₂RuO₄ using SrRuO₃-SrTiO₃ superlattice / KIM Bongjae* (¹Department of Physics, Kunsan National University)

A5.03 [13:48 - 14:12]

Phase Instability amid Dimensional Crossover in Artificial Oxide Crystal / CHOI Woo Seok* (¹Physics, Sungkyunkwan University)

A5.04 [14:12 - 14:36]

Oxygen-vacancy-endurable conductors with enhanced transparency using correlated 4d² SrMoO₃ thin films / HA Youngkyoung¹, LEE Shinbuhm*¹ (¹Emerging Materials Science, DGIST)

[A6-co] [E] [F] Berry curvature, Topology, and Spin transport I

2020. 11. 04 Wednesday 13:00~15:00

Room: 06

좌장 : 전상준 중앙대학교

Chair: JEON Sangjun (Chung-ang University)

A6.01 [13:00 - 13:24]

Topological physics in the 2D kagome network / COMIN Riccardo*¹ (¹MIT)

A6.02 [13:24 - 13:48]

Generation and control of Berry curvature dipole in 2D honeycomb lattices / LEE Jieun*¹ (¹Department of physics and astronomy, Seoul National University)

A6.03 [13:48 - 14:12]

Geometrical photon drag shift current in centrosymmetric crystals / SONG Justin*¹ (¹NTU, Nanyang Technological University)

A6.04 [14:12 - 14:36]

Anomalous thermal transport in magnetic insulators / YANG Bohm Jung¹, PARK Sung-joon¹ (¹Department of Physics and Astronomy, Seoul National University)

A6.05 [14:36 - 15:00]

Longitudinal Spin Seebeck effect in Pt/YIG structure with monolayer WSe₂ interlayer / LEE Sang-Kwon¹, LEE Won-Yong¹, KIM Yong Soo², SAITOH Eiji³ (¹Physics, Chungang University, ²Physics, University of Ulsan, ³Applied Physics, The University of Tokyo)

[A7-co] [F] Ultimate X-ray Science

2020. 11. 04 Wednesday 13:00~15:00

Room: 07

좌장 : 문봉진 광주과학기술원

Chair : MUN Bongjin Simon (GIST)

A7.01 [13:00 - 13:24]

Current Status of European XFEL Facility and Future Perspectives / KIM Chan¹ (¹European XFEL)

A7.02 [13:24 - 13:48]

Pulsed laser-induced dewetting of Co/Sapphire(0001) thin films / KANG Hyon Chol¹ (¹Department of Materials Science and Engineering, Chosun University)

A7.03 [13:48 - 14:12]

Graphene in organic-inorganic hybrid PVs: synchrotron x-ray studies / KIM Hyo Jung¹ (¹Organic Material Science and Engineering, Pusan National University)

A7.04 [14:12 - 14:36]

Structural phase control and thermochromic modulation of VO₂ thin films by post thermal annealing / KUMAR Manish¹, RANI Sunita¹, SINGH Jitendra Pal¹, CHAE Keun Hwa², KIM Younghak¹, PARK Jaehun¹, LEE Hyun Hwi¹ (¹Beamline Research Division, Pohang Accelerator Laboratory, ²Advanced Analysis Center, KIST)

A7.05 [14:36 - 15:00]

Femtosecond Dynamics of Strongly Photoexcited Electrons in Noble Metals / CHO Byoung Ick¹ (¹GIST)

[A8-co] Superconductivity

2020. 11. 04 Wednesday 13:00~14:36

Room: 08

좌장 : 조연정 경북대학교

Chair : JO Youn Jung (Kyungpook National University)

A8.01 [13:00 - 13:12]

Topological Jeff=2 Cooper Pairs in the Spin-Orbit Mott Insulator GaTa₄Se₈ / PARK Moon Jip¹, SIM GiBaik¹, JEONG Min Yong¹, MISHRA Archana¹, HAN Myung Joon¹, LEE SungBin¹ (¹Department of Physics, KAIST)

A8.02 [13:12 - 13:24]

Proposals to detect Bogoliubov Fermi surfaces / OH Hanbit¹, MOON Eun-Gook¹ (¹physics, KAIST)

A8.03 [13:24 - 13:36]

Off-diagonal singlet state in the infinite-layer nickelate with Ni²⁺ ion / JIN Hyo-Sun¹, LEE Kwan-Woo¹ (¹Division of Display and Semiconductor Physics, Korea University)

A8.04 [13:36 - 13:48]

Distinct nodal and nematic superconducting phases in the 2D Ising superconductor NbSe₂ / CHO Chang-woo^{1,2}, LYU Jian^{2,3}, HAN Tianyi^{2,4}, NG Cheuk Yin², GAO Yuxiang², LI Gaomin³, HUANG Mingyuan³, WANG Ning², SCHMALIAN Joerg⁵, LORTZ Rolf² (¹Grenoble High Magnetic Field Laboratory, Centre National de la Recherche Scientifique, CNRS, ²Department of Physics, The Hong Kong University of Science and Technology, ³Department of Physics, Southern University of Science and Technology, ⁴Department of Physics, Massachusetts Institute of Technology, ⁵Institute for Theory of Condensed Matter and Institute for Solid State Physics, Karlsruhe Institute of Technology)

A8.05 [13:48 - 14:00]

Coherent photogalvanic effect in fluctuating superconductors / KOVALEV Vadim^{2,3}, SONOWAL Kabyashree^{1,4}, SAVENKO Ivan^{1,4} (¹Theoretical physics of complex systems, IBS, ²Physics, Rzhanov Institute of Semiconductor Physics, ³Physics, Novosibirsk State Technical University, ⁴Basic Science, UST)

A8.06 [14:00 - 14:12]

Electron-spin correlation in the electron-doped cuprate high temperature superconductor / KIM Changyoung^{1,2}, SONG Dongjoon^{1,2} (¹Department of Physics and Astronomy, Seoul National University, ²CCES, IBS)

A8.07 [14:12 - 14:24]

Optical properties of electron doped cuprate Pr_{0.85}LaCe_{0.15}CuO_{4-δ} : unusually low charge carrier density / LEE Myounghoon¹, SONG Dongjoon^{2,3}, SEO Yu-Seong¹, ROH

Seulki¹, LEE Seokbae¹, EISAKI Hiroshi³, HWANG Jungseek^{*1} (¹Department of Physics, Sungkyunkwan University, ²Department of Physics and Astronomy, Seoul National University, ³Department of Physics, ³National Institute of Advanced Industrial Science and Technology)

A8.08 [14:24 - 14:36]

B1g phonon anomaly in pseudogap phase of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ revealed by Raman spectroscopy / OH Dongjin^{1,2}, SONG Dongjoon^{1,2}, WULFERDING Dirk^{1,2}, TAJIMA Setsuko⁴, PARK Seung Ryong³, KIM Changyoung^{*1,2} (¹Department of Physics and Astronomy, Seoul National University, ²Center for Correlated Electron Systems, Institute for Basic Science, ³Department of Physics, Incheon National University, ⁴Department of Physics, Osaka University)

[A9-ap] [F] Boron Nitrided based nanomaterials I

2020. 11. 04 Wednesday 13:00~14:48

Room: 09

좌장 : 권영균 경희대학교

Chair : KWON Young-Kyun (Kyung Hee University)

A9.01 [13:00 - 13:36]

Synthesis of wafer-scale hexagonal boron nitride films via chemical vapor deposition / KIM Soo Min^{*1}, KIM Ki Kang^{*2,3} (¹Department of Chemistry, Sookmyung Women's University, ²Department of Energy Science, Sungkyunkwan University, ³Center for Integrated Nanostructure Physics (CINAP), Institute for Basic Science (IBS))

A9.02 [13:36 - 14:12]

Photolithography-like direct pattern growth technique for two-dimensional materials in layered structures - Focus on hexagonal boron nitride / PARK Jaehyun^{*1}, LEE Dongjun¹ (¹Center for Opto-Electronic Materials and Devices, KIST)

A9.03 [14:12 - 14:48]

Amorphous Boron Nitride / SHIN Hyeon Suk^{*1} (¹Department of Chemistry and Low-Dimensional Carbon Materials Center, Ulsan National Institute of Science and Technology)

[A10-ap] Oxide and energy materials

2020. 11. 04 Wednesday 13:00~14:48

Room: 10

좌장 : 김태헌 울산대학교

Chair : KIM Tae Heon (University of Ulsan)

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

Surface Treatment and Passivation of Resistively Switchable SnO_2 Thin Films under

Different Ambient Conditions / KIM Jihyun¹, KIM Yeon Soo¹, JUNG Hye Ri¹, JO William^{*1}
(¹Department of Physics, Ewha Womans University)

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

Highly reliable titanium oxide memristor array device for neuromorphic computing system / JANG Jingon¹, CHOI Sanghyeon¹, WANG Gunuk^{*1} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University)

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

Titanium oxide thin films for heat mirror applications / SEO Hye-Won^{*1}, JANG Ji-Won¹ (¹Dept of Physics, Jeju National University)

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

Fabrication of tunnel selectors using selective filament formation for high-density memristors / JO William^{*1,2}, KIM Yeon Soo², CHUNG Harry² (¹Department of Physics, Ewha Womans University, ²New and Renewable Energy Research Center, Ewha Womans University)

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

Nanorod-shaped SiO_x Memristor for Stochastic Artificial Neuron and Computing Application / CHOI Sanghyeon¹, KIM Gwang Su^{1,2}, CHO Haein¹, YANG Jehyeon¹, KANG Chong-Yun^{1,2}, WANG Gunuk^{*1} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Center for Electronic Materials, KIST)

A10.06 [14:00 - 14:12]

Reduced extrinsic recombination process in anatase and rutile TiO₂ epitaxial thin films for efficient electron transport layers / KIM Yeon Soo¹, JIN Hye-Jin¹, JUNG Hye Ri¹, KIM Jihyun¹, NGUYEN Bich Phuong¹, KIM Juran¹, JO William^{*1} (¹Department of Physics, Ewha Womans University)

A10.07 [14:12 - 14:24]

Development of unstable front of ionic flow with power-law in crystalline solids / YANG Chan-Ho^{*1,2,3}, PARK Heung-Sik^{1,2}, LIM Ji Soo^{1,2}, SUH Jeonghun^{1,2} (¹Physics, KAIST, ²Center for Lattice Defectronics, KAIST, ³KAIST Institute for the NanoCentury, KAIST)

A10.08 [14:24 - 14:36]

Polarization-controlled PVDF-based hybrid nanogenerator for an effective vibrational energy harvesting from human foot / LEE Dong Woo¹, JEONG Dong Geun¹, KIM Jong Hun^{2,3}, KIM Hyun Soo^{1,6}, MURILLO Gonzalo⁷, LEE Gwan-Hyoung^{2,3,4,5}, SONG Hyun-Cheol⁶, JUNG Jong Hoon^{*1} (¹Inha University, ²Department of Materials Science and Engineering, Seoul National University, ³Research Institute of Advanced Materials (RIAM), Seoul National University, ⁴Institute of Engineering Research, Seoul National University, ⁵Institute of Applied Physics, Seoul National University, ⁶Center for Electronic Materials, KIST, ⁷Department of Nano and Microsystems, Instituto de Microelectronica de Barcelona)

A10.09 [14:36 - 14:48]

Interface Band Offset and Band Alignment in Ga-graded Cu(In,Ga)Se₂ Thin Film Solar Cells / PARK Ha Kyung¹, CHO Yunae¹, KIM Kihwan², JEONG Inyoung², YUN Jae Ho², GWAK Jihye², JO William^{*1} (¹Department of Physics, Ewha Womans University, ²Photovoltaic Laboratory, Korea Institute of Energy Research (KIER))

[A11] No session

[A12-st] [F] **Understanding of Covid-19 outbreak I**

2020. 11. 04 Wednesday 13:00~14:48

Room: 12

좌장 : 강병남 서울대학교

Chair : KAHNG Byungnam (Seoul National University)

A12.01 [13:00 - 13:36]

COVID-19 Genomic Surveillance / LEE Ha Youn^{*1} (¹Department of Molecular Microbiology and Immunology, Keck School of Medicine, University of Southern California)

A12.02 [13:36 - 14:12]

COVID-19 related epidemic patterns and scaling behaviors based on minimal model studies / HA Meesoon^{*1} (¹Department of Physics Education, Chosun University)

A12.03 [14:12 - 14:36]

Epidemics spreading with time-varying transmission rates: case of Covid19 / MIN Byungjoon^{*1} (¹Department of Physics, Chungbuk National University)

A12.04 [14:36 - 14:48]

Relationship between transmission of Malaria and Climate change in Africa / LEE Jae Woo^{*1}, MAFWELE Biseko Juma¹ (¹Inha University)

[A13-A14] No session

[A15-op] [F] **Colloidal Plasmonics & Metamaterials I**

2020. 11. 04 Wednesday 13:00~14:36

Room: 15

좌장 : 김명기 고려대학교

Chair : KIM Myung-Ki (Korea University)

A15.01 [13:00 - 13:24]

Non-Thermal Molecular Vibrational Excitation Induced by Plasmonic Hot Carriers

/ SHIN Hyun-Hang¹, NAM Yeonsig², LEE Kang Sup¹, YEON Gyu Jin¹, LEE Seung Yeon¹, PARK Sangwon¹, LEE Jin Yong², KIM Zee Hwan^{*1} (¹Department of Chemistry, Seoul National University, ²Department of Chemistry, Sungkyunkwan University)

A15.02 [13:24 - 13:48]

Fluidic metamolecules: from synthetic approach to dynamic self-assembly / PARK Sojung^{*1}, LEE Sunghye¹, WOODS Connor², IBRAHIM Omar², CHO Eun Chul³, FAKHRAAI Zahra² (¹Department of Chemistry and Nanoscience, Ewha Womans University, ²Department of Chemistry, University of Pennsylvania, ³Department of Chemical Engineering, Hanyang University)

A15.03 [13:48 - 14:12]

Plasmonic Nanoparticle Superlattice for Unnaturally High Optical Refraction / LEE Seungwoo^{*1} (¹Graduate School of Converging Sci & Tech & Dept. of Integrative Energy Engineering, Korea University)

A15.04 [14:12 - 14:36]

Peptide Induced Chirality in Single Gold Nanoparticle / NAM Ki Tae^{*1} (¹Seoul National University)

[A16-A19] No session

[A20-or] NPSM Senior Invited Lecture “I was a physicist. From now on...”

2020. 11. 04 Wednesday 13:00~14:48

Room: 20

좌장 : 조성래 울산대학교

Chair : CHO Sung Lae (University of Ulsan)

[13:00 - 13:05]

새물리 편집위원회 위원장 인사말 / 조성래(울산대)

A20.01 [13:05 - 13:45]

Fate of university in the post coronavirus world / 정윤희^{*1} (¹POSTECH)

A20.02 [13:45 - 14:25]

물리가 있는 풍경-Gamma ray bursts and gravitational waves / 이현규^{*1} (¹한양대)

A20.03 [14:25 - 14:48]

새물리 발전 방향 / 조성래^{*1} (¹울산대, 새물리 편집위원장)

Session B

2020 November 4(Wed) 15:00~16:48

B

[B1] No session

[B2-pa] Accelerator II

2020. 11. 04 Wednesday 15:00~16:48

Room: 02

좌장 : 유재혁 고려대학교

Chair : YOO Jae Hyeok (Korea University)

B2.01 [15:00 - 15:12]

Search for resonant new phenomena in high-mass dilepton final states at $\sqrt{s} = 13\text{TeV}$ with CMS / OH Minseok¹, YOO Hwidong² (¹Department of Physics, Seoul National University, ²Department of Physics, Yonsei University)

B2.02 [15:12 - 15:24]

Search for Z' bosons decaying into tau pairs in bottom fermion fusion process / LEE Jason Sang Hun¹, PARK Inkyu¹, ROH Youn Jung¹, WATSON Ian James¹, KANG Dayoung¹ (¹Department of Physics, University of Seoul)

B2.04 [15:24 - 15:36]

Search for Charged Higgs Boson decaying to $c \bar{b}$ in $t\bar{t}$ lepton+jets channel with CMS Run2 Data / YANG Un-ki¹, OH Byunghun¹, YOON Inseok¹, LEE Sangeun¹, YU Geumbong² (¹Department of physics and astronomy, Seoul National University, ²Department of physics, CEA Paris-Saclay/IRFU)

B2.06 [15:36 - 15:48]

Search for a heavy neutrino in top quark decays using CMS detector / BHYUN Ji Hwan¹, JEON Si Hyun¹, YANG Un-ki¹ (¹Department of physics and astronomy, Seoul National University)

B2.07 [15:48 - 16:00]

Search for long-lived particles using HCAL timing at CMS / YOO Jae Hyeok¹, PAD-MANABA Jayashri¹ (¹Physics, Korea University)

B2.08 [16:00 - 16:12]

Studies of efficiencies and scale factors in monophoton final state for dark matter

search at CMS / MOON Chang-Seong^{*1}, LEE Hakseong¹, DOGRAM Sunil Manohar¹ (¹Department of Physics, Kyungpook National University)

B2.09 [16:12 - 16:24]

Search for Long-lived Particle Using Delayed Photons with CMS / MOON Chang-Seong^{*1}, SEO YeongDeok¹, PENA Cristian³, NGUYEN Thong², XIE Si² (¹Department of Physics, Kyungpook National University, ²Department of Physics, California Institute of Technology, ³Particle Physics Division, Fermi National Accelerator Laboratory)

[B3-nu] Nuclear Experiment & Heavy-ion Collision

2020. 11. 04 Wednesday 15:00~16:24

Room: 03

좌장 : 유인권 부산대학교

Chair : YOO In-Kwon (Pusan National University)

B3.01 [15:00 - 15:12]

The development of LAMPS starting counter / KWEON Min Jung^{*1}, DO Jaehyeon¹, LEE Hyungjun¹ (¹Inha University)

B3.02 [15:12 - 15:24]

Development of a Barrel ToF Counter for LAMPS at RAON / AHN Jung Keun^{*1}, KANG Byungmin¹ (¹Department of Physics, Korea University)

B3.03 [15:24 - 15:36]

Development of an active-target TPC demonstrator for the study of $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$ reaction in stellar nucleosynthesis / KIM Shin Hyung¹, AHN Jung Keun^{*1} (¹Korea University)

B3.04 [15:36 - 15:48]

Single-photoelectron response of MCP-PMT and MPPC for the LEPS2 aerogel Cherenkov detector / YANG Hyunmin¹, AHN J. K.^{*1}, TOKIYASU A.², YOSOI M.², For the LEPS2 Collaboration (¹Korea University, ²LEPS2)

B3.05 [15:48 - 16:00]

Ξ_c^0 production in p+Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV / BOK Jeongsu^{*1} (¹Inha University)

B3.06 [16:00 - 16:12]

Ξ_c^0 and Ξ_c^+ production in pp collisions at 13 TeV / SEO Jinjoo^{*1} (¹Dept. of Physics, Inha University)

B3.07 [16:12 - 16:24]

J/ ψ near T_c / LEE Su Houg^{*1}, HONG Juhee¹, SONG Taesoo², GUBLER Philipp³, KENJI

Morita⁴ (¹Yonsei University, ²Theory group, GSI Helmholtzzentrum, ³Advanced Science Research Center, Japan Atomic Energy Agency, ⁴Nishina Center, RIKEN)

B

[B4-as] [F] Korean Neutrino Observatory as an Astrophysical Neutrino Telescope

2020. 11. 04 Wednesday 15:00~16:36

Room: 04

좌장 : 곽규진 울산과학기술원

Chair: KWAK Kyujin (UNIST)

B4.01 [15:00 - 15:24]

KNO Overview / YU Intae^{*1} (¹Department of Physics, Sungkyunkwan University)

B4.02 [15:24 - 15:48]

Neutrino Observatories around the World / ROTT Carsten^{*1} (¹Department of Physics, Sungkyunkwan University)

B4.03 [15:48 - 16:12]

Studies of High-Energy Astrophysical Neutrinos with KN / RYU Dongsu^{*1} (¹Department of Physics, UNIST)

B4.04 [16:12 - 16:36]

Neutrinos from supernovae and compact objects / PARK Myeong-Gu^{*1} (¹Department of Astronomy and Atmospheric Sciences, Kyungpook National University)

[B5-co] [F] Emergent quantum phenomena in symmetry-manipulated oxides II

2020. 11. 04 Wednesday 15:00~16:36

Room: 05

좌장 : 최우석 성균관대학교

Chair: CHOI Woo Seok (Sungkyunkwan University)

B5.01 [15:00 - 15:24]

Correlation between symmetry and phase transition temperature of VO₂ / PARK Sungkyun^{*1}, CHOI Yesul¹, LEE Dooyong¹, KIM Jiwoong¹, SONG Sehwan¹, JU Taesung¹, KIM Hyegyeyong¹, KIM Jayeong², YOON Seokhyun², KIM Yunseok³, PHAN Thang Bach⁴, BAE Jong-Seong⁵ (¹Pusan National University, ²Department of Physics, Ewha Womans University, ³School of Advanced Materials and Engineering, Sungkyunkwan University, ⁴Center for Innovative Materials and Architectures, Vietnam National University, ⁵Busan Center, Korea Basic Science Institute)

B5.02 [15:24 - 15:48]

First-principles investigation of strain and oxygen vacancy formation in titanates / KIM Inseo¹, LEE Hyungwoo¹, CHOI Minseok^{*1} (¹Department of Physics, Inha University)

B5.03 [15:48 - 16:12]

Enhanced Hund's metallicity by van Hove singularity in three-band systems / GO Ara^{*1} (¹Department of Physics, Chonnam National University)

B5.04 [16:12 - 16:36]

Understanding the superconductivity in infinite-layer nickelate: 2B(band) or not 2B(band)? / HAN Myung Joon^{*1} (¹Department of Physics, KAIST)

[B6-co] [E] [F] Berry curvature, Topology, and Spin transport II

2020. 11. 04 Wednesday 15:00~16:36

Room: 06

좌장 : 최광용 중앙대학교

Chair : CHOI Kwang-Yong (Chung-ang University)

B6.01 [15:00 - 15:24]

Topological magnons and magnon-polarons in 2D magnets / KIM Se Kwon^{*1} (¹Physics, KAIST)

B6.02 [15:24 - 15:48]

Majorana-mediated spin transport without spin polarization in quantum spin liquids / NASU Joji^{*1} (¹Yokohama National University)

B6.03 [15:48 - 16:12]

Majorana bound states vs. spin waves in Kitaev candidate materials / WULFERDING Dirk^{*1,2}, CHOI Youngsu³, LEE Seungyeol³, GALLAIS Yann⁴, FAUGERAS Clément⁵, CHOI Kwang-Yong³ (¹IBS-CCES, ²Seoul Natl. Univ., ³Chung-Ang Univ., ⁴Univ. de Paris, France, ⁵LNCMI Grenoble, France)

B6.04 [16:12 - 16:36]

Theory of Two-Dimensional Nonlinear Spectroscopy for the Kitaev Spin Liquid / LEE Ki Hoon^{*1} (¹Department of Physics, Incheon National University)

[B7-co] [F] Van der Waals type superconductors

2020. 11. 04 Wednesday 15:00~17:00

Room: 07

좌장 : 조연정 경북대학교

Chair : JO Youn Jung (Kyungpook National University)

B

B7.01 [15:00 - 15:24]

Electron-phonon coupling and its role for superconductivity in twisted graphene layers / CHOI Young Woo¹, CHOI Hyoung Joon^{*1} (¹Department of Physics, Yonsei University)

B7.02 [15:24 - 15:48]

Enhanced superconductivity in the vicinity of CDW quantum critical points in chalcogenide superconductors Pd-intercalated TaSe₂ / KIM Kee Hoon^{*1,2} (¹Center for Novel States of Complex Materials and Research, Department of physics and astronomy, Seoul National University, ²Institute of Applied Physics, Department of physics and astronomy, Seoul National University)

B7.03 [15:48 - 16:12]

On the origin of charge density waves and superconductivity in Pd-intercalated 2H-TaSe₂ / BAEK Seung-Ho^{*1} (¹Physics, Changwon National University)

B7.04 [16:12 - 16:36]

Superconductivity emerging from a stripe charge order in IrTe₂ nanoflakes / KIM Jun Sung^{*1} (¹Department of Physics, POSTECH)

B7.05 [16:36 - 17:00]

Yu-Shiba-Rusinov states in the unconventional superconductor FeTe_{0.55}Se_{0.45} / CHO Doohee^{*1}, CHATZOPOULOS Damianos², BASTIAANS Koen M.², STEFFENSEN Gorm O.³, BOUWMEESTER Damian⁴, AKBARI Alireza⁵, GU Genda⁶, PAASKE Jens³, ANDERSEN Brian M.³, ALLAN Milan P.² (¹Department of Physics, Yonsei University, ²Leiden Institute of Physics, Leiden University, ³Center for Quantum Devices, Niels Bohr Institute, University of Copenhagen, ⁴Kavli Institute of Nanoscience, Delft University of Technology, ⁵Max Planck POSTECH Center for Complex Phase Materials and Department of Physics, POSTECH, ⁶Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory)

[B8-co] Magnetism/Superconductivity

2020. 11. 04 Wednesday 15:00-16:36

Room: 08

좌장 : 김수란 경북대학교

Chair : KIM Sooran (Kyungpook National University)

B8.01 [15:00 - 15:12]

Berezinskii-Kosterlitz-Thouless transitions in easy-plane spin-triplet superconductor / KIM Se Kwon¹, CHUNG Suk Bum² (¹Department of Physics, KAIST, ²Department of Physics, University of Seoul)

B8.02 [15:12 - 15:24]

Exact three-colored quantum scars from geometric frustration / LEE Kyungmin¹, MELENDREZ Ronald¹, PAL Arijeet², CHANGLANI Hitesh J.^{*1} (¹National High Magnetic Field Laboratory, ²University College London)

B8.03 [15:24 - 15:36]

Hidden phases born of a quantum spin liquid: Application to pyrochlore spin ice / LEE SungBin^{*1}, YANG HyeokJun¹ (¹physics, KAIST)

B8.04 [15:36 - 15:48]

Quantum geometric characterization of anomalous Landau levels of isolated flat bands / HWANG Yoonseok^{1,2,3}, RHIM Jun-Won^{1,2}, YANG Bohm Jung^{*1,2,3} (¹Center for Correlated Electron Systems (CCES), Institute for Basis Science (IBS), ²Department of Physics and Astronomy, Seoul National University, ³Center for Theoretical Physics (CTP), Seoul National University)

B8.05 [15:48 - 16:00]

Observation of topological surface states in antiferromagnetic Sm-doped Bi₂Te₃ / JUNG Myung Hwa^{*1}, JUN Jin-Hyeon¹, KIM Jinsu¹, KIM Soo-Whan¹ (¹Sogang University)

B8.06 [16:00 - 16:12]

The Orbit topology of Dirac semimetal determined from Magnetic Quantum Oscillation / JUNG Myung Hwa^{*1}, LEE Sang-Eon¹, OH Myeong-Jun², KANG Woun³, JO Youn-Jung^{*2} (¹Sogang University, ²Department of Physics, Kyungpook National University, ³Department of Physics, Ewha Womans University)

B8.07 [16:12 - 16:24]

Strong correlation between the electronic and magnetic properties in the Dirac semimetal of Ti_xZr_{1-x}Te₅ / JUNG Myung Hwa^{*1}, Ji Sanghyun¹, LEE Sang Eon¹ (¹Sogang University)

B8.08 [16:24 - 16:36]

Hidden magnetic state of kagome-lattice $\text{Co}_3\text{Sn}_2(\text{S,Se})_2$ single crystals / SHIN Dong-Hwa¹, JUN Jin-Hyeon¹, LEE Sang-Eon¹, JUNG Myung Hwa^{*1} (¹Sogang University)

[B9-ap] [F] Boron Nitrided based nanomaterials II

2020. 11. 04 Wednesday 15:00~16:48

Room: 09

좌장 : 김기강 성균관대학교

Chair : KIM Ki Kang (Sungkyunkwan University)

B9.01 [15:00 - 15:36]

Theoretical investigation on various color centers in hexagonal boron nitride / KWON Young-Kyun^{*1} (¹Department of Physics, Kyung Hee University)

B9.02 [15:36 - 16:12]

Investigation of growth and defects of hBN using atomic resolution TEM / LEE Zonghoon^{*1,2} (¹Department of Materials Science and Engineering, UNIST, ²Center for Multidimensional Carbon Materials, IBS)

B9.03 [16:12 - 16:48]

Deep ultraviolet light emission from atomically thin hexagonal boron nitride van der Waals heterostructures / KIM Young Duck^{*1} (¹Department of Physics, Kyung Hee University)

[B10-ap] Magnetism and energy materials

2020. 11. 04 Wednesday 15:00~16:12

Room: 10

좌장 : 제송근 전남대학교

Chair : JE Soong-Geun (Chonnam National University)

B10.01 [15:00 - 15:12]

Annealing effect on the magnetic properties due to the structural change of Mn_3Ga thin films / BANG Hyun-Woo¹, JUNG Myung Hwa^{*1} (¹Sogang University)

B10.02 [15:12 - 15:24]

Scaling of anomalous Hall effect in perpendicular magnetic CoSiB/Pt multilayers / NOH Hwayong¹, GAUTAM Praveen², SHARMA Pradeep Raj³ (¹Sejong University, ²Department of Physics, Sejong University, ³Department of Physics, Sejong University)

B10.03 [15:24 - 15:36]

Resonant coupling between two macro-spins by acoustic phonons / AN Kyongmo^{*1}, KOHNO Ryuhei¹, LITVINENKO Artem¹, NALETOV Vladimir^{1,2}, VILA Laurent¹, DE LOUBENS

Gregoire³, BEN YOSSEF Jamal⁴, VUKADINOVIC Nicolas⁵, KLEIN Olivier¹ (¹Physics, Univ. Grenoble Alpes, CEA, CNRS, France, ²Institute of Physics, Kazan Federal University, Russian Federation, ³Physics, SPEC, CEA-Saclay, CNRS, Université Paris-Saclay, ⁴Physics, LabSTICC, CNRS, Université de Bretagne Occidentale, France, ⁵Physics, Dassault Aviation, France)

B10.04 [15:36 - 15:48]

Role of non-thermal electrons in ultrafast spin dynamics of ferromagnetic multi-layer / SHIM Je-ho^{1,2}, SYED Akbar Ali^{1,2}, KIM Jea-Il^{1,2}, PIAO Hong-Guang^{3,4}, LEE Sang-Hyuk³, PARK Seung-Young⁵, CHOI Yeon Suk⁵, LEE Kyung Min⁶, KIM Hyun-Joong⁷, JEONG Jong-Ryul⁶, HONG Jung-Il⁷, KIM Dong Eon^{1,2}, KIM Dong-Hyun³ (¹Physics Department, POSTECH, ²Attosecond science, Max Planck POSTECH/KOREA Research Initiative, ³Department of Physics, Chungbuk National University, ⁴College of Science, China Three Gorges University, ⁵Spin Engineering Physics Team, Korea Basic Science Institute, ⁶Department of Material Science and Engineering and Graduate School of Energy Science and Technology, Chungnam National University, ⁷Department of Emerging Materials Science, DGIST)

B10.05 [15:48 - 16:00]

Electrical detection of the inverse Edelstein effect on the surface of SmB₆ / KIM Je-hyun¹, JANG Chaun², WANG Xiangfeng³, PAGLIONE Johnpierre³, HONG Seokmin², SAYED Shehrin⁴, CHUN Dongwon⁵, KIM Dohun¹ (¹Department of Physics and Astronomy, Seoul National University, ²Center for spintronics, KIST, ³Maryland Quantum Materials Center, Department of Physics, University of Maryland, ⁴Electrical Engineering and Computer Science, UC Berkeley, ⁵Advanced Analysis Center, KIST)

B10.06 [16:00 - 16:12]

Probing hydrogen environments in quasicrystals by high-resolution 1H MAS NMR / KWEON Jin Jung¹, KIM Hyo-Im¹, LEE Sang-hwa^{2,3}, KIM Jaeyong², LEE Sung Keun^{1,4} (¹School of Earth and Environmental Sciences, Seoul National University, ²Department of Physics and Institute for High Pressure, Hanyang University, ³Neutron and Radioisotope Application Research Division, Korea Atomic Energy Research Institute, ⁴Institute of Applied Physics, Seoul National University)

[B11-ap] Quantum information and processing

2020. 11. 04 Wednesday 15:00-16:48

Room: 11

좌장 : 이길호 포항공과대학교

Chair : LEE Gil-Ho (POSTECH)

B11.01 [15:00 - 15:12]

Deep learning enhanced individual nuclear spin detection in diamond / JUNG Kyung-hoon¹, ABOBEIH Mohamed H², YUN Jiwon¹, KIM Gyeonghun¹, OH Hyunseok¹, ANG Henry¹, TAMINIAU Tim H², KIM Dohun¹ (¹Department of Physics and Astronomy, Seoul National University, ²QuTech, Delft University of Technology)

B11.02 [15:12 - 15:24]

Adaptive compressive quantum process tomography / KIM Yosep¹, TEO Yong Siah², AHN Daekun², IM Dong-gil¹, CHO Young-Wook³, LEUCHS Gerd^{4,5}, SANCHEZ-SOTO Luis L.^{4,6}, JEONG Hyunseok², KIM Yoon-Ho¹ (¹Department of Physics, POSTECH, ²Department of Physics and Astronomy, Seoul National University, ³Center for Quantum Information, KIST, ⁴Max-Planck-Institut für die Physik des Lichts, Staudtstraße, ⁵Institute of Applied Physics, Russian Academy of Sciences, ⁶Departamento de Optica, Facultad de Fisica, Universidad Complutense)

B11.03 [15:24 - 15:36]

Three individual control of singlet-triplet qubits in a micromagnet integrated quantum dot array / JANG Wonjin¹, CHO Min-Kyun¹, KIM Jehyun¹, CHUNG Hwanchul², UMANSKY Vladimir³, KIM Dohun¹ (¹Department of Physics and Astronomy, Seoul National University, ²Department of Physics, Pusan National University, ³Department of Condensed Matter Physics, Weizmann Institute of Science)

B11.04 [15:36 - 15:48]

Arbitrary parameter estimation via generalized weak value measurement / YOO Seung-Yeun¹, KIM Yosep¹, IM Dong-Gil¹, LEE Gyu-Hyeok¹, LEE Chung-Hyun¹, KIM Yoon-Ho¹ (¹Department of Physics, POSTECH)

B11.05 [15:48 - 16:00]

Realtime nanoscale quantum thermometry under arbitrary magnetic field using microwave dressed spin states in diamond / YUN Jiwon¹, KIM Dohun¹ (¹Department of Physics and Astronomy, Seoul National University)

B11.06 [16:00 - 16:12]

Time-bin qubit entanglement distribution over a wavelength-multiplexing quantum network / KIM Jin-Hun¹, CHAE Jin-Woo¹, JEONG Youn-Chang², KIM Yoon-Ho¹ (¹Physics, POSTECH, ²연구부서, The affiliated institute of ETRI)

B11.07 [16:12 - 16:24]

Fast, scalable auto-tuning of the semiconductor quantum dot qubits via deep reinforcement learning / KIM Gyeonghun¹, JUNG Kyunghoon¹, KIM Minyoung¹, KIM Dohun¹ (¹Department of Physics and Astronomy, Seoul National University)

B11.08 [16:24 - 16:36]

Trapping a Free-propagating Single-photon into an Atomic Ensemble / KIM U-Shin¹, IHN Yong Sup², LEE Chung-Hyun¹, KIM Yoon-Ho¹ (¹POSTECH, ²Quantum Physics Technology Directorate, Agency for Defense Development)

B11.09 [16:36 - 16:48]

Dispersion cancellation in a quantum interferometer with independent single-photons / IM Dong-gil¹, KIM Yosep¹, KIM Yoon-Ho¹ (¹Department of Physics, POSTECH)

[B12-st] [F] Understanding of Covid-19 outbreak II

2020. 11. 04 Wednesday 15:00~16:48

Room: 12

좌장 : 김범준 성균관대학교

Chair : KIM Beom Jun (Sungkyunkwan University)

B12.01 [15:00 - 15:12]

Numerical simulation approaches for stochastic epidemic model under the self-isolation / CHOI Kwangjong¹, CHOI Hoyun¹, KAHNG Byungnam^{*1} (¹Department of Physics and Astronomy, Seoul National University)

B12.02 [15:12 - 15:36]

Covid-19 outbreak under the K-quarantine model: numerical simulations on networks / CHOI Kwangjong¹, CHOI Hoyun¹, KAHNG Byungnam^{*1} (¹Department of Physics and Astronomy, Seoul National University)

B12.03 [15:36 - 16:12]

코로나19 확산 예측 및 비약물적 방역 정책 분석 / 손우식^{*1} (¹국가수리과학연구소)

B12.04 [16:12 - 16:48]

Data-driven modeling of COVID-19 pandemic / MORENO Yamir^{*1,2} (¹Institute for Bio-computation and Physics of Complex Systems (BIFI), University of Zaragoza, ²Department of Theoretical Physics, Faculty of Sciences, University of Zaragoza)

[B13-B14] No session

[B15-op] [F] Colloidal Plasmonics & Metamaterials II

2020. 11. 04 Wednesday 15:00~16:36

Room: 15

좌장 : 이승우 고려대학교

Chair : LEE Seungwoo (Korea University)

B15.01 [15:00 - 15:24]

On-demand Delivery of Colloidal Metal Nanoparticles onto Arbitrary Solid Surfaces for Sensitive Molecular Detections / 강태욱^{*1} (서강대학교 화공생명공학과, 바이오융합기술연구소)

B15.02 [15:24 - 15:48]

Microfluidic Platforms for Surface Enhanced Raman Sensing / CHOO Jaebum^{*1} (¹Department of Chemistry, Chung-Ang University)

B15.03 [15:48 - 16:12]

Nanoframes: Synthesis and Applications / PARK Sungho^{*1} (¹Department of Chemistry, Sungkyunkwan University)

B15.04 [16:12 - 16:36]

Lipid Nanotablet for Modular and Scalable DNA Computing / NAM Jwa-Min^{*1} (¹Department of Chemistry, Seoul National University)

[B16-B18] No session

[B19-or] Status of Heavy Ion Accelerator Complex, RAON

2020. 11. 04 Wednesday 15:00~16:50

Room: 19

좌장 : 권영관 기초과학연구원 중이온가속기건설구축사업단

Chair : KWON Young-Kwan (IBS)

B19.01 [15:00 - 15:24]

중이온가속기 현황 및 향후 계획 / 권면^{*1} (¹기초과학연구원 중이온가속기건설구축사업단)

B19.02 [15:24 - 16:08]

중이온가속기 가속장치 구축현황 / 손영욱^{*1} (¹기초과학연구원 중이온가속기건설구축사업단)

B19.03 [16:08 - 16:50]

중이온가속기 실험장치 구축현황 / 신택수^{*1} (¹기초과학연구원 중이온가속기건설구축사업단)

[B20-or] How can you introduce computational science to your research?

2020. 11. 04 Wednesday 15:00~15:48

Room: 20

좌장 : 박민규 (주)버추얼랩

Chair : PARK Minkyu (Virtual Lab. Inc.)

B20.01 [15:00 - 15:48]

How can you introduce computational science to your research? / KIM Young-Kwang^{*1} (¹Virtual Lab. Inc.)

Session C

2020 November 5(Thu) 09:00~10:48

[C1-pa] [F] Cornerstone for future collider projects I

2020. 11. 05 Thursday 09:00~11:12

Room: 01

좌장 : 이세욱 경북대학교

Chair: LEE Sehwook (Kyungpook National University)

C1.01 [09:00 - 09:36]

Future Circular e^+e^- Colliders / KLUTE Markus^{*1} (¹Department of Physics, Massachusetts Institute of Technology)

C1.02 [09:36 - 10:24]

Calorimetry in the 21st Century / WIGMANS Richard^{*1} (¹Department of Physics and Astronomy, Texas Tech University)

C1.03 [10:24 - 10:48]

Dual-Readout Calorimeter R&D in Korea for future e^+e^- colliders / YOO Hwidoong^{*1} (¹Department of Physics, Yonsei University)

C1.04 [10:48 - 11:12]

ML application for future e^+e^- colliders / LEE Jason^{*1} (¹Department of Physics, University of Seoul)

[C2] No session

[C3-nu] Heavy-ion collision

2020. 11. 05 Thursday 09:00~10:24

Room: 03

좌장 : 권민정 인하대학교

Chair: KWEON Min Jung (Inha University)

C3.01 [09:00 - 09:12]

String shoving model in PYTHIA8 for long-range correlation in pp collisions / KIM Junlee^{*1}, KIM Eun-Joo¹, LIM Sanghoon², JI SuJeong² (¹Division of Science Education, Jeonbuk National University, ²Department of Physics, Pusan National University)

C3.02 [09:12 - 09:24]

Development of Monte Carlo simulation for quarkonia production in heavy-ion collisions / LIM Sang Hoon^{*1}, LEE Su Houg², HONG Juhee², KIM Eun-Joo³, KWEON MinJung⁴, PARK Jaebeom⁵, KIM Junlee³, SEO Jinjoo⁴ (¹Physics Department, Pusan National University, ²Physics Department, Yonsei University, ³Division of Science Education, Jeonbuk National University, ⁴Physics Department, Inha University, ⁵Physics Department, Korea University)

C3.03 [09:24 - 09:36]

Status of the measurement of electrons from beauty-hadron decays in pp collisions at $\sqrt{s} = 13$ TeV in ALICE / KWON Jiyeon^{*1}, KWEON Min Jung¹ (¹Physics, Inha University)

C3.04 [09:36 - 09:48]

Measurement of electrons from beauty-hadron decays in Pb-Pb collisions at $\sqrt{s} NN = 5.02$ TeV with ALICE detector / PARK Jong Han^{*1} (¹Inha University)

C3.05 [09:48 - 10:00]

Recent recents of photo-production of vector meson and jet in CMS heavy ion experiment. / KIM Yongsun^{*1} (¹Sejong University)

C3.06 [10:00 - 10:12]

The K_1 meson abundance in relativistic heavy-ion collisions / SUNG Haesom¹, HONG Juhee¹, CHO Sungtae², SONG Taesoo³, LEE Su Houg^{*1} (¹Yonsei University, ²The Department of Science Education, Kangwon National University, ³Theory Department, GSI Helmholtzzentrum)

C3.07 [10:12 - 10:24]

Bose-Einstein correlation measurements at CMS / DOGRA Sunil Manohar^{*1}, MOON Chang-Seong¹ (¹Department of physics, Kyungpook National University)

[C4] No session**[C5-co] [F] Excitons in quantum matter**

2020. 11. 05 Thursday 09:00~10:36

Room: 05

좌장 : 김근수 연세대학교

Chair : KIM Keun Su (Yonsei University)

C5.01 [09:00 - 09:24]

Observation of exotic many-body exciton in NiPS₃ / PARK Je-Geun^{*1} (¹Seoul National University)

C5.02 [09:24 - 09:48]

Observation of excitonic instability in Ta₂NiSe₅ / KIM Bumjoon^{*1} (¹Department of Physics, POSTECH)

C5.03 [09:48 - 10:12]

Identification of the many-body exciton in the van der Waals antiferromagnet NiPS₃ / KIM Beom Hyun^{*1} (¹School of Computational Sciences, KIAS)

C5.04 [10:12 - 10:36]

Excitons in twisted MoSe₂/ MoSe₂ bilayers: the effect of broken mirror symmetry / SUNG Jiho^{*1} (¹Chemistry and Chemical Biology, Harvard University)

[C6-co] [E] [F] High-pressure physics I

2020. 11. 05 Thursday 09:00~10:36

Room: 06

좌장 : 김재용 한양대학교

Chair : KIM Jaeyong (Hanyang University)

C6.01 [09:00 - 09:24]

Opportunities of high-pressure researches as an effective route for tuning electronic states of solids / KIM Kee Hoon^{*1,2} (¹Center for Novel States of Complex Materials and Research, Department of physics and astronomy, Seoul National University, ²Institute of Applied Physics, Department of physics and astronomy, Seoul National University)

C6.02 [09:24 - 09:48]

Multi-step pathways of water freezing and ice melting under dynamic compression / LEE Geun Woo^{*1,2}, LEE Yun-Hee Lee^{1,2}, KIM Yong-Jae¹, LEE Sooheyong^{1,2}, CHO Yong Chan¹ (¹Frontier of Extreme Physics, KRISS, ²Nano Science, University of Science and Technology)

C6.03 [09:48 - 10:12]

Pressure-induced superconductivity in the double helical antiferromagnet CrAs / PARK Tuson^{*1} (¹Physics, Sungkyunkwan University)

C6.04 [10:12 - 10:36]

Crystal growth in water and aqueous solutions under dynamic compression condition / LEE Yun-Hee¹, KIM Yongjae¹, LEE Sooheyong¹, CHO Yongchan¹, LEE Geun Woo^{*1} (¹Frontier of Extreme Physics, KRISS)

[C7-co] Dielectric/Functional Oxides

2020. 11. 05 Thursday 09:00~10:00

Room: 07

좌장 : 조지영 광주과학기술원

Chair : JO Ji Young (GIST)

C

C7.01 [09:00 - 09:12]

First-principles study on rotation-driven ferroelectricity in CaTiO_3 induced by interfacial coupling / KIM Jeong Rae^{1,2}, JANG Jinhyuk³, GO Kyoung-June³, PARK Se Young^{4,5}, ROH Chang Jae⁵, BONINI John⁶, KIM Jinkwon^{1,2}, LEE Han Gyeol^{1,2}, RABE Karin M⁶, LEE Jong Seok⁵, CHOI Si-Young³, NOH Tae Won^{1,2}, LEE Daesu^{7,8} (¹Center for Correlated Electron Systems, CCES (IBS), ²Department of Physics and Astronomy, Seoul National University, ³Department of Materials Science and Engineering, POSTECH, ⁴Department of physics, Soongsil University, ⁵Department of Physics and Photon Science, GIST, ⁶Department of Physics and Astronomy, Rutgers University, ⁷Department of Physics, POSTECH, ⁸Theoretical Physics, APCTP)

C7.02 [09:12 - 09:24]

Reversible photoluminescence modulation of multifunctional optical materials Eu^{3+} doped Sr_2SnO_4 ceramics based on photochromism / LEE Dong Jae¹, LEE Yun Sang¹ (¹Department of Physics and Integrative Institute of Basic Sciences, Soongsil University)

C7.03 [09:24 - 09:36]

Thickness dependence of electrocatalytic activity in epitaxial $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films / LEE Jegon¹, ADIGA Prajwal², LEE Sang A³, STOERZINGER Kelsey A.², CHOI Woo Seok¹ (¹Physics, Sungkyunkwan University, ²School of Chemical, Biological and Environmental Engineering, Oregon State University, ³Department of Physics, Pukyong National University)

C7.04 [09:36 - 09:48]

Emerging Soft Phonon Mode of the Ferroelastic WO_3 Twin Wall Explored by Raman Spectromicroscopy / SEO Jeongdae¹, PARK Heung-Sik¹, YUN Shinhee¹, LEE Jin Hong¹, YANG Chan-Ho¹ (¹Physics, KAIST)

C7.05 [09:48 - 10:00]

Decoupling of Metal-to-Insulator Transition and Crystal Field Effects of VO_2 / HWANG Inhui^{1,2}, PARK Changin¹, SUN Chengjun², HAN Sang Wook¹ (¹Department of Physics Education, Jeonbuk National University, ²X-ray Science Division, Argonne National Laboratory)

[C8-co] Magnetism

2020. 11. 05 Thursday 09:00~10:36

Room: 08

좌장 : 김상훈 울산대학교

Chair : KIM Sanghoon (University of Ulsan)

C8.01 [09:00 - 09:12]

Tunable phase transition temperature of FeRh thin film by Co doping / JUNG Myung Hwa^{*1}, SEO Sang Il¹, PARK Mintae¹ (¹Sogang University)

C8.02 [09:12 - 09:24]

Epitaxial growth of FeRh thin films and adjusting transition temperature through proximity effect between Co doped Mn₃Ga / JUNG Myung Hwa^{*1}, PARK Mintae¹, YOO Woosuk¹ (¹Sogang University)

C8.03 [09:24 - 09:36]

Resonance Raman Scattering Studies of localized spin excitation in hexagonal LuMnO₃ / YANG In-Sang^{*1}, KIM Seung¹, NAM Jiyeon¹, WANG Yazhong², CHEONG Sang-Wook² (¹Ewha Womans University, ²Rutgers Center for Emergent Materials and Department of Physics and Astronomy, Rutgers University)

C8.04 [09:36 - 09:48]

Electronic and Magnetic Properties of GdPtBi / JUNG Myung Hwa^{*1}, CHOI Mi Ri¹, LEE Sang-Eon¹ (¹Sogang University)

C8.05 [09:48 - 10:00]

Effect of thermal annealing on electronic properties and microstructure of polycrystalline SrFe₁₂O₁₉ / KANG Kung Wa², JEEN Hyoung Jeen^{*1} (¹Department of Physics, Pusan National University, ²Department of Physics, Pusan National University)

C8.06 [10:00 - 10:12]

Observation of unconventional anomalous Hall effect at compensated Mn_{2.3}Pd_{0.7}Ga thin film / CHOI Won-Young¹, YOO Woosuk¹, JUNG Myung Hwa^{*1} (¹Sogang University)

C8.07 [10:12 - 10:24]

Comparison between Perpendicular and Longitudinal Exchange Bias Effects in (Mn, Co)₃Ga/Mn₃Ga Bilayers / KIM HyeonSu¹, YOO Woosuk¹, JUNG Myung Hwa^{*1} (¹Sogang University)

C8.08 [10:24 - 10:36]

Structural study of nitrogen ion beam implanted GdFe₁₂ films / CHO Dae Gill¹, LEE Joonhyuk¹, JEEN Hyoung Jeen^{*1} (¹Department of Physics, Pusan National University)

[C9-ap] [F] Quantum information processing using atoms and devices

2020. 11. 05 Thursday 09:00~10:36

Room: 09

좌장 : 최태영 이화여자대학교

Chair : CHOI Taeyoung (Ewha Womans University)

C9.01 [09:00 - 09:24]

Quantum Information Processing using Superconducting Quantum Devices / CHONG Younk¹ (¹SAINT, Sungkyunkwan University)

C9.02 [09:24 - 09:48]

Quantum simulations with ultracold atoms / CHOI Jae Yoon¹ (¹Physics Department, KAIST)

C9.03 [09:48 - 10:12]

Spin sensing and quantum control of single molecules / ZHANG Xue^{1,2}, WANG Yu^{1,2}, WILLKE Philip^{1,2}, AUBIN Hervé³, HEINRICH Andreas J.^{1,4}, CHOI Taeyoung^{1,4} (¹Center for Quantum Nanoscience, Institute for Basic Science (IBS), ²Ewha Womans University, ³Centre de Nanosciences et de Nanotechnologies, CNRS, Univ. Paris-Sud, Universités Paris-Saclay, France, ⁴Department of Physics, Ewha Womans University)

C9.04 [10:12 - 10:36]

Quantum information with trapped ions / LEE Moonjoo¹ (¹Department of Electrical Engineering, POSTECH)

[C10-ap] [F] Direct visualization of defects and reconstruction in 2D layered crystals

2020. 11. 05 Thursday 09:00~10:48

Room: 10

좌장 : 김관표 연세대학교

Chair : KIM Kwanpyo (Yonsei University)

C10.01 [09:00 - 09:36]

Engineering domain topology and symmetry in the twisted bilayer vdW materials / YOO Hyobin¹ (¹Department of Physics, Sogang University)

C10.02 [09:36 - 10:12]

Cooperative study of TEM and simulation on mediator atom in 2D materials and various van der Waals heterostructures. / LEE Gun-Do¹ (¹Department of Materials Science and Engineering, Seoul National University)

C10.03 [10:12 - 10:48]

Advanced interface analysis of 2D-TMD materials using cross-sectional transmis-



sion electron microscopy / JEONG Hu Young*¹ (UNIST Central Research Facilities, UNIST)

[C11-ap] [F] Next-generation display technology based on nanomaterials

2020. 11. 05 Thursday 09:00~10:36

Room: 11

좌장 : 이현복 강원대학교

Chair : LEE Hyunbok (Kangwon National University)

C11.01 [09:00 - 09:24]

The Interface Mixing Effect of Solution Processed OLEDs / 서민철*¹ (경희대학교 정보디스플레이학과)

C11.02 [09:24 - 09:48]

Metal halide perovskite LEDs prepared by ultrasonic spray coating process / IM Sang Hyuk*¹ (Department of Chemical and Biological Engineering, Korea University)

C11.03 [09:48 - 10:12]

Ultrathin wearable quantum dot light emitting diodes / KIM Dae-Hyeong*^{1,2} (¹Center for Nanoparticle Research, Institute for Basic Science, Seoul National University, ²School of Chemical and Biological Engineering, Seoul National University)

C11.04 [10:12 - 10:36]

White QLEDs with High Color Quality / KWAK Jeonghun*¹, HONG Ahyoung*¹ (Department of Electrical and Computer Engineering, Seoul National University)

[C12-st] Complex Systems I

2020. 11. 05 Thursday 09:00~10:48

Room: 12

좌장 : 하미순 조선대학교

Chair : HA Meesoon (Chosun University)

C12.01 [09:00 - 09:24]

Spontaneous versus interaction-driven burstiness in human dynamics: The case of Wikipedia edit history / 조항현*¹ (가톨릭대학교)

C12.02 [09:24 - 09:36]

Friendly-rivalry solution to the iterated n-person public-goods game / MURASE Yohsuke¹, BAEK Seung Ki*² (¹Center for Computational Science, RIKEN, ²Department of Physics, Pukyong National University)

C12.03 [09:36 - 09:48]

Photosystem network reveals that diverse chlorophylls facilitate photoprotection / KIM Heetae^{*1}, KIM Eunchul^{2,3}, CONTRERAS Mauricio Vargas⁴, MINAGAWA Jun³ (¹Data Science Institute, Universidad del Desarrollo, ²Division of Biological Science, Nagoya University, ³Division of Environmental Photobiology, National Institute for Basic Biology, ⁴Instituto de Matemática y Física, Universidad de Talca)

C12.04 [09:48 - 10:00]

Betweenness Centrality Distribution of Hypergraphs / LEE Jongshin¹, KAHNG Byungnam¹ (¹Department of Physics and Astronomy, Seoul National University)

C12.05 [10:00 - 10:12]

The stability and feasibility of ecological networks. / LEE Hyunwoo¹, LEE Jae Woo¹, LEE Deok-Sun² (¹Department of Physics, Inha University, ²School of Computational Sciences, KIAS)

C12.06 [10:12 - 10:24]

인천 버스노선의 복잡계 네트워크적 특성 / LEE Jae Woo^{*1}, LEE HyunMin¹ (¹Inha University, ²Physics, Inha University)

C12.07 [10:24 - 10:36]

The spatial transition of urban retail areas in Hongdae revealed through online SNS data: in perspective of complex network. / CHEON SangHyun^{*1}, LEE Minjin², KIM Hangeil³ (¹Urban Planning, Hongik University, ²Department of Energy Science, Sungkyunkwan University, ³Graduate School of Environmental Studies, Seoul National University)

C12.08 [10:36 - 10:48]

Diversity and Stability on an Open Evolving Network Model / PARK Youngjai¹, PARK Hye Jin^{1,2}, SON Seung-Woo^{*1} (¹Department of Applied Physics, Hanyang University, ²Statistical Physics of Ecology and Evolution, APCTP)

[C13] No session

[C14-pl] Accelerator, Beam, Laser Plasma, Radiation Sources, and Pulsed Power Systems

2020. 11. 05 Thursday 09:00~10:12

Room: 14

좌장 : 정모세 울산과학기술원

Chair: CHUNG Moses(UNIST)

C14.01 [09:00 - 09:12]

Experimental Transverse Beam Emittance Measurement Using Solenoid Magnet

Strength Variation in the AB-BNCT / PARK Cha Won^{*1}, HONG Bong Hwan¹, CHO Il Sung¹, MIN Sun-Hong¹, KIM Minho¹, MA Sukhwal¹, JUNG Hyun woo¹, HWANG Won Taek¹
(*Division of Applied Rare Isotope, KIRAMS)

C14.02 [09:12 - 09:24]

Development of UNIST EBIT / CHUNG Moses^{*1}, SHIN Bokkyun¹, PARK SungNam¹, YOO Kyounghun¹, RYU Dongsu¹ (*Department of Physics, UNIST)

C14.03 [09:24 - 09:36]

Generation of isolated, terawatt, attosecond X-ray free-electron laser pulse by investigating the effect of high slice energy spread of an electron beam / SHIM Chi Hyun¹, PARC Yong Woon^{2,3}, KIM Dong Eon^{4,5} (*Accelerator Control Team, Pohang Accelerator Laboratory, ²Beam Operation Team, Pohang Accelerator Laboratory, ³Division of Advanced Nuclear Engineering, POSTECH, ⁴Physics Department, POSTECH, ⁵Max Planck Center for Attosecond Science, Max Planck POSTECH/Korea Res. Init.)

C14.04 [09:36 - 09:48]

Radiation reaction of a charged particle undergoing uniform circular motion / KANG Teyoun¹, HUR Min Sup^{*1} (*Physics, UNIST)

C14.05 [09:48 - 10:00]

Simulation study of phase-matched THz emission from an axially modulated magnetized plasma / KUMAR Manoj¹, KANG Teyoun¹, SONG Hyung Seon¹, HUR Min Sup^{*1} (*Physics, UNIST)

C14.06 [10:00 - 10:12]

자기유체역학 코드를 이용한 고전압 펄스전원장치의 엑스 핀치(X-pinch) 플라즈마 전산모사 Numerical Study of X pinch plasmas evolution on pulsed power generator using MHD Simulation / BYUN Sangmin¹, NA Yong-Su¹, CHUNG Kyoung-Jae¹, KIM Deok-Kyu², LEE Chanyoung¹, HAM Seunggi¹, RYU Jonghyeon¹ (*Seoul National University, ²Technology Research Center, Agency for Defense Development)

[C15-op] Optics I

2020. 11. 05 Thursday 09:00~10:36

Room: 15

좌장 : 김명기 고려대학교

Chair : KIM Myung Ki (Korea University)

C15.01 [09:00 - 09:12]

Non-resonant laser using a light trapping scattering cavity / LEE KyeoReh^{*1,3}, MA Ho Jin², ROTERMUND Fabian¹, KIM Do Kyung², PARK YongKeun^{*1,3} (*Department of Physics, KAIST, ²Department of Materials Science and Engineering, KAIST, ³KAIST Institute for Health Science and Technology, KAIST)

C15.02 [09:12 - 09:24]

3D Stochastic Interferometry / GRACIANI Guillaume^{*1}, AMBLARD Francois¹ (¹CSLM, IBS)

C15.03 [09:24 - 09:36]

High-contrast, Intense Single-cycle Pulses from multiple-plates in a Double-stage Configuration / KIM Dong Eon^{*1,2}, SEO Meenkyo^{1,2}, TSENSUREN Khurelbaatar^{1,2}, MITRA Sambit^{3,4}, KLING Matthias^{3,4} (¹Physics Department, POSTECH, ²Attosecond Science, Max Planck Center for Attosecond Science, ³Quantum optics, Max Planck Institute of Quantum optics, ⁴Physics Department, Ludwig Maximilian University of Munich, Germany)

C15.04 [09:36 - 09:48]

Ultrafast dynamics of electron-phonon coupling in 2H-MoTe₂ thin film / KIM Joon-soo^{1,2}, PARK Jin Cheol^{1,2}, KIM Ji-Hee^{*1,2} (¹Department of Energy Science, Sungkyunkwan University, ²Center for Integrated Nanostructure Physics (CINAP), IBS)

C15.05 [09:48 - 10:00]

Development of a SESAM-assisted Kerr-lens mode-locked laser with the SESAM located at the inside of the cavity / KO Do-Kyeong^{*1}, KWON Seong-Hoon¹, SONG Dong Hoon², KIM In-Sik³ (¹Dept. of Physics and Photon Science, GIST, ²Bio-Medical IT Convergence Research Department, Electronics and Telecommunications Research Institute, Daejeon 34129, Republic of Korea, ETRI, ³Molecular Biophysics and Integrated Bioimaging Division, Lawrence Berkeley National Lab)

C15.06 [10:00 - 10:12]

레이저 유도 X-선 기반 금속 단백질 형광 측정 연구 / KO Do-Kyeong^{*1}, KANG Jungu¹ (¹Dept. of Physics and Photon Science, GIST)

C15.07 [10:12 - 10:24]

Temporal contrast measurement using tunneling ionization / KIM Kyung Taec^{*1,2}, CHO Wosik^{1,2} (¹Department of Physics and Photon Science, GIST, ²Center for Relativistic Laser Science, Institute for Basic Science)

C15.08 [10:24 - 10:36]

Electrically tunable spatial light complex amplitude modulator / CHOI Minho¹, CHOI Jaewu^{*1} (¹Information Display, Kyung Hee University)

[C16] No session

[C17-se] [F] Future Optoelectronic Materials and Devices

2020. 11. 05 Thursday 09:00~10:12

Room: 17

좌장 : 정문석 성균관대학교

Chair : JEONG Mun Seok (Sungkyunkwan University)

C17.01 [09:00 - 09:24]

New directions for optoelectronics with a valley degree of freedom / GONG Su-Hyun^{*1}

(*1Department of Physics, Korea University)

C17.02 [09:24 - 09:48]

Tuning the excitonic properties with semiconductor-based nanocavities / CHO

Chang-Hee^{*1} (*1Department of Emerging Materials Science, DGIST)

C17.03 [09:48 - 10:12]

Ultrasensitive Plasmon-free Surface-enhanced Raman Spectroscopy with Femtomolar Detection Limit from 2D van der Waals Heterostructure / PARK HYESUNG^{*1}

(*1Department of Materials Science and Engineering, UNIST)

[C18-se] Devices - electronic, optoelectronic, organic & flexible

2020. 11. 05 Thursday 09:00~10:48

Room: 18

좌장 : 김종수 영남대학교

Chair : KIM Jong Su (Yeungnam University)

C18.01 [09:00 - 09:12]

Multi-level switching mechanism of resistive memory device based on SiO₂ nanoparticle-decorated TiO_x / KWON Sera¹, KIM Min-Jung¹, CHUNG Kwun Bum^{*1} (*1Division of Physics and Semiconductor Science, Dongguk University)

C18.02 [09:12 - 09:24]

산화아연 박막트랜지스터 능동어레이를 이용한 초고해상도 유연 압력센서 제조 및 이를 이용한 로봇집게의 페루프 제어 / OH Hongseok^{*1}, YIP Michael¹, YI Gyuchul², DAYEH Shadi¹ (*1Electrical and Computer Engineering, UCSD, ²Department of Physics and Astronomy, Seoul National University)

C18.03 [09:24 - 09:36]

Analysis for growth and drug reaction mechanism monitoring of NIH 3T3 cells using impedance biosensor with various frequencies / LEE Gayoung¹, JEONG Jaehun¹, SHIN Sooyong², KIM Yeeun¹, CHOI Jisoo¹, JEON Sungho², JANG Moon Gyu^{*1,3} (*1School of Nanoconvergence Technology, Hallym University, ²Department of Life Science and Multidisciplinary Institute, Hallym University, ³Center of Nano Convergence Technology, Hallym University)

C18.04 [09:36 - 09:48]

Optimization of the resolution of microfluidic chip calorimeters for sensing a few mammalian cells / NAM Sung Min¹, LEE Wonhee^{*1,2} (1Graduate School of Nanoscience and Technology, KAIST, ²Department of Physics, KAIST)

C

Session D

2020 November 5(Thu) 14:00~15:48

[D1-pa] [F] Cornerstone for future collider projects II

2020. 11. 05 Thursday 14:00~15:48

Room: 01

좌장 : 유희동 연세대학교

Chair : YOO Hwi-Dong (Yonsei University)

D1.01 [14:00 - 14:36]

Fast timing using silicon sensors with intrinsic gain in the CMS upgrade / STUART

David^{*1} (¹Department of Physics, University of California, Santa Barbara)

D1.02 [14:36 - 15:00]

ASIC Development for LGAD-based CMS Endcap Timing Layer (ETL) Upgrade / MOON Chang-Seong^{*1} (¹Department of Physics, Kyungpook National University)

D1.03 [15:00 - 15:24]

Plan for LGAD sensor testing in Korea / YOO Jae Hyeok^{*1} (¹Department of Physics, Korea University)

D1.04 [15:24 - 15:48]

HPC application for future collider projects / GOH Junghwan^{*1} (¹Department of Physics, Kyunghee University)

[D2-pa] Non-accelerator I

2020. 11. 05 Thursday 14:00~16:00

Room: 02

좌장 : 오유민 기초과학연구원

Chair : OH Yoomin (IBS)

D2.01 [14:00 - 14:12]

Status and performance of the AMoRE-I detectors / KIM HAN BEOM^{1,2}, WOO Kyungrae^{1,3}, KWON Dohyung^{1,3}, KIM Yong-Hamb^{*1} (¹Center for Underground Physics, IBS, ²Department of Physics & Astronomy, Seoul National University, ³IBS School, University of Science and Technology (UST))

D2.02 [14:12 - 14:24]

Analysis tools for the AMoRE-I experiment / WOO Kyung-Rae^{1,2}, KIM Yong-Hamb^{1,2}, LEE Yong-Chang^{1,3}, KWON Do-Hyung^{1,2}, KIM Han-Bum^{1,3}, KIM Hye-Lim^{1,4} (1Center for Underground Physics, IBS, 2Basic Science, UST, 3Physics & Astronomy, Seoul National University, 4Physics, Kyungpook National University)

D2.04 [14:24 - 14:36]

Alpha Background Modeling for AMoRE-Pilot Experiment / SARI Mona Berlian^{*1,2}, JEON Eunju¹, KIM Hong Joo³, DJAMAL Mitra¹ (1Center for Underground Physics, IBS, 2Department of Physics, Bandung Institute of Technology, 3Department of Physics, Kyungpook National University)

D2.05 [14:36 - 14:48]

Status of AMoRE-II / LEE Jai Son^{*1} (1CUP, IBS)

D2.06 [14:48 - 15:00]

Neutron and muon-induced background simulations for AMoRE-II shield design / LEE Moo Hyun^{*1,2}, SEO Jeewon^{1,2}, JEON Eunju² (1IBS School, University of Science and Technology, 2Center for Underground Physics (CUP), IBS)

D2.07 [15:00 - 15:12]

Status of COSINE-100 experiment / LEE In soo^{*1} (1Center for underground physics, IBS)

D2.08 [15:12 - 15:24]

COSINE-100 annual modulation search / PRIHTIADI Hafizh^{*1} (1Physics, Center for Underground Physics, IBS)

D2.09 [15:24 - 15:36]

Search for dark matter with COSINE-100 NaI(Tl) detectors / KO Young Ju^{*1} (1IBS)

D2.10 [15:36 - 15:48]

Neutron monitoring at Y2L / YU Gyunho^{*1}, KO Youngju² (1Physics, Sungkyunkwan University, 2CUP, IBS)

[D3-nu] [E] [F] Physics of CENuM

2020. 11. 05 Thursday 14:00~16:24

Room: 03

좌장 : 홍병식 고려대학교

Chair : HONG Byungsik (Korea University)

D3.01 [14:00 - 14:24]

Heavy flavor measurements and new observables in the future with ALICE /
KWEON Min Jung^{*1} (¹Inha University)

D3.02 [14:24 - 14:48]

Hadron production models in heavy ion collisions / CHO Sung Tae^{*1} (¹Kangwon National University)

D3.03 [14:48 - 15:12]

Lattice-QCD projects in CENuM / NAM Seung-il^{*1}, WAKAYAMA Masayuki², HOSAKA Atsushi³ (¹Department of Physics, Pukyong National University, ²Department of Physics, Kokushikan University, ³Research Center for Nuclear Physics (RCNP), Osaka University)

D3.04 [15:12 - 15:36]

Lambda(1405) as a hadronic molecule / HYODO Tetsuo^{*1} (¹Tokyo Metropolitan University, Japan)

D3.05 [15:36 - 16:00]

Revisiting nuclear symmetry energy with KIDS density functional / HYUN Chang Ho^{*1} (¹Daegu University)

D3.06 [16:00 - 16:24]

Quasi-elastic ($e; e'p$) reaction using various nuclear models / KIM Kyungsik^{*1} (¹Liberal Arts and Science, Korea Aerospace University)

[D4-as] Astrophysics Experiments/Observations

2020. 11. 05 Thursday 14:00~15:24

Room: 04

좌장 : 원은일 고려대학교

Chair : WON Eunil (Korea University)

D4.01 [14:00 - 14:12]

Updated preliminary analysis of TAx4 hybrid trigger and events / KIM Sangwoo^{1,2}, JEONG Hyomin^{1,2}, LEE Kwangho^{1,2}, KIM Minhyo^{1,2}, FUJITA Keitaro⁵, PARK IL Hung^{*1,2}, YANG Jongman², CHEON Byunggu³, KIM Hangbae³, SAGAWA Hiroyuki⁴, KIDO Eiji⁴ (¹Physics, Sungkyunkwan University, ²성균관대학교 한일 우주선 공동연구센터 물리학과, ³한양대학교 물리학과, ⁴동경대 일본 우주선 연구소 물리학과, ⁵Physics, Osaka City University)

D4.02 [14:12 - 14:24]

Preliminary analysis on energies and arrival directions of UHECRs detected by TA4 Surface Detectors / JEONG Hyomin^{1,2}, PARK IL Hung^{1,2}, LEE Kwangho^{1,2}, KIM Sang-woo^{1,2}, KIM Minhyo^{1,2}, FUJISUE Kozo⁴, KIDO Eiji⁵, YANG Jongman², CHEON Byeonggu³, KIM Hangbae³, SAGAWA Hiroyuki⁴ (¹Physics, Sungkyunkwan University, ²Cooperation center for Cosmic Ray Research, Sungkyunkwan University, ³Physics, Hanyang University, ⁴International Cosmic Ray Research, The University of Tokyo, ⁵Astrophysical Big Bang Laboratory, RIKEN)

D4.03 [14:24 - 14:36]

The study of energy-scale of UHECR with result with air fluorescence measurement using 15 EeV electron shower / CHUNG Moses¹, SHIN Bokkyun¹, COLLABORATION For The sFLASH¹, RYU Dongsu¹ (¹Department of Physics, UNIST)

D4.04 [14:36 - 14:48]

A search for secluded dark matter with / CHRISTOPH Toennis¹ (¹Physics, Sungkyunkwan University)

D4.05 [14:48 - 15:00]

Sensitivity analysis of SISA experiment and simulation of Stellar intensity interferometer / HONG Gihan¹, LEE Kwangho¹, KIM M.H.¹, KIM Chanyeol¹, PARK IL Hung¹, WON Eunil² (¹Physics, Sungkyunkwan University, ²Physics, Korea University)

D4.06 [15:00 - 15:12]

Investigation on developing new coating materials for Advanced LIGO Plus (A+LIGO) with reduced coating Brownian noise / LEE Kyung-ha¹ (¹Physics, Sungkyunkwan University)

D4.07 [15:12 - 15:24]

Identification of Lensed Gravitational Waves with Deep Learning / KIM Kyungmin¹, LEE Joongoo^{1,2}, HANNUKSELA Otto A.^{3,4}, LI Tjonnie G. F.⁵ (¹Optical Astronomy Division, KASI, ²Department of Physics and Astronomy, Seoul National University, ³Nikhef - National Institute for Subatomic Physics, ⁴Department of Physics, Utrecht University, ⁵Department of Physics, The Chinese University of Hong Kong)

[D5-co] [F] Nano/Mesoscopic system: Quantum Coherence in Condensed Matter

2020. 11. 05 Thursday 14:00~15:12

Room: 05

좌장 : 심흥선 한국과학기술원

Chair : SIM Heung-Sun (KAIST)

D5.01 [14:00 - 14:24]

Intermediate-excitation single electron source / CHO Sung Un², KIM Bum-Kyu¹,

PARK Wanki², SEO Minky¹, PARK DongSung T.², CHOI Hyung-Kook³, KIM Nam¹, SIM Heung-Sun², BAE Myung-Ho^{*1} (¹KRISS, ²Department of Physics & Center for Quantum Coherence in Condensed Matter, Korea Advanced Institute of Science and Technology, ³Department of Physics, Jeonbuk National University)

D5.02 [14:24 - 14:48]

Imaging current flow in transport devices using a solid-state spin magnetometer / LEE Donghun^{*1} (¹Physics, Korea University)

D5.03 [14:48 - 15:12]

Graphene-based Josephson junction microwave bolometer / LEE Gil-Ho^{*1} (¹Department of Physics, POSTECH)

[D6-co] [E] [F] High-pressure physics II

2020. 11. 05 Thursday 14:00~15:36

Room: 06

좌장 : 조연정 경북대학교

Chair : JO Youn Jung (Kyungpook National University)

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

Emerging New Quantum Phases in GaTa₄Se₈ under pressure / HAN Myung Joon^{*1} (¹Department of Physics, KAIST)

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

Pressure-induced phase transitions and superconductivity in magnesium carbides / KIM Sooran^{*1}, KIM Kyoo², KOO Jahyun³, LEE Hoonkyung³, MIN Byung Il⁴, KIM Duck Young⁵ (¹Department of Physics Education, Kyungpook National University, ²Korea Atomic Energy Research Institute, Daejeon, ³Department of Physics, Konkuk University, ⁴Department of Physics, POSTECH, ⁵Center for High Pressure Science and Technology Advanced Research, Shanghai)

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

Extraordinary pressure-induced quantum phase transition from superconducting to charge-density wave state in LuPd₂In / KIM Heejung^{*1,2}, SHIM J. H.³, KIM Sooran⁴, PARK Jae-Hoon^{1,2,6}, KIM Kyoo^{2,5}, MIN BYUNG IL² (¹MPPHC-CPM, Max Plank POSTECH/Korea Research Initiative, ²Department of physics, POSTECH, ³Department of Chemistry, POSTECH, ⁴Department of Physics Education, Kyungpook National University, ⁵신소재 융합기술 연구부, KAERI, ⁶Division of Advanced Materials Science, POSTECH)

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

Alloying and pressure effect on Metal-insulator transition of NiS_{2-x}Se_x / JANG Bo Gyu¹, PARK Ina², SHIM Ji Hoon², KIM Duck Young^{*1} (¹Center for High Pressure Science and Technology Advanced Research (HPSTAR), China, ²Department of Chemistry, Pohang Uni-

[D7-co] [F] Theoretical progress of Spin-orbitronics

2020. 11. 05 Thursday 14:00~16:00

Room: 07

좌장 : 임성현 울산대학교

Chair : RHIM Sonny (University of Ulsan)

D

D7.01 [14:00 - 14:24]

Magnetization dynamics and spin transport in compensated ferrimagnets / LEE Kyung-Jin^{*1} (¹Department of Physics, KAIST)

D7.02 [14:24 - 14:48]

Diffusive transport of orbital angular momentum / KIM Kyoung-Whan^{*1}, HAN Seungyun², LEE Hyun-Woo² (¹Center for Spintronics, KIST, ²Department of Physics, POSTECH)

D7.03 [14:48 - 15:12]

Orbital transport from first-principles / GO Dongwook^{*1,2} (¹Peter Grünberg Institut, Forschungszentrum Jülich, ²Institute of Physics, Johannes Gutenberg University of Mainz)

D7.04 [15:12 - 15:36]

Spin-orbit-coupling-enabled topological hydrodynamics / KIM Se Kwon^{*1} (¹Physics, KAIST)

D7.05 [15:36 - 16:00]

Berry phase effects and anomaly in Kramers-Weyl semimetals with single Weyl point / CHEON Suik¹, CHO Gil Young¹, LEE Hyun-Woo^{*1} (¹Department of Physics, POSTECH)

[D8-co] Strongly Correlated I

2020. 11. 05 Thursday 14:00~15:36

Room: 08

좌장 : 고아라 전남대학교

Chair : GO Ara (Chonnam National University)

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

Spin-orbital separation and orbital differentiation in Hund metals / LEE Seung-Sup^{*1} (¹Faculty of Physics, Ludwig Maximilian University of Munich, Germany)

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

Non-Fermi Liquids in Conducting 2D Networks / LEE Jongjun Michael¹, OSHIKAWA Masaki², CHO Gil Young^{*1} (¹Department of Physics, POSTECH, ²Institute for Solid State Physics, The University of Tokyo)

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

Many-body flatband localisation / DANIELI Carlo⁴, ANDREANOV Alexei^{1,2}, FLACH Sergej^{1,2,3} (¹Center for Theoretical Physics of Complex Systems, IBS, ²Basic Science Program (IBS School), UST, ³New Zealand Institute for Advanced Study, Massey University, ⁴Condensed Matter, Max Planck Institute for the Physics of Complex Systems)

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

Emergences of the Fermi liquid and the Gapped phase out of quantum critical point by the symmetry breaking. / SIN Sang Jin¹, OH Eunseok¹, YUK Taewon¹ (Physics department, Hanyang University)

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

Many-Body Invariants for Chern and Chiral Hinge Insulators / KANG Byungmin², LEE Wonjun¹, CHO Gil Young¹ (¹Department of Physics, POSTECH, ²Department of Physics, KIAS)

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

Causal projection method for imaginary-time many-body simulations / HAN Manchun¹, CHOI Hyoung Joon¹ (¹Department of Physics, Yonsei University)

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

Symmetry Protected Magnetic Weyl Nodal Loops in 5d^{1,2} Cubic Double Perovskites / SONG Young-Joon¹, LEE Kwan-Woo¹ (¹Division of Display and Semiconductor Physics, Korea University)

D8.08 [15:24 - 15:36]

Nontrivial Topology induced by Magnon-Phonon Hybridization / KIM Se Kwon¹, LEE Kyung-Jin², GO Gyungchoon² (¹Physics, KAIST, ²Department of Materials Science and Engineering, Korea University)

[D9-ap] [F] Frontiers of Current Applied Physics I

2020. 11. 05 Thursday 14:00~15:12

Room: 09

좌장 : 홍영준 세종대학교

Chair : HONG Young Joon (Sejong University)

D9.01 [14:00 - 14:24]

Artificial synapse based on magnetic skyrmions for neuromorphic computing / SONG Kyung Mee^{1,2}, JEONG JAE-SEUNG³, ZHANG XICHAO⁵, XIA JING⁵, PARK TAE-EON¹, FINIZIO SIMONE⁶, JU HYUNGSU³, WOO SEONGHOON⁸ (¹Center for Spintronics, KIST, ²Inorganic material Lab, Samsung Advanced Institute of Technology, ³Center for Opto-Electronic Materials and Devices, KIST, ⁴Fert Beijing Institute, Beihang University, ⁵School of Science and Engineering, The Chinese University of Hong Kong, ⁶Swiss Light Source, Paul

Scherrer Institut, ⁷Department of Materials Science and Engineering, Yonsei University, ⁸T.J. Watson Research Center, IBM)

D9.02 [14:24 - 14:48]

Nanoionics: ionic space-charge effect in lead halide perovskites / KIM Gee Yeong^{*1,2}, SENOCRATE Alessandro², MOIA Davide², MAIER Joachim² (¹KIST, ²Physical Chemistry of Solids, Max Planck Institute for Solid State Research)

D9.03 [14:48 - 15:12]

Tailoring optoelectronic properties of two-dimensional materials based heterostructures / OH Hye Min^{*1} (¹Department of Nanotechnology & Advanced materials Engineering, Sejong University)

D

[D10-ap] [F] Magnetic 2D materials

2020. 11. 05 Thursday 14:00~15:36

Room: 10

좌장 : 이재웅 아주대학교

Chair: LEE Jae-Ung (Ajou University)

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

Optical spectroscopy of magnetic ordering in 2-dimensional materials / CHEONG Hyeonsik^{*1} (¹Department of Physics, Sogang University)

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

Anomalous Hall measurement of 2D ferromagnet-based heterostructures / LEE Changgu^{*1}, LEE Jinhwan¹, SRIVASTAVA Pawan¹, HASSAN Yasir², TAN Cheng³, WANG Lan³ (¹School of Mechanical Engineering, Sungkyunkwan University, ²SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, ³Department of Physics, Royal Melbourne Institute of Technology, Australia)

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

Tunable magnetic and topological properties of iron-based van der Waals magnets / KIM Jun Sung^{*1} (¹Department of Physics, POSTECH)

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

Two-dimensional magnetism in atomically thin chromium trihalides / KIM Hyun Ho^{*1} (¹School of Materials Science and Engineering, Kumoh National Institute of Technology)

[D11-ap] [F] Nano/bio/medical organic electronic device

2020. 11. 05 Thursday 14:00~15:36

Room: 11

좌장 : 이택희 서울대학교

Chair : LEE Takhee (Seoul National University)

D11.01 [14:00 - 14:24]

Organic Electronics for Wearable Healthcare / LEE Hyeonwoo¹, KIM Taehyun¹, YOO Seunghyup¹ (¹School of Electrical Engineering, KAIST)

D11.02 [14:24 - 14:48]

Skin-Inspired Artificial Ion Electronic Skin / JEONG Unyong¹ (¹Department of Materials Science and Engineering, POSTECH)

D11.03 [14:48 - 15:12]

Nanoscopically Engineered Organic Semiconducting Materials for Healthcare Sensors / OH Joon Hak¹ (¹School of Chemical and Biological Engineering, Seoul National University)

D11.04 [15:12 - 15:36]

A bioinspired ion channel for optoelectronic deformable sensors / KIM Joo Sung¹, AMOLI Vipin¹, CHUNG Yoon Sun¹, KIM Yunah¹, CHOI Hanbin¹, KWEON Hyukmin¹, KIM Do Hwan¹ (¹Department of Chemical Engineering, Hanyang University)

[D12-st] Complex Systems II

2020. 11. 05 Thursday 14:00~15:36

Room: 12

좌장 : 손승우 한양대학교

Chair : SON Seung-Woo (Hanyang University)

D12.01 [14:00 - 14:24]

Emulating relatedness network using the structural information of the citation / YUN Jin Hyuk¹, AHN Sejung², LEE June Young² (¹Department of Smart Systems Software, Soongsil University, ²Future Technology Analysis Center, KISTI)

D12.02 [14:24 - 14:36]

Win-Stay-Lose-Shift as a self-confirming equilibrium in the iterated prisoner's dilemma / KIM Minjae¹, CHOI Jung-Kyoo², BAEK Seung Ki¹ (¹Department of Physics, Pukyong National University, ²School of Economics and Trade, Kyungpook National University)

D12.03 [14:36 - 14:48]

The effect of media on opinion formation model / LEE Woosub¹, YANG Seong-Gyu¹, KIM Beom Jun¹ (¹Sungkyunkwan University)

D12.04 [14:48 - 15:00]

Homological percolation transitions in evolving coauthorship relations / LEE Yongsun¹, LEE Jongshin¹, OH Soo Min¹, LEE Deokjae¹, KAHNG Byungnam^{*1} (¹Department of Physics and Astronomy, Seoul National University)

D12.05 [15:00 - 15:12]

Quantifying and Predicting Synergy in Scientific Collaboration / SON Gangmin¹, YUN Jinhyuk², JEONG Hawoong^{*1,3} (¹Physics Department, KAIST, ²Department of Smart Systems Software, Soongsil University, ³Center for Complex Systems, KAIST)

D12.06 [15:12 - 15:24]

A Set of Central Words in Korean Language / LEE Hae Seong^{*1}, KIM Beom Jun¹ (¹Department of Physics, Sungkyunkwan University)

D12.07 [15:24 - 15:36]

Machine learning approaches for the nonlinear dynamics / SONG Je Ung¹, CHOI Kwangjong¹, KAHNG Byungnam^{*1} (¹Department of Physics and Astronomy, Seoul National University)

[D13] No session

[D14-pl] [F] Plasma-based Advanced Accelerators and Radiation Sources

2020. 11. 05 Thursday 14:00~15:36

Room: 14

좌장 : 석희용 광주과학기술원

Chair : SUK Hyyong (GIST)

D14.01 [14:00 - 14:24]

Overview of beam-driven wakefield accelerators / CHUNG Moses^{*1} (¹Department of Physics, UNIST)

D14.02 [14:24 - 14:48]

Generation of non-thermal energetic ion beams from a layered target irradiated by an ultraintense laser pulse / LEE Kitae^{*1}, KIM Ha-Na¹, KUMAR Manoj¹, RYU Woo-Je^{1,2}, CHOI Il Woo^{3,4}, LEE Seong Geun^{3,5}, NAM Chang Hee^{3,5} (¹Research Center for Ultrafast Science, KAERI, ²Department of Physics, Hannam University, ³Center for Relativistic Laser Science, Institute for Basic Science, ⁴Advanced Photonics Research Institute, GIST, ⁵Department of Physics and Photon Science, GIST)

D14.03 [14:48 - 15:12]

Two laser pulses-based plasma acceleration for high temporal resolution UED researches / KIM Minseok^{*1}, CHO Myung Hoon², NAM Inhyuk², JANG Dogeun¹, LEE Sihyeon³ (¹XFEL Beamline Division, Pohang Accelerator Laboratory, ²XFEL Accelerator Division, Pohang Accelerator Laboratory, ³Department of Physics and Photon Science, GIST)

D14.04 [15:12 - 15:36]

레이저-플라즈마를 이용한 초고속-광대 THz 광원 개발 / JANG Dogeun^{*1} (¹XFEL beamline, Pohang Accelerator Laboratory)

[D15-op] [F] Quantum computing & simulation I

2020. 11. 05 Thursday 14:00~15:36

Room: 15

좌장 : 신희득 포항공과대학교

Chair: SHIN Heedeuk (POSTECH)

D15.01 [14:00 - 14:24]

Adiabatic quantum computation with trapped ions / KIM Kihwan^{*1} (¹Center for Quantum Information, Institute for Interdisciplinary Information Sciences, Tsinghua University, China)

D15.02 [14:24 - 14:48]

Trapped ions coupled to optical cavities / LEE Moonjoo^{*1} (¹Department of Electrical Engineering, POSTECH)

D15.03 [14:48 - 15:12]

Semiconductor spin-photon interfaces for quantum network research / LEE Sang Yun^{*1} (¹GIST)

D15.04 [15:12 - 15:36]

Nanophotonics for Efficient Quantum Interfaces / KIM Myung Ki^{*1}, LEE Jungmin¹, KIM Moohyuk¹, YU Aran¹, PARK Nu-Ri¹ (¹Korea University)

[D16-at] [F] Atomic Sensors I

2020. 11. 05 Thursday 14:00~15:48

Room: 16

좌장 : 허명선 한국표준과학연구원

Chair: HEO Myoung-Sun (KRISS)

D16.01 [14:00 - 14:36]

리드버그 원자를 이용한 고감도 광대역 전기장 계속 연구 / MOON Han Seb^{*1} (¹Pusan National University)

D16.02 [14:36 - 15:12]

Toward high precise, compact, low power gyroscopes: Atom spin gyroscopes / LEE Sangkyung¹, YIM Sin Hyuk¹, LEE Deok Young¹, SHIM Kyumin¹ (¹Agency for Defense Development)

D16.03 [15:12 - 15:48]

초정밀 이동형 원자중력계 개발 / LEE Sang Bum¹, KWON Taeg Yong¹, PARK Sang Eon¹, HEO Moungh Sun¹, HONG Hyun Gue¹, SEO Sangwon¹, LEE Jae Hoon¹ (¹Center for Time and Frequency, KRISS)

D

[D17-se] [F] Organic - inorganic photovoltaic materials and devices

2020. 11. 05 Thursday 14:00~15:36

Room: 17

좌장 : 서정화 동아대학교

Chair : SEO Jung Hwa (Dong-A University)

D17.01 [14:00 - 14:24]

High PCE perovskite solar cells with active layer modulation / KIM Gi-Hwan¹ (¹School of Materials Science and Engineering, Gyeongsang National University)

D17.02 [14:24 - 14:48]

Cathode interlayers for favorable energy level alignment in inverted organic solar cells / LEE Hyun Bok¹ (¹Department of Physics, Kangwon National University)

D17.03 [14:48 - 15:12]

Facile conductivity enhancement of PEDOT:PSS with high work-function for transparent electrode application / CHOI Jea-Young¹ (¹Department of Materials Science and Engineering, Dong-A University)

D17.04 [15:12 - 15:36]

친환경 컬러 Cu(In,Ga)Se₂ 박막 태양전지 기술 / 정용덕^{1,2}, 조대형¹, 이우정¹, 김우주^{1,2}, 유종훈^{1,3}, 강성준³ (¹한국전자통신연구원 신소재연구실, ²과학기술연합대학원대학교 차세대소자공학과, ³경희대학교 정보전자신소재공학과)

[D18-se] Devices - energy harvesting & storage

2020. 11. 05 Thursday 14:00~15:24

Room: 18

좌장 : 장문규 한림대학교

Chair : JANG Moon Gyu (Hallym University)

D18.01 [14:00 - 14:12]

기계적 에너지 수확을위한 마이크로 아키텍처 마찰전기 필름으로 향상된 전기 출력 특성 /

GRAHAM Sontyana Adonijah², HARISHKUMARREDDY Patnam², PUNNARAO Manch², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Electronics, Kyung Hee University)

D18.02 [14:12 - 14:24]

슈퍼커패시터 응용을 위한 향상된 전기화학적 성능을 갖춘 MnV_2O_6 미세 구조의 제작 / KRISHNA B. N. Vamsi², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

D18.03 [14:24 - 14:36]

에너지 저장 장치용 바나듐 통합 금속산화물의 합성 및 특성 / S. Chandra Sekhar¹, BHI-MANABOINA Ramulu¹, SHAIK Junied Arbaz¹, YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

D18.04 [14:36 - 14:48]

Core-shell MnO_2 deposited one-dimensional porous silicon nanowire electrodes for high performance supercapacitors / BAGAL Indrajit V.¹, RYU Sang Wan^{*1} (¹Department of Physics, Chonnam National University)

D18.05 [14:48 - 15:00]

GaN/p-GaN core-shell Nanowire-Based Self-powered Piezoelectric-Pressure Sensor / WASEEM Aadil¹, RYU Sang Wan^{*1} (¹Department of Physics, Chonnam National University)

D18.06 [15:00 - 15:12]

리튬 이온 배터리용 $NiS_2-CoS_2@MoS_2$ 음극재의 합성 및 특성 / D. Narsimulu¹, ASHOK Kumar Kakarla², ANKI Reddy Mule², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

D18.07 [15:12 - 15:24]

고성능 슈퍼커패시터를 위한 삼금속 층상이중수산화물의 합성 / RAMULU Bhimanaboina², S. Chandra Sekhar², SHAIK Junied Arbaz², YU Jae Su^{*2,1} (¹Department of Electronics and Information Convergence Engineering, Kyung Hee University, ²Department of Electronic Engineering, Kyung Hee University)

[D19-bp] Biological physics I (invited)

2020. 11. 05 Thursday 14:00~15:36

Room: 19

좌장 : 이자일 울산과학기술원

Chair: LEE Ja Yil (UNIST)

D19.01 [14:00 - 14:24]

Role of metal ions in enzyme catalysis / KIM Chae Un^{*1} (¹Department of Physics, UNIST)

D19.02 [14:24 - 14:48]

Development of a hyperspectral endoscopy system for imaging the gastrointestinal tract in clinics / YOON Jonghee^{*1} (¹Department of Physics, Ajou University)

D19.03 [14:48 - 15:12]

High-speed tracking of synaptic protein interactions / SHON Min Ju^{*1} (¹Department of Physics, POSTECH)

D19.04 [15:12 - 15:36]

프라이머-템플릿에서 DNA 녹는 특이점은 시공간적으로 패밀리-B DNA 중합 효소의 교정 활동을 지휘합니다. / 보티민 호아¹, 존혁진¹, 유정만¹, 이광록¹ (¹life sciences, GIST)

**[D20-or] 출연연특별세션: 신규 방사광가속기 구축 현황 및 미래전망
(Status and future outlook of new accelerator)**

2020. 11. 05 Thursday 14:00~15:45

Room: 20

좌장 : 임종선 한국화학연구원

Chair: LIM Jong Sun (KRICT)

[14:00 - 14:05]

출연연활성화특별위원회 위원장 인사말 / 이주한 (한국기초과학지원연구원)

D20.01 [14:05 - 14:30]

미래 방사광가속기의 이용 기술과 사이언스 / 김현정^{*1} (¹서강대)

D20.02 [14:30 - 14:55]

신규방사광가속기에서의 분광실험 발전 방향 / 고경태^{*1} (¹한국기초과학지원연구원)

D20.03 [14:55 - 15:20]

Design of Korean 4GSR and its beam characteristic / 이재유^{*1} (¹포항가속기연구소)

D20.04 [15:20 - 15:45]

KAERI의 다목적 방사광가속기 구축 인력 리뷰 / 김유중^{*1} (¹한국원자력연구원)

Session E

2020 November 5(Thu) 16:10~17:58

[E1-pa] [F] Cornerstone for future collider projects III

2020. 11. 05 Thursday 16:10~18:10

Room: 01

좌장 : 유희동 연세대학교

Chair : YOO Hwi-Dong (Yonsei University)

E1.01 [16:10 - 16:58]

Overview of EIC and Calorimeter / GOTO Yuji^{*1} (¹Experimental Group, RIKEN)

E1.02 [16:58 - 17:22]

Opportunity in EIC physics for the control case study of relativistic heavy ion experiments / KIM Yongsun^{*1} (¹Department of Physics, Sejong University)

E1.03 [17:22 - 17:46]

Development of silicon trackers for EIC / LIM Sanghoon^{*1} (¹Department of Physics, Pusan National University)

E1.04 [17:46 - 18:10]

Nucleon tomography with GPDs at the EIC / JO Hyon-Suk^{*1} (¹Department of Physics, Kyungpook National University)

[E2-pa] Field and String theory

2020. 11. 05 Thursday 16:10~18:10

Room: 02

좌장 : 송재원 한국과학기술원

Chair : SONG Jaewon (KAIST)

E2.01 [16:10 - 16:22]

Emergent Fermi liquid as topological insulator in holographic spacetime. / OH Eun-seok¹, SIN Sang Jin^{*1} (¹physics department, Hanyang University)

E2.02 [16:22 - 16:34]

Magnetism from rotating black brane / SEO Yunseok^{*1}, KIM Kyun Kiu², KIM Keun-Young³, SIN Sang-Jin⁴ (¹GIST College, GIST, ²Department of Physics and Astronomy, Sejong University, ³Department of Physics and Photon Science, GIST, ⁴Department of Physics, Hanyang University)

E2.03 [16:34 - 16:46]

Determination of Dynamical exponents of Graphene at quantum critical point by holography / SIN Sang Jin^{*1}, SONG Geunho¹, SEO Yunseok² (¹physics department, Hanyang University, ²School of Physics and Chemistry, GIST)

E2.04 [16:46 - 16:58]

Junctions of mass-deformed nonlinear sigma models on $SO(2N)/U(N)$ and $Sp(N)/U(N)$ / KIM Taegyul¹, SHIN Sunyoung^{*2} (¹Department of Physics, Sungkyunkwan University, ²Institute of Basic Science, Sungkyunkwan University)

E2.05 [16:58 - 17:10]

Dyonic Generalisation of Effective One-Body Formalism via Scattering Amplitudes / SHIM Myungbo^{*1}, KIM Jung-Wook² (¹Department of Physics, Kyung Hee University, ²Centre for Research in String Theory, School of Physics and Astronomy, Queen Mary University of London)

E2.06 [17:10 - 17:22]

Structure Constants of a Single Trace Operator and Determinant Operators from Hexagon / KIM Keun Young^{*1}, KIM Minkyoo², LEE Kyung-Sun¹ (¹Physics, GIST, ²Physics, University of the Witwatersrand)

E2.07 [17:22 - 17:34]

Large N gauge theories with a dense spectrum and the Weak Gravity Conjecture / AGARWAL Prarit², LEE Ki-Hong³, SONG Jaewon^{*1} (¹Physics, KAIST, ²School of Physics and Astronomy, Queen Mary University of London, ³String Theory and Quantum Geometry JRG group, APCTP)

E2.08 [17:34 - 17:46]

Quantum Simulation for SYK Models / YOON Junggi^{*1}, KANG Byungmin¹, TEZUKA Masaki², SUZUKI Yuki² (¹Department of Physics, KIAS, ²Department of Physics, Kyoto University)

E2.09 [17:46 - 17:58]

Holography of T2 deformation in quantum mechanics / KIM Kyung Kiu^{*1}, BAEK Jong Hyun¹ (¹Department of Physics and Astronomy, Sejong University)

E2.10 [17:58 - 18:10]

Pole-skipping of scalar and vector fields in hyperbolic space: conformal blocks and holography / KIM Keun Young^{*1}, AHN Yongjun¹, JAHNKE Viktor¹, JEONG Hyun-Sik¹, LEE Kyung-Sun¹, NISHIDA Mitsuhiro¹ (¹Physics, GIST)

[E3-nu] Nuclear Reaction & Structure

2020. 11. 05 Thursday 16:10~17:22

Room: 03

좌장 : 천명기 송실대학교

Chair : CHEOUN Myung Ki (Soongsil University)

E3.01 [16:10 - 16:22]

Nuclear transmutation of 93Zr using the low-energy beamline / HWANG Jongwon^{*1}, DOZONO Masanori², IMAI Nobuaki², MICHIMASA Shin'ichiro², SHIMOURA Susumu² (¹Center for Exotic Nuclear Studies, IBS, ²Center for Nuclear Study, The University of Tokyo)

E3.02 [16:22 - 16:34]

Neutrino-Deuteron Reactions at Solar Neutrino Energies in Pionless Effective Field Theory with Dibaryon Fields / ANDO Shung-ichi^{*1}, SONG Young-Ho², HYUN Chang Ho³ (¹Department of Information Display, Sun Moon University, ²RISP, IBS, ³Department of Physics Education, Daegu University)

E3.03 [16:34 - 16:46]

Development of new Graphic User Interface program for nuclear reaction / SONG Young-Ho^{*1}, SHIN Ik Jae¹ (¹Rare Isotope Science Project, Institute for Basic Science)

E3.04 [16:46 - 16:58]

Nuclear structure of neutron-rich Te isotopes beyond the double magic nucleus 132Sn / MOON Byul^{*1} (¹Center for Exotic Nuclear Studies, IBS)

E3.05 [16:58 - 17:10]

Tensor force in nuclei / HA Eun Ja^{*1} (¹Soongsil University)

E3.06 [17:10 - 17:22]

Structure of ^{100}Sn – present knowledge and research methods / PARK Joochun^{*1} (¹Center for Exotic Nuclear Studies, IBS)

[E4-as] Astrophysics Experiments/Observations and Theories

2020. 11. 05 Thursday 16:10~17:22

Room: 04

좌장 : 조인용 서울과학기술대학교

Chair : CHO In Yong (Seoul National University of Science and Technology)

E4.01 [16:10 - 16:22]

Measurement of cosmic-ray proton spectrum with the ISS-CREAM experiment / CHOI Gwangho¹, TAKEISHI Ryuji¹, SEO Eunsuk², PARK IL Hung^{*1} (¹Physics, Sungkyunkwan University, ²Physics, University of Maryland)

E4.02 [16:22 - 16:34]

Cosmic-ray Heavy Nuclei Spectra from the ISS-CREAM Experiment / KANG Sin-chul¹, KIM Hong Joo^{*1}, PARK Hwanbae¹, LEE Jik¹, JEONG Dongwoo¹, JEON Hyebin¹, PARK Jeongmin², HWANG Yongseok³, HYUN Hyojung⁴, LEE Moohyun⁵, SEO Eunsuk⁶ (¹Department of Physics, Kyungpook National University, ²Advanced Radiation Technology Institute, Korea Atomic Energy Research Institute, ³Korea Multi-purpose Accelerator Complex, Korea Atomic Energy Research Institute, ⁴4th generation synchrotron radiation accelerator institute, Pohang Accelerator Laboratory, ⁵Center for Underground Physics, Institute for Basic Science, ⁶Department of Physics, University of Maryland)

E4.03 [16:34 - 16:46]

카그라 MCMC 모수 추정 파이프라인을 이용한 블랙홀 쌍성의 물리량 추정 / JEON Chaeyeon¹, KIM Chunglee^{*1}, LEE Hyungwon², KIM Jeongcho², HIDEYUKI Tagoshi³ (¹Department of Physics, Ewha Womans University, ²Department of Dron IoT Simulation, Inje University, ³Institute for Cosmic Ray Research, University of Tokyo)

E4.04 [16:46 - 16:58]

Gravitational waves generated by a rotating traversable wormhole / KIM Sung Won^{*1}, LEE Seungkoog², PARK Meongwon², CHANG Sungpil², JANG Junhwa², YOU Jungmin¹ (¹Science Education, Ewha Womans University, ²Physics, Korea Science Academy)

E4.05 [16:58 - 17:10]

Observations of Gravitational Waves by Gauge-Invariant Measures of Light / PARK Chan^{*1}, KIM Dong-Hoon² (¹Division of Basic Researches for Industrial Mathematics, NIMS, ²Department of Physics and Astronomy, Seoul National University)

E4.06 [17:10 - 17:22]

Light in the presence of gravitational waves / KANG Gungwon^{*1} (¹Supercomputing Center, KISTI)

[E5-co] [F] Nano/Mesoscopic system, Graphene and Topological Materials

2020. 11. 05 Thursday 16:10~17:58

Room: 05

좌장 : 김준성 포항공과대학교

Chair : KIM Jun Sung (POSTECH)

E5.01 [16:10 - 16:46]

Two-dimensional chiral stacking orders in quasi-one-dimensional charge density waves / KIM Tae-Hwan^{*1} (¹Physics, POSTECH)

E5.02 [16:46 - 17:22]

Atomic and electronic reconstruction in the twisted bilayer graphene / YOO Hyobin^{*1} (¹Department of Physics, Sogang University)

E5.03 [17:22 - 17:58]

Control of electron-electron interaction in graphene by proximity screening / KIM Minsoo^{*1} (School of Physics and Astronomy, The University of Manchester)

[E6-co] [E] [F] High-pressure physics III

2020. 11. 05 Thursday 16:10~17:46

Room: 06

좌장 : 김봉재 군산대학교

Chair : KIM Bongjae (Kunsan National University)

E6.01 [16:10 - 16:34]

메가바 이상의 극한 환경에서의 산화물의 전자-결합구조의 실험적규명 / LEE Sung Keun^{*1}
(School of Earth and Environ. Sci., Seoul National University)

E6.02 [16:34 - 16:58]

XFEL-Induced Synthesis of ϵ -Iron Nitride at High Pressures / LEE Yongjae^{*1} (Department of Earth System Science, Yonsei University)

E6.03 [16:58 - 17:22]

Structure and Transport Properties of Potassium Hydrides under High Temperature and Pressure of Hydrogen / KIM Jae Yong^{*1}, YAN Jiafeng¹, JUNG Kwanhui¹, PARK Changyong², PRAKAPENKA Vitali³, PAKHOMOVA Anna⁴, LIERMANN Hanns-Peter⁴, STRUZHNIKIN Viktor⁵ (1Department of Physics, Hanyang University, 2HPCAT, Advanced Photons Source, Argonne National Laboratory, 3Center for Advanced Radiation Sources, University of Chicago, 4Photon Science, Deutsches Elektronen Synchrotron (DESY), 5HPSTAR, Center for High Pressure Science and Technology Advanced Research)

E6.04 [17:22 - 17:46]

Enhanced activation energy at a possible hidden antiferromagnetic phase in FeSe under pressure / KIM Jihye¹, OK Jong Mok², CHOI Joonyoung¹, KIM Jun Sung², KANG Woun³, JO Youn Jung^{*1} (1Physics, Kyungpook National University, 2Physics, POSTECH, 3physics, Ewha Womans University)

[E7-co] [F] Synchrotron x-ray studies for advanced electronic materials and quantum mechanical properties I

2020. 11. 05 Thursday 16:10~17:58

Room: 07

좌장 : 이동렬 송실대학교

Chair : LEE Dong Ryeol (Soongsil University)

E7.01 [16:10 - 16:34]

Observation on selective orbitals of 5d IrO₂ epitaxial thin films using resonant in-

elastic x-ray scattering / CHANG Seo Hyoung¹, LEE Kyeong Jun¹, HEO Jin Eun¹ (¹Department of Physics, Chung-ang University)

E7.02 [16:34 - 16:46]

Polarized x-ray resonant scattering from the chiral structures of the electric quadrupole moments / LEE Dong Ryeol¹, KIM Kook Tae¹, KEE Jung Yun¹, PARK Se Young¹ (¹Department of Physics, Soongsil University)

E7.03 [16:46 - 17:10]

Magnetic skyrmions in heterostructures / CHOI Jun Woo¹ (¹Center for Spintronics, KIST)

E7.04 [17:10 - 17:22]

Ferromagnetism and XMCD studies in 2D layered chrome telluride thin films / LEE In Hak¹, CHOI Byoung Ki¹, KIM Hyuk Jin¹, KIM Min Jae¹, JEONG Hu Young², KIM Younghak³, PARK Seung Young⁴, JO Younghun⁴, LEE Chanki⁵, CHOI Junwoo⁵, LEE Suyoun⁶, CHANG Young Jun¹ (¹Department of Physics, University of Seoul, ²Central Research Facilities (UCRF), UNIST, ³Pohang Accelerator Laboratory, POSTECH, ⁴Division of Materials Science, KBSI, ⁵Center for Spintronics, KIST, ⁶Center for Electronic Materials, KIST)

E7.05 [17:22 - 17:46]

Sub-nanosecond phase transition dynamics of iron using laser-pump and XFEL-probe / LEE Yongjae¹ (¹Department of Earth System Science, Yonsei University)

E7.06 [17:46 - 17:58]

Time-resolved x-ray diffraction study of acoustic and thermal transports across metal-semiconductor interfaces / LEE Dong Ryeol¹, KEE Jung Yun¹, JO Won Hyuk^{1,2,3}, KIM Kook Tae¹, LANDAHL Eric C.⁴, DICHIARA Anthony D.⁵, WALKO Donald A.⁵, LEE Soo Hyeoyong² (¹Department of Physics, Soongsil University, ²소재융합측정연구소, KRISS, ³Department of Photon Science, Deutsches Electron-Synchrotron(DESY), ⁴Department of Physics, DePaul University, ⁵Department of Time-Resolved Research (XSD-TRR), Advanced Photon Source)

[E8-co] Strongly Correlated II

2020. 11. 05 Thursday 16:10-17:34

Room: 08

좌장 : 황정식 성균관대학교

Chair : HWANG Jungseek (Sungkyunkwan University)

E8.01 [16:10 - 16:22]

Propagation Control of Octahedral Distortion in SrRuO₃ via Atomic-scale Heterostructuring / JEONG Seung Gyo¹, HAN Gyeongtak^{2,3}, SONG Sehwan⁴, MIN Taewon⁴, MOHAMED Ahmed Yousef⁴, PARK Sungkyun⁵, LEE Jaekwang⁴, JEONG Hu Young⁶, KIM

Young-Min^{2,3}, CHO Deok-Yong⁵, CHOI Woo Seok ^{*1} (¹Physics, Sungkyunkwan University, ²Center for Integrated Nanostructure Physics, Institute for Basic Science, ³Energy Sciences, Sungkyunkwan University, ⁴Physics, Pusan National University, ⁵IPIT and Department of Physics, Jeonbuk National University, ⁶UNIST Central Research Facilities and School of Materials Science and Engineering, UNIST)

E8.02 [16:22 - 16:34]

Light control of octahedral rotation in perovskite oxides / KYUNG Wonshik¹, JANG Hoyoung², CHUN SaeHwan², KWON Junyoung¹, KIM Minsoo¹, SOHN Byungmin¹, KIM Changyoung^{*1} (¹Department of Physics and Astronomy, Seoul National University, ²X-FEL, Pohang Accelerator Laboratory)

E8.03 [16:34 - 16:46]

LaMnO₃의 중적외선 전도도 피크들의 기원 / MYUNG-WHUN Kim^{*1}, MUNKHBAATAR Purevdorj¹ (¹Jeonbuk National University)

E8.04 [16:46 - 16:58]

The strong correlation between electric and magnetic properties in the cubic pyrite Co-doped NiS₂ system / KIM Changyoung^{*1,2}, KIM Mi Kyung^{1,2}, KWON Junyoung^{1,2} (¹Department of Physics and Astronomy, Seoul National University, ²CCES, IBS)

E8.05 [16:58 - 17:10]

Effect of grain size on the electrical properties of SmB₆ thin films / LEE Seung-hun^{*1,2,3}, ZHANG Xiaohang^{2,3}, EO Yun Suk³, PARK Jihun², BAE Jong-Seong⁴, PAGLIONE Johnpierre³, GREENE Richard L³, TAKEUCHI Ichiro^{2,3} (¹Department of Physics, Pukyong National University, ²Department of Materials Science and Engineering, University of Maryland, ³Maryland Quantum Materials Center, Department of Physics, University of Maryland, ⁴Busan Center, Korea Basic Science Institute)

E8.06 [17:10 - 17:22]

Defect engineering of magnetic phase of EuTiO₃ epitaxial thin films / SHIN Dong-won¹, KIM Inseo², SONG Sehwan³, PARK Sungkyun³, CHOI Minseok², CHOI Woo Seok^{*1} (¹Physics, Sungkyunkwan University, ²Department of Physics, Inha University, ³Department of Physics, Pusan University)

E8.07 [17:22 - 17:34]

Infrared observation of the low-energy interband transition in ultraclean SrVO₃ film / AHN Gihyeon¹, ZINGL M.², NOH S. J.¹, BRAHLEK M.³, ROTH Joseph D.³, ENGEL-HERBERT Roman^{3,4,5}, MILLIS A. J.^{2,6}, MOON Soonjae^{*1} (¹Department of Physics, Hanyang University, ²Center for Computational Quantum Physics, Flatiron Institute, ³Department of Materials Science and Engineering, Pennsylvania State University, ⁴Department of Physics, Pennsylvania State University, ⁵Department of Chemistry, Pennsylvania State University, ⁶Department of Physics, Columbia University)

[E9-ap] [F] Frontiers of Current Applied Physics II

2020. 11. 05 Thursday 16:10~17:22

Room: 09

좌장 : 양상모 서강대학교

Chair : YANG Sang Mo (Sogang University)

E9.01 [16:10 - 16:34]

Bi-doping induced visible-light optical absorption of wide bandgap semiconductor In_2O_3 / PARK Sungkyun^{*1}, KIM JIwoong¹, PARK Hongjun¹, SONG Sehwan¹, CHOI Yesul¹, KIM Hyegeyeong¹, BAE JongSeong², LE Chinh Tam³, KIM Yong Soo³, YANG Mihyun⁴, IHM Kyuwook⁴, LEE Kug-Seung⁴ (¹Pusan National University, ²Busan Center, Korea Basic Science Institute, ³Department of Physics, University of Ulsan, ⁴Pohang Accelerator Laboratory, POSTECH)

E9.02 [16:34 - 16:58]

Local electrical characterizations of nanomaterials and nanodevices / PARK Ji-Yong^{*1} (¹Ajou University)

E9.03 [16:58 - 17:22]

Controlling spin structure of antiferromagnet for the switching of exchange bias effect / HONG Jung-Il^{*1}, KIM Hyun-Joong¹ (¹Emerging Materials Science, DGIST)

[E10-ap] [F] Chiral Magnetism and Topological Properties

2020. 11. 05 Thursday 16:10~17:46

Room: 10

좌장 : 이경진 한국과학기술원

Chair : LEE Kyung-Jin (KAIST)

E10.01 [16:10 - 16:34]

Antisymmetric interlayer exchange coupling in magnetic multilayers / JUNG Myung Hwa^{*1} (¹Sogang University)

E10.02 [16:34 - 16:58]

Dynamics of topological defects and their applications / KIM Kab-Jin^{*1} (¹Department of Physics, KAIST)

E10.03 [16:58 - 17:22]

Magnetic skyrmions in van der Waals ferromagnet-based heterostructures / PARK Tae-Eon^{*1}, PENG Licong², LIANG Jingua³, SONG Kyung Mee¹, KIM Sung Jong¹, WEIGAND Markus⁴, ZHANG Xichao⁵, YANG Hongxin³, YU Xiuzhen², WOO Seonghoon⁶ (¹Center for Spintronics, KIST, ²Center for Emergent Matter Science, RIKEN, ³Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, ⁴HelmholtzCenter Berlin, Albert

E10.04 [17:22 - 17:46]

Role of in-plane magnetic field in the generation of magnetic skyrmion in Fe/Gd multilayer / HAN Hee-Sung¹, MONTOYA Sergio A.², CHAO Weilun³, JEONG Suyeong¹, FULLERTON Eric E.^{4,5}, HONG Jung-Il⁶, JE Soong-Geun⁷, IM Mi-Young³, LEE Ki-Suk^{1*} (¹School of Materials Science and Engineering, UNIST, ²Naval Information Warfare Systems Command - Pacific, San Diego, ³Center for X-ray Optics, Lawrence Berkeley National Laboratory, ⁴Center for Memory and Recording Research, University of California - San Diego, ⁵Department of Electrical and Computer Engineering, University of California - San Diego, ⁶Department of Emerging Materials Science, DGIST, ⁷Department of Physics, Chonnam National University)

[E11-ap] Energy and bio materials

2020. 11. 05 Thursday 16:10~17:34

Room: 11

좌장 : 임은주 단국대학교

Chair : LIM EunJu (Dankook University)

E11.01 [16:10 - 16:22]

Surface Photovoltage Imaging of Hybrid Perovskite Crystals / JUNG Hye Ri¹, CHO Yunae¹, JO William^{1*} (¹Department of Physics, Ewha Womans University)

E11.02 [16:22 - 16:34]

Impact of Rashba and Polaronic Effects on the Luminescence Properties of APbBr₃ (A=Cs, CH₃NH₃) Perovskite Single Crystals / RYU Hongsun¹, MCCALL Kyle², PARK Dae Young³, JEONG Mun Seok³, KANATZIDIS Mercour², JANG Joon Ik^{1*} (¹Physics, Sogang University, ²Chemistry, Northwestern University, ³Energy science, Sungkyunkwan University)

E11.03 [16:34 - 16:46]

Raman scattering study of structural properties of methylammonium lead chloride single crystals / PARK Joohee¹, KIM Yejin¹, BAE Soungmin², BARI Maryam³, JUNG Hye Ri¹, JO William¹, KIM Yong-Hoon², YE Zuo-Guang³, YOON Seokhyun^{1*} (¹Department of Physics, Ewha Womans University, ²School of Electrical Engineering, KAIST, ³Department of Chemistry and 4D LABS, Simon Fraser University)

E11.04 [16:46 - 16:58]

Large size and high quality metal halide perovskite single crystals by inverse temperature crystallization / CHO Yunae¹, JUNG Hye Ri¹, KIM Yeon Soo¹, KIM Yejin¹, YOON Seokhyun¹, LEE Yousil², CHEON Miyeon², JEONG Se-young², JO William^{1*} (¹Department of Physics, Ewha Womans University, ²Department of Physics, Pusan National University)

E11.05 [16:58 - 17:10]

Nanogap for SERS analytical platform for the detection of explosives / ADHIKARI Samir¹, AMPADU Emmanuel K¹, KIM Minjun¹, NOH Daegwon¹, OH Eunsoon¹, LEE Donghan¹ (¹department of physics, Chungnam National University)

E11.06 [17:10 - 17:22]

Gate-tunable interlayer charge transition in graphene/ MoS₂ heterostructures / CHOI Youn Gyu^{1,2}, TRAN Dao Minh^{1,2}, LEE Sanghyup^{1,2}, PARK Sehwan^{1,2}, KIM Jungho^{1,2}, KIM Ji-Hee^{*1,2} (¹Department of Energy Science, Sungkyunkwan University, ²Center for Integrated Nanostructure Physics (CINAP), Institute for Basic Science (IBS))

E11.07 [17:22 - 17:34]

Advanced Manufacturing Process for Defect-Free Microneedle Arrays Based Transdermal Drug Delivery System by Employing Electrostatic and Capillary Actions in Combination with Freeze-drying / JEON Tae Hyun¹, HWANG Jae Seok², KANG Dae Joon^{*1} (¹Sungkyunkwan University, ²Energy Science, Sungkyunkwan University)

[E12-st] Phase transition and critical phenomena

2020. 11. 05 Thursday 16:10~17:34

Room: 12

좌장 : 노재동 서울시립대학교

Chair: NOH Jae Dong (University of Seoul)

E12.01 [16:10 - 16:22]

Synchronization in leader-follower switching dynamics / KAHNG Byungnam^{*1}, PARK Jinha¹ (¹Department of Physics and Astronomy, Seoul National University)

E12.02 [16:22 - 16:34]

Infinite-order phase transitions in growing scale-free simplicial complexes / OH Soo Min¹, LEE Yongsun¹, LEE Jongshin¹, KAHNG Byungnam^{*1} (¹Department of Physics and Astronomy, Seoul National University)

E12.03 [16:34 - 16:46]

Link overlap influence opinion dynamics on multiplex networks: spin model approach / KAHNG Byungnam^{*1}, KIM Cook¹ (¹Department of Physics and Astronomy, Seoul National University)

E12.04 [16:46 - 16:58]

Hybrid percolation transition in a self-organized system / CHOI Hoyun¹, PARK Jinha¹, KAHNG Byungnam^{*1} (¹Department of Physics and Astronomy, Seoul National University)

E12.05 [16:58 - 17:10]

Accessing the quantum criticality of the transverse-field Ising chain via a neural-network quantum state / KIM Dongkyu¹, KIM Dong-Hee^{*1} (¹Department of Physics and Photon Science, GIST)

E12.06 [17:10 - 17:22]

Temperature-Dependent Performance of Erasure Machine in Detecting Interaction Structure of Spin Glasses / JUNG Min Jae¹, KIM Beom Jun¹ (¹Department of Physics, Sungkyunkwan University)

E12.07 [17:22 - 17:34]

Crossover from a quantum to a classical DP transition in dissipative quantum systems / JO Minjae¹, CHOI Kwangjong¹, KAHNG Byungnam^{*1} (¹Department of Physics and Astronomy, Seoul National University)

[E13] No session

[E14-pl] Nuclear Fusion and Basic Plasma Phenomena

2020. 11. 05 Thursday 16:10~17:10

Room: 14

좌장 : 이정표 한양대학교

Chair : LEE Jungpyo (Hanyang University)

E14.01 [16:10 - 16:22]

Nonlinear MHD Study on the Dual SPI in KSTAR / LEE S.J.¹, NA Yong Su^{*1}, HU D.², KIM S.K.¹, HOELZL M.³, LEHNEN M.⁴, NARDON E.⁵, BECOULET M.⁵, HUIJSMANS G.T.A.^{5,6}, KIM Jayhyun⁷, JOREK Team⁸ (¹Nuclear Engineering, Seoul National University, ²School of Physics, Beihang University, China, ³Max Planck Institute for Plasma Physics, Germany, ⁴ITER Organization, France, ⁵CEA, IRFM, France, ⁶Eindhoven University of Technology, The Netherlands, ⁷National Fusion Research Institute, ⁸URL: <https://jorek.eu>)

E14.02 [16:22 - 16:34]

A gyrofluid model for the plasma parallel dynamics with poloidally inhomogeneous sources / LEE Younghoon^{*1}, KWON Jae-Min², JHANG Hogun², KIM S.S.², LEE Jungpyo¹ (¹Department of nuclear engineering, Hanyang University, ²Department of physics, NFRI)

E14.03 [16:34 - 16:46]

Effects of SAS-like divertor structure on detachment phenomenon in KSTAR. / RA Ookjoo¹, KWON Kyu Been¹, HUR Min Sup^{*1} (¹Physics, UNIST)

E14.04 [16:46 - 16:58]

태양 플라즈마에서 자기장의 증폭을 설명하는 alpha, beta 효과의 직관적 파악과 해석적 유도 / CHEOUN Myung Ki¹, PARK Kiwan¹ (¹Department of Physics, Soongsil University)

E14.05 [16:58 - 17:10]

Study of plasma dispersion relation and wave stability with fluid closure / LEE MIN UK¹, Ji Jeong-Young², YUN GUNSU^{1,3} (¹Division of Advanced Nuclear Engineering, POS-TECH, ²Department of Physics, Utah State University, ³Department of Physics, POSTECH)

[E15-op] [F] Quantum computing & simulation II

2020. 11. 05 Thursday 16:10~17:46

Room: 15

좌장 : 신희득 포항공과대학교

Chair : SHIN Heedeuk (POSTECH)

E

E15.01 [16:10 - 16:34]

First-principles theory of quantum defects in 2D materials / SEO Hosung¹ (¹Physics, Ajou University)

E15.02 [16:34 - 16:58]

Utilizing electronic spin interactions for scalable quantum network / 이정현¹ (¹한국과학기술연구원)

E15.03 [16:58 - 17:22]

Defects in crystals with efficient optical interfaces / KIM Je Hyung¹, LEE Jin Hee¹, MOON Jong Sung¹, LEE Sangyun^{2,3}, LEE Junghyun² (¹Department of Physics, UNIST, ²Center for Quantum Information, KIST, ³Department of Physics and photon science, GIST)

E15.04 [17:22 - 17:46]

Effective single-photon detection for quantum nanophotonics / 이육재¹, 김갑중², 조성완², 주정진², 이정민³, 강원남³ (¹Department of Physics, Kongju National University, ²Electronics and Telecommunications Research Institute, ³Department of Physics, Sungkyunkwan University)

[E16-at] [F] Atomic Sensors II

2020. 11. 05 Thursday 16:10~17:58

Room: 16

좌장 : 허명선 한국표준과학연구원

Chair : HEO Myoung-Sun (KRISS)

E16.01 [16:10 - 16:46]

Chip-Scale Atomic Clock / KWON Taeg Yong¹, 흥현규¹, 박상연¹, 이상범¹, 허명선¹, 김희연²,

박종철², 윤상준³, 전태현³, 김태균³ (¹Division of Physical Metrology, KRISS, ²Department of Convergence Sensor, National NanoFab Center, ³넵코어스 주식회사 기술연구소)

E16.02 [16:46 - 17:22]

Nitrogen-vacancy centers in diamond for magnetometry / OH Sangwon^{*1} (¹Ultra-low magnetic field team, KRISS)

E16.03 [17:22 - 17:58]

Atomic sensor based on diamond NV centers / LEE Donghun^{*1} (¹Physics, Korea University)

[E17-se] [F] Future Optoelectronic Materials and Devices II

2020. 11. 05 Thursday 16:10~17:22

Room: 17

좌장 : 조창희 대구경북과학기술원

Chair : CHO Chang-Hee (DGIST)

E17.01 [16:10 - 16:34]

Understanding tunable photoresponsivity of 2D multilayer phototransistors: Interplay between thickness and carrier mobility / JOO Min-Kyu^{*1} (¹Department of Applied Physics, Sookmyung Women's University)

E17.02 [16:34 - 16:58]

Graphene-mediated non-covalent epitaxy of semiconductor micro-light-emitting diodes for flexible optoelectronics applications / HONG Young Joon^{*1,2} (¹Nanotechnology and Advanced Materials Engineering, Sejong University, ²GRI-TPC International Research Center, Sejong University)

E17.03 [16:58 - 17:22]

Epitaxial growth of single-crystal transition metal dichalcogenide monolayers via atomic step surfaces / KIM Ki Kang^{*1,2} (¹Department of Energy Science, Sungkyunkwan University, ²Center for Integrated Nanostructure Physics (CINAP), Institute for Basic Science (IBS))

[E18-se] Low dimensional nano-materials

2020. 11. 05 Thursday 16:10~17:10

Room: 18

좌장 : 류상완 전남대학교

Chair : RYU Sang Wan (Chonnam National University)

E18.01 [16:10 - 16:22]

Size-dependent electronic transitions and shape anisotropy on optical properties

of CdSe quantum dots / KIM Sung Hun¹, MAN Minh Tan^{2,3}, LEE Joong Wook⁴, PARK Kyoung-Duck⁵, LEE Hong Seok^{*1} (¹Department of Physics, Jeonbuk National University, ²Institute of Theoretical and Applied Research, Duy Tan University, ³Faculty of Natural Sciences, Duy Tan University, ⁴Department of Physics, Chonnam National University, ⁵Department of Physics, UNIST)

E18.02 [16:22 - 16:34]

MoS₂ Layers on Nano-patterned SiO₂/Si Wafers: Broadband Absorption Enhancement / CHOI Hyeji¹, KIM Eunah¹, KWON Soyeong¹, KIM Jayeong¹, NGUYEN Anh Duc², KO Eunji¹, BAEK Suyeun¹, YOON Seokhyun¹, KIM Yong Soo², KIM Dong-Wook^{*1} (¹Department of Physics, Ewha Womans University, ²Department of Physics, University of Ulsan)

E18.03 [16:34 - 16:46]

Valley-dependent directional emission of WS₂ layers to a dielectric nanowire / WOO Aran¹, SUNG Joong Hyun¹, GONG Su-Hyun^{*1} (¹Department of Physics, Korea University)

E18.04 [16:46 - 16:58]

Nanoscale investigation of hydrogen-free carbon nanocrystal film: tailoring the electrical and physical performance by tuning the sp²-sp³ configuration / PARK Jewook^{*1}, KIM Jong Hun^{2,3}, JUNG Yeonjoon², LEE Gwan-Hyung^{2,3,4,5} (¹Center for Artificial Low Dimensional Electronic Systems, IBS, ²Department of Materials Science and Engineering, Seoul National University, ³Research Institute of Advanced Materials, Seoul National University, ⁴Institute of Engineering Research, Seoul National University, ⁵Institute of Applied Physics, Seoul National University)

E18.05 [16:58 - 17:10]

Effects of Interlayer Coupling and Band Offset on Second Harmonic Generation in Vertical MoS₂/ MoS₂(1-x)Se_{2x} Structures / KIM Yong Soo^{*1}, LE TAM CHINH¹ (¹Department of Physics, University of Ulsan)

E

[E19-bp] Biological physics II

2020. 11. 05 Thursday 16:10-17:34

Room: 19

좌장 : 김채운 울산과학기술원

Chair : KIM Chae Un (UNIST)

E19.01 [16:10 - 16:22]

Development of a label-free interferometric scattering method for characterizing biomolecules and their interactions at a single molecule level / MOON Hyeon-Min¹, LEE Il-Buem¹, LEE Sehwan^{1,2}, PARK Jin-Sung¹, HONG Seok-Cheol^{1,2}, CHO Minhaeng^{1,3} (¹Center for Molecular Spectroscopy and Dynamics, Institute for Basic Science (IBS), ²Physics, Korea University, ³Chemistry, Korea University)

E19.02 [16:22 - 16:34]

Parylene microfluidic calorimeter as a cell-based assay platform / SEO Sumin², LEE Wonhee^{*1,2} (¹Department of Physics, KAIST, ²Graduate School of Nanoscience and Technology, KAIST)

E19.03 [16:34 - 16:46]

Termination Mechanism in Prokaryotic Transcription Determined the Fate of RNA Polymerase / HOHNG Sungchul^{*1,2}, SONH Eunho^{1,2}, UHM Heesoo^{1,2,3} (¹Seoul National University, ²Department of Physics and Astronomy, Institute of Applied Physics, Seoul National University, ³Department of Physics, University of Oxford)

E19.04 [16:46 - 16:58]

Structural and single-molecule studies reveal the molecular function underlying histone loading of Schizosaccharomyces Pombe AAA+ ATPase Abo1 / LEE Ja Yil^{*1}, KANG Yujin¹ (¹School of Life Sciences, UNIST)

E19.05 [16:58 - 17:10]

TonEBP recognizes R-loops and initiates m6A RNA methylation for R-loop resolution / CHEON Na Young¹, KANG Hyun Je¹, MYUNG Kyungjae¹, KWON Hyug Moo^{1,2}, LEE Ja Yil^{*1,2} (¹School of Life Sciences, UNIST, ²Center of Genomic Integrity, IBS)

E19.06 [17:10 - 17:22]

Revealing and analyzing the three-dimensional structure of human mitotic chromosome / LIM Chan¹, SUNG Daeho^{1,2}, SONG Changyong^{1,2}, JEON Jae-Hyung^{*1} (¹Department of Physics, POSTECH, ²Photon Science Center, POSTECH)

E19.07 [17:22 - 17:34]

In vitro and in vivo PABP count during translation / KIM Byungju¹, SEOL Jincheol¹, PARK Yeonkyoung^{2,3}, KIM Yoon Ki^{2,3}, LEE Jong-Bong^{*1,4} (¹Physics, POSTECH, ²Creative Research Initiatives Center for Molecular Biology of Translation, Korea University, ³School of Life Sciences, Korea University, ⁴School of Interdisciplinary Bioscience and Bioengineering, POSTECH)

[E20-or] “KPS-KOFST 젊은 연구자상” 후보자 논문 발표 및 선정(“KPS-KOFWST Young Researcher Award” – Applicant’s presentation and selection)

2020. 11. 04 Wednesday 12:00 – 11. 06 Friday 18:00 (Release on the website)

2020. 10. 21 Wednesday 14:10~16:30 (Presentation)

Room: 20

좌장 : 류미이 강원대학교

Chair : RYU Mee-Yi (Kangwon National University)

[14:00 - 14:10]

회장 · 여성위원회 위원장 인사말 / 이범훈(서강대) · 김현정(서강대)

E20.01 [14:10 - 14:30]

Oxygen Vacancy Engineering for Highly Tunable Ferromagnetic Properties: A Case of SrRuO₃ Ultrathin Film with a SrTiO₃ Capping Layer / 고은교^{*1} (서울대/IBS)

E20.02 [14:30 - 14:50]

Layering Transition and Novel Topological Defects of Chiral Nematic Liquid Crystals Confined in a Cylinder / 은종희^{*1} (UNIST)

E20.03 [14:50 - 15:10]

Instability of $j=3/2$ Bogoliubov Fermi-surfaces / 오한빛^{*1} (KAIST)

E20.04 [15:10 - 15:30]

Off-diagonal singlet state in the infinite-layer nickelate with Ni²⁺ ion / 진효선^{*1} (고려대)

E20.03 [15:30 - 15:50]

Identification of Additional Jets in the $t\bar{t}b\bar{b}$ Events by Using Deep Neural Network / 최지은^{*1} (한양대)

E20.03 [15:50 - 16:10]

Optical absorption and anomalous photoconductivity in Methylammonium lead mixed halide single crystals / 변혜령^{*1} (서강대)

E20.03 [16:10 - 16:30]

Study of event Jettiness in the $H \rightarrow ZZ^* \rightarrow 4l$ decay channel / 김미란^{*1} (성균관대)

E

Session F

2020 November 6(Fri) 09:00~10:48

[F1-pa] Non-accelerator II

2020. 11. 06 Friday 09:00~10:48

Room: 01

좌장 : 윤성우 기초과학연구원

Chair: YOUN SungWoo (IBS)

F1.01 [09:00 - 09:12]

Status of NEOS-II / OH Yoomin^{*1} (IBS)

F1.02 [09:12 - 09:24]

Pulse Shape Discrimination using Convolution Neural Network for NEOS-II / JEONG Yeonwoo^{*1}, SIYEON Kim^{*1} (¹Physics, Chung-ang University)

F1.03 [09:24 - 09:36]

Performance study of a large water Cherenkov neutrino detector in Korea / KIM HyunSoo^{*1}, YU SeongHyeon², HONG Jaejin², SEO Jiwoong², YU Intae², JANG Jiseung³, SHIN Bokkyun⁴, KWON EunHyang⁵, SEO Hyunkwan⁵, LEE Youngmin⁶ (¹Physics and Astronomy, Sejong University, ²Physics, Sungkyunkwan University, ³Physics, GIST, ⁴Physics, UNIST, ⁵Physics, Seoul National University, ⁶Physics, KAIST)

F1.04 [09:36 - 09:48]

Background Study of NEOS-II / KO Young Ju^{*1} (IBS)

F1.05 [09:48 - 10:00]

Data Analysis and Simulation for NEOS-II / KIM Jinyu^{*1} (¹Department of Physics, Sejong University)

F1.06 [10:00 - 10:12]

Analysis of KAPAE data on Positronium Annihilation Energy and Position for CPT violation studies / PARK HyeoungWoo¹, JIN Jegal¹, JUNG Dongwoo¹, HWANG Sanghoon², KIM Hong Joo^{*1} (¹Department of Physics, Kyungpook National University, ²Center for Ionizing Radiation, KRISS)

F1.07 [10:12 - 10:24]

18 T High Temperature Superconducting Magnet for an Axion Haloscope Experiment / AHN Moohyun^{*1}, YANG Byeongsu², MIN Byeong Hun², LEE Youngjae³, YOON

Hojin³, KIM Donglak², YOO Jonghee^{2,3} (¹Department of Physics, Seoul National University, ²CAPP, IBS, ³Department of physics, KAIST)

F1.08 [10:24 - 10:36]

Search for invisible axion dark matter with a multiple-cell haloscope / JEONG Junu^{1,2}, YOUN Sungwoo², BAE Sungjae^{1,2}, SEONG Taehyeon², KIM Jihn E³, SEMERTZIDIS Yannis Kyriakos^{*1,2} (¹Physics, KAIST, ²Center for Axion and Precision Physics Research, Institute for Basic Science, ³Department of Physics, Kyung Hee University)

F1.09 [10:36 - 10:48]

Status of Neutrino Elastic-scattering Observation with NaI(Tl)(NEON) / CHOI Jaejin^{*1} (¹Department of Physics and Astronomy, Seoul National University)

[F2-pa] Accelerator III

2020. 11. 06 Friday 09:00~11:00

Room: 02

좌장 : 이상훈 서울시립대학교

Chair : LEE Jason Sang Hun (University of Seoul)

F

F2.01 [09:00 - 09:12]

Readiness of detector mass production and the quality-control procedure for the CMS muon system in the Phase-2 LHC / LEE Kyong Sei^{*1}, KANG Minho², JO Youngmin² (¹Korea University, ²Institute of Basic Science, University of Seoul)

F2.02 [09:12 - 09:24]

Trigger RPCs for SHiP experiments and an Application to Muon Radiography / LEE Kyong Sei^{*1}, KANG Minho^{1,2}, JO Youngmin^{1,2}, KO Jae-Woo³, LEE Kang Young³, SON Jong Youn³, YOUN Chunsil³, WOO Jong-Kwan⁴, KIM Yong Kyun⁵, CHOI Ki-Young⁶ (¹Korea University, ²Institute of Basic Sciences, University of Seoul, ³Dept. of Physics Education and RINS, Gyeongsang National University, ⁴Dept. of Physics, Jeju National University, ⁵Dept. of Science Education, Gwangju National University of Education, ⁶Dept. of Physics, Sungkyunkwan University)

F2.03 [09:24 - 09:36]

Scattering and Neutrino Detector at the LHC / YOON Chun Sil^{*1}, KIM Sung Hyun², KO Jae-Woo², LEE Kang Young², PARK Byung Do², SOHN Jong Yoon², LEE Kyong Sei³, KIM Yeong Gyun⁴, CHOI Ki-Young⁵, WOO Jong-Kwan⁶ (¹Research Institute of Natural Science, Gyeongsang National University, ²Physics Education Department & RINS, Gyeongsang National University, ³KODEL, Korea University, ⁴Department of Science Education, Gwangju National University of Education, ⁵Department of Physics, Sungkyunkwan University, ⁶Department of Physics, Jeju National University)

F2.04 [09:36 - 09:48]

The measurement status of the aging properties of the Korean triple GEM detector for the CMS upgrade. / YOON Inseok^{*1}, SONG DongHyun², LEE Gyeong Gu³, MA Kyung Ju², CHOI Minuk³, KIM Mi Ran³ (¹Department of Physics and Astronomy, Seoul National University, ²Department of Physics, University of Seoul, ³Department of Physics, Sungkyunkwan University)

F2.05 [09:48 - 10:00]

The Front-end Chip Test Results for the LGAD Based Precision Timing Application in MTD project for CMS Phase-2 Upgrade / DOGRA Sunil Manohar^{*1}, MOON Chang-Seong¹, LEE Jongho¹ (¹Department of physics, Kyungpook National University)

F2.06 [10:00 - 10:12]

Studies of MET regression with machine learning technique for Phase-2 Upgrade of CMS Level-1 Trigger system / MOON Chang-Seong^{*1}, SEO YeongDeok¹ (¹Department of Physics, Kyungpook National University)

F2.07 [10:12 - 10:24]

FPGA based firmware implementation of MET algorithm for CMS Phase-2 Level-1 trigger / MOON Chang-Seong^{*1}, HONG Jieun¹ (¹Department of Physics, Kyungpook National University)

F2.08 [10:24 - 10:36]

Frontiers in HEP precision measurements through machine learning / RAMIREZ MORALES ANDRES^{*1} (¹Physics Department, Kyungpook National University)

F2.09 [10:36 - 10:48]

R-Parity Violating Supersymmetry event classification using Convolutional Neural Network with Large Scale Deep Learning / AN Soyun¹, BAE DongSung², GOH Junghwan^{*2}, MOON Chang-Seong^{*1}, KIM Jiwoong¹, KIM SungWon³, KIM Tongil³, LEE Seunghwan², YOO Changhyun², YOO Hwidong³ (¹Department of Physics, Kyungpook National University, ²Department of Physics, Kyung Hee University, ³Department of Physics, Yonsei University)

F2.10 [10:48 - 11:00]

Permutation independent Deep Learning Algorithm for RPV SUSY event classification / GOH Junghwan^{*1}, YOO Changhyun¹, MOON Chang-Seong^{*2}, SOYUN An², BAE DongSung¹, KIM Jiwoong², KIM SungWon³, KIM Tongil³, LEE Seunghwan¹, YOO Hwidong³ (¹Department of Physics, Kyung Hee University, ²Department of Physics, Kyungpook National University, ³Department of Physics, Yonsei University)

[F3-nu] [E] [F] [APCTP-KPS-JPS Meeting]

New Prospects on Strong QCD and Hadrons

2020. 11. 06 Friday 09:00~10:36

Room: 03

좌장 : 김현철 인하대학교

Chair : KIM Hyun-Chul (Inha University)

F3.01 [09:00 - 09:24]

Diquark perspective on hadron structure / JIDO Daisuke^{*1} (¹ Tokyo Institute of Technology)

F3.02 [09:24 - 09:48]

Heavy baryon spectroscopy / HOSAKA Atsushi^{*1,2} (¹ RCNP, Osaka University, ² ASRC, JAEA)

F3.03 [09:48 - 10:12]

Production of multi-quark baryon states with hadron beams / AHN Jung Keun^{*1} (¹ Korea University)

F3.04 [10:12 - 10:36]

Isospin mass differences of singly heavy baryons / YANG Ghil Seok¹, KIM Hyun-Chul² (¹ Soongsil University, ² Department of Physics, Inha University)

[F4-as] [E] [F] [APCTP-KPS-JPS Meeting] **Current Topics in Astrophysics I**

2020. 11. 06 Friday 09:00~10:36

Room: 04

좌장 : 곽보근 동국대학교

Chair : GWAK Bogeun (Dongguk University)

F4.01 [09:00 - 09:24]

Gravitational waves from the early universe / YOKOYAMA Jun'ichi^{*1} (¹ RESCEU, The University of Tokyo)

F4.02 [09:24 - 09:48]

On Horava-Lifshitz-DeWitt Gravity: An Overview and Future Directions / PARK Mu-In^{*1} (¹ CQeST, Sogang University)

F4.03 [09:48 - 10:12]

Tests of gravity with gravitational waves / NISHIZAWA Atsushi^{*1} (¹ RESCEU, The University of Tokyo)

F4.04 [10:12 - 10:36]

Fuzzy dark matter and mysteries of galaxies / LEE Jae-Weon^{*1} (¹ Department of Electrical and Electronic Engineering, Jungwon University)

[F5-co] [E] [F] [APCTP-KPS-JPS Meeting] New trends in quantum and topological matters under extreme condition I

2020. 11. 06 Friday 09:00~10:36

Room: 05

좌장 : 박제근 서울대학교

Chair : PARK Je-Geun (Seoul National University)

F5.01 [09:00 - 09:24]

Quantum Anomalous Hall Effect in Two-Dimensional Topological Magnetic Insulators / YU Jaejun*¹ (¹Center for Theoretical Physics, Department of Physics and Astronomy, Seoul National University)

F5.02 [09:24 - 09:48]

Non-Hermitian Topological Phases / SATO Masatoshi*¹ (¹Yukawa Institute for Theoretical Physics, Kyoto University)

F5.03 [09:48 - 10:12]

Universal behaviors of deconfined fractionalized spin excitations in α -RuCl₃ / PARK Jae-Hoon*^{1,2} (¹Max Planck POSTECH/Korea Research Initiative, POSTECH, ²Department of Physics, POSTECH)

F5.04 [10:12 - 10:36]

Experimental signatures of a Kitaev quantum spin liquid in α -RuCl₃ / SHIBAUCHI Takasada*¹ (¹Department of Advanced Materials Science, University of Tokyo)

[F6-co] Nano-Meso/Surface-Interface I

2020. 11. 06 Friday 09:00~10:36

Room: 06

좌장 : 김세권 한국과학기술원

Chair : KIM Se Kwon (KAIST)

F6.01 [09:00 - 09:12]

Chiral edge states along the mass-inverted domain wall in gapped graphene / MYOUNG Nojoon*¹ (¹Department of Physics Education, Chosun University)

F6.02 [09:12 - 09:24]

Spatial structure of two-channel Kondo cloud / SHIM Jeongmin¹, KIM Donghoon¹, SIM Heung-Sun*¹ (¹Department of Physics, KAIST)

F6.03 [09:24 - 09:36]

Universal Thermal Entanglement of the Multi-channel Kondo Effect / SIM Heung-Sun*¹, KIM Donghoon¹, SHIM Jeongmin¹ (¹Department of Physics, KAIST)

F6.04 [09:36 - 09:48]

Robust Quantum Point Contact via Trench gate Modulation / PARK Dongsung T.¹, LEE Seokyeong¹, KIM Uhjin², CHOI Hyoungsoon^{*1}, CHOI Hyungkook^{*2} (¹Physics, KAIST, ²Physics, Jeonbuk National University)

F6.05 [09:48 - 10:00]

Crystallization of Transition-metal Oxides in Aqueous Solution beyond Ostwald Ripening / HAN Sang Wook^{*1}, JEONG Eun-Suk¹, HWANG In-Hui¹ (¹Department of Physics Education, Jeonbuk National University)

F6.06 [10:00 - 10:12]

Particle-antiparticle duality and re-fractionalization of chiral solitons in the extended Su-Schrieffer-Heeger model / OH Chang-geun¹, HAN Sang-Hoon¹, JEONG Seung-Gyo², KIM Tae-Hwan², CHEON Sang Mo^{*1} (¹Department of Physics, Hanyang University, ²Department of Physics, POSTECH)

F6.07 [10:12 - 10:24]

Electron spin resonance of a single atom in vector magnetic fields / KIM Jinkyung^{1,2}, BUI Hong Thi^{1,2}, JANG Won-jun³, LEE Soonhyeong^{1,2}, KRYLOV Denis^{1,2}, CHOI Deung-jang⁴, WOLF Christoph^{1,2}, HEINRICH Andreas^{1,2}, BAE Yujeong^{*1,2} (¹Center for Quantum Nanoscience, IBS, ²Department of Physics, Ewha Womans University, ³Nano Electronics, Samsung Advanced Institute of Technology, ⁴Institut de Physique et Chimie des Matériaux de Strasbourg, Université de Strasbourg)

F6.08 [10:24 - 10:36]

Effects of doping on electronic and magnetic properties of twisted graphene / CHO Yosep¹, CHOI Young Woo¹, CHOI Hyoung Joon^{*1} (¹Department of Physics, Yonsei University)

[F7-co] [F] Synchrotron x-ray studies for advanced electronic materials and quantum mechanical properties II

2020. 11. 06 Friday 09:00~10:48

Room: 07

좌장 : 서정화 동아대학교

Chair : SEO Jung Hwa (Dong-A University)

F7.01 [09:00 - 09:24]

Ultrafast dynamic phenomena in strongly electron-correlated materials investigated at PAL-XFEL / CHUN SAE HWAN^{*1} (¹XFEL Division, Pohang Accelerator Laboratory)

F7.02 [09:24 - 09:36]

ARPES and Time-resolved ARPES studies in epitaxially grown 2D chalcogenide thin films / CHOI Byoung Ki¹, KIM Hyuk Jin¹, LEE In Hak¹, CHANG Young Jun^{*1} (¹Department of Physics, University of Seoul)

F7.03 [09:36 - 10:00]

Time resolved measurement of topological spin structure by using soft x-ray microscopy / HAN Hee-Sung¹, LEE Sooseok¹, YU Young-Sang², HONG Jung-II³, IM Mi-Young⁴, LEE Ki-Suk^{*1} (¹School of Materials Science and Engineering, UNIST, ²Advanced Light Source, Lawrence Berkeley National Lab, ³Department of Emerging Materials Science, DGIST, ⁴Center for X-ray Optics, Lawrence Berkeley National Lab)

F7.04 [10:00 - 10:12]

Observation of Three-dimensional Magnetic Domain Structure by Using Transmission X-ray Microscopy / LEE Sooseok¹, HAN Hee-Sung¹, YU Young-Sang², JE Soong-Geun³, KANG Myeonghwan¹, OK Hye-Jin¹, KIM Namkyu¹, CHAO Weilun⁴, IM Mi-Young⁴, LEE Ki-Suk^{*1} (¹School of Materials Science and Engineering, UNIST, ²Advanced Light Source, Lawrence Berkeley National Lab, ³Department of Physics, Chonnam National University, ⁴Center for X-ray Optics, Lawrence Berkeley National Lab)

F7.05 [10:12 - 10:36]

Enhancing Vertical Carrier Transport on a Thin Film Polymer Semiconductor via Molecular orientation modification by a femto-second Laser process / CHAE Sangmin², YI Ahra², KIM Hyo Jung², CHOI Jiyeon³, LEE Hyun Hwi^{*1} (¹Beamline Research Division, Pohang Accelerator Laboratory, ²Department of Organic Material Science and Engineering, Pusan National University, ³Department of Laser and Electron Beam Application, KIMM)

F7.06 [10:36 - 10:48]

Electronic band structure at the Au/Perovskite interface via photoemission spectroscopies / SEO Jung Hwa^{*1}, KANG Juhwan¹ (¹physics, Dong-A University)

[F8-co] Condensed Matter Computational Physics I

2020. 11. 06 Friday 09:00~10:24

Room: 08

좌장 : 이재광 부산대학교

Chair : LEE Jaekwang (Pusan National University)

F8.01 [09:00 - 09:12]

Off-centered Pb interstitials inducing lattice instability in PbTe / PARK Sungjin^{*1}, RYU Byungki^{*1} (¹Energy Conversion Research Center, KERI)

F8.02 [09:12 - 09:24]

Neural network interatomic potential for (B,N)/Pt(111) surface system / YEO Kang-mo¹, PARK Karam¹, JEONG Sukmin^{*1} (¹Department of Physics, Jeonbuk National University)

F8.03 [09:24 - 09:36]

Accurate band gap prediction with tuplewise graph based material representation

based on machine learning / LEE Yea-Lee¹, NA Gyoung S.¹, JANG Seunghun¹, CHANG Hyunju¹ (¹Chemical Data-driven Research Center, KRICT)

F8.04 [09:36 - 09:48]

High mobility two-dimensional electron gas in $\text{PbZr}_{0.5}\text{Ti}_{0.5}\text{O}_3/\text{BaSnO}_3$ heterostructure / HWANG Jaejin¹, LEE Jaekwang¹ (¹Department of Physics, Pusan National University, ²Pusan National University)

F8.05 [09:48 - 10:00]

Partial quantum revivals of localized condensates in distorted lattices / KO Dogyun¹, SUN Meng¹, ANDREANOV Alexei¹, RUBO Yuri¹, SAVENKO Ivan¹ (¹basic science, UST)

F8.06 [10:00 - 10:12]

First Principles Study of a Phase Change Mechanism of $\text{GeTe}/\text{Sb}_2\text{Te}_3$ Superlattice Structure / KWON Young-Kyun¹, PARK Sunho¹, LEE Chang Woo², CHO Mann-ho² (¹Department of Physics, Kyung Hee University, ²Department of Physics and Applied Physics, Yonsei University)

F8.07 [10:12 - 10:24]

Deep Convolutional Neural Network for Determining the Unit Cell Structure of Lead Titanate / NOH Do Young¹, LEE Yoon Gyu² (¹IBS, IBS, ²Department of Physics and Photon Science, GIST)

F

[F9-ap] Surface and Interface

2020. 11. 06 Friday 09:00~10:12

Room: 09

좌장 : 이진호 서울대학교

Chair : LEE Jinho (Seoul National University)

F9.01 [09:00 - 09:12]

Ab initio study of remote heteroepitaxial growth of GaN on the graphene/ Al_2O_3 substrate / CHA Janghwan^{2,3,4}, HONG SukLyun^{2,3,4} (¹Sejong University, ²Department of Physics, Sejong University, ³Graphene Research Institute, Sejong University, ⁴GRI-TPC International Research Center, Sejong University)

F9.02 [09:12 - 09:24]

First principles study of TiCl_4 adsorption on bare and hydroxyl terminated alpha-phase Al_2O_3 during TiN ALD / LEE Gun-Do¹, CHOI Woo Jin¹, LEE Sung Woo¹, PARK Hwan Yeol¹ (¹Department of Materials Science and Engineering, Seoul National University)

F9.03 [09:24 - 09:36]

Electrohydrodynamic-Driven Nanostructure Replica Transferred Surface Enhanced

Raman Scattering Active Swab for Rapid Detection of Low-Concentrated Substances / HYEON Myeongjun¹, PARK Hyunje¹, HWANG Jaeseok², LEE Jaejong³, KANG Dae Joon^{*1} (¹Sungkyunkwan University, ²Energy Science, Sungkyunkwan University, ³Nanomanufacturing Division, KIMM)

F9.04 [09:36 - 09:48]

Laser-induced crystalline-phase transformation for hematite nanorod photoelectrochemical cells / KONG Heejung¹, YEO Junyeob^{*1} (¹Department of Physics, Kyungpook National University)

F9.06 [09:48 - 10:00]

Fog Collection Based on Anisotropic Wetting for Secondary Electrohydrodynamic-induced Hybrid Structures / PARK Hyunje¹, HWANG Jaeseok², HYEON Myeongjun¹, LEE Jaejong³, KANG Dae Joon^{*1} (¹Sungkyunkwan University, ²Energy Science, Sungkyunkwan University, ³Nanomanufacturing Division, KIMM)

[F10-ap] 2D materials I

2020. 11. 06 Friday 09:00-10:36

Room: 10

좌장 : 이철호 고려대학교

Chair : LEE Chul-Ho (Korea University)

F10.01 [09:00 - 09:12]

Raman studies on interlayer vibration and structural phase transition in few-layer 1T' and Td MoTe₂ / CHEON Yeryun¹, KIM Kangwon¹, CHEONG Hyeonsik^{*1} (¹Department of Physics, Sogang University)

F10.02 [09:12 - 09:24]

Quasi-Fermi Level Splitting in Epitaxial Heterobilayers of WS₂ and MoS₂ / KIM Dong-Wook^{*1}, KIM Bora¹, KIM Jayeong¹, TSAI Po-Cheng², LIN Shih-Yen², YOON Seokhyun¹ (¹Department of Physics, Ewha Womans University, ²Reserch Center for Applied Sciences, Academia Sinica)

F10.04 [09:24 - 09:36]

Atomic-Layer-Confined Multiple Quantum Wells Enabled by Monolithic Bandgap Engineering of Transition Metal Dichalcogenides / KIM Yoon Seok¹, KANG Sojung², SO Jae-Pil³, KIM Jong Chan⁴, KIM Kangwon⁵, YANG Seunghoon¹, JUNG Yeonjoon⁶, SHIN Yongjun⁶, LEE Seongwon⁴, LEE Donghun¹, PARK Jin-Woo², CHEONG Hyeonsik⁵, JEONG Hu Young⁷, PARK Hong-Gyu^{1,3}, LEE Gwan-Hyoung^{6,8,9,10}, LEE Chul-Ho^{*1} (¹Korea University, ²Department of Materials Science and Engineering, Yonsei University, ³Department of Physics, Korea University, ⁴School of Materials Science and Engineering, UNIST, ⁵Department of Physics, Sogang University, ⁶Department of Materials Science and Engineering, Seoul

National University, ⁷UNIST Central Research Facilities (UCRF), UNIST, ⁸Research Institute of Advanced Materials (RIAM), Seoul National University, ⁹Institute of Engineering Research, Seoul National University, ¹⁰Institute of Applied Physics, Seoul National University)

F10.05 [09:36 - 09:48]

Surface Photovoltage Spectroscopy Study of MoS₂ Monolayers on Au Nanostructures / KIM Dong-Wook^{*1}, SONG Jungeun¹, KWON Soyeong¹, KIM Bora¹, MURTHY Lakshmi N.S.², LEE Taejin³, HONG Inhae⁴, LEE Byoung Hoon⁴, LEE Sang Wook¹, CHOI Soo Ho⁵, KIM Ki Kang⁵, CHO Chang-Hee³, HSU Julia W.P.² (¹Department of Physics, Ewha Womans University, ²Department of Materials Science and Engineering, University of Texas at Dallas, ³Department of Emerging Materials Science, DGIST, ⁴Division of Chemical Engineering and Materials Science, Ewha Womans University, ⁵Center of Integrated Nanostructure Physics (CINAP), Institute of Basic Science (IBS), Sungkyunkwan University)

F10.06 [09:48 - 10:00]

Expanding Chemical Enhancement Mechanism of SERS by using WS₂ / KIM Jayeong¹, JANG Yujin¹, SHIN Yukyung², KIM Myunghwa², YOON Seokhyun^{*1} (¹Department of Physics, Ewha Womans University, ²Department of Chemistry, Ewha Womans University)

F10.07 [10:00 - 10:12]

CO-induced Phase Transition of WS₂ and MoS₂ Nanocrystals: A DFT Study / HONG Deokgi¹, LEE Sungwoo^{1,2}, JOO Young-Chang^{1,2,3}, LEE Gun-Do^{*1,2} (¹Department of Materials Science and Engineering, Seoul National University, ²Research Institute of Advanced Materials, Seoul National University, ³Advanced Institute of Convergence Technology, Advanced Institute of Convergence Technology)

F10.08 [10:12 - 10:24]

Effect of stacking order change in 2D MoS₂, WS₂ heterostructure with Raman spectroscopy / KIM Jayeong¹, BAEK Suyeon¹, KIM Bora¹, KIM Dongwook¹, TSAI Po-Cheng², LIN Shih-Yen², YOON Seokhyun^{*1} (¹Department of Physics, Ewha Womans University, ²Research Center for Applied Sciences, Academia Sinica)

[F11] No session

F

[F12-st] Nonequilibrium systems

2020. 11. 06 Friday 09:00~10:48

Room: 12

좌장 : 박수찬 가톨릭대학교

Chair : PARK Su-Chan (The Catholic University of Korea)

F12.01 [09:00 - 09:24]

Emergence of motile structures via symmetry breaking in active fluids / BAEK Yongjoo¹ (¹Department of Physics and Astronomy, Seoul National University)

F12.02 [09:24 - 09:36]

Langevin dynamics of an active Brownian particle in a viscoelastic polymer environment / JOO Sungmin¹, DURANG Xavier¹, LEE O-chul¹, JEON Jae-Hyung¹ (¹Department of Physics, POSTECH)

F12.03 [09:36 - 09:48]

Fluctuation dissipation theorem for energy eigenstates / NOH Jae Dong¹ (¹Department of Physics, University of Seoul)

F12.04 [09:48 - 10:00]

Motility induced by symmetry breaking in an active fluid / KIM Ki-Won¹, CHOE Yun-sik¹, BAEK Yongjoo¹ (¹Department of Physics and Astronomy, Seoul National University)

F12.05 [10:00 - 10:12]

Membrane fluctuations encapsulating active matters / GRANICK Steve^{1,2,3}, PARK Myeonggon^{1,2} (¹Center for Soft and Living Matter, IBS, ²Department of Physics, UNIST, ³Department of Chemistry, UNIST)

F12.06 [10:12 - 10:24]

Effect of magnetic field on the dream engine condition / PARK Jong-Min¹, PARK Hyunggyu¹ (¹School of Physics, KIAS)

F12.07 [10:24 - 10:36]

Data dependence of the resolution-relevance tradeoff in unsupervised learning / KIM Gilhan¹, LEE Hojun¹, JO Junghyo², BAEK Yongjoo¹ (¹Department of Physics and Astronomy, Seoul National University, ²Department of Physics Education, Seoul National University)

F12.08 [10:36 - 10:48]

Deep reinforcement learning for feedback-controlled flashing ratchets / KIM Dong-Kyum¹, JEONG Hawoong^{1,2} (¹Physics Department, KAIST, ²Center for Complex Systems, KAIST)

[F13-te] [F] Curriculum revision and direction of physics teacher education

2020. 11. 06 Friday 09:00~10:36

Room: 13

좌장 : 정용욱 경상대학교

Chair : CHEONG Yong Wook (Gyeongsang National University)

F

F13.01 [09:00 - 09:24]

물리교육에서 이론과 실용 격차에 대한 이해 / PARK Jong Won^{*1} (Chonnam National University)

F13.02 [09:24 - 09:48]

물리예비교사양성에서 탐구 교육 / LEE Bong woo^{*1} (Dankook University)

F13.03 [09:48 - 10:12]

물리 교육과정 개정과 교사교육의 방향 탐색: 고등학교 현대물리학 교육의 어려움을 중심으로 / LEE Gyoungho^{*1}, KIM Hongbin¹ (physics education, Seoul National University)

F13.04 [10:12 - 10:36]

모든 이를 위한 물리교육에 대한 소고 / 강남화^{*1} (한국교원대학교)

[F14-pl] [F] Symposium for the Basic Fusion R&D Program I

2020. 11. 06 Friday 09:00~10:48

Room: 14

좌장 : 인용균 울산과학기술원

Chair : IN Yongkyoon (UNIST)

F14.01 [09:00 - 09:36]

핵융합 코어 플라즈마 붕괴 기작 및 제어 연구 / 황용석^{*1} (Dept. of Nuclear Engineering, Center for Advance Research in Fusion Reactor Engineering, Seoul National University)

F14.02 [09:36 - 10:12]

혁신적 디버터 열속 제어 처리 기술 거점 센터 연구 개발 현황 / HUR Min Sup^{*1}, 채길병², 조항진³ (1Physics, UNIST, 2핵물리응용연구부, KAERI, 3첨단원자력공학부, POSTECH)

F14.03 [10:12 - 10:48]

플라즈마 불순물 및 경계 열속 연구센터 / CHOE Wonho^{*1,4}, GHIM Young-chul^{1,4}, CHUNG Chin-Wook^{2,4}, LEE Jungpyo^{3,4}, IERC TEAM IERC Team⁴, LEE HyungHo⁵, HONG Suk-Ho⁵ (1KAIST, 2Department Of Electrical Bio-Engineering, Hanyang University, 3Department Of Nuclear Engineering, Hanyang University, 4KAIST, Impurity and Edge plasma Research, 5DEMO Technology Division, NFRl)

[F15-op]] [F] Special approaches in integrated photonics I

2020. 11. 06 Friday 09:00~10:36

Room: 15

좌장 : 한상윤 대구경북과학기술원

Chair : HAN Sangyoon (DGIST)

F15.01 [09:00 - 09:24]

Symmetry breaking in integrated photonics / YU Kyoungsik^{*1} (¹Electrical Engineering, KAIST)

F15.02 [09:24 - 09:48]

Evolution of photonic topological insulators from triangular lattice to honeycomb lattice / YANG Jin-Kyu^{*1,2}, HWANG Yongsop², OH Sang Soon³ (¹Department of Optical Engineering, Kongju National University, ²Institute of Application and Fusion for Light, Kongju National University, ³School of Physics and Astronomy, Cardiff University)

F15.03 [09:48 - 10:12]

Kerr nonlinear nanophotonics in microring resonator / JUNG Hojoong^{*1} (¹Korea Institute of Science and Technology (KIST))

F15.04 [10:12 - 10:36]

Chiral Plasmonic Nanosensors / JEONG Hyeon-Ho^{*1} (¹School of Electrical Engineering and Computer Science, GIST)

[F16-at] Atomic, Molecular and Optical Physics I

2020. 11. 06 Friday 09:00~10:24

Room: 16

좌장 : 김휘동 한국표준과학연구원

Chair : KIM Huidong (KRISS)

F16.01 [09:00 - 09:12]

Non-Born-Oppenheimer Molecular Dynamics Observed by Coherent Nuclear Wave Packets / KIM JunWoo², KIM Dong Eon^{*1} (¹Physics Department, POSTECH, ²Department of Chemistry, Princeton University)

F16.02 [09:12 - 09:24]

Dual-frequency operation of unshielded radio-frequency atomic magnetometer / YU Ye Jin¹, LEE Hyun Joon², CHO In-Kui², MOON Han Seb^{*1} (¹Pusan National University, ²Radio & Satellite Research Division, ETRI)

F16.03 [09:24 - 09:36]

Diffusion induced spin relaxation of gaseous ¹²⁹Xe in the presence of magnetic gra-

dients / LEE Deok Young^{*1}, LEE Sangkyung¹, YIM Sin Hyuk¹, SHIM Kyumin¹ (¹Agency for Defense Development)

F16.04 [09:36 - 09:48]

Multi-step energy dissipation in a binary superfluid gas by a moving magnetic obstacle / KIM Joon Hyun¹, HONG DeokHwa^{1,2}, SHIN Yong-il^{1,2} (¹Department of Physics and Astronomy, Seoul National University, ²Center for Correlated Electron Systems, Institute for Basic Science)

F16.05 [09:48 - 10:00]

Spontaneous defect formation in a thermally quenched Bose gas and the statistics of the defect number / GOO Junhong^{1,2}, LIM Younghoon^{1,2}, SHIN Yong-il^{1,2} (¹Department of Physics and Astronomy, Seoul National University, ²Center for Correlated Electron Systems, CCES (IBS))

F16.06 [10:00 - 10:12]

Reflection of Helium clusters from two different square-wave gratings / KIM Leeyeong², PARK Sanghwan³, LEE ChangYoung³, SCHOELLKOPF Wieland⁴, ZHAO Bum Suk^{*1} (¹Department of Chemistry, Department of Physics, UNIST, ²Department of Physics, UNIST, ³Department of Chemical Engineering, UNIST, ⁴Fritz-Haber-Institut der Max-Planck-Gesellschaft)

F16.07 [10:12 - 10:24]

Single-site Resolving 7Li Quantum Gas Microscope / CHOI Jae Yoon^{*1}, KWON Kiryang¹, KIM Kyungtae¹, HUH SeungJung¹, HUR Junhyeok¹ (¹Physics Department, KAIST)

[F17-se] [F] Nano-optical characterizations of semiconducting materials I

2020. 11. 06 Friday 09:00~10:12

Room: 17

좌장 : 박경덕 울산과학기술원

Chair : PARK Kyoung-Duck (UNIST)

F17.01 [09:00 - 09:24]

Nanopipette/QTF-AFM-based Nanofabrication and Surface Characterization / AN Sangmin^{*1} (¹Department of Physics, Research Institute of Physics and Chemistry, Jeonbuk National University)

F17.02 [09:24 - 09:48]

Investigating Heterogeneous Defects in Two-Dimensional Transition Metal Dichalcogenides via Tip-Enhanced Raman Spectroscopy / LEE Chanwoo¹, JEONG Mun Seok^{*1} (¹Department of Energy Science, Sungkyunkwan University)

F17.03 [09:48 - 10:12]

Dynamic plasmonic tip-cavity from weak to strong coupling regime / PARK Kyo-ung-Duck^{*1} (¹Physics, UNIST)

[F18-se] Nitride & oxide semiconductors

2020. 11. 06 Friday 09:00~10:12

Room: 18

좌장 : 이홍석 전북대학교

Chair : LEE Hong Seok (Jeonbuk National University)

F18.01 [09:00 - 09:12]

전계방출 디스플레이를 위한 적색 $\text{Ba}_2\text{GdSbO}_6$: Eu^{3+} 형광체의 제작 및 특성 / HUA Yongbin², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

F18.02 [09:12 - 09:24]

An Epitaxially Separated GaN Thin Film As An Alternative to A Free-Standing GaN Thick Film / KIM Donghoi², JANG Dongsoo¹, LEE Hyunkyu², KIM Jayeong³, JANG Yujin³, YOON Seokhyun³, KIM Chinkyu^{*1,2} (¹Dept. of Physics, Kyung Hee University, ²Dept. of Information Display, Kyung Hee University, ³Dept. of Physics, Ewha Womans University)

F18.03 [09:24 - 09:36]

Non-edge-triggered polarity inversion of a GaN thin film from (0001) to (000-1) / LEE Hyunkyu², JANG Dongsoo¹, KIM Donghoi², KIM Chinkyu^{*1,2} (¹Dept. of Physics, Kyung Hee University, ²Dept. of Information Display, Kyung Hee University)

F18.04 [09:36 - 09:48]

Growth of composite TiO_x and $\text{N}:\text{TiO}_x$ thin films deposited by DC sputtering technique. / SEO Hye-Won^{*1}, KIM Jin-Soo¹, JEE Hyeok¹ (¹Dept of Physics, Jeju National University)

F18.05 [09:48 - 10:00]

Observation of cavity modes in GaN equilateral triangular structure / SUNG Chan Young¹, SONG Hyun Gyu¹, CHO Yong Hoon^{*1} (¹Department of Physics, KAIST)

F18.06 [10:00 - 10:12]

Field dependent optical properties for InGaN pyramidal apex quantum structure / SONG Yongho¹, AHN Seonghun¹, YEO Hwan-Seop¹, LEE Kwanjae¹, SUNG Chan young¹, CHO Yong Hoon^{*1} (KAIST)

Session G

2020 November 6(Fri) 11:10~12:58

[G1-pa] [E] [F] [APCTP-KPS-JPS Meeting] Xe1T anomaly

2020. 11. 06 Friday 11:10~13:10

Room: 01

좌장 : 박성찬 연세대학교

Chair : PARK Seong Chan (Yonsei University)

G1.01 [11:10 - 11:34]

Observation of excess electronic recoil events in XENON1T / KAZAMA Shingo^{*1} (¹Nagoya University)

G1.02 [11:34 - 11:58]

Review of theoretical models explaining the XENON1T excess / TAKAHASHI Fuminobu^{*1} (¹Tohoku University)

G1.03 [11:58 - 12:22]

Leptonic new forces for Xe1t anomaly / PARK Seongchan^{*1} (¹Yonsei University)

G1.04 [12:22 - 12:46]

Exothermic Dark Matter for XENON1T Excess / LEE Hyun Min^{*1} (¹Department of Physics, Chung-Ang University)

G1.05 [12:46 - 13:10]

Implications of Dark Matter Interpretation / PARK Jong-Chul^{*1} (¹Chungnam National University)

[G2-pa] Accelerator IV

2020. 11. 06 Friday 11:10~12:58

Room: 02

좌장 : 권영준 연세대학교

Chair : KWON Youngjoon(Yonsei University)

G2.01 [11:10 - 11:22]

Search for the $B^0 \rightarrow l^+ \tau^-$ decays at the Belle experiment / KIM Kyungho^{*1}, KWON Youngjoon^{*1} (¹Department of Physics, Yonsei University)

G2.02 [11:22 - 11:34]

Monte-Carlo study for a search of $B^0 \rightarrow K_S^0 K_S^0 \gamma$ in the Belle experiment / JEON

Hyebin¹, KIM Hongjoo¹, KANG Kookhyun¹, LI Jin1, LEE Seungcheol¹, PARK Hwanbae^{*1}
(¹Kyungpook National University)

G2.03 [11:34 - 11:46]

Performance of the Belle II calorimeter trigger system at the SuperKEKB collider / CHEON Byung Gu^{*1}, KIM Cheolhun¹, CHO Haneol¹, UNNO Yuji¹, CHOI Sookyung², JANG Eunji², AHN Jungkeun³, KIM Youngjun³, KIM Sunghyun⁴, LEE Insoo⁴ (¹Department of Physics, Hanyang University, ²Department of Physics, Gyeongsang National University, ³Department of Physics, Korea University, ⁴Center for Underground Physics, IBS)

G2.04 [11:46 - 11:58]

Studies of dark sector at Belle & Belle II / PARK Seokhee¹, KWON Youngjoon^{*1} (¹Physics, Yonsei University)

G2.05 [11:58 - 12:10]

Toward first test beam with dual-readout calorimeter R&D for future e^+e^- collider / HA Seung kyu^{*1}, KIM Bobae², LEE Junghyun², LEE Sehwook², KO Sanghyun⁴, KIM Doyeong³, LEE Jason³, LEE Yunjae³, PARK Jongsuk³, RYU Minsang³, WATSON Ian³, EO Yun¹, HWANG Kyuyoung¹, KIM Minsoo¹, YOO Hwidong¹ (¹Yonsei University, ²Department of Physics, Kyungpook National University, ³Department of Physics, University of Seoul, ⁴Department of Physics, Seoul National University)

G2.06 [12:10 - 12:22]

Study on EM/jet energy resolution with 4π dual-readout calorimeter / YOO Hwidong^{*1}, LEE Sehwook², KIM Bobae², LEE Junghyun², KO Sanghyun³, KIM Doyeong⁴, LEE Jason⁴, LEE Yunjae⁴, PARK Jongsuk⁴, RYU Minsang⁴, WATSON Ian James⁴, HA Seungkyu¹, EO Yun¹, KIM Minsoo¹, HWANG Kyuyeong¹ (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³Department of Physics & Astronomy, Seoul National University, ⁴Department of Physics, University of Seoul)

G2.07 [12:22 - 12:34]

The simulation of the dual-readout calorimeter for future collider experiments using Key4HEP common software framework / EO Yun⁴, HA Seungkyu⁴, HWANG Kyuyeong⁴, KIM Bobae¹, KIM Doyeong³, KIM Minsoo⁴, KO Sanghyun^{*2}, LEE Junghyun¹, LEE Jason³, PARK Jongsuk³, LEE Sehwook¹, LEE Yunjae³, RYU Minsang³, WATSON Ian³, YOO Hwidong⁴ (¹Department of Physics, Kyungpook National University, ²Department of Physics and Astronomy, Seoul National University, ³Department of Physics, University of Seoul, ⁴Department of Physics, Yonsei University)

G2.08 [12:34 - 12:46]

Deep learning implementation for Dual-Readout calorimeter / LEE YunJae¹, LEE Jason Sang Hun¹, YOO Hwidong², LEE Sehwook³, KO Sanghyun⁴, HWANG Kyuyoung², KIM Minsoo², EO Yan², KIM Bobae³, LEE Junghyun³, RYU Minsang¹, WATSON Ian James¹, KIM

Doyoung¹ (¹Department of Physics, University of Seoul, ²Department of Physics, Yonsei University, ³Department of Physics, Kyungpook National University, ⁴Department of Physics, Seoul National University)

G2.09 [12:46 - 12:58]

Simulation study on position and angular resolution of the dual-readout calorimeter / EO Yun¹, HA Seungkyu¹, HWANG Kyuyeong¹, KIM Bobae², KIM Doyeong³, KIM Minsoo¹, KO Sanghyun⁴, LEE Jason³, LEE Junghyun², LEE Sehwook², LEE Yunjae³, RYU Minsang³, WATSON Ian³, YOO Hwidong¹ (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University, ³Department of Physics, University of Seoul, ⁴Department of Physics & Astronomy, Seoul National University)

[G3-nu] Hadron physics & Nuclear Astrophysics

2020. 11. 06 Friday 11:10-12:34

Room: 03

좌장 : 안정근 고려대학교

Chair : AHN Jung Keun (Korea University)

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G3.01 [11:10 - 11:22]

Exclusive photoproduction of ϕ meson on ^4He / KIM Sangho¹, NAM Seung-il¹, OH Yongseok², LEE T.-S. H.³ (¹Physics Department, Pukyong National University, ²Physics Department, Kyungpook National University, ³Physics Division, Argonne National Laboratory)

G3.02 [11:22 - 11:34]

Tribaryons in a constituent quark model / PARK Aaron¹, LEE Su Hwang¹ (¹Department of Physics and Institute of Physics and Applied Physics, Yonsei University)

G3.03 [11:34 - 11:46]

Electromagnetic Form Factor Analysis in 1+1 Dimension: Light-front Dynamics vs. Instant Form Dynamics / OH Yongseok¹, CHOI Yongwoo¹, CHOI Ho-Meoyng², JI Chueng-Ryong³ (¹Department of Physics, Kyungpook National University, ²Department of Physics, Teachers College, Kyungpook National University, ³Department of Physics, North Carolina State University)

G3.04 [11:46 - 11:58]

Rho-omega mixing and charge-symmetry breaking nuclear forces in chiral perturbation theory / PARK Tae-Sun¹ (¹CENS, IBS)

G3.05 [11:58 - 12:10]

Importance of precise mass measurements for ^{65}As and ^{66}Se / NGUYEN Duy Ngoc¹, CHAE Kyung Yuk¹, NGUYEN Kim Uyen¹ (¹Department of Physics, Sungkyunkwan University)

G3.06 [12:10 - 12:22]

The production of ^{53}Mn as a cosmochronometer by neutrino process in core-collapse supernova / KO Heamin¹, CHEOUN Myung Ki¹ (¹Department of Physics, Soongsil University)

G3.07 [12:22 - 12:34]

Dynamic screening effects on big bang nucleosynthesis / HWANG EunSeok¹, JANG Dukjae², CHEOUN Myung Ki¹, PARK Kiwan¹ (¹Department of Physics, Soongsil University, ²Center for Relativistic Laser Science, IBS)

[G4-as] [E] [F] [APCTP-KPS-JPS Meeting] Current Topics in Astrophysics II

2020. 11. 06 Friday 11:10~12:46

Room: 04

좌장 : 김정리 이화여자대학교

Chair : KIM Chunglee (Ewha Womans University)

G4.01 [11:10 - 11:34]

Multimessenger astronomy in Japan: introduction of optical-infrared follow-up observation project / YOSHIDA Michitoshi¹ (¹Subaru Telescope National Astronomical Observatory of Japan)

G4.02 [11:34 - 11:58]

Gravitational Wave, Data Analysis, and Observations / LEE Hyung Won¹, KIM Jeongcho¹, KIM Chunglee² (¹Drone IoT Simulation School, Inje University, ²Dept. of Physics, Ewha Womans University)

G4.03 [11:58 - 12:22]

Gravitational-wave EM Counterpart Korean Observatory, GECKO / IM Myungshin¹, PAEK Gregory S. H.¹, KIM Joonho¹, HWANG Sungyong¹, CHOI Changsu¹, LEE Chung-Uk², KIM Seung-Lee², LEE Hyung Mok^{1,2}, SUNG Hyun-Il², JEONG Mankeun¹, YOON Yongmin³, LEE Seong-Kook Joshua¹, GECKO Team^{1,2,3} (¹Dept. of Physics & Astronomy, Seoul National University, ²Korea Astronomy and Space Science Institute, KASI, ³Korea Institute for Advanced Study, KIAS)

G4.04 [12:22 - 12:46]

Multimessenger astronomy and the origin of heavy elements in the Universe / TANAKA Masaomi¹ (¹Tohoku University)

[G5-co] [E] [F] [APCTP-KPS-JPS Meeting] New trends in quantum and topological matters under extreme condition II

2020. 11. 06 Friday 11:10~12:46

Room: 05

Chair: **HIROYUKI Nojiri** IMR, Tohoku University

G5.01 [11:10 - 11:34]

Dirac fermions coupled with magnetic order and lattice polarization / SAKAI Hideaki^{*1}
(¹Department of Physics, Osaka University, Japan)

G5.02 [11:34 - 11:58]

ARPES study of a Multifold Fermionic Semimetal PdSb₂ / JEONG Jinwon¹, JU Woo-Ri¹, CHO En-Jin¹, NOH Han-Jin^{*1}, KIM Kyoo² (¹department of physics, Chonnam National University, ²Department of Physics, Korea Atomic Energy Research Institute)

G5.03 [11:58 - 12:22]

Exotic nodal fermions in topological materials studied by ARPES / SATO Takafumi^{*1,2,3}
(¹WPI Research Center, Advanced Institute for Materials Research, Tohoku University, ²Department of Physics, Tohoku University, ³Center for Spintronics Research Network, Tohoku University)

G5.04 [12:22 - 12:46]

Extreme Nonlinear Meissner Effect in Superconductors / KIM Jae Hoon^{*1}, LEE Ji Eun¹, CHOI Joonyoung², SIM Kyung Ik², JO Younjung² (¹Department of Physics, Yonsei University, ²Department of Physics, Kyungpook National University)

[G6-co] Nano-Meso/Surface-Interface II

2020. 11. 06 Friday 11:10~12:46

Room: 06

좌장 : 김근수 연세대학교

Chair : KIM Keun Su (Yonsei University)

G6.01 [11:10 - 11:22]

Computational Search for Two-dimensional Iodine-Monofluoride Epitaxially Grown on WSe₂ / LEE Sungwoo¹, LEE Gun-Do^{*1} (¹Department of Materials Science and Engineering, Seoul National University)

G6.02 [11:22 - 11:34]

STM study of lattice dynamics in 1T' structure of bilayer VSe₂ / DUVJIR Ganbat¹, TSERMAA Baatarchuluun^{2,3}, CHOI Byoung Ki⁴, JANG Kyuha⁵, CHANG Young Jun⁴, KIM Jungdae^{*1} (¹Physics, University of Ulsan, ²Department of Geology and Geophysics, School of Arts and Sciences, National University of Mongolia, ³Institute of Photonics and Information

Technology, Jeonbuk National University, ⁴Department of Physics, University of Seoul, ⁵Radiation Center for Ultrafast Science, Korea Atomic Energy Research Institute)

G6.03 [11:34 - 11:46]

Crystal structure identification of type-II red phosphorus / YOON Jun-Yeong¹, LEE Yangjin¹, OH Dong Gun¹, CHOE Jeongheon¹, KIM JinKyun², CHOI Young Jai¹, KIM Chae Un², MA Yanhang³, KIM Kwanpyo^{*1} (¹Physics, Yonsei University, ²Physics, UNIST, ³School of Physical Science and Technology, ShanghaiTech University)

G6.04 [11:46 - 11:58]

First-principles study of metal-atom adsorption on black phosphorus / KIM Han-yu¹, CHOI Hyoung Joon^{*1} (¹Department of Physics, Yonsei University)

G6.05 [11:58 - 12:10]

Pseudospin Tunneling in Two-Dimensional Black Phosphorus Junctions / CHOI Young Woo¹, CHOI Hyoung Joon^{*1} (¹Department of Physics, Yonsei University)

G6.08 [12:10-12:22]

Studies of non-volatile single atom magnet using ESR-STM technique / SINGHA Aparajita^{1,2}, WILLKE Philip^{1,2}, ZHANG Xue^{1,2}, CHOI Taeyoung^{*1,2} (¹Department of Physics, Ewha Womans University, ²Center for Quantum Nanoscience, IBS)

[G7-co] [F] Synchrotron x-ray studies for advanced electronic materials and quantum mechanical properties III

2020. 11. 06 Friday 11:10~12:22

Room: 07

좌장 : 류혜진 한국과학기술연구원

Chair : RYU Hyejin (KAIST)

G7.01 [11:10 - 11:22]

X-ray holography based on a speckle-correlation scattering matrix / LEE KyeoReh^{*1,3}, LIM Jun², LEE Su Yong², PARK YongKeun^{*1,3} (¹Department of Physics, KAIST, ²Pohang Accelerator Laboratory, POSTECH, ³KAIST Institute for Health Science and Technology, KAIST)

G7.02 [11:22 - 11:34]

Comparative study of hard x-ray undulator beamline performance in 4GSR-Korea and PLS-II / CHO Byeong-Gwan^{*1}, KIM Yongsam¹, KOO Tae-Young¹ (¹Beamline Division, Pohang Accelerator Laboratory)

G7.03 [11:34 - 11:46]

X-ray-induced photo-current of non-stoichiometric Ga₂O_{3-x} Thin Films grown by powder sputtering method / CHOI Sukjune², OH Ho Jun², HA Sung Soo³, HAM Daseul⁴, CHA Su Yeon¹, LEE Su Yong⁴, NOH Do Young^{*2}, KANG Hyon Chol^{*1} (¹Department of Ma-

terials Science and Engineering, Chosun University, ²Department of Physics and Photon Science, GIST, ³School of Materials Science and Engineering, GIST, ⁴Pohang Accelerator Laboratory, POSTECH)

G7.04 [11:46 - 11:58]

In situ heating X-ray diffraction of VO_2 (020)_{M1} & (011)_{M1} on Al_2O_3 (006) analyzed with 3D reciprocal space map(RSM). / OH Ho Jun¹, NOH Do Young², KANG Hyon Chol¹, HA Sung Soo¹, YOON Young Min¹, CHOI Seok Jun¹, KWON Oh Young¹, KIM Jin Woo³ (¹Department of Physics and Photon Science (DPH), GIST, ²Department of Materials Science and Engineering, Chosun University, ³5D beamline, Pohang Accelerator Laboratory)

G7.05 [11:58 - 12:10]

V_2O_3 tetrahedron grown on sapphire (0001) substrates using thermal chemical vapor deposition method under hydrogen-reducing atmosphere / KANG Sae Hyun¹, NOH Do Young¹, KANG Hyon Chol² (¹Department of Physics and Photon Science, Gwangju Institute of Science and Technology, ²Department of Materials Science and Engineering, Chosun University)

G7.06 [12:10 - 12:22]

Feedforward compensation for hysteresis and dynamic behaviors of a high-speed atomic force microscope scanner / OTIENO Luke Oduor¹, LEE Yong Joong¹ (¹School of Mechanical Engineering, Kyungpook National University)

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[G8-co] Condensed Matter Computational Physics II

2020. 11. 06 Friday 11:10~12:34

Room: 08

좌장 : 한명준 한국과학기술원

Chair : HAN Myungjoon (KAIST)

G8.01 [11:10 - 11:22]

Hybrid density functional theory calculation for high-throughput studies / PARK Ji-Sang¹ (¹Physics, Kyungpook National University)

G8.02 [11:22 - 11:34]

Stabilization of metastable TiS_2 via alloying / LEE Jaekwang¹, NGUYEN Phuong Lien¹ (¹Pusan National University)

G8.03 [11:34 - 11:46]

High-harmonic spectroscopy in 3D topological insulators / BAYKUSHEVA Denitsa², CHACON Alexis^{1,3,6}, LU Jian², BAILEY Trevor P.⁴, SOBOTA Jonathan A.⁵, SOIFER Hadas⁵, KIRCHMANN Patrick S.⁵, ROTUNDU Costel R.⁵, UHER Ctirad⁴, HEINZ Tony F.², KIM Dong Eon^{1,6}, REIS David A.², GHIMIRE Shambhu² (¹Physics Department, POSTECH, ²Stanford PULSE Institute, SLAC national accelerator Laboratory, ³Center for Nonlinear Studies and Theoretic-

cal Division, Los Alamos National Laboratory, ⁴Department of Physics, University of Michigan, ⁵Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, ⁶Max Planck Center for Attosecond Science, Max Planck POSTECH/KOREA Res. Init.)

G8.04 [11:46 - 11:58]

Spin and charge correlations across the metal-to-insulator crossover in the half-filled 2D Hubbard model / KIM Aaram J.^{*1}, SIMKOVIC Fedor^{1,2}, KOZIK Evgeny¹ (¹Department of Physics, King's College London, ²Centre de Physique Theorique, Ecole Polytechnique)

G8.05 [11:58 - 12:10]

Atomistic study of the interfacial oxide layer effect on the stabilization of orthorhombic HfO₂ / BYUN Jinho¹, LEE Joonbong², JIN Yeongrok¹, CHOI Taekjib², LEE Jaekwang^{*1} (¹Pusan National University, ²Hybrid Materials Research Center and Department of Nanotechnology and Advanced Materials Engineering, Sejong University)

G8.06 [12:10 - 12:22]

Variational Quantum-Classical Simulations for Quantum Phase Transitions of Spin Chains / KIM Donggyu¹, LEE Hyunyong², MOON Eun-Gook^{*1} (¹physics, KAIST, ²applied physics, Korea University)

G8.07 [12:22 - 12:34]

Circular dichroism in high-order harmonic generation: Heralding topological phases and transitions in Chern insulators / CHACÓN Alexis^{1,2}, KIM Dasol¹, ZHU Wei², KELLY Shane Patrick^{2,3}, DAUPHIN Alexandre⁴, PISANTY Emilio⁴, MAXWELL Andrew S.^{4,5}, PICÓN Antonio^{4,6}, CIAPPINA Marcelo F.^{4,7}, KIM Dong Eon^{*1}, TICKNOR Christopher², SAXENA Avadh², LEWENSTEIN Maciej⁴ (¹Physics Department, POSTECH, ²Center for Nonlinear Studies and Theoretical Division, Los Alamos National Laboratory, ³Physics and Astronomy Department, University of California Riverside, ⁴ICFO, The Barcelona Institute of Science and Technology, ⁵Department of Physics & Astronomy, University College London, ⁶Departamento de Química, Universidad Autónoma de Madrid, ⁷Institute of Physics of the ASCR, ELI-Beamlines project)

[G9-ap] [F] The 100th anniversary of ferroelectricity : achievement and future I

2020. 11. 06 Friday 11:10~12:46

Room: 09

좌장 : 박성균 부산대학교

Chair: PARK Sungkyun (Pusan National University)

G9.01 [11:10 - 11:34]

Principles and Laws in Ferroelectricity / RAHMAN Mokhlesur¹, LEE Jaichan^{*1} (¹School of Advanced Materials Science and Engineering, Sungkyunkwan University)

G9.02 [11:34 - 11:58]

Nanogenerators for energy harvesting based on piezoelectric nanostructures / BU Sang-Don^{*1} (¹Department of Physics, Jeonbuk National University)

G9.03 [11:58 - 12:22]

Flexo-electronics: achievement and future / LEE Daesu^{*1} (¹Department of Physics, POSTECH)

G9.04 [12:22 - 12:46]

Can the negative capacitance of ferroelectrics be useful? / PARK Hyeon Woo¹, HWANG Cheol Seong^{*1} (¹Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University)

[G10-ap] 2D materials II

2020. 11. 06 Friday 11:10~12:46

Room: 10

좌장 : 양희준 성균관대학교

Chair : YANG Heejun (Sungkyunkwan University)

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G10.01 [11:10 - 11:22]

Epitaxial Growth of Single-Crystalline Metal Films on Black Phosphorus / LEE Yang-jin^{1,2}, KIM Han-gyu¹, YUN Tae Keun¹, KIM Jong Chan³, LEE Sol^{1,2}, YANG Sung Jin¹, JANG Myeongjin^{1,2}, KIM Donggyu¹, RYU Huije⁴, LEE Gwan-Hyoung^{4,5}, IM Seongil¹, JEONG Hu Young^{3,6}, CHOI Hyoung Joon¹, KIM Kwanpyo^{*1,2} (¹Physics, Yonsei University, ²Center for Nanomedicine, Institute for Basic Science, ³School of Materials Science and Engineering, UNIST, ⁴Materials Science and Engineering, Seoul National University, ⁵Research Institute of Advanced Materials (RIAM), Institute of Engineering Research, Institute of Applied Physics, Seoul National University, ⁶UNIST Central Research Facilities, UNIST)

G10.02 [11:22 - 11:34]

Nonvolatile tuning of the spin-orbit coupling in graphene by a ferroelectric dipole / JO Young Hun^{*1}, PARK Jungmin¹, CHOI Jeonghyeon³, OH Inseon³, LEE Ah-Yeon², AHN Chang-Won⁴, KOO Seulgi⁵, YOO Jung-Woo³ (¹Center for Scientific Instrumentation, KBSI, ²Center for Research Equipment, KBSI, ³School of Materials Science and Engineering, UNIST, ⁴Department of Physics, University of Ulsan, ⁵Department of Research, RNDWARE Co., Ltd)

G10.03 [11:34 - 11:46]

High thermoelectric performance of two-dimensional α -GeTe bilayer / HONG Ji Sang^{*1}, MARFOUA Brahim¹ (¹Physics, Pukyong National University)

G10.05 [11:46 - 11:58]

Out of plane growth of Bi₂O₂Se thin film for constructing functional van der Waals

heterostructures / HONG Chengyun^{2,1,3}, LIU Xiaolong³, KIM Ji-Hee^{*2,1} (¹Center for Integrated Nanostructure Physics of New Energy, Institute for Basic Science, ²Department of Energy Science, Sungkyunkwan University, ³School of New Energy, North China Electric Power University)

G10.06 [11:58 - 12:10]

Mass prediction of materials using artificial intelligence in noisy environment / SEO Miri¹, YANG Eun-Seo², LEE Sang-Wook^{*1} (¹Department of Physics, Ewha Womans University, ²Department of Computer Engineering, Ewha Womans University)

G10.07 [12:10 - 12:22]

Valley acoustoelectric effect in two dimensional Dirac materials exposed to Rayleigh surface acoustic waves. / SONOWAL Kabyashree^{*1,4}, KALAMEITSEV A.V.², KOVALEV Vadim^{2,3}, SAVENKO Ivan^{1,4} (¹Theoretical physics of complex systems, IBS, ²Physics, Rzhanov Institute of Semiconductor Physics, Russia, ³Physics, Novosibirsk State Technical University, Russia, ⁴Basic Science, UST)

G10.08 [12:22 - 12:34]

Improving shielding effectiveness by designing of multiple porous thin metal layers at X-band frequency wave. / KWON Jisung¹, KIM Myung Ki^{*1} (¹Korea University)

[G11] No session

[G12-st] Granular systems, Soft matters, and biophysics

2020. 11. 06 Friday 11:10~12:46

Room: 12

좌장 : 이남경 세종대학교

Chair : LEE Nam Kyung (Sejong University)

G12.01 [11:10 - 11:22]

Layering Transition and Novel Topological Defects of Chiral Nematic Liquid Crystals Confined in a Cylinder / EUN Jonghee¹, KIM Sung-Jo¹, JEONG Joonwoo^{*1} (¹Physics, UNIST)

G12.02 [11:22 - 11:34]

Solvent Isotopic Effect on the Phase Transition of Lyotropic Chromonic Liquid Crystals: Possible Roles of Electrostatic Interactions / CHEON Jiyong¹, JEONG Joonwoo^{*1} (¹Physics, UNIST)

G12.03 [11:34 - 11:46]

Pair Potential between Topological Defects of Spontaneously Twisted Liquid Crystals in a Cylindrical Cavity / ALMUKAMBETOVA Madina¹, JAVADI Arman¹, EUN Jong-hee¹, JEONG Joonwoo^{*1} (¹Physics, UNIST)

G12.04 [11:46 - 11:58]

Diabetes prediction with KoGES data using Machine Learning / KIM Young Jin¹, SONG Harksoo¹, KANG Hyuk^{*1}, KIM Sang Soo^{2,3}, KIM Jeong Mi^{2,3}, JANG Min Hee^{2,3}, YI Wook^{2,3}, RYANG Soree^{2,3}, KIM Minsoo^{2,3}, KIM In Joo^{2,3}, KIM Jinmi⁴ (¹NIMS, ²Division of Endocrinology and Metabolism, Department of Internal Medicine, Pusan National University Hospital, ³Biomedical Research Institute, Pusan National University Hospital, ⁴Department of Biostatistics, Clinical Trial Center, Biomedical Research Institute, Pusan National University Hospital)

G12.05 [11:58 - 12:10]

Effect of various recoding of granule cells on Pavlovian eyeblink conditioning in a cerebellar network / KIM Sang-Yoon¹, LIM Woochang^{*1} (¹Daegu National University Of Education)

G12.06 [12:10 - 12:22]

Human blood glucose modulation via insulin secretion adjustment / KANG Hyuk^{*1}, YOO Minha¹, KIM Jong-Ho¹, KIM Sang Soo^{2,3}, KIM Jeong Mi^{2,3}, JANG Min Hee^{2,3}, YI Wook^{2,3}, RYANG Soree^{2,3}, KIM Minsoo², KIM In Joo^{2,3}, KIM Jinmi⁴ (¹NIMS, ²Division of Endocrinology and Metabolism, Department of Internal Medicine, Pusan National University Hospital, ³Biomedical Research Institute, Pusan National University Hospital, ⁴Department of Biostatistics, Clinical Trial Center, Biomedical Research Institute, Pusan National University Hospital)

G12.07 [12:22 - 12:34]

Two kinds of stochastic resonance in an ecological community / PARK Jong Il^{*1}, KIM Beom Jun¹, PARK Hye Jin² (¹Department of Physics, Sungkyunkwan University, ²Statistical physics of ecology and evolution group, APCTP)

G12.08 [12:34 - 12:46]

Competition between cells in a hierarchical tissue can suppress the accumulation of mutations / PARK Hye Jin^{*1}, ZHOU Da², TRAULSEN Arne³ (¹APCTP, ²School of Mathematical Sciences, Xiamen University, ³Department of Evolutionary Theory, Max Planck Institute for Evolutionary Biology)

[G13-te] [F] Changes in physics education due to IT technology

2020. 11. 06 Friday 11:10~12:10

Room: 13

좌장 : 정용욱 경상대학교

Chair: CHEONG Yong Wook (Gyeongsang National University)

G13.01 [11:10 - 11:22]

IT 융합과 STEM 기반 물리교육의 확대 / OH Won Kun^{*1} (¹Dept. Physics Education, Chungbuk National University)

G13.02 [11:22 - 11:46]

마이크로비트를 이용한 무센서네트워크 구축 및 과학탐구활동에의 활용방안 탐색 / CHEONG Yong Wook^{*1} (¹physics education, Gyeongsang National University)

G13.03 [11:46 - 12:10]

가상/증강 현실을 활용한 교육의 현황과 성과 / JHO Hunkoo^{*1} (¹Graduate school of education, Dankook University)

[G14-pl] [F] Symposium for the Basic Fusion R&D Program II

2020. 11. 06 Friday 11:10~12:22

Room: 14

좌장 : 최원호 한국과학기술원

Chair: CHOE Wonho (KAIST)

G14.01 [11:10 - 11:46]

MHD-stabilized reactor-relevant fusion plasmas (with full integration of edge, divertor and core) / IN Yongkyoon^{*1}, YUN Gunsu^{S2}, YOON Eisung³, KIM Kang-wook⁴ (¹Physics Department, UNIST, ²Physics Department, POSTECH, ³Nuclear Engineering Department, UNIST, ⁴Electronics Engineering Department, Kyungpook National University)

G14.02 [11:46 - 12:22]

핵융합 재료-플라즈마 반응 연구센터 소개 (Center for Interaction of Materials with Plasmas: cimp) / CHUNG Kyu-Sun¹, LEE MyungJae², JUNG YoungDae², KIM Jaeyong², CHUNG Bohyun³, PARK Insun^{*1}, KIM Gon-Ho⁴, SHIM HyungJin⁴, NAM JunSeok⁵, RHO Ki-Baek⁴ (¹Department of electrical engineering, Hanyang University, ²Department of Physics, Hanyang University, ³Physico Technology Laboratory, Korea Accelerator and Plasma Research Association, ⁴Department of Nuclear Engineering, Seoul National University, ⁵Department of Quantum System Engineering, Jeonbuk National University)

[G15-op] [F] Special approaches in integrated photonics II

2020. 11. 06 Friday 11:10~12:22

Room: 15

좌장 : 한상윤 대구경북과학기술원

Chair : HAN Sangyoon (DGIST)

G15.01 [11:10 - 11:34]

Mechano-optic devices for large-scale photonic integration / HAN Sangyoon^{*1} (¹Robotics Engineering, DGIST)

G15.02 [11:34 - 11:58]

Monolithic integration of efficient InAs quantum dot laser onto Si by direct epitaxy / JUNG Daehwan^{*1} (¹Korea Institute of Science and Technology (KIST))

G15.03 [11:58 - 12:22]

Extreme nanophotonics based on surface polaritons in 2D materials / LEE In-Ho^{*1} (¹Korea Institute of Science and Technology (KIST))

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[G16-at] Atomic, Molecular and Optical Physics II

2020. 11. 06 Friday 11:10~12:34

Room: 16

좌장 : 안재욱 한국과학기술원

Chair : AHN Jaewook (KAIST)

G16.01 [11:10 - 11:22]

광통신 대역에 맞는 광자 생성을 위한 사광파 혼합 / MOON Han Seb^{*1}, JEONG Han Sol¹, PARK Jiho¹ (¹Pusan National University)

G16.02 [11:22 - 11:34]

마이크로 세슘 증기 셀에서 사광파조합 / MOON Han Seb^{*1}, PARK JiHo¹, HWANG Jong Min¹, KIM HeeWoo¹ (¹Pusan National University)

G16.03 [11:34 - 11:46]

Simulation and fabrication of a linear Paul trap with segmented blades(분할된 날을 이용한 선형 폴 이온트랩의 개발) / HONG JungSoo¹, KIM Myunghun¹, SEO Taehyun¹, LEE Down¹, LEE Moonjoo^{*1} (¹Electric Engineering, POSTECH)

G16.04 [11:46 - 11:58]

Genuinely tripartite Bell inequality using a quasi-distance / LEE Daemin¹, RYU Jung-hee^{2,3}, KURZYŃSKI Paweł^{3,4}, KASZLIKOWSKI Dagomir^{3,5}, LEE Jinhyoung^{*1} (¹Physics, Hanyang University, ²National Institute of Supercomputing Division, Korea Institute of Science and Technology Information, ³Centre for Quantum Technologies, National University of Sin-

gapore, ⁴Faculty of Physics, Adam Mickiewicz University, ⁵Department of Physics, National University of Singapore)

G16.05 [11:58 - 12:10]

Rydberg-atom quantum simulator measures quantum-Ising eigenspectra of non-isomorphic graphs of up to six qubits / KIM Minhyuk¹, SONG Yunheung¹, KIM Jaewan², AHN Jaewook¹ (¹Physics, KAIST, ²Physics, Myongji University)

G16.06 [12:10 - 12:22]

Development of asymmetric optical cavity in strong atom-cavity coupling regime 원자-공진기 강결합 영역에서 비대칭 공진기의 개발 / LEE Dowon^{*1}, KIM Myunghun¹, HONG JungSoo¹, SEO Taehyun¹, LEE Moonjoo¹ (¹Electrical Engineering, POSTECH)

G16.07 [12:22 - 12:34]

원자 앙상블을 이용한 4-광자 Greenberger-Horne-Zeilinger(GHZ) 상태 구현과 특성 분석 / MOON Han Seb^{*1}, PARK Jiho¹ (¹Pusan National University)

[G17-se] [F] Nano-optical characterizations of semiconducting materials II
2020. 11. 06 Friday 11:10~12:22
Room: 17
좌장 : 박경덕 울산과학기술원
Chair : PARK Kyoung-Duck (UNIST)

G17.01 [11:10 - 11:34]

Nanoscale Hyperspectral Mapping by using Photo-induced Force Microscopy / JAHNG Junghoon^{*1} (¹Hyperspectral Nano-imaging Lab, Korea Research Institute of Standards and Science (KRISS))

G17.02 [11:34 - 11:58]

THz near-field spectroscopy of single coaxial aperture / KIM Teun-Teun^{*1} (¹Physics, University of Ulsan)

G17.03 [11:58 - 12:22]

Investigation of Chemical Origin of White-Light Emission in Two-Dimensional (C₄H₉NH₃)₂PbBr₄ via Infrared Nanoscopy / PARK Dae Young¹, AN Sung-Jin¹, JEONG Mun Seok^{*1} (¹Department of Energy Science, Sungkyunkwan University)

[G18-se] Semiconductor growth, transport & optical properties

2020. 11. 06 Friday 11:10~12:34

Room: 18

좌장 : 김광석 부산대학교

Chair : KYHM kwangseuk (Pusan National University)

G18.01 [11:10 - 11:22]

이중 페로브스카이트 Mn^{4+} 첨가된 Ba_2YTaO_6 형광체의 합성 및 특성 / HARISHKUMARRED-DY Patnam², YU Jae Su^{1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

G18.02 [11:22 - 11:34]

Drain Induced Fermi Energy Shift in ReS_2 Multilayers / JOO Min-Kyu¹, KIM Soo Yeon¹ (¹Department of Applied Physics, Sookmyung Women's University)

G18.03 [11:34 - 11:46]

Coherent polarizaion of micro-photoluminescence in an anisotropic single quantum ring / KIM Minju², KYHM Kwangseuk^{1,2} (¹Pusan National University, ²cogno-mechatronics engineering, Pusan National University)

G18.04 [11:46 - 11:58]

InAs/AlSb 초격자 구조의 광학적 특성 연구 / KIM Jong Su¹, KIM Sung yeop¹, JO Hyun-Jun¹, LEE SeungHyun², KRISHNA Sanjay², LEE Sang Jun³ (¹Yeungnam University, ²Department of Physics, The Ohio State University, ³Micro & Smart Devices Team, KRISS)

G18.05 [11:58 - 12:10]

The optical properties of PIN-AlGaAsSb Random alloy and Digital alloy on InP by Photoluminescence and Photoreflectance Spectroscopy / KIM Jong Su¹, HA Jae Du¹, JO Hyun-Jun¹, LEE Seung Hyun², KRISHNA Sanjay², LEE Sang Jun³ (¹Yeungnam University, ²Department of Electrical and Computer Engineering, The Ohio State University, ³Micro & Smart Device Team, KRISS)

G18.06 [12:10 - 12:22]

Evaluation of the electric field of $In_{0.25}Ga_{0.75}As_{0.3}Sb_{0.7}$ nBn detector by using the photoreflectance spectroscopy. / KIM Jong Su¹, SAEID NAHAEI Sanam¹, JO Hyun Jun¹, KWAK Minsoo¹, MORE Vivek mohan², LEE Sang Jun² (¹Yeungnam University, ²Physics department, Korea Research Institute of Standards and Science,Daejeon)

G18.07 [12:22 - 12:34]

Improving the optical properties of droplet-epitaxy-grown GaAs/AlGaAs quantum dots by thermal annealing / KIM Jong Su², SEO Youryang^{2,3}, JO Hyeonjun⁴, KIM Yeong-ho³ (¹Yeungnam University, ²Department of Physics, Yeungnam University, ³Micro & Smart Device, KRISS, ⁴Department of Physics, Yeungnam University)

[G19-bp] [F] Frontiers in Computational Biophysics

2020. 11. 06 Friday 11:10~12:46

Room: 19

좌장 : 전재형 포항공과대학교

Chair: JEON Jae-Hyung (POSTECH)

G19.01 [11:10 - 11:34]

The packaging process of a DNA into a viral capsid determines how the DNA exits the capsid / SUNG Bong June^{*1} (¹Department of Chemistry, Sogang University)

G19.02 [11:34 - 11:58]

Super-accuracy molecular dynamics simulations of proteins / YOO Jejoong^{*1} (¹Sungkyunkwan University)

G19.03 [11:58 - 12:22]

New trends in computational biophysics / WU Sangwook^{*1,2} (¹Department of Physics, Pukyong National University, ²R & D center, PharmCADD)

G19.04 [12:22 - 12:46]

θ -chain in confined space and its implication to biopolymers / HYEON Chang Bong^{*1} (¹KIAS)

Session H

2020 November 6(Fri) 15:00~16:48

[H1-pa] Non-accelerator III

2020. 11. 06 Friday 15:00~16:36

Room: 01

좌장 : 서선희 기초과학연구원

Chair : SEO Seon Hee (IBS)

H1.01 [15:00 - 15:12]

Development of low threshold detector to search for light dark matter / KIM Yong-Hamb^{1,2}, KWON Dohyung^{1,2}, KIM Hyeelim¹, KIM Sora¹, LEE Hyejin¹, JEON Jin-A¹, KIM Sang Goon¹, WOO GyungRae^{1,2}, KIM Hanbeom¹, LEE YongChang¹ (¹Center for Underground Physics, IBS, ²Basic Science, UST)

H1.02 [15:12 - 15:24]

Background modeling and Threshold study for Neutrino Elastic-scattering Observation with NaI(Tl)(NEON) experiment / PARK ByungJu^{1,2} (¹Center for Underground Physics, IBS, ²IBS school, UST)

H1.03 [15:24 - 15:36]

NaI(Tl) temperature-dependent responses measurement at -35°C / LEE Seo Hyun¹ (¹Basic Science, UST)

H1.04 [15:36 - 15:48]

Improved intensities for the gamma transitions with $E_{\gamma} > 3$ MeV from 208Tl decay / KIM Yeongduk^{1,6,8}, KIM Gowoon¹, LEONARD Douglas¹, HAHN Insik^{2,3}, KANG Woongu¹, KAZALOV Vladimir⁷, LEE Eunkyung¹, PARK Suyeon^{1,4} (¹IBS Center for Underground Physics, IBS, ²IBS Center for Exotic Nuclear Studies, Institute for Basic Science (IBS), ³Science Education, Ewha Womans University, ⁴Physics, Ewha Wmams University, ⁵IBS School, University of Science and Technology (UST), ⁶Physics and Astronomy, Sejong University, ⁷Baksan Neutrino Observatory, Institute for Nuclear Research of the Russian Academy of Science, ⁸IBS School, University of Science and Technology (UST))

H1.05 [15:48 - 16:00]

Measurement of cosmogenic Li/He production rate at RENO / KIM Soo-Bong⁵, KIM Wooyoung², PAC Myoung Youl³, CHOI Juneho³, JANG Hani⁴, KWON Eunhyang⁵, KIM Sang Yong¹, SEO Hyunkwan¹, LEE Hyungi¹, KIM Jonggun⁵, SEO Jiwoong⁵, YU Intae⁵, JEON Sanghoon⁵, JUNG Daeun⁵ (¹Seoul National University, ²Department of Physics, Kyungpook National University, ³Department of Radiology, Dongshin University, ⁴Department of Fire

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H1.06 [16:00 - 16:12]

Updated RENO results on reactor antineutrino oscillation amplitude and frequency / KIM Soo-Bong², KIM Wooyoung³, PAC Myoung Youl⁵, CHOI Juneho⁵, JANG Hanil⁴, KWON Eunhyang², KIM Sang yong¹, SEO Hyunkwan¹, LEE Hyungi¹, KIM Jonggun², SEO Jiwoong², YU Intae², JEON Sanghoon², JUNG Daeun², KIM Jaeyool⁸, MOON Dongho⁸, SHIN Changdong⁸, JOO Kyungkwang⁸, JOHAAIB Atif⁹, LIM Intaek⁸, JANG Jeeseung⁶, YOO Jonghee⁷, YOON Seok-Gyeong⁷ (¹Seoul National University, ²Department of Physics, Sungkyunkwan University, ³Department of Physics, Kyungpook National University, ⁴Department of Fire Safety, Seoyeong University, ⁵Department of Radiology, Dongshin University, ⁶Department of Physics, GIST, ⁷Department of Physics, KAIST, ⁸Department of Physics, Chonnam National University)

H1.07 [16:12 - 16:24]

Measurement of reactor neutrino flux and spectrum at RENO / YOON Seok-Gyeong¹, YOO Jonghee¹, YANG Byeongsu¹, JANG Jeeseung², LIM Intaek⁴, KIM Baro³, JOO Kyungkwang³, KIM Jaeyool³, MOON Dongho³, JOHAAIB Atif³, SHIN Changdong³, KIM Soo-Bong⁵, YU Intae⁵, KWON Eunhyang⁵, JUNG Daeun⁵, SEO Jiwoong⁵, JEON Sanghoon⁵, KIM Jonggun⁵, KIM Sangyong⁶, SEO Hyunkwan⁶, LEE Hyungi⁶, JANG Hanil⁷, PARK Myoung-Youl⁸, CHOI Juneho⁸, KIM Wooyoung⁹ (¹Physics, KAIST, ²GIST College, GIST, ³Department of Physics, Chonnam National University, ⁴Department of Physics Education, Chonnam National University, ⁵Department of Physics, Sungkyunkwan University, ⁶Department of Physics and Astronomy, Seoul National University, ⁷Department of Fire Safety, Seoyeong University, ⁸Department of Radiology, Dongshin University, ⁹Department of Physics, Kyungpook National University)

H1.08 [16:24 - 16:36]

Study of accidental background using machine learning at RENO / KWON Eun Hyang¹, KIM Wooyoung², PAC Myoungyu³, CHOI Junho³, JANG Hanil⁴, KIM Sangyong⁵, SEO Hyunkwan⁵, LEE Hyungi⁵, KIM Soobong¹, KIM Jonggeon¹, SEO Jiwoong¹, YU Intae¹, JEON Sanghoon¹, JUNG Daeun¹, KIM Baro⁶, KIM Jaeyool⁶, MOON Dongho⁶, SHIN Changdong⁶, LIM Intaek⁶, JOO Kyungkwang⁶, ZOHAI B Atif⁶, JANG Jeeseung⁷, YOO Jonghee⁸, YANG Byeongsu⁸, YOUN Seokkyoung⁸ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics, Kyungpook National University, ³Department of Physics, Dongshin University, ⁴Department of Physics, Seoyeong University, ⁵Department of Physics, Seoul National University, ⁶Department of Physics, Chonnam National University, ⁷Department of Physics, GIST, ⁸Department of Physics, KAIST)

[H2-pa] Accelerator V

2020. 11. 06 Friday 15:00~17:12

Room: 02

좌장 : 하창현 중앙대학교

Chair : HA Chang Hyon (Chung-ang University)

H2.01 [15:00 - 15:12]

Current status of JSNS² experiment / PARK Jungsic^{*1}, KIM E. J.², KIM J. Y.³, LIM I. T.³, JOO K. K.³, MOON D. H.³, SHIN C. D.³, ZOHAI B. A.³, JANG M. C.³, CHOI J. W.³, CHOI J. H.⁴, PAC M. Y.⁴, JANG H. I.⁵, YEO I. S.⁵, JANG J. S.⁶, KIM W.⁷, KIM S. B.⁸, YU I. T.⁸, ROTT C.⁸, JEON H.⁸, JEON S.⁸, JUNG D. E.⁸, ROEILINGHOFF G.⁸, GOH J. H.⁹, YU C.⁹, LEE S.⁹, KANG S. K.¹⁰, CHEOUN M. K.¹¹ (¹Institute of Particle and Nuclear Studies, High Energy Accelerator Research Organization, KEK, ²Division of Science Education, Physics major, Jeonbuk National University, ³Department of Physics, Chonnam National University, ⁴Department of Radiology, Dongshin University, ⁵Department of Fire Safety, Seoyeong University, ⁶Division of liberal art and science, GIST, ⁷Department of Physics, Kyungpook National University, ⁸Department of Physics, Sungkyunkwan University, ⁹Department of Physics, Kyung Hee University, ¹⁰School of Liberal Arts, Seoul National University of Science and Technology, ¹¹Department of Physics, Soongsil University)

H2.02 [15:12 - 15:24]

Background study status of JSNS² experiment / LEE Dong Ha^{*1}, KIM E. J.², KIM J. Y.³, LIM I. T.³, JOO K. K.³, MOON D. H.³, SHIN C. D.³, ZOHAI B. A.³, JANG M. C.³, CHOI J. W.³, CHOI J. H.⁴, PAC M. Y.⁴, JANG H. I.⁵, YEO I. S.⁵, JANG J. S.⁶, KIM W.⁷, KIM S. B.⁸, YU I. T.⁸, ROTT C.⁸, JEON H.⁸, JEON S.⁸, JUNG D. E.⁸, ROEILINGHOFF G.⁸, GOH J. H.⁹, YU C.⁹, LEE S.⁹, KANG S. K.¹⁰, CHEOUN M. K.¹¹ (¹Institute of Particle and Nuclear Studies, KEK, ²Division of Science Education, Jeonbuk National University, ³Department of Physics, Chonnam National University, ⁴Department of Radiology, Dongshin University, ⁵Department of Fire Safety, Seoyeong University, ⁶Division of liberal art and science, GIST, ⁷Department of Physics, Kyungpook National University, ⁸Department of Physics, Sungkyunkwan University, ⁹Department of Physics, Kyung Hee University, ¹⁰School of Liberal Arts, Seoul National University of Science and Technology, ¹¹Department of Physics, Soongsil University)

H2.03 [15:24 - 15:36]

The slow control and monitor system of JSNS² Experiment / CHOI June Ho^{*1}, PAC M. Y.¹, KIM E. J.², KIM J. Y.³, LIM I. T.³, JOO K. K.³, MOON D. H.³, SHIN C. D.³, ATIF Zohaib³, JANG M. C.³, CHOI J. W.³, JANG H. I.⁴, YEO I. S.⁴, JANG J. S.⁵, KIM W.⁶, KIM S. B.⁷, YU I. T.⁷, ROTT C.⁷, JEON H.⁷, JEON S.⁷, JUNG D. E.⁷, ROEILINGHOFF G.⁷, GOH J. H.⁸, YU C.⁸, LEE S.⁸, KANG S. K.⁹, CHEOUN M. K.¹⁰ (¹Dongshin University, ²Division of Science Education, Jeonbuk National University, ³Department of Physics, Chonnam National University, ⁴Department of Fire Safety, Seoyeong University, ⁵Division of liberal art and science, GIST, ⁶Department of Physics, Kyungpook National University, ⁷Department of Physics, Sungkyunkwan University, ⁸Department of Physics, Kyung Hee University, ⁹School of Liberal Arts, Seoul National University of Science and Technology, ¹⁰Department of Physics, Soongsil University)

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H2.04 [15:36 - 15:48]

PSD study of Gd-loaded liquid scintillator with DIN / SHIN Chang Dong^{*1}, KIM J. Y.¹, LIM I. T.¹, JOO K. K.¹, MOON D. H.¹, ATIF Zohaib¹, JANG M. C.¹, CHOI J. W.¹, KIM E. J.², CHOI J. H.³, PAC M. Y.³, JANG H. I.⁴, YEO I. S.⁴, JANG J. S.⁵, KIM W.⁶, KIM S. B.⁷, YU I. T.⁷, ROTT C.⁷, JEON H.⁷, JEON S.⁷, JUNG D. E.⁷, ROEILINGHOFF G.⁷, GOH J. H.⁸, YU C.⁸, LEE S.⁸, KANG S. K.⁹, CHEOUN M. K.¹⁰ (¹Chonnam National University, ²Division of Science Education, Jeonbuk National University, ³Department of Radiology, Dongshin University, ⁴Department of Fire Safety, Seoyeong University, ⁵Division of liberal art and science, GIST, ⁶Department of Physics, Kyungpook National University, ⁷Department of Physics, Sungkyunkwan University, ⁸Department of Physics, Kyung Hee University, ⁹School of Liberal Arts, Seoul National University, ¹⁰Department of Physics, Soongsil University)

H2.05 [15:48 - 16:00]

Progress and plans of DUNE / CHEON Yoolim⁵, CHO Kihyeon³, CHUNG Moses⁵, GWON Sunwoo¹, HA Changhyon¹, KWAK Donghyun⁵, LEE Soo Yeon², SHIN Seodong², SIYEON Kim^{*1}, YOON Young-Soo⁴, MOON Seok Ho⁵ (¹Physics, Chung-Ang University, ²Physics, Jeonbuk National University, ³High-Energy Physics, KISTI, ⁴Center for Ionizing Radiation, KRISS, ⁵Physics, UNIST)

H2.06 [16:00 - 16:12]

The DUNE Near Detector / HA Chang Hyon^{*1} (¹Department of Physics, Chung-Ang University)

H2.07 [16:12 - 16:24]

Neutron detection of 3DST in the DUNE near detector / GWON Sunwoo^{*1} (¹Physics, Chung-Ang University)

H2.08 [16:24 - 16:36]

Search for sub-millicharged particles at J-PARC / YOO Jae Hyeok^{*1}, KIM Jeong Hwa¹ (¹Physics, Korea University)

H2.09 [16:36 - 16:48]

Data analysis on axion EDM experiment at COSY / SEMERTZIDIS Yannis Kyriakos^{*1,2}, CHANG Seungpyo¹ (¹Physics, KAIST, ²CAPP, IBS)

H2.10 [16:48 - 17:00]

The status of the GBAR experiment / KIM Bongho^{*1}, CHOI Jaejin¹, CHUNG Moses³, KIM Eunsan², KIM Sunkee¹, KO Youngju⁴, LEE Byungchan¹, LEE Hobin¹, LEE Jaison⁴, IM Eunhoon², PARK Kwanhyung¹, WON Donghwan¹, YOO Kyounghoon³ (¹department of physics and astronomy, Seoul National University, ²department of accelerator science, Korea University, ³department of physics, UNIST, ⁴center for underground physics, IBS)

H2.11 [17:00 - 17:12]

Dark Photon Search at Yemilab, Korea / SEO Seon Hee^{*1}, KIM Yeongduk¹ (¹Center for Underground Physics, Institute for Basic Science)

[H3-H8] No session

[H9-ap] [F] The 100th anniversary of ferroelectricity : achievement and future

2020. 11. 06 Friday 15:00~16:36

Room: 09

좌장 : 양찬호 한국과학기술원

Chair : YANG Chan-Ho (KAIST)

H9.01 [15:00 - 15:24]

Microscopic structure and roles of defects and impurities in perovskite ferroelectric oxides / PARK Chul Hong¹, KIM Dokyun² (¹Department of Physics Education, Pusan National University, ²Department of Physics, Pusan National University)

H9.02 [15:24 - 15:48]

Atomistic visualization of ferroelectricity via Scanning Transmission Electron Microscopy / CHOI Si-Young¹ (¹Department of Materials Science & Engineering, POSTECH)

H9.03 [15:48 - 16:12]

Unit-cell-scale ferroelectricity : Flat band breaks the 100-years myth of necessitating domains / LEE Jun Hee¹ (¹School of Energy and Chemical Engineering, UNIST)

H9.04 [16:12 - 16:36]

Beginning of ferroelectric thin film researches in Korea and the following developments / NOH Tae Won^{1,2} (¹Center for Correlated Electron Systems, Institute for Basic Science, ²Department of Physics and Astronomy, Seoul National University)

[H10-H11] No session

[H12-st] Econophysics

2020. 11. 06 Friday 15:00~15:36

Room: 12

좌장 : 육순형 경희대학교

Chair : YOOK Soon-Hyung (Kyung Hee University)

H12.01 [15:00 - 15:12]

하드포크 그 이후: 비트코인과 비트코인 파생 코인들 간의 정보 흐름 실증 분석 / AHN Kwang-won², CHO Yerim³, YI Eojin¹, SOHN Sungbin⁴ (¹Moon Soul Graduate School of Future Strategy, KAIST, ²Future Strategy, Yonsei University, ³Department of Industrial Engineering, Yonsei University, ⁴HSBC Business School, Peking University)

H12.02 [15:12 - 15:24]

보이는 것이 다가 아니다: 비트코인과 비트코인 캐시 시장 사례 분석 연구 / KIM Hyeonoh¹, JEON Jooyoung¹, AHN Kwangwon² (¹Graduate School of Future Strategy, KAIST, ²Future Strategy, Yonsei University)

H12.03 [15:24 - 15:36]

신종 코로나바이러스(COVID-19) 국면의 유가 폭락 예측 : 시장 속성을 중심으로 / AHN Kwangwon¹, YI Eojin², KIM DUYOUNG³ (¹Future Strategy, Yonsei University, ²Moon Soul Graduate School of Future Strategy, KAIST, ³Department of Investment Information Engineering, Yonsei University)

[H13-te] Physics Education in Diverse Setting

2020. 11. 06 Friday 15:00~15:48

Room: 13

좌장 : 정용욱 경상대학교

Chair : CHEONG Yong Wook (Gyeongsang National University)

H13.01 [15:00 - 15:12]

과학 교사의 제안에서 시작된 과정중심평가 기반 수업 및 평가 실행 분석 / Ji Young rae¹, KIM Donggeon² (¹Department of Physics education, Suncheon National University, ²Department of Educational Technology, Changdeok Girls' Middle School)

H13.02 [15:12 - 15:24]

Bra-Ket Representation of Inertia Tensor / KIM U-Rae², KIM Dohyeon², LEE Jungil² (¹Korea University, ²Department of Physics, Korea University)

H13.03 [15:24 - 15:36]

Relativistic Analogue Hidden in a Projectile Motion / LIM Jae Hoon², JUNG Dong-Won², KIM U-Rae², CHO Sungwoong², LEE Jungil² (¹Korea University, ²Department of Physics, Korea University)

H13.04 [15:36 - 15:48]

Understanding the Theory of Special Relativity Based on Einstein's Exploration Process for Science Education / OH Jun Young¹, SON Yeon-A² (¹Hanyang University, ²Institute for Integrated Science Education, Dankook University)

[H14] No session

[H15-op] Optics II

2020. 11. 06 Friday 15:00~16:36

Room: 15

좌장 : 한상윤 대구경북과학기술원

Chair : HAN Sangyoon (DGIST)

H15.01 [15:00 - 15:12]

Atomically flat single-crystalline copper films for plasmonics / CHEW Soo Hoon^{1,2,3}, GLISERIN Alexander^{1,2,3}, CHOI Sungho^{2,3}, KIM Sujae⁴, KIM Dong Eon^{2,3}, JEONG Se Young^{*1,4}, KIM Seungchul^{1,5} (¹Dept. of Optics and Mechatronics engineering, Pusan National University, ²Department of Physics, Center for Attosecond Science and Technology, POS-TECH, ³Max Planck Center for Attosecond Science, Max Planck POSTECH/Korea Research Initiative, ⁴Crystal Bank Research Institute, Pusan National University, ⁵Department of Cogno-Mechatronics Engineering, College of Nanoscience and Nanotechnology, Pusan National University)

H15.02 [15:12 - 15:24]

Emerging unnatural optical magnetism from DNA-guided metamolecules / HUH Ji-Hyeok¹, WANG Pengfei², LEE Jaewon¹, KIM Kwangjin¹, KE Yonggang³, LEE Seungwoo^{*1,4} (¹Graduate School of Converging Sci & Tech & Dept. of Integrative Energy Engineering, Korea University, ²Institute of Molecular Medicine (IMM), Renji Hospital, Shanghai Jiao Tong University School of Medicine, ³Wallace H. Coulter Department of Biomedical Engineering, Georgia Institute of Technology and Emory University, ⁴Department of Integrative Energy Engineering, Department of Biomicrosystem Technology, and KU Photonics Center, Korea University)

H15.03 [15:24 - 15:36]

Transformable gratings for seamless and large-scale integration of multiple diffractive optical elements / LIM Yongjun¹, LEE Seungwoo^{*2,1} (¹Department of Biomicrosystem Technology, Korea University, ²Graduate School of Converging Sci & Tech & Dept. of Integrative Energy Engineering, Korea University)

H15.04 [15:36 - 15:48]

루비듐 원자에서 생성된 안정된 편광 얽힘 양자광원 / BAE Jinhyuk¹, PARK Jiho¹, MOON Han Seb^{*1} (¹Pusan National University)

H15.05 [15:48 - 16:00]

Sum frequency generation using fiber mode-locked pulse laser and CW laser diode / KIM Hyunhak¹, PARK Nam Hun^{2,3}, YEOM Dong-Il², CHA Myoungsik¹, MOON Han Seb^{*1} (¹Pusan National University, ²Department of Physics, Ajou University, ³Quantum Technology Institute, KRISS)

H15.06 [16:00 - 16:12]

Simultaneous multi-particle tracking by dynamic holographic 3D imaging / BYUN Andrew¹, SUN Haeun¹, AHN Jaewook^{*1} (¹Physics, KAIST)

H15.07 [16:12 - 16:24]

딥러닝 기법을 이용한 레이저 공간 모드의 고분해능 인식 High-resolution recognition of laser spatial modes using deep-learning technique / KO Do-Kyeong¹, NA Youngbin¹ (¹Dept. of Physics and Photon Science, GIST)

H15.08 [16:24 - 16:36]

THz 메타구조를 이용한 페로브스카이트 포논-플래리톤 관측 / KIM Hwan Sik¹, HA Na Young¹, PARK Ji-Yong¹, LEE Soonil¹, KIM DaiSik², AHN Yeong Hwan^{*1} (¹Ajou University, ²Department of Physics, UNIST)

[H16-H18] No session

[H19-bp] [F] Dynamic Processes in the Cells

2020. 11. 06 Friday 15:00~16:12

Room: 19

좌장 : 김하진 울산과학기술원

Chair : KIM Hajin (UNIST)

H19.01 [15:00 - 15:24]

Higher-order chromatin structure in gene regulation / JUNG Inkyung^{*1} (¹Department of Biological Sciences, KAIST)

H19.02 [15:24 - 15:48]

The Stickers and Spacers Framework: Understanding Biomolecular Phase Separation Behaviors / CHOI Jeong-Mo^{*1} (¹Department of Chemistry, Pusan National University)

H19.03 [15:48 - 16:12]

Nuclear Mechanobiology: Biological interpretation of subcellular nuclear mechanics / KIM Dong-Hwee^{*1} (¹KU-KIST Grad Sch Converging Sci & Tech, Korea University)

[H20-or] [E] [APCTP-KPS-JPS Meeting] Distinguished Lectures

2020. 11. 06 Friday 15:00~18:00

Room: 20

Chair 1: ISHIBASHI Nobuyuki (Tokyo Institute of Technology)

Chair 2: KIM Changyoung (Seoul National University)

Chair 3: SIN Sang-Jin (Hanyang University)

Chair 4: TAJIMA Setsuko (JPS)

[15:00 - 15:15]

Opening Remark / BANG Yunkyung (APCTP), NAGAE Tomofumi (JPS), SUGAWARA Hiro-taka (OIST)

H20.01 [15:15 - 15:55]

Chair 1: ISHIBASHI Nobuyuki (Tokyo Institute of Technology)

Quantum chaos and black holes / HASHIMOTO Koji*1 (*Osaka Univ.)

H20.02 [15:55 - 16:35]

Chair 2: KIM Changyoung (Seoul National University)

Towards room-temperature T_c in van der Waals layered magnetic semiconductors /

LEE Young Hee*1 (*Sungkyunkwan Univ., IBS)

H20.03 [16:35~17:15]

Chair 3: SIN Sang-Jin (Hanyang University)

Recent advances with neutrino program in Korea / KIM Yeongduk*1 (*IBS)

H20.04 [17:20~17:55]

Chair 4: TAJIMA Setsuko (JPS)

Emergent electromagnetic phenomena from topological magnets / TOKURA Yoshi-nori*1 (*RIKEN, Univ. of Tokyo)

[17:55~18:00]

Closing Remark / LEE Bum-Hoon (KPS)

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포스터발표논문 시간표

Poster session schedule

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-ap.101

그래핀/그래핀 산화물 접합 소자에서의 전자기적 특성 연구 / KEE Eun Hee¹, HAIDARI Mohd Musaib¹, JEON Ji Hoon¹, LEE Ji Hye², KIM Jin Hong¹, CHOI Jin Sik¹, PARK Bae Ho¹ (¹Department of Physics, Konkuk University, ²Center for Correlated Electron Systems (CCES), Institute of Basic Science (IBS), Department of Physics and Astronomy, Seoul National University)

P1-ap.102

Experimental band structure of group-IV monochalcogenides / AN Gijeong¹, SOHN Yeongsup^{1,2}, KIM Minsu¹, HUH Minjae^{1,2}, NAM Gi hwan¹, KIM Keun su¹ (¹Department of Physics, Yonsei University, ²Department of Physics, POSTECH)

P1-ap.103

Observation of the Dirac nodal surface in black phosphorus / KIM Keun Su¹, PARK Do Yun¹, HUH Minjae^{1,2}, RYU Sae Hee^{1,2} (¹Department of Physics, Yonsei University, ²Department of Physics, POSTECH)

P1-ap.104

Theoretical Investigations of Graphene/Y₂C van der Waals Heterostructures / HONG SukLyun¹, CHOI Chang-Gyu¹, KIM Junghwan¹, CHA Janghwan¹ (¹Sejong University)

P1-ap.105

용액 공정 기반으로 합성된 W_xMo_{1-x}S₂ 합금 박막의 열분해 성장 온도에 따른 구조적 특성 분석 / KIM Bohyeon¹, BU Sang-Don¹ (¹Department of Physics, Jeonbuk National University)

P1-ap.106

다층 α-MoO₃ 기반 전계 효과 트랜지스터의 산소 결합 유도에 의한 전도도 특성 향상 및 게이트 전압 의존 특성 연구 / 윤유주¹, 유다희¹, 서승희¹, 허윤석¹, 진형진¹, KANG Haeyong¹ (¹Department of Physics, Pusan National University)

P1-ap.107

Graphene nano-electro-mechanical resonator arrays: physical properties and application to radio / JE Yugyeong¹, SHIN DongHoon², LEE Sang-Wook¹ (¹Department of Physics, Ewha Womans University, ²Kavli Institute of Nanoscience, Delft University of Technology)

P1-ap.108

Monolithic Interface Contact Engineering to Boost Optoelectronic Performances of 2D Semiconductor Photovoltaic Heterojunctions / YANG Seunghoon¹, CHA Janghwan², KIM Jong Chan³, HUH Woong¹, LEE Donghun¹, KIM Yoon Seok¹, LEE Seong Won⁶, PARK Hong-Gyu⁶, JEONG Hu Young⁴, HONG Suklyun², LEE Gwan-Hyoung⁵, LEE Chul-Ho^{*1} (¹Korea University, ²Department of Physics, Sejong University, ³School of Materials Science and Engineering, UNIST, ⁴UNIST Central Research Facilities, UNIST, ⁵Department of Materials Science and Engineering, Seoul National University, ⁶Department of Physics, Korea University)

P1-ap.109

Experimental Band Structure of Black-arsenic Studied by Angle-resolved Photoemission Spectroscopy / KANG Changmo¹, RYU Sae Hee¹, HUH Minjae^{1,2}, KIM Keun Su^{*1} (¹Department of Physics, Yonsei University, ²Department of Physics, POSTECH)

P1-ap.111

Electrical and optical properties of large-area MoS₂ layers synthesized on silicon substrates / KIM Yoon Sok¹, KIM Taeyoung¹, KIM Eun Kyu^{*1} (¹Department of Physics, Hanyang University)

P1-ap.112

Water-assisted Layer Transfer of Large-scale Molybdenum Disulfide Onto Arbitrary Substrates for Flexible Electronics / LYU Zhiyi¹, QIAN Yongteng¹, IM Jae Min¹, KANG Dae Joon^{*1} (¹Sungkyunkwan University)

P1-ap.114

Enhanced Raman spectra in WS₂/ReS₂ heterostructure / CHEONG Hyeonsik^{*1}, NA Woongki¹, KWON Yongjae¹ (¹Department of Physics, Sogang University)

P1-ap.115

화학기상증착법의 제어를 통한 그래핀 일함수의 조절 (Direct tuning of graphene work function via chemical vapor deposition control) / CHA YUNMI^{*1} (¹physics, Myongji University)

P1-ap.116

Vertically Stacked Two-dimensional Layered Double Hydroxide based Transparent Unipolar Switching Memory / CHO Haein¹, JEON Chan-Woo², PARK Il-Kyu², CHOI Sanghyeon¹, JANG Jingon¹, WANG Gunuk^{*1} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Department of Materials Science and Engineering, Seoul National University of Science and Technology)

P1-ap.117

Optical spectroscopy of van der Waals material Nb₃Se₈ / KIM Jangwon¹, LEE Youjin^{2,3}, SON Suhan^{2,3}, PARK Je-Geun^{2,3}, KIM Jae Hoon^{*1} (¹Department of Physics, Yonsei University,

²Department of Physics and Astronomy, Seoul National University, ³Center for Quantum Materials, Seoul National University)

P1-ap.118

X-ray Spectroscopy Study of Atomic-Layer-Deposited MoS₂ Monolayer on SiO₂ / KIM Yejin¹, LEE Minji¹, MOHAMED Ahmed Yousef¹, CHO Deok-Yong¹ (¹Department of Physics, Jeonbuk National University)

P1-ap.119

Intra-layer exciton energy shifts in TMD heterostructure / KIM Jungcheol¹, CHEONG Hyeonsik¹ (¹Department of Physics, Sogang University)

P1-ap.120

Piezo/triboelectric energy harvester using two-dimensional In₂Se₃ flakes / CHO Samyeon¹, RANI Adila¹, PARK Jiseul², HAN Seunghun¹, LIM Seongvin², JEONG Chang Kyu², BU Sang-Don¹ (¹Department of Physics, Jeonbuk National University, ²Division of Advanced Materials Engineering, Jeonbuk National University)

P1-ap.121

Interlayer Vibration Modes of Monolayer-Bilayer MoS₂/WSe₂ Heterostructure / CHEONG Hyeonsik¹, OH Siwon¹, KIM Jungcheol¹ (¹Department of Physics, Sogang University)

P1-ap.122

Chemically Cleavable Two-Dimensional Ruddlesden-Popper Organic-Inorganic Hybrid van der Waals Magnets / KIM Ki-Yeon¹, PARK Garam², CHO Jaehun³, KIM Joonwoo³, KIM June-Seo³, JUNG Jinyong⁴, PARK Kwonjin⁴, YOU Chun-Yeol⁴, OH In-Hwan¹ (¹Quantum Beam Science Center, KAERI, ²Nuclear Chemistry Research Team, KAERI, ³Division of Nanotechnology, DGIST, ⁴Department of Emerging Materials Science, DGIST)

P1-ap.123

Domain structure and birefringence of few-layer ReS₂ / PARK Je Myoung¹, NA Woongki¹, CHOI Yun¹, LEE Sol², KIM Kwanpyo², CHEONG Hyeonsik¹ (¹Department of Physics, Sogang University, ²Department of Physics, Yonsei University)

P1-ap.124

Electrical Characteristics of Field Effect Transistors Based on MoS₂ Monolayer Grown by Chemical Vapor Deposition / LEE Sang-Kwon¹, PARK No-Won¹, CHOI Jae-Won¹, KIM Yun-Ho¹ (¹Physics, Chung-ang University)

P1-ap.125

Interlayer modes in 2H-MoTe₂/hBN heterostructure / NGUYEN Manh Hong¹, LIM Soo Yeon¹, CHEONG Hyeonsik¹ (¹Department of Physics, Sogang University)

P1-ap.126

Photoinduced topological phase transition and optical conductivity of black phosphorene / MOON Kyungsun^{*1}, KANG Yousung¹ (¹Department of Physics, Yonsei University)

P1-ap.127

Scanning Probe Microscopy Studies of Photon-Plasmon-Exciton Coupling in MoS₂/Au-Nanogratings / KWON Soyeong¹, LEE Seong-Yeon², CHOI Soo Ho³, KANG Jang-Won⁴, LEE Taejin⁵, SONG Jungeun¹, LEE Sang Wook¹, CHO Chang-Hee⁵, KIM Ki Kang³, YEE Ki-Ju², KIM Dong-Wook^{*1} (¹Department of Physics, Ewha Womans University, ²Department of Physics, Chungnam National University, ³Center for Integrated Nanostructure Physics, Sungkyunkwan University, ⁴Department of Physics, Mokpo National University, ⁵Department of Emerging Materials Science, DGIST)

P1-ap.128

Spin Seebeck Effect in the 2D Ferromagnetic CrPbTe₃ / HONG Ji Sang^{*1}, MARFOUA Brahim¹ (¹Physics, Pukyong National University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-ap.201그래핀과 강유전체 물질을 이용한 FET 소자의 전기적 특성 분석 및 개선 / LEE Kyungmin¹, SEO Seunghye¹, KANG Haeyong^{*1} (¹Department of Physics, Pusan National University)**P1-ap.202**다공성 실리콘을 감지부로 이용한 정전형 센서의 습도 감응 특성 / PARK Jongha¹, KIM Sohee¹, CHO Joonghyun¹, LEE Kiwon^{*1}, HONG Sayong¹, KIM Yong-gi¹ (¹Kongju National University)**P1-ap.203**Double-layer Deposition Method for Enhancement Surface and Magnetic Properties of Amorphous CoFe_2O_4 Thin Film / LEE Hyunkyung¹, KIM BYEONGWAN¹, KANG Haeyong^{*1} (¹Department of Physics, Pusan National University)**P1-ap.204**Spontaneous van der Waals epitaxy of chalcogenide thin film by pulsed laser deposition / LEE Sang A¹, HWANG Jae-Yeol^{*1} (¹Department of Physics, Pukyong National University)**P1-ap.205**음향 센서를 이용한 DED 방식 금속 3D 프린팅의 공정 모니터링 / JANG Yea Sol¹, YOON Hyung-Do¹, KANG Chang Koo², KIM Young Soo², LEE Kyung Ha², SEO Yong Gon^{*1} (¹Nano Convergence Technology Research Center, KETI, ²DENT R&D Center, DE&T Co., Ltd)**P1-ap.206**Chemical growth of PbS directly on large-area graphene for photovoltaic infrared high performance photo-detectors / OH Eunsoon^{*1}, AMPADU EMMANUEL KWAME¹, KIM Jungdong¹, KIM KeunSoo², LEE Dongyun² (¹Department of Physics, Chungnam National University, ²Department of Physics and Graphene Research Institute-Texas Photonics Center International Research Center (GRI-TPC IRC), Sejong University)**P1-ap.207**Surface Raman enhancement of Vertically-Oriented WS_2 nanosheets with a few layers / KIM Jayeong¹, SHIN Yukyung², JANG Yujin¹, KO Eunji¹, LEE Nam-Suk³, KIM Myung Hwa², YOON Seokhyun^{*1} (¹Department of Physics, Ewha Womans University, ²Department of Chemistry & Nanoscience, Ewha Womans University, ³National Institute for Nanomaterials Technology (NINT), POSTECH)

P1-ap.208

Curing of Moisture Sensitive Polymers Based Microstructures Using Freeze-Drying Method / HWANG Jaeseok², JEON Tae Hyun¹, KANG Dae Joon^{*1} (¹Sungkyunkwan University, ²Energy Science, Sungkyunkwan University)

P1-ap.209

Charge transport study of lead halide perovskite and oxide layer interface / YOUN Sarah Su-O¹, JO William¹, KIM Gee Yeong^{*2} (¹Department of Physics, Ewha Womans University, ²Advanced Photovoltaics Research Center, Korea Institute of Science and Technology)

P1-ap.210

Identification and Classification of Defects in STEM images of MoS₂ using Deep Learning / CHOI Soyeon¹, LEE Yangjin¹, KIM Kwanpyo^{*1} (¹Physics, Yonsei University)

P1-ap.211

Improving thermoelectric performance of silicon nanowires by heat dissipation and energy filtering through gold nanoparticles / JEON Gi Wan¹, JANG Jae Won^{*1} (¹Division of Physics and Semiconductor Science, Dongguk University)

P1-ap.212

Nanostructure CuO application for hydrogen gas sensor / LEE Gun Hee¹, UMESH Nakate Tukaram¹, HONG Chang-Hee¹, SUH Eunkyung^{*1} (¹School of semiconductor and Chemical Engineering, Jeonbuk National University)

P1-ap.213

수성 폴리우레탄 아크릴레이트와 BNNT 충전 복합재의 성능향상에 효율적인 BNNT의 함유량 연구 / LEE Yong Joon¹, LEE Hak Ji¹, SONG Jun Yong¹, YOO Young Joon¹, LA Yunju¹, PARK Sang Yoon^{*1} (¹Advanced institutes of convergence technology)

P1-ap.214

Laser Scribed Carbon Nanomaterials for Gas Sensor based on Polyimide-Copper composite / KO Yong-il¹, KIM Min Jae¹, LEE Gil Yong¹, JANG A-Rang², KIM Keun Soo^{*1} (¹Department of Physics & Astronomy, Sejong University, ²Department of Electrical Engineering, Semyung University)

P1-ap.215

Dynamic modification changes on graphene surface observed by in-situ TEM / JEONG HyunJeong¹, JE Yugeong¹, SHIN DongHoon³, INANI Heena², MUSTONEN Kimmo², MANGLER Clemens², KOTAKOSKI Jani², LEE Sang-Wook^{*1} (¹Department of Physics, Ewha Womans University, ²Kavli Institute of Nanoscience, Delft University of Technology, ³Faculty of physics, University of Vienna)

P1-ap.216

Synthesis of Ti^{3+} Self-doped Blue TiO_2 for Enhanced Photocatalytic Performance under Visible Light / YANG Hao¹, LEE Taehyeong¹, KANG Dae Joon^{*1} (¹Sungkyunkwan University)

P1-ap.217

Plasma-synthesized gold nanoparticles for optical sensing applications / LEE GeonJoon^{*1}, NGUYEN Linh Nhat¹, CHOI Eun Ha¹ (¹Kwangwoon University)

P1-ap.218

Magneto-Plasmonic Nanoparticles assembly on Nickel metasurface for Terahertz sensing. / LEE Jaebeom^{*1,2}, KIM Youngmi² (¹Chemistry, Chungnam National University, ²chemical Engineering and Applied Chemistry, Chungnam National University)

P1-ap.219

ReS_2 based pn Heterojunction Device / RYU Eui-Hyoun^{2,3}, LEE Sang-Wook³, KIM Gyu-Tae^{*1} (¹School of Electrical Engineering, Korea University, ²Department of micro/nano system, Korea University, ³Department of physics, Ewha Womans University)

P1-ap.220

Correlation between magnetothermopower and magnetoresistance in topological insulator / KWON Du Hyuk^{1,2}, DOH Yong-Joo³, SONG Jong Hyun^{*1}, BAE Myung-Ho^{*2} (¹Chungnam National University, ²Electromagnetic Standard Group, KRISS, ³Department of Physics and Photon Science, GIST)

P1-ap.221

Analysis of electromagnetic field distribution around metal nanostructures based on finite difference time domain method / CHOI Sung Woo^{*1} (¹Hallym University)

P1-ap.222

Research of near-field distribution and transmission properties of single metal nanoplasmon structures / HONG Se-Lim^{*1} (¹School of Nano Convergence Technology, Hallym University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-ap.301

Parametric spin wave modes in rectangular-shaped permalloy building block / HWANG Seong¹, YOON Seungha², HAN Songhee³, CHO Beong Ki^{*1} (¹School of Materials Science and Engineering, GIST, ²Nano Photonics Group, KITECH, ³Division of Navigation Science, Mokpo National Maritime University)

P1-ap.302

Residual stress effect on the Ni_xFe_{1-x} thin film / YANG Yeonhee¹, YOON Seungha², CHO Beong Ki^{*1} (¹School of Materials Science and Engineering, GIST, ²Nano Photonics Group, KITECH)

P1-ap.303

Charge-to-spin conversion in HM/FM/perovskite trilayers / JEONG Se Yeob¹, LEE Jongmin², JANG Heechan¹, PARK Eunkang¹, LEE Nyun Jong¹, KIM Tae Heon¹, KIM Sanghoon^{*1} (¹Department of physics, University of Ulsan, ²School of Materials Science & Engineering, GIST)

P1-ap.304

Enhanced Magnon-Photon Coupling at the Angular Momentum Compensation Point of Ferrimagnets / SHIM Jaechul¹, KIM Seok-Jong², KIM Se Kwon^{*1}, LEE Kyung-Jin^{*2,3} (¹Department of Physics, KAIST, ²KU-KIST Graduate School of Converging Science and Technology, Korea University, ³Department of Materials Science and Engineering, Korea University)

P1-ap.305

Role of orbital hybridization in anisotropic magnetoresistance / KO Hye-Won¹, PARK Hyeon-Jong², GO Gyungchoon³, OH Jung Hyun³, KIM Kyoung-Whan⁴, LEE Kyung-Jin^{*2,3} (¹Department of Physics, KAIST, ²KU-KIST Graduate School of Converging Science and Technology, Korea University, ³Department of Materials Science and Engineering, Korea University, ⁴Center for Spintronics, KIST)

P1-ap.306

Controlling threshold current of auto-oscillation using cobalt co-sputtering in nano-wire structure. / KIM Byung-ro¹, YOON Seungha², HAN Songhee³, CHO Beong Ki^{*1} (¹School of Materials Science and Engineering, GIST, ²Nano Photonics Group, KITECH, ³Division of Navigation Science, Mokpo National Maritime University)

P1-ap.307

Observation of the spin-Seebeck effect in a $WS_2/NiFe$ bilayer by the inverse spin Hall effect. / NOH Hwayong¹, SHARMA Pradeep Raj², GAUTAM Praveen³ (¹Sejong University, ²Department of Physics, Sejong University, ³Department of Physics, Sejong University)

P1-ap.308

Synaptic Performance with Improved Linearity and Endurance by modulating $Pb(Zr_{0.52}Ti_{0.48})O_3/Nb$ doped $SrTiO_3$ Interface Barrier. / KIM Sohwi¹, YOON Chansoo¹, JEON Jihoon¹, LEE Ji Hye¹, PARK Bae Ho¹ (¹Department of Physics, Konkuk University)

P1-ap.309

UV-Ozone Treated Growth of Highly Conducting SnO_2 Thin Films for Various Device Applications / KIM Jlhyn¹, KIM Yeon Soo¹, JUNG Hye Ri¹, JO William¹ (¹Department of Physics, Ewha Womans University)

P1-ap.310

Collective electromigration offers an alternative method for determining ionic conductivity / SUH Jeonghun^{1,2}, LIM Ji Soo^{1,2}, PARK Heung-Sik^{1,2}, YANG Chan-Ho^{1,2} (¹Physics, KAIST, ²Center for Lattice Defectronics, KAIST)

P1-ap.311

The relationship between Al and the unnatural negative Threshold voltage shift of solution processed Indium Gallium Zinc Oxide TFTs / KIM BYEONGWAN¹, LEE Hyunkyung¹, KIM Kanghyun², KANG Haeyong¹ (¹Department of Physics, Pusan National University, ²Display, Samsung)

P1-ap.312

테이프캐스팅을 이용한 Flexible YSZ Thin film 제조 연구 / PARK Yong Yeol¹, LEE Hak Ji¹, JEON Ok Sung¹, YOO Young Joon¹, PARK Sang Yoon¹ (¹Advanced institutes of convergence technology)

P1-ap.313

Local magnetization control through reduction of CoO_x thin films / KIM Jisu¹, PARK Eunkang¹, LEE Nyun Jong^{1,3}, LEE Taekhyeon², YANG Ji-Seok², PARK Seongboo¹, SHIN Young-Han¹, LEE Ki-Seung³, YOU Chun-Yeol³, KIM Kab-Jin², KIM Sanghoon¹ (¹Department of physics, University of Ulsan, ²Department of Emerging Materials Science, KAIST, ³Department of Physics, DGIST)

P1-ap.314

Achieving atomically flat and single-terminated layered perovskite substrate surfaces / KIM Jinkwon^{1,2}, KIM Jeong Rae^{1,2}, HAHN Sungsoo^{1,2}, KIM Youngdo^{1,2}, KIM Changyoung^{1,2}, NOH Tae Won^{1,2} (¹Center for Correlated Electron Systems, Institute for Basic Science, ²Department of Physics and Astronomy, Seoul National University)

P1-ap.315

Enhancement of Output Performance in relaxor ferroelectric $\text{Bi}_{0.5}(\text{Na}_{1-x}\text{K}_x)_{0.5}\text{TiO}_3$ piezoelectric nanogenerator / BU Sang-Don^{*1}, KIM Eun-Young¹ (¹Department of Physics, Jeonbuk National University)

P1-ap.316

Photogenerated characteristic of Na passivated $\text{Cu}_2\text{ZnSn}(\text{S,Se})_4$ thin-film solar cells by Kelvin probe force microscopy / PARK Ha Kyung¹, CHO Yuna¹, KIM Juran¹, JEONG Woo-Lim², KIM Kyung-Pil², LEE Dong-Seon², JO William^{*1} (¹Department of Physics, Ewha Womans University, ²School of Electrical Engineering and Computer Science, Gwangju Institute of Science and Technology (GIST))

P1-ap.317

A membraneless nonenzymatic fiber-shaped glucose fuel cell based on multiwall carbon nanotube yarn electrode / SUH Dongseok^{*1}, LE Suong Thi¹ (¹Department of Energy Science, Sungkyunkwan University)

P1-ap.318

Analysis of Helical-type Electromagnetic Pump for Lithium Charge Stripper / LEE GeunHyeong^{*1}, KIM HeeReyoung¹ (¹Department of Nuclear Engineering, UNIST)

P1-ap.319

메타소재 기반의 THz 투과체 및 조절장치 / YOO Young Joon^{*1}, LEE Yong Joon¹, LA Yunju¹, PARK Sang Yoon^{*1} (¹Advanced institutes of convergence technology)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-ap.401

유기물 반도체 TMTSF의 전하수송 특성 연구 / LEE In Jae^{*1}, BAE Junwan¹ (¹Department of Physics, Chonbuk National University)

P1-ap.402

The tunability of energy levels in the highly ordered conjugated polymer system / KIM Kitae^{1,2}, JEONG Junkyeong¹, YANG Jaehyun¹, YOO Jisu¹, PARK Soohyung², LEE Hyunbok³, YI Yeonjin^{*1} (¹Department of Physics, Yonsei University, ²Advanced Analysis Center, KIST, ³Department of Physics, Kangwon National University)

P1-ap.403

Optoelectronic Responses in CH₃NH₃PbCl₃ Perovskite Crystals with of Excitonic Behavior / JUNG Hye Ri¹, BARI Maryam², JO Young Chan³, KIM Jae Hoon³, YULDASHEV Shavkat⁴, NGUYEN Trang Thi Thu Nguyen¹, KIM Yejin¹, YOON Seokhyun¹, YE Zuo-Guang², JO William^{*1} (¹Department of Physics, Ewha Womans University, ²Department of Chemistry, Simon Fraser University, ³Department of Physics, Yonsei University, ⁴Quantum Functional Semiconductor Research Center, Dongguk University)

P1-ap.404

Increasing electrical efficiency of MFC with synechococcus sp. / LIM EunJu^{*1}, KIM Seonghyun¹ (¹integrative systems engineering, Dankook University)

P1-ap.405

Study on the charge transfer characteristics of organic semiconductor devices with controlled crystal properties by heat and nanoparticles / LIM EunJu^{*1}, CHO SeongJib¹ (¹Convergent Systems Engineering, Dankook University)

P1-ap.406

Effect of temperature during stirring of P3HT:PCBM solution on organic photovoltaics / KIM Wonsik^{1,2}, OH Jaewon¹, CHOI Seungsun^{1,2}, SHIN Woojin^{1,2}, OH Hyesung¹, JUNG Sehyun¹, RYU Mee-Yi¹, LEE Hyun Bok^{*1,2} (¹Department of Physics, Kangwon National University, ²Institute for Accelerator Science, Kangwon National University)

P1-ap.407

Variation in optical and electronic properties of polymeric thin films by ultraviolet-ozone treatment / LEE Hyun Bok^{*1,2}, CHOI Seungsun^{1,2}, KIM Wonsik^{1,2}, SHIN Woojin^{1,2}, OH

Jeawon¹, JIN Sila^{2,3}, JUNG Young Mee^{2,3}, RYU Mee-Yi¹ (¹Department of Physics, Kangwon National University, ²Accelerator Science, Kangwon National University, ³Department of Chemistry, Kangwon National University)

P1-ap.408

Structural and Optical Characterization of Mechanochemically Synthesized Cs-based Perovskites / BAEK Kyeong-Yoon¹, LEE Woocheol¹, LEE Jeongjae², LEE Jonghoon¹, AHN Heebeom¹, KIM Junwoo¹, KANG Keehoon¹, LEE Takhee¹ (¹Department of Physics and Astronomy, Seoul National University, ²School of Earth and Environmental Sciences, Seoul National University)

P1-ap.409

Improving electron injection with nucleoside cytidine in organic light-emitting diode / LEE Hyun Bok¹, SHIN Woojin¹, KIM Wonsik¹, CHOI Senugsun¹, OH Hyesung¹, JUNG Sehyun¹, KIM Boyoung¹ (¹Department of Physics, Kangwon National University)

P1-ap.410

Antisolvent-mixed perovskite precursor for high-performance perovskite solar cells / LIU Xuewen¹, XU Chongyang¹, LEE Eun-Cheol¹ (¹Gachon University)

P1-ap.411

development of a single device-based organic tactile synapse for artificial learning skin applications / JANG Seonghoon¹, LEE Kyuho², KIM KangLib², KOO Min², PARK Chanho², LEE Seokyeong², LEE Junseok², PARK Cheolmin², WANG Gunuk¹ (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Department of Materials Science and Engineering, Yonsei University)

P1-ap.412

Fiber-shaped multi-synapses based on the organic ferroelectric transistor for wearable neuromorphic applications / WANG Gunuk¹, HAM Seonggil¹, KANG Minji², JANG Seonghoon¹, JANG Jingon¹, CHOI Sanghyeon¹, KIM Tae-Wook² (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Department of Flexible and Printable Electronics, Jeonbuk National University)

P1-ap.413

Highly Tunable Molecular Rectifier Realized by Interfacial Design in Molecular Heterojunction with Two-Dimensional Materials / SHIN Jaeho¹, YANG Seunghoon¹, JANG Yeonsik², EO Jung Sun¹, KIM Tae-Wook³, LEE Takhee², LEE Chul-Ho¹, WANG Gunuk¹ (¹KU-KIST Graduate School of Converging Science and Technology, Korea University, ²Department of Physics and Astronomy, and Institute of Applied Physics, Seoul National University, ³Department of Flexible and Printable Electronics, Jeonbuk National University)

P1-ap.414

Realization of Sub-2nm Molecular Selector for Next-generation Memory Application
/ EO Jung Sun¹, SHIN Jaeho¹, WANG Gunuk^{*1} (¹KU-KIST Graduate School of Converging Science and Technology, Korea University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-ap.501

Structural phase transition behavior of methylammonium lead halide perovskite single crystals studied by Raman scattering spectroscopy / YOON Seokhyun¹, NGUYEN Trang Thi Thu¹, KIM Yejin¹, PARK Joohee¹, JUNG Hye-Ri¹, JO William¹, BAE Soungmin², KIM Yong-Hoon², BARI Maryam³, YE Zuo-Guang³ (¹Department of Physics, Ewha Womans University, ²Department of Physics, KAIST, ³Department of Chemistry, Simon Fraser university)

P1-ap.502

PEDOT:PSS mixed with inorganic V₂O₅ as hole injection layer for efficient quantum-dot light-emitting diodes / SHIN Jae Seung¹, KIM Tae Yeon¹, HEO Su Been¹, HONG Jong-Am², PARK Yongsup², KANG Seong Jun¹ (¹정보전자신소재공학과, Kyung Hee University, ²Department of Physics, Kyung Hee University)

P1-ap.504

근적외선 영역에서의 광섬유 기반 선형 위상 제어 Fiber-based Linear Phase Change in the Near-Infrared Range / KIM Eun Sun¹, LEE Seung Seok¹, CHOI Eun Seo¹ (¹Chosun University)

P1-ap.505

Versatile red emitting Mg₂TiO₄:Mn⁴⁺ phosphors for solid state lighting and forensic science / PARK Jin Young¹, HONG Woo Tae², YANG Hyun Kyoung^{1,2}, JE Jae-Yong³ (¹Department of Electrical, Electronics and Software Engineering, Pukyong National University, ²Interdisciplinary Program of LED and Solid State Lighting Engineering, Pukyong National University, ³Department of Radiological Technology, dong-eui institute of technology)

P1-ap.506

Color-tuning behavior of K₃YB₆O₁₂:Er³⁺, Tm³⁺, Eu³⁺ phosphor for each activator ions various concentrations / CHUNG Jong Won¹, PARK Sung Jun², YANG Hyun Kyoung^{1,2}, MOON Byung Kee³ (¹Department of Electrical, Electronics and Software Engineering, Pukyong National University, ²Interdisciplinary Graduate Program of Artificial Intelligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, ³Department of Physics, Pukyong National University)

P1-ap.508

Fast synthesis of carbon dots by using coffee residue / PARK Sung Jun¹, PARK Jin Young², YANG Hyun Kyoung^{*1,2}, JE Jae-Yong³ (¹Interdisciplinary Graduate Program of Artificial Intelligence on Computer, Electronic and Mechanical Engineering, Pukyong National University, ²Department of Electrical, Electronics and Software Engineering, Pukyong National University, ³Department of Radiological Technology, dong-eui institute of technology)

P1-ap.509

Microwave synthesis and latent fingerprint detection of $\text{Ca}_2\text{MgSi}_2\text{O}_7:\text{Eu}^{2+}$ phosphor / HONG Woo Tae¹, YANG Hyun Kyoung^{*1,2}, MOON Byung Kee³ (¹Interdisciplinary Program of LED and Solid State Lighting Engineering, Pukyong National University, ²Department of Electrical, Electronics and Software Engineering, Pukyong National University, ³Department of Physics, Pukyong National University)

P1-ap.510

Effect of mistracked principal state of polarization on measurement of optical signal to noise ratio using optical power / HAN Ki Ho^{*1} (¹Department of Optical Engineering, Kongju National University)

P1-ap.511

Responsivity of arranged fiber optic sensors using Sagnac interferometers / HAN Ki Ho^{*1} (¹Department of Optical Engineering, Kongju National University)

P1-ap.512

Structural and Optical Properties of Tris- (8-hydroxyquinoline) Aluminum Doped ZnO Nanoparticle for Organic Light Emitting Diode Applications / MAKKI Aya Hekmet¹, ZOUBI Wail Al¹, LEE Young-Woong¹, KIM Bo-myung¹, KIM Huijin¹, SON Boseong¹, SUNG Jiwon¹, SONG Yeonghak¹, KO Young Gun¹, PARK Si Hyun^{*1} (¹Yeungnam University)

P1-ap.513

Hybrid quantum system employing a nano-mechanical oscillator and a superconducting microwave resonator / CHOI Gahyun^{*1}, CHONG Yonuk², KIM Junhyung³, KIM Duk Young⁴, KIM Dong Kyu⁴, JO Yonggi⁴, PARK Kibog^{3,5}, LEE Donghun⁶, KIM Zaeill^{*4} (¹Quantum Technology Institute, KRISS, ²SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, ³Department of Electrical Engineering, UNIST, ⁴Quantum Physics Directorate, Agency for Defense Development, ⁵Department of Physics, UNIST, ⁶Department of Physics, Korea University)

P1-ap.514

Low noise telecom-band single-photon detector via frequency up-conversion / CHAE Jin-Woo^{*1}, KIM Jin-Hun¹, JEONG Youn-Chang², KIM Yoon-Ho¹ (¹Physics, POSTECH, ²연구부서, The affiliated institute of ETRI)

P1-ap.515

Observation of second-order interference beyond the coherence time with true thermal photons / LEE Gyu-Hyeok^{*1}, IHN Dong-Gil¹, KIM Yosep¹, KIM U-Shin¹, KIM Yoon-Ho¹ (¹Physics, POSTECH)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-as.001

A cosmic cloud system for the ISS-CREAM data analysis / KIM Hong Joo^{*1}, SEO Eun Suk², JEGAL Jin¹, JEONG Dong Woo¹, KANG Sin Chul¹ (¹Department of Physics, Kyungpook National University, ²Department of Physics, University of Maryland)

P1-as.002

Properties of AdS black hole in dilatonic Einstein-Gauss-Bonnet theory / LEE Hochoel^{*1}, LEE Bum-Hoon¹, LEE Wonwoo² (¹Department of Physics, Sogang University, ²CQeST, Sogang University)

P1-as.003

천구기준계와 지구기준계에서의 지구자전축의 섭동에 대한 분석 / NA Sung-Ho^{*1} (¹Geological Sciences, Gyeongsang National University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-at.001

Comparison of Polarization Spectroscopy on Pump Beam Intensity and Cell Temperature for the $^{85}\text{Rb } F_g=3 \rightarrow F_e=4$ and $^{87}\text{Rb } F_g=2 \rightarrow F_e=3$ / JEONG Jeongyoun¹, LEE Sanglok¹, MOON Geol¹ (¹Department of Physics, Chonnam National University)

P1-at.002

Polarization dependence of sub-Doppler spectral resolution for four-level coherent medium in ^{85}Rb / YANG Somyeong¹, JEONG Jeongyoun¹, MOON Geol¹ (¹Department of Physics, Chonnam National University)

P1-at.003

Detection of the ion pair channels for collision of 4 keV hydrocarbon ion beam with helium atom / KIM Hyun², CHUNG Yang Soo^{1,2} (¹Dept. of Physics, Chungnam National University, ²Institute of Quantum Systems (IQS), Chungnam National University)

P1-at.004

MTS를 이용한 양자중력계용 다이오드 레이저의 주파수 고안정화 / 이상록^{1,2}, 이상범¹, 박상연¹, 홍현규¹, 서상원¹, 허명선¹, 문 걸², KWON Taeg Yong¹ (¹Division of Physical Metrology, KRISS, ²Department of Physics, Chonnam National University)

P1-at.005

Single-site Resolving ^7Li Quantum Gas Microscope / CHOI Jae Yoon¹, KWON Kiryang¹, KIM Kyungtae¹, HUH SeungJung¹, HUR Junhyeok¹ (¹Physics Department, KAIST)

P1-at.006

Mechanism of HHG from solids based on Houston states / BYUN Chang Woo¹, LEE Min-Ho¹, CHOI NarkNyul¹ (¹School of Liberal Arts and Teacher Training, Kumoh National Institute of Technology)

P1-at.007

Test of quantum search algorithm / CHOI Nark Nyul¹, LEE Min-Ho¹, BYUN Chang Woo¹ (¹School of Liberal Arts and Teacher Training, Kumoh National Institute of Technology)

P1-at.008

Higher order multiphoton frequency mixing effects on coherent electromagnetically induced absorption spectra of ^{85}Rb atoms / JADOON Zeeshan Ali Safdar¹, HASSAN

Aisar Ul¹, NOH Heung-Ryoul², KIM Jin-Tae*¹ (1Dept. of Photonic Eng., Chosun University, 2Dept. of Physics, Chonnam National University)

P1-at.009

Development of helical resonator for trapping ytterbium ions Yb 이온 포획을 위한 나선형 공진기의 개발 / SEO Taehyun*¹, KIM Myunghun¹, HONG Jung Soo, LEE Downon, LEE Moonjoo (1Electrical engineering, POSTECH)

P1-at.010

Entropic nonclassicality and quantum non-Gaussianity tests using homodyne detection with beam splitting operation / PARK Jiyong*¹, LEE Jaehak², NHA Hyunchul³ (1School of Basic Sciences, Hanbat National University, 2School of Computational Sciences, Korea Institute for Advanced Study, 3Department of Physics, Texas A&M University at Qatar)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-bp.001

A model of artificial chaotic 1/f noise generation / KIM Hyung-Rae¹ (¹School of Basic Sciences, Hannam University)

P1-bp.002

A database of behavioral phenotypes of *C. elegans* / LEE Kyung Suk¹ (¹Department of Physics Education, Kongju National University)

P1-bp.003

A simple, scalable imaging platform for behavioral analysis of *C. elegans* / LWIN Eindra Moh Moh¹, PAHLEVI Sahreza¹, LEE Kyung Suk¹ (¹Department of Physics Education, Kongju National University)

P1-bp.004

Recovery of fatty acid monolayers by divalent salts investigated by sum-frequency generation spectroscopy / KIM Doseok¹, SAM Sokhouy¹, KREM Sona¹ (¹Physics, Sogang University)

P1-bp.005

Optimization of osteoblasts culture in PLCL scaffolds through electrical stimulation / LIM EunJu¹, LEE Dongkyu¹, LEE Wookul¹ (¹integrative systems engineering, Dankook University)

P1-bp.006

Nondestructive tumor monitoring using radiation-guided targeting system / LIM Sa Hoe¹, JUNG Shin¹ (¹Department of Neurosurgery, Chonnam National University Hospital)

P1-bp.008

Single molecule biophysical studies of chromatin-targeting anti-cancer agent Curaxin / JEON Jin-Won^{1,2}, MOON Hyeon-Min¹, PARK Jin-Sung¹, HONG Seok-Cheol^{1,2} (¹Center for Molecular Spectroscopy and Dynamics, Institute for Basic Science (IBS), ²Physics, Korea University)

P1-bp.009

Exonuclease-independent mismatch repair in a cell free system / YANG KeunSang¹, LEE

Ryanggeun², LEE Jong-Bong^{*1,2} (1School of Interdisciplinary Bioscience and Bioengineering, POSTECH, 2Physics, POSTECH)

P1-bp.010

Single-molecule visualization of mismatch repair components using DNA skybridge / YANG InHo¹, LOPEZ Juani Martin², TAKAHASHI Masateru³, HANDAN Samir³, FISHEL Richard², LEE Jong-Bong^{*1,4} (1Physics, POSTECH, 2Cancer Biology and Genetics, The Ohio State University, 3Division of Biological and Environmental Sciences and Engineering, King Abdullah University of Science and Technology, 4Bioscience and Bioengineering, POSTECH)

P1-bp.011

Single-molecule cryo-fluorescence microscopy / YU Phil-Sang¹, LIM Seon-Woo², KIM Chae-Un², LEE Jong-Bong^{*1,3} (1Physics, POSTECH, 2Physics, UNIST, 3School of Interdisciplinary Bioscience and Bioengineering, POSTECH)

P1-bp.012

The role of beta-actin mRNA localization in single dendritic spines studied by two-photon glutamate uncaging / SHIM Jae Yoon¹, LEE Byung Hun¹, MOON Hyungseok C.¹, PARK Hyeyoon^{*1} (1Department of Physics and Astronomy, Seoul National University)

P1-bp.013

Transcription of Arc mRNA induced by electrical burst stimulation / KIM Dongwook¹, PARK Hyeyoon^{*1}, MOON Hyungseok Chad¹, CHOI Hongyoung¹, LEE Byung Hun¹, SHIM Jae Yoon¹ (1Department of Physics and Astronomy, Seoul National University)

P1-bp.014

Fluctuation analysis of transcription in live mammalian cells / PARK Hyeyoon^{*1}, CHOI Hongyoung¹ (1Department of Physics and Astronomy, Seoul National University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-co.101

Momentum dependent $d_{xz/yz}$ band splitting in LaFeAsO / HUH Soonsang¹, KIM Younsik¹, KIM Changyoung¹ (¹Department of Physics and Astronomy, Seoul National University)

P1-co.102

Finding the electron-boson spectral density functions with machine learning / PARK Hwiwoo¹, HWANG Jungseek¹, PARK Jun H.¹ (¹Department of Physics, Sungkyunkwan University)

P1-co.103

Analysis of magnetic properties in GdBCO rings with narrow paths / RI H.-C.^{*1}, KIM Y.-K.¹, KIM C.¹ (¹Kyungpook National University)

P1-co.104

Interval and stacking number dependence of AC loss in GdBCO coated conductor / RI H.-C.^{*1}, KIM Chan¹, KIM Young-Kyoung¹, JEON Sung-min¹ (¹Kyungpook National University)

P1-co.105

Linear Proportionality of Creep Scaling Constant on Co-Layer Thickness / LEE Seong Hyub¹, MOON Joon¹, YU Ji-Sung¹, CHOE Sug Bong^{*1} (¹Department of Physics, Seoul National University)

P1-co.106

Domain-wall-roughness-based determination scheme for Dzyaloshinskii-Moriya interaction / YU Ji-Sung¹, KIM Dae-Yun¹, MOON Joon¹, LEE Seong-Hyub¹, CHANG Jun-Young^{1,2}, KIM Duck-Ho², CHOE Sug Bong^{*1} (¹Department of Physics, Seoul National University, ²Spin Convergence Research Center, Korea Institute of Science and Technology)

P1-co.107

Cr 기반의 이종박막 내에서 발생하는 스핀-홀 자기저항에 대한 연구 / PARK Eunkang¹, LEE Soogil², KANG Min-Gu², PARK Byong-Guk², KIM Sanghoon^{*1} (¹Department of physics, University of Ulsan, ²Materials Science and Engineering, KAIST)

P1-co.108

Thickness dependent magnetic transition in vdW layered MnPS₃ / LIM Soo Yeon¹, KIM Kangwon¹, LEE Sungmin², PARK Je-Geun², CHEONG Hyeonsik^{*1} (¹Department of Physics,

P1-co.109

Two-dimensional Fe₃GeTe₂: strain effect on magneto-crystalline anisotropy / KIM G. Hye¹, AIN Qurat Ul¹, HONG SoonCheol¹, RHIM Sonny¹ (¹Department of Physics, University of Ulsan)

P1-co.110

Spin Current Generation in a Single Fe₅GeTe₂ Layer / KIM Kwangsu^{1,2}, ANH Hyo-bin³, JEONG Seyeob¹, PARK Jungmin⁴, LEE Nyun Jong¹, LY Trinh Thi¹, SONG Kyung Mee², KIM Jung Dae¹, LEE Changgu³, PARK Tae-Eon², KIM Sanghoon¹ (¹Department of physics, University of Ulsan, ²Center for spintronics, KIST, ³School of mechanical engineering, Sungkyunkwan University, ⁴Center for scientific instrumentation, KBSI)

P1-co.111

Non-vanishing Anomalous Hall Effect in nearly Compensated Ferrimagnet Mn₃Al / HAN Guihyun¹, PARK Minkyu², AN Su Yeon¹, HONG Soon Cheol^{1,3}, RHIM Sonny^{1,3} (¹Department of Physics, University of Ulsan, ²Research Institute of Basic Sciences, University of Ulsan, ³Energy Harvest-Storage Research Center, University of Ulsan)

P1-co.112

Unidirectional spin Hall magnetoresistance 현상에서 마그논 기여에 관한 연구 / JANG HeeChan¹, PARK Eunkang¹, LEE NyunJong^{1,2}, LEE Ki-Seung², YOU Chun-Yeol², KIM Sanghoon¹ (¹Department of physics, University of Ulsan, ²Emerging Materials Science, DGIST)

P1-co.113

Temperature-dependent ARPES Study of CeRhAs / SEONG Seungho¹, DENLINGER J. D.², KIM Kyoo³, MIN B. I.⁴, TAKABATAKE T.⁵, KANG Jeongsoo¹ (¹Physics, The Catholic University of Korea, ²ALS, Lawrence Berkeley National Lab, ³Advanced Materials Research Division, Korea Atomic Energy Research Institute, ⁴Department of Physics, POSTECH, ⁵Graduate School of Advanced Sciences of Matter, Hiroshima University)

P1-co.114

Successive magnetic transitions in the trimer-based triangular lattice Ba₄NbMn₃O₁₂ / LEE Suheon^{1,2}, SANNIGRAHI Jhuma², BERLIE Adam², HILLIER Adrian², KHALYAVIN Dmitry², KIM Heung-Sik³, ADROJA Devashibhai², CHOI Kwang Yong^{1,2} (¹Department of Physics, Chung-ang University, ²ISIS Neutron and Muon Source, Rutherford Appleton Laboratory, ³Department of Physics, Kangwon National University)

P1-co.115

Giant and highly anisotropic magnetocaloric effects in single crystals of disordered-perovskite RCr_{0.5}Fe_{0.5}O₃(R= Gd, Er) / SHIN Hyunjun¹, KIM Jinseok¹, KIM Jonghyuk¹, OH Donggun¹, LEE Nara¹, CHOI Young Jai¹ (¹Department of Physics, Yonsei University)

P1-co.116

Anisotropic and nonlinear magnetodielectric effects in orthoferrite ErFeO_3 single crystals / OH Dong Gun¹, KIM Jong Hyuk¹, SHIN Hyun Jun¹, CHOI Young Jai^{*1}, LEE Nara¹ (Department of Physics, Yonsei University)

P1-co.117

Oxygen Vacancy Engineering for Highly Tunable Ferromagnetic Properties: A Case of SrTiO_3 Ultrathin Film with a SrTiO_3 Capping Layer / KO Eun Kyo^{1,2}, MUN Junsik³, LEE Han Gyeol^{1,2}, KIM Jinkwon^{1,2}, SONG Jeongkeun^{1,2}, CHANG Seo Hyoung⁴, KIM Tae Heon⁵, CHUNG Suk Bum^{6,7,8}, KIM Miyoung³, WANG Lingfei^{1,2,9}, NOH Tae Won^{*1,2} (Department of Physics and Astronomy, Seoul National University, ²Center for Correlated Electron Systems, Institute for Basic Science (IBS), ³Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University, ⁴Department of Physics, Chung-Ang University, ⁵Department of Physics and Energy Harvest Storage Research Center (EHSRC), University of Ulsan, ⁶Department of Physics, University of Seoul, ⁷Natural Science Research Institute, University of Seoul, ⁸School of Physics, Korea Institute for Advanced Study, ⁹Hefei National Laboratory for Physical Sciences at Microscale, University of Science and Technology of China)

P1-co.118

Coupling magnon modes with microwave-cavity modes at low temperature below 20 mK / KIM Duk Y.^{*1}, KIM Dong Kyu¹, IHN Yong Sup¹, LEE Su-Yong¹, KIM Zaeil¹ (Agency for Defense Development)

P1-co.119

Torque magnetometry using circuit change of membrane-type surface stress sensor / ABDALLAH Mariam Omran¹, CHOI Joonyoung¹, JO Youn Jung^{*1} (Physics, Kyungpook National University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-co.201

Controlling anomalous Hall effect and hump structure in SrRuO₃ ultra-thin film by tuning inversion symmetry breaking / KIM Donghan^{1,2}, SOHN Byungmin^{1,2}, KIM Minsoo^{1,2}, HAHN Sungsoo^{1,2}, KIM Youngdo^{1,2}, KIM Jong Hyuk³, CHOI Young Jai³, KIM Changyoung^{*1,2}

(¹CCES (IBS), CCES (IBS), ²Department of Physics and Astronomy, Seoul National University, ³Department of Physics, Yonsei University)

P1-co.202

Strain-dependent electronic properties of SrRuO₃ thin film / HAHN Sungsoo^{1,2}, RYU Hanyoung^{1,2}, SOHN Byungmin^{1,2}, KIM Jeongrae^{1,2}, DAS Saikat^{1,2}, KIM Changyoung^{*1,2}

(¹Department of Physics and Astronomy, Seoul National University, ²Center for Correlated Electron Systems, Institute for Basic Science, CCES (IBS))

P1-co.203

Electronic structures and magnetic properties of ruthenate thin films / LEE SANG A¹, LEE JEGON², BAE JONG-SEONG³, SONG SEHWAN⁴, PARK SUNGKYUN⁴, CHOI WOO SEOK², HWANG JAE-YEOL^{*1}

(¹Pukyong National University, ²Department of Physics, Sungkyunkwan University, ³Busan Center, KBSI, ⁴Department of Physics, Pusan National University)

P1-co.204

Observation of Kondo hybridization with an orbital-selective Mott phase in 4d Ca_{2-x}Sr_xRuO₄ / KIM Minsoo^{1,2}, KIM Changyoung^{*1,2}, KYUNG Wonshik^{*1,2}

(¹Center for correlated electron systems, Institute for basic science, ²Department of Physics and Astronomy, Seoul National University)

P1-co.205

Variety of resistance properties and lattice parameters of SrIrO₃ films according to growth conditions / LEE DooPyo³, MAENG JinYoung², SONG Jong Hyun^{*2}, PARK JaeHoon³

(¹Chungnam National University, ²Department of Physics, Chungnam National University, ³Department of Physics, POSTECH)

P1-co.206

Unconventional superconducting properties in one-unit cell LaAlO₃ capped with SrTiO₃ / KWAK Yongsu¹, HAN Woojoo², LEE Joon Sung⁴, KIM Jinhee³, SONG Jong Hyun^{*1}

(¹Chungnam National University, ²Department of Nanoscience, UST, ³플랑크상수질량팀, KRISS, ⁴Display and Semiconductor Physics, Korea University)

P1-co.207

Observation of Kondo lattice behavior in an antiferromagnetic metal FeTe / KIM Younsik^{1,2}, HUH Soonsang^{1,2}, KIM Jong Hyuk³, CHOI Young Jae³, KIM Changyoung^{*1,2}
(¹Center for Correlated Electron Systems, Institute for Basic Science, ²Department of Physics and Astronomy, Seoul National University, ³Department of Physics, Yonsei University)

P1-co.208

Temperature dependent anomalous Hall effect in (Co, Ni)S₂ single crystals / CHOI Joonyoung¹, SALAWU Yusuff⁴, KIM Mi Kyung^{2,3}, KIM Changyoung^{2,3}, KIM Heon-Jung⁴, JO Youn Jung^{*1} (¹Physics, Kyungpook National University, ²Center for Correlated Electron Systems, IBS, ³Department of Physics and Astronomy, Seoul National University, ⁴Department of Materials-Energy Science and Engineering, Daegu University)

P1-co.209

Control of Photothermoelectric Effect in Topological Insulator / PARK Soohyun¹, LEE Jekwan², YU Ki Jun¹, CHOI Hyunyoung^{*2} (¹Electrical and Electronic Engineering, Yonsei University, ²Physics and Astronomy, Seoul National University)

P1-co.210

Electronic band structure of Cu₃TeO₆ via visible-UV Spectroscopy / KIM Jae Ha¹, SIM Kyung Ik^{1,2}, TIRTHANKAR Chakraborty^{3,4}, PARK Je Geun⁴, KIM Jae Hoon^{*1} (¹Department of Physics, Yonsei University, ²Center for Integrated Nanostructure Physics, IBS, ³Center for Quantum Materials, Seoul National University, ⁴Chemical Physics of Solids, Max Planck Institute)

P1-co.211

Growth optimization and characterization of ferroelectric properties in Bi₂WO₆ thin films / JEONG Jihwan^{1,2}, MUN Junsik^{1,3}, KIM Jinkwon^{1,2}, KIM Jeong Rae^{1,2}, PENG Wei^{1,2}, DAS Saikat^{1,2}, KIM Miyoung^{1,3}, NOH Tae Won^{*1,2} (¹Department of Physics and Astronomy, Seoul National University, ²Center for Correlated Electron Systems, Institute for Basic Science (IBS), ³Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)

P1-co.212

Temperature Dependent Raman Spectroscopic Study of Lead Halide Perovskite MaPbCl₃ Single Crystals / NAQVI Syed Furqan UI Hassan¹, KO Jaehyeon^{*1}, AHN Changwon², KIM Taeheon² (¹School of Nano Convergence, Hallym University, ²Department of Physics and Energy Harvest Storage Research Center, University of Ulsan)

P1-co.213

Optical and electrical properties of La_{1-x}Sr_xVO₃ films and Schottky diodes of La_{1-x}Sr_xVO₃/SrVO₃ (x ≤ 0.15) / LEE Ho Sun¹, OH Ye Jin¹, JUNG Dae Ho¹, PARK Woo Sung¹ (¹Applied Physics, Kyung Hee University)

P1-co.214

Chemical control of dielectric permittivity in Ni-doped BaTiO₃ ceramics / DUONG Nguyen Xuan¹, LEE Soonil², BAE Jong-Seong³, IHM Kyuwook⁴, KIM Gyeheon⁵, LIM So Yeon⁶, LEE Jongmin⁷, LEE Sanghan⁷, YANG Sang Mo⁸, SOHN Changhee⁵, KIM III Won¹, AHN Chang Won¹, KIM Tae Heon^{*1} (¹Department of Physics, University of Ulsan, ²School of Materials Science and Engineering, Changwon National University, ³Busan Center, Korea Basic Science Institute, ⁴Pohang, Pohang Accelerator Laboratory, ⁵Department of Physics, UNIST, ⁶Department of Physics, Sookmyung Women's University, ⁷School of Materials Science and Engineering, GIST, ⁸Department of Physics, Sogang University)

P1-co.215

Impact of growth temperatures on ferroelectric hysteresis in epitaxial Bi_{1/2}(Na_{0.82}K_{0.18})_{1/2}TiO₃ thin films / JO Yong Jin¹, SHEERAZ Muhammad¹, DUONG Nguyen Xuan¹, KIM Gyeheon², SOHN Changhee², KIM III Won¹, AHN Chang Won¹, KIM Tae Heon^{*1} (¹Department of Physics, University of Ulsan, ²Department of Physics, UNIST)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-co.301

Superconducting proximity effect and Aharonov-Bohm oscillations in Josephson junctions made of topological insulator nanoribbons. / KIM Rak-Hee¹, HOU Yasen², YU Dong², DOH Yong-Joo^{*1} (¹Department of Physics and Photon Science, GIST, ²Department of Physics and Astronomy, University of California Davis)

P1-co.302

Theoretical Investigations of Graphene/Y₂C van der Waals Heterostructures / CHOI Chang-Gyu¹, KIM Junghwan¹, CHA Janghwan¹, HONG SukLyun^{*1} (¹Sejong University)

P1-co.303

Ab initio study of electric field effect on p-n junctions based on 2D van der Waals heterostructures / KIM Junghwan¹, HONG SukLyun^{*1} (¹Sejong University)

P1-co.304

Theoretical study of adsorption of acetonitrile molecules on Si(111)-(7x7) / HONG SukLyun^{*1}, PARK Jinwoo¹ (¹Sejong University)

P1-co.305

Electron-phonon interaction on topological insulators / LEE Bumjoo^{1,2}, IN Chihun², NOH Tae Won^{*1,2}, CHOI Hyunyoung^{*2} (¹Institute for Basic Science, Center for Correlated Electrons Systems, ²Department of Physics and Astronomy, Seoul National University)

P1-co.306

Revivable vertical graphene resistive strain sensor for in vivo biocompatible application / NA Hong Ryeol¹, LEE Sunghun^{*1} (¹Department of Physics, Sejong University)

P1-co.307

The Morphological Characterization Study of Proton Exchange Membrane through Local Charge Density Measurement by EFM / KWON Osung^{*1} (¹Keimyung University)

P1-co.308

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} (¹Department of Physics and Astronomy, Seoul National University, ²Center for Correlated Electron Systems, Institute for Basic Science)

P1-co.309

Bimodal switching current distribution and fractional Josephson effect in topological Josephson junctions / HWANG Tae-Ha¹, KIM Nam-Hee¹, KIM Hong-Seok¹, HOU Yaseen², YU Dong², DOH Yong-Joo^{*1} (¹Department of Physics and Photon Science, GIST, ²Department of Physics, UC Davis)

P1-co.310

Semiclassical Broadening in Quantum Dot Thermometry / KIM Uhhjin¹, PARK Dongsung T.², CHOI Hyungkook^{*1} (¹Physics, Jeonbuk National University, ²Physics, KAIST)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-co.401

Magnetism of Heusler Compound $Mn_{3-x}Co_xGa$ ($0 \leq x \leq 1$) in Cubic and Tetragonal Phases / [NGUYEN Quynh Anh Thi](#)¹, [HO Thi Huynh](#)¹, [HONG Soon Cheol](#)¹, [RHIM Sonny](#)^{*1} (¹Department of Physics, University of Ulsan)

P1-co.402

First-principles study of two-dimensional Gd_2C electride / [CHAE Jinwoong](#)¹, [KIM Gunn](#)^{*2} (¹Department of Physics, Sejong University, ²Department of Physics and Astronomy, Sejong University)

P1-co.403

Variations in Electronic Properties due to Defects in Monolayer GeS / [CHOI Hyeongkyu](#)¹, [CHA Janghwan](#)¹, [HONG SukLyun](#)^{*1} (¹Sejong University)

P1-co.404

Emergence of anomalous Hall effect from a compensated collinear ferrimagnetism / [PARK Minkyu](#)¹, [HAN Guihyun](#)², [RHIM Sonny](#)^{*2} (¹Research Institute of Basic Sciences, University of Ulsan, ²Department of Physics, University of Ulsan)

P1-co.405

Very Strong Lithium-Polysulfide Anchoring Effect of Amorphous Carbon for Lithium-Sulfur Batteries / [LEE Yong Chul](#)¹, [JUNG Sung Chul](#)^{*1} (¹Pukyong National University)

P1-co.406

First Principle Study of the groove smoothing mechanism on a Cu(111) surface / [LEE Hyung-June](#)¹, [KWON Young-Kyun](#)^{*1} (¹Department of Physics, Kyung Hee University)

P1-co.407

Hydrogen evolution reaction of AgTe / [KIM Heeju](#)¹, [KIM Gunn](#)^{*2} (¹Department of Physics, Sejong University, ²Department of Physics and Astronomy, Sejong University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-co.501

Double-well potential of hydrogen bonds revealed by NMR / KIM Se Hun^{*1} (¹Jeju National University)

P1-co.502

Observation of the back-donation pi-bonding states near the Fermi level with angle-resolved photoemission / JUNG Jongkeun¹, KIM Changyoung^{*1}, MUN Bongjin Simon² (¹Department of Physics and Astronomy, Seoul National University, ²Department of Physics and Photon Science, GIST)

P1-co.503

Design of frequency conversion device using 'membrane-in-the-middle' cavity optomechanics / PARK Chanhu¹, IHN Yong Sup², LEE Donghun^{*1} (¹Physics, Korea University, ²Quantum Physics Technology Directorate, Agency for Defense Development)

P1-co.504

각분해 광전자 분광학을 이용한 PbSb₂ 전자구조 연구 / NOH Han-Jin^{*1}, JU Woo-Ri^{*1} (¹department of physics, Chonnam National University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-nu.001

Detailed study of string shoving model in PYTHIA8 / Ji SuJeong¹, LIM Sanghoon¹, KIM Eun-Joo², KIM Junlee² (¹Department of Physics, Pusan National University, ²Department of Physics, Jeonbuk National University)

P1-nu.002

Development of the prototype of Active Target Time Projection Chamber / KIM Yongsun¹, KIM Geunwoo¹ (¹Department of Physics, Sejong University)

P1-nu.003

Status report of a prototype BDC for the LAMPS system at the RAON / MOON Dong Ho¹, HWANG Jaein², GWAK Piljun¹, KIM Hyunchoo¹, HWANG Sanghoon³, SEO Junhu¹ (¹Physics Department, Chonnam National University, ²Department of Physics, Korea University, ³Department of Physics, KRISS)

P1-nu.004

The Data aquastion development of LAMPS starting counter / KWEON Min Jung¹, DO Jaehyeon¹, LEE Hyungjun¹ (¹Inha University)

P1-nu.005

Comparison of radio-photoluminescence with silver doped phosphate glass with different composition / KIM Hong Joo¹, CHO Jaeyoung¹, ARYAL Pabitra¹ (¹Department of Physics, Kyungpook National University)

P1-nu.006

Crystal Structure and Luminescence Study of Lithium Scandium Borate $\text{Li}_3\text{Sc}(\text{BO}_3)_2$ Phosphors / SAHA Sudipta¹, KIM Hong Joo¹ (¹Department of Physics, Kyungpook National University)

P1-nu.007

Investigation of ^{22}Mg levels by resonant scattering of $^{18}\text{Ne}+\alpha$ / CHAE Kyung Yuk¹, CHA S. M.¹, ABE K.², BAE S. H.³, BINH D. N.⁴, CHOI S. H.³, DUY N. N.^{1,5}, GE Z.⁶, HAHN K. I.^{7,8}, HAYAKAWA S.², HONG B.⁹, IWASA N.^{6,10}, KAHL D.¹¹, KHIEM L. H.^{12,13}, KIM A.¹⁴, KIM D.⁷, KIM E. J.¹⁵, KIM G. W.¹⁴, KIM M. J.¹, KWAK K.¹⁶, KWAG M. S.¹, LEE E. J.¹, LIM S. I.¹⁴, MOON B.⁹, MOON J. Y.¹⁷, PARK S. Y.¹⁴, PHONG V. H.⁶, SHIMIZU H.², YAMAGUCHI H.², YANG L.² (¹Physics Department, Sungkyunkwan University, ²University of Tokyo, Center for

Nuclear Study, ³Department of Physics and Astronomy, Seoul National University, ⁴30 MeV Cyclotron Center, Tran Hung Dao Hospital, ⁵Department of Physics, Dong Nai University, ⁶Nishina Center, RIKEN, ⁷Center for Exotic Nuclear Studies, Institute for Basic Science, ⁸Department of Science Education, Ewha Womans University, ⁹Department of Physics, Korea University, ¹⁰Department of Physics, Tohoku University, ¹¹School of Physics and Astronomy, University of Edinburgh, ¹²Institute of Physics, Vietnam Academy of Science and Technology, ¹³Graduate University of Science and Technology, Vietnam Academy of Science and Technology, ¹⁴Department of Physics, Ewha Womans University, ¹⁵Division of Science Education, Chonbuk National University, ¹⁶Department of Physics, Ulsan National Institute of Science and Technology (UNIST), ¹⁷Rare Isotope Science Project, Institute for Basic Science)

P1-nu.008

Simulation study for quasi-mono energetic neutron source based on $p^+{}^9\text{Be}/\text{C}$ using the GEANT4 / KIM Gui Nyun¹, LEE Changhui¹ (¹Department of Physics, Kyungpook National University)

P1-nu.009

Measurement of Gamma-ray Energy Spectrum of ${}^{176}\text{Re}$ and ${}^{180}\text{Re}$ isotopes produced from ${}^{\text{nat}}\text{W}(p,x)$ Reaction by 100-MeV Proton Accelerator / LEE Samyol^{1,3}, YOON Jungran^{2,3} (¹Department of Radiological Science, Dongseo University, ²Department of New Material Physics, Dong-A University, ³Center of Radiological Environment & Health Science, Dongseo University)

P1-nu.010

Calculation of nuclear structure lying in the transition path between dynamic symmetries / LEE Su-youn¹, LEE J.H.¹, LEE Young-jun¹ (¹Division of Basic Sciences, Dong-Eui University)

P1-nu.012

The Comparison Study of Dose Distribution for 6He and 4He Ion Beams / LIU Dong¹, WOO Jong-Kwan², YANG Ji hae² (¹BK21+, Jeju National University, ²Physics Department, Jeju National University)

P1-nu.013

$\text{Na}_2(\text{Mo}_{1-x}\text{W}_x)_2\text{O}_7$ scintillation crystal: Crystal growth, luminescence and scintillation properties / NGUYEN Luan Thanh¹, KHAN Arshad¹, KIM Hong Joo^{1,2} (¹Department of Physics, Kyungpook National University, ²The Center for High Energy Physics, Kyungpook National University)

P1-nu.014

Calculation of beam quality correction factor for different depths of SOBP using Monte Carlo simulations / 권용철^{1,2}, JO Hyon-Suk¹, 이세병², 신옥근^{3,4} (¹Department of Physics, Kyungpook National University, ²양성자치료센터, National Cancer Center, ³방사선학과, Yonsei University, ⁴., Université Bordeaux 1)

P1-nu.015

Synthesis and luminescence properties of Ce^{3+} doped $\text{CsBaYB}_6\text{O}_{12}$ phosphor / NTARISA Amos Vincent¹, DANIEL D. Joseph¹, KIM Hong Joo^{*1}, NGUYEN Duy Quang¹
(¹Department of Physics, Kyungpook National University)

P1-nu.016

외기빔 PIXE 시스템을 이용한 대기 시료 내 중금속 분석 실증 연구 / KIM Kye-Ryung^{*1}, CHO Yong-Sub¹, KWON Hyeok-Jung¹, KIM Kui-Young¹, KANG Nam-Woo¹, DANG Jeong-Jeung¹ (¹Korea Multi-purpose Accelerator Complex, KAERI)

P1-nu.017

Development and Calibration of a BC501A Liquid Scintillator for Neutron Detection / NGUYEN Duy Quang¹, KIM Hong Joo^{*1}, NTARISA Amos Vincent¹, KIM Jae Hyeok¹
(¹Department of Physics, Kyungpook National University)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

On-line Discussion(mandatory): Nov. 5, 13:00-13:50 & Nov. 6, 14:00-14:50

Room: Virtual poster room

P1-op.001LED 광원을 이용한 항공장애등 프레넬 렌즈설계 (Design of Fresnel Lens for Aircraft Warning Light Using LED Light Source) / KIM Jong Tae^{*1} (¹Pukyong National University)**P1-op.002**온도측정을 위한 적외선 광학계 설계에 관한 연구 (InfraRed Optical System Design for Temperature Measurements) / KIM Jong Tae^{*1} (¹Pukyong National University)**P1-op.003**Few-femtosecond nanoplasmonic near-field dynamics studied by interferometric time- and energy-resolved photoemission electron microscopy / GLISERIN Alexander^{2,3}, CHEW Soo Hoon^{2,3}, CHOI Sungho^{1,3}, KIM Seungchul², KIM Dong Eon^{*1,3} (¹Physics Department, POSTECH, ²Department of Optics and Mechatronics Engineering, Pusan National University, ³Max Planck/POSTECH Korea Research Initiative, Max Planck Center for Attosecond Science)**P1-op.004**Temperature dependence of vermilion pigments in the terahertz region / LEE Ji Eun¹, KIM Jangwon¹, JUNG Taek Sun¹, KIM Jae Ha¹, KIM Jae Hoon^{*1} (¹Department of Physics, Yonsei University)**P1-op.005**Quantitative analysis of vermilion pigments using terahertz time-domain spectroscopy / JUNG Taek Sun¹, KIM Jangwon¹, LEE Ji Eun¹, KIM Jae Ha¹, KIM Jae Hoon^{*1} (¹Department of Physics, Yonsei University)**P1-op.006**Angle-insensitive reflective structural color filters creating additive colors / JUNG Incheol¹, KWAK Hojae¹, KIM Hyeonwoo¹, JEON Jisoo¹, LEE Kyu-Tae^{*1} (¹Department of Physics, Inha University)**P1-op.007**고출력 백색광원용 세라믹 형광체 플레이트의 가공 크기에 따른 발광 분포 및 효율 분석 / KIM Kyuheon¹, JUNG Gunwoo¹, JEONG Wonchae¹, JEON Boram¹, KIM Jaesun¹, SUNG Yujin¹, MOON Youngboo², SONG Jung Hoon^{*1} (¹Kongju National University, ²UJL, (주)UJL)

P1-op.008

DED 방식 금속 3D 프린팅 공정에서의 멜트풀 파장 특성 분석 / JANG Yea Sol¹, YOON Hyung-Do¹, BANG Keon Hwan², KIM Young Soo², LEE Kyung Ha², SEO Yong Gon^{*1} (¹Nano Convergence Technology Research Center, KETI, ²DENT R&D Center, DE&T Co., Ltd)

Presentation: Nov. 2, 12:00 ~ Nov. 6, 18:00

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P1-pa.101**Search for Dark Sector with Belle Experiment / CHO Sungjin¹, KIM Yongkyu¹, KWON Youngjoon¹** (¹Physics, Yonsei University)**P1-pa.102****DAQ Archiver management for Belle II Detector Operation / KIM Yongkyu¹, CHO Sungjin¹, KWON Youngjoon¹** (¹Physics, Yonsei University)**P1-pa.103****Shielding configuration to reduce beam-related gamma backgrounds at JSNS² / JUNG Da Eun¹, KIM S.B.¹, YU I.T.¹, ROTT C.¹, JEON H.¹, JEON S.¹, G. ROEILINGHOFF G.¹, KIM E.J.², KIM J.Y.³, LIM I.T.³, JOO K.K.³, MOON D.H.³, SHIN C.D.³, ZOHAI B.A.³, JANG M.C.³, CHOI J.W.³, CHOI J.H.⁴, PAC M.Y.⁴, JANG H.I.⁵, YEO I.S.⁵, JANG J.S.⁶, KIM W.⁷, GOH J.H.⁸, YU C.⁸, LEE S.⁸, KANG S.K.⁹, CHEOUN M.K.¹⁰** (¹physics, Sungkyunkwan University, ²Division of Science Education, Physics major, Jeonbuk National University, ³Department of Physics, Chonnam National University, ⁴Department of Radiology, Dongshin University, ⁵Department of Fire Safety, Seoyeong Univsersity, ⁶Division of liberal art and science, GIST, ⁷Department of Physics, Kyungpook National University, ⁸Department of Physics, Kyung Hee University, ⁹School of Liberal Arts, Seoul National University of Science and Technology, ¹⁰Department of Physics, Soongsil University)**P1-pa.104****Report on an LED run of the JSNS² experiment / YU Intae¹, JEON Sanghoon¹, KIM E J², KIM J Y³, LIM I T³, JOO K K³, MOON D H³, SHIN C D³, ZOHAI B A³, JANG M C³, CHOI J W³, CHOI J H⁴, PAC M Y⁴, JANG H I⁵, YEO I S⁵, JANG J S⁶, KIM W⁷, KIM S B¹, ROTT C¹, JEON H¹, JUNG D E¹, ROEILINGHOFF G¹, GOH J⁸, YOO C⁸, LEE S⁸, KANG S K⁹, CHEOUN M K¹⁰** (¹Department of Physics, Sungkyunkwan University, ²Division of Science Education, Physics Major, Jeonbuk National University, ³Department of Physics, Chonnam National University, ⁴Department of Radiology, Dongshin University, ⁵Department of Fire Safety, Seoyeong Univsersity, ⁶Division of liberal art and science, GIST, ⁷Department of Physics, Kyungpook National University, ⁸Department of Physics, Kyung Hee University, ⁹School of Liberal Arts, Seoul National University of Science and Technology, ¹⁰Department of Physics, Soongsil University)**P1-pa.105****A study of Dark Matter at e⁺e⁻ collider using MadGraph / PARK Kihong¹, CHO Kihyeon¹** (¹UST, KISTI)

P1-pa.106

Cosmic gamma Background study at the JSNS² / JEON Hyoungku¹, ROTT Carsten¹, KIM E.J², KIM J.Y³, LIME I.T³, JOO K.K³, MOON D.H³, SHIN C.D³, ZOHAI B. A.³, JANG M.C³, CHOI J.W³, CHOI J.H⁴, PAC M.Y⁴, JANG H.I⁵, YEO I.S⁵, JANG J.S⁶, KIM W⁷, KIM S.B¹, YU I.T¹, JEON S.H¹, JUNG D.E¹, ROEILINGHOFF G¹, GOH J.H⁸, YU C.⁸, LEE S.⁸, KANG S.K⁹, CHEOUN M.K¹⁰ (¹department of physics, Sungkyunkwan University, ²Division of Science Education, Jeonbuk National University, ³Department of Physics, Chonnam National University, ⁴Department of Radiology, Dongshin University, ⁵Department of Fire Safety, Seoyeong University, ⁶Division of liberal art and science, GIST, ⁷Department of Physics, Kyungpook National University, ⁸Department of Physics, Kyung Hee University, ⁹School of Liberal arts, Seoul National University of Science and Technology, ¹⁰Department of Physics, Soongsil University)

P1-pa.107

A Study on the Way to Build an Affordable Storage System in the Big Data Age with the Experience of Operating the WLCG CMS Tier-2/3 Center / RYU Geonmo^{*1} (¹Global Science Experimental Data Hub Center (GSDC), Korea Institute Science and Technology Information)

P1-pa.108

Study of MET Significance for the Phase-2 Upgrade of the CMS Level-1 Trigger / MOON Chang-Seong¹, KIM Daekwon¹ (¹Department of Physics, Kyungpook National University)

P1-pa.109

CMS RPC offline software development and quality monitoring / LEE YOUNGHOON^{*1} (¹DEPARTMENT OF PHYSICS, Sungkyunkwan University)

P1-pa.110

Simn design optimization by TCAD simulation for the dual-readout calorimeter / SON Jonghui¹, KIM Bobae¹, LEE Sehwook¹, LEE Junghyun¹, KO Sanghyun², KIM Doyeong³, LEE Jason³, LEE Yunjae³, PARK Jongsuk³, RYU Minsang³, WATSON Ian³, EO Yan⁴, HA Seungkyu⁴, HWANG Kyuyoung⁴, KIM Minsoo⁴, YOO Hwidong⁴ (¹Kyungpook National University, ²Department of Physics, Seoul National University, ³Department of Physics, University of Seoul, ⁴Department of Physics, Yonsei University)

P1-pa.111

Unfolding Weyl invariants / KIM Yujin^{*1} (¹Kyung Hee University)

P1-pa.112

Asymptotic Symmetries of Conformal Gravity / KIM Sejin^{*1}, JOUNG Euihun¹ (¹Physics, Kyung Hee University)

P1-pa.113

The higher spin operator product expansion in the N=3 Kazama-Suzuki Model / LEE Soa^{*1} (¹Physics, Kyungpook National University)

P1-pa.114

Higgs inflation as non-linear sigma models and its UV completion / LEE Hyun Min^{*1},
MENKARA Adriana Guerrero¹ (¹Department of Physics, Chung-Ang University)

P1-pa.115

Light mediators for dark matter beyond Z^2 parity / LEE Hyun Min^{*1}, KIM Seongsik¹,
KANG Yoo-Jin¹ (¹Department of Physics, Chung-Ang University)

P1-pa.116

Four-form flux bridging between Higgs boson and dark matter / LEE Hyun Min^{*1},
SONG Ji Seon¹, KANG Yoo Jin¹, MENKARA Adriana Guerrero¹ (¹Department of Physics,
Chung-Ang University)

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P1-pa.201

Study of measured charge variation using radioactive sources at RENO / JOO Kyung Kwang^{*1}, KIM Ba-Ro¹, GWAK Piljun¹, KIM Jaeyool¹, MOON Dongho¹, SHIN Changdong¹, JOHAAIB Atif¹, KIM Wooyoung², PAC Myoung Youl³, CHOI Juneho³, JANG Hanil⁴, KWON Eunhyang⁵, KIM Sang yong⁵, KIM Soo-Bong⁵, SEO Hyunkwan⁵, LEE Dongha⁵, LEE Hyung⁵, KIM Jonggun⁶, SEO Jiwoong⁶, YU Intae⁶, JEON Sanghoon⁶, JUNG Daeun⁶, LIM Intaek⁷, JANG Jeeseung⁸, YOO Jonghee⁹, YANG Byeongsu⁹, JU Kiwon⁹, YU Minsang⁹, YOON Seok-Gyeong⁹ (¹Department of Physics, Chonnam National University, ²Department of Physics, Kyungpook National University, ³Department of Radiology, Dongshin University, ⁴Department of Fire Safety, Seoyeong University, ⁵Department of Physics and Astronomy, Seoul National University, ⁶Department of Physics, Sungkyunkwan University, ⁷Department of Physics Education, Chonnam National University, ⁸GIST College, Gwangju Institute of Science and Technology, ⁹Department of Physics, Korea Advanced Institute of Science and Technology)

P1-pa.202

Deep Learning For Low Energy Noise Rejection From COSINE-100 Data / LEE Seung Mok^{*1}, KO Young Ju², LEE Hyun Su², KIM Kyoung Won², KIM Sun Kee¹, CHOI Jaejin¹, JOO Han Wool¹ (¹Department of Physics & Astronomy, Seoul National University, ²Center For Underground Physics, IBS)

P1-pa.203

The Camera System for the IceCube Upgrade / LEE Jiwoong^{*1}, ROELLINGHOFF Gerrit¹, KANG Woosik¹, TOENNIS Christoph¹, ROTT Carsten¹ (¹Department of Physics, Sungkyunkwan University)

P1-pa.205

Design of target and background study for a magnetic monopole experiment / LEE Junghyun^{*1}, LEE Sehwook¹, HUH Changgi¹, YE Ryonghae¹ (¹Kyungpook National University)

P1-pa.206

Photon propagation simulation in the crystal scintillator / KIM Jinyoung^{*1}, KAN Junho¹, HA Chang Hyon¹ (¹Physics, Chung-Ang University)

P1-pa.207

A way to reduce the aging of a solid state scintillator / WOO Jong-Kwan^{*1}, LIU Dong², YANG Jihye¹ (¹Department of Physics, Jeju National University, ²Medical Physics Laboratory, Jeju National University)

P1-pa.208

Photon simulations for AMoRE-Pilot experiment / MAILYAN Bagrat^{*1} (¹Center for Underground Physics, IBS)

P1-pa.209

Energy resolution study for AMoRE-Pilot experiment / MAILYAN Bagrat^{*1} (¹Center for Underground Physics, IBS)

P1-pa.210

Rock gamma simulation for AMoRE / KIM Hong Joo^{*1}, HA Daehoon¹, JEON Eunjo², OH Yo0min² (¹Department of Physics, Kyungpook National University, ²CUP, IBS)

P1-pa.211

Simulation study of calibration system for AMoRE-II experiment / LEE Moo Hyun^{*1,2}, SEO Jeewon^{1,2}, JEON Eunju¹ (¹Center for Underground Physics (CUP), IBS, ²IBS School, University of Science and Technology (UST))

P1-pa.212

Novel Silicon Photomultiplier Tube (SiPMT) for KNO / ANJUM Faizan¹, NASIR Hamza¹, LEE Jik¹, KIM Hong Joo^{*1} (¹Department of Physics, Kyungpook National University)

P1-pa.213

Development of vertex reconstruction and particle identification tool for KNO / SEO Jiwoong^{*1}, YU Intae¹, KWON Eunhyang¹, YU SeongHyeon¹, HONG JaeJin¹, KIM Hyunsoo², JANG JeeSeung⁴, LEE Youngmin² (¹Department of Physics, Sungkyunkwan University, ²Department of Physics, KAIST, ³Department of Physics and Astronomy, Sejong University, ⁴Department of Physics and Photon Science, GIST)

P1-pa.214

Reconstruction of neutrino energy in the KNO detector / YU Intae^{*1}, YU SeongHyeon¹, KIM HyunSoo², JANG JeeSeung³, KWON EunHyang¹, SEO JiWoong¹, LEE YoungMin⁴, HONG JaeJin¹ (¹Department of Physics, Sungkyunkwan University, ²Department of Physics and Astronomy, Sejong University, ³Department of Physics and Photon Science, GIST, ⁴Department of Physics, KAIST)

P1-pa.215

Kovar Alloy Oxidation and Baking System for the Fabrication of the Photocathode and SiPMT Assembly. / NASIR Hamza¹, ANJUM Faizan¹, LEE Jik¹, KIM Hong Joo^{*1} (¹Department of Physics, Kyungpook National University)

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P1-pl.101Optimization of external quadrupole field in free-electron laser / KIM Tae hoon¹, KIM Ki-Bum¹ (¹Kangwon National University)**P1-pl.102**레이저유도형광 진단을 이용한 홀추력기 플라즈마 내 Xe II 이온의 2차원 거동 연구 / DOH Guentae¹, LEE Dongho¹, KIM Youngho², CHOE Wonho^{1,3} (¹Department of physics, KAIST, ²Space Exploration Engineering Program, Department of Aerospace Engineering, KAIST, ³KAIST)**P1-pl.103**Characterization of the plasma dipole oscillation in strongly magnetized plasmas / SONG HyungSeon¹, KANG Teyoun¹, KUMAR Manoj¹, PARK Dohyun¹, HUR Min Sup¹ (¹Physics, UNIST)**P1-pl.104**KOMAC 양성자가속기의 200 MeV 업그레이드를 위한 극저온 시스템 기초 설계 연구 / KIM Han Sung¹, KWON Hyeok Jung¹, DANG Jeong Jeung¹, LEE Seung Hyun¹, KIM Kyung Hyun¹, JUNG Won Hyeok¹, CHO Yong Sub¹ (¹KOMAC, KAERI)**P1-pl.105**Numerical Study on the residual gas molecules in KOMAC LEBT using Molflow+ / KIM DongHwan^{1,2}, DANG Jeongjeung¹, KWON Hyeok-Jung¹, KIM Han-Sung¹, LEE Seung-Hyun¹, CHOE Kyumin¹, CHUNG Kyoung-Jae², HWANG Yong-Seok² (¹KAERI, ²Department of Nuclear Engineering, Seoul National University)**P1-pl.106**A new configuration for helium atmospheric pressure plasma jet / TRAN Tuyen Ngoc¹, KIM Bumsoo¹, LEE Wonwook^{1,2}, OH Cha-Hwan¹ (¹Department of Physics, Hanyang University, ²Research Institute of Natural Science, Hanyang University)**P1-pl.107**Design and First Experimental Results of a Beam Extraction system of 2.45 GHz Electron Cyclotron Resonance Ion Source for Compact Neutron Generator / KIM Tae-Seong¹, JEONG SeungHo¹, JO JongGab¹, KIM Sun-Ho¹, JUNG Bong-Ki¹, HUH Sung-Ryul¹, CHANG Doo-Hee¹, CHANG Dae-Sik¹ (¹KAERI)

P1-pl.108

Gas cell development for laser plasma acceleration by using fs-laser machining / KIM Hyunil Benjamin¹, KIM JinJu¹, PHUNG LING JEN Vanessa¹, PARK JunGyu¹, ROH KyungMin¹, KANG KeeKon¹, SUK Hyyong^{*1} (¹Dept. of Physics and Photon Science, GIST)

P1-pl.109

유전장벽형 유연 플라즈마 파우치 개발 및 특성 조사 / KIM Jinwoo¹, PARK Sanghoo², CHOE Wonho^{*1} (¹KAIST, ²Plasma Technology Research Center, NFRI)

P1-pl.110

Measuring electric fields between two conducting parallel plates using a linear electro-optic effect applicable to a plasma assisted combustion system / CHOI Seongmin¹, KYRITSIS Dimitrios², CHOE Wonho¹, GHIM Young Chul^{*1} (¹KAIST, ²Department of Mechanical Engineering, Khalifa University)

P1-pl.111

Generation of laser induced helium plasma at atmospheric pressure / TRAN Tuyen Ngoc¹, KIM Bumsoo¹, LEE Wonwook^{*1,2}, OH Cha-Hwan¹ (¹Department of Physics, Hanyang University, ²Research Institute of Natural Science, Hanyang University)

P1-pl.112

Single Crystal Dispersion Interferometer 데이터의 베이지안 기반 해석을 위한 forward model 개발 / LEE Jaeseok¹, LEE Donggeun¹, LEE Kwan Chul², GHIM Young Chul^{*1} (¹KAIST, ²플라즈마진단연구팀, NFRI)

P1-pl.113

Design and Evaluation of Impedance Transformer to Improve 2.45 GHz Microwave Coupling into Plasmas in Electron Cyclotron Resonance Ion Source (ECRIS) / JO Jong Gab^{*1}, JEONG Seung Ho¹, KIM Sun-Ho¹, KIM Tae-Seong¹ (¹Nuclear Fusion Technology Development Division, KAERI)

P1-pl.114

Preliminary study of high energy beam transport for 200 MeV energy upgrade of KOMAC proton linac / LEE Seunghyun^{*1}, KWON Hyeok-Jung¹, DANG Jeong-Jeung¹, KIM Han-Sung¹, CHO Yong-Sub² (¹KOMAC, KAERI, ²Nuclear Physics Application Research Division, KAERI)

P1-pl.115

KOMAC 200 MeV 에너지 업그레이드를 위한 HWR 극저온 모듈 제작 일정 계획 / CHO Yong-Sub^{*1}, KWON Hyeok-Jung², KIM Han Sung², LEE Seunghyun², DANG Jeongjeung² (¹Nuclear Physics Application Research Division, KAERI, ²KOMAC, KAERI)

P1-pl.116

50 W급 저전력 홀추력기의 자기장 형상에 따른 성능 및 이온빔 특성 연구 / LEE Dongho¹, KIM Holak², DOH Guentae¹, KIM Youngho³, PARK Jaehong³, CHOE Wonho⁴ (¹Department of Physics, KAIST, ²Satellite Research Directorate, KARI, ³Space Exploration Engineering Program, KAIST, ⁴KAIST)

P1-pl.117

제한된 시선을 가진 ITER 분광계 시스템의 토카막 토모그래피 기법 개발 / HAN YoonSeong², HWANG Junghoo², CHOE Wonho^{*1,2} (¹KAIST, ²Department of Nuclear and Quantum Engineering, KAIST)

P1-pl.118

하이브리드 Particle-In-Cell 전산모사를 통한 100 W급 이하 저전력 홀추력기의 채널 내외 플라즈마 특성 연구 / PARK Jaehong¹, LEE Dongho², DOH Guentae², KIM Youngho¹, RYU Kwangsun⁴, CHOE Wonho^{*3,5} (¹Space Exploration Engineering Program, KAIST, ²Department of Physics, KAIST, ³Department of Nuclear and Quantum Engineering, KAIST, ⁴Satellite Technology Research Center, KAIST, ⁵KAIST)

P1-pl.119

저주파에서 발생하는 대기압 플라즈마 젯의 기초 진단 및 액체 내 활성 종들의 변화 / BAE JINHEE¹, LEE JAESUN¹, JEONG SOJEONG¹, JOH HEAMIN¹, CHUNG TAEHUN¹ (¹physics, Dong-A University)

P1-pl.120

지구 저궤도 플라즈마 환경모사를 위한 링-커스프 자기장 기반의 플라즈마 발생장치 개발 및 플라즈마 특성 조사 / KIM Youngho⁴, DOH Guentae², LEE Dongho², RYU Kwangsun³, CHOE Wonho^{*1,4} (¹KAIST, ²Department of Physics, KAIST, ³Satellite Technology Research Center, KAIST, ⁴Department of Aerospace engineering, space exploration engineering program, KAIST)

P1-pl.121

200 MeV 에너지 업그레이드를 위한 초전도 저온용기의 자기차폐 설계 기초연구 / KWON Hyeok-Jung^{*1}, KIM Han-Sung¹, DANG Jeong-Jeung¹, LEE Seunghyun¹, CHO Yong-Sub² (¹KOMAC, KAERI, ²Nuclear Physics Application Research Division, KAERI)

P1-pl.122

Development of thin-foil based infrared bolometer system in KSTAR / BAE SEHYUN¹, LEE MIN UK², THATIPAMULA SHEKAR GOUD², KIM JAYHYUN³, YUN GUNSU^{*1,2} (¹Department of Physics, POSTECH, ²Division of Advanced Nuclear Engineering, POSTECH, ³MHD Stability Research Team, NFRI)

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P1-pl.201

유도 결합 플라즈마에서 He 2^3S 준 안정 상태 원자 밀도에 따른 E-H 모드 전이에 관한 연구 / SHIM Sungyong¹, OH Cha Hwan¹, LEE Wonwook^{*1,2} (¹Department of physics, Hanyang University, ²Research Institute of Natural Science, Hanyang University)

P1-pl.202

제트 플라즈마 전산모사를 통한 전기풍(Electric wind) 발생 연구 / LEE Hyun Gyu¹, PARK Sanghoo², KIM Jinwoo¹, CHOE Wonho^{*1} (¹KAIST, ²Plasma Technology Research Center, NFRl)

P1-pl.203

Al Hugoniot from model calculations including semicore electrons based on density functional theory / JEONG Inki¹, HAHN Sang June¹, YOON Young-Gui^{*1} (¹Chung-ang University)

P1-pl.204

Development of one dimensional full wave spectral code for the ICRF H&CD of a nuclear fusion reactor / KIM Sun Ho^{*1}, KWAK Jong Gu² (¹Nuclear Physics Application Research Division, KAERI, ²Department of Heating and Current Drive Research, NFRl)

P1-pl.205

Experimental Observations of Interaction between Runaway Electrons and Fast Waves in Versatile Experiment Spherical Torus (VEST) / JO Jong Gab^{*1}, LIM Soobin², KIM SeongCheol², LEE Soong-Hyeong², KIM Sun-Ho¹, HWANG Yong-Seok² (¹Nuclear Fusion Technology Development Division, KAERI, ²Department of Nuclear Engineering, Seoul National University)

P1-pl.206

인공신경망을 이용한 토카막 플라즈마 내 불순물 수송 코드 백워드 모델 개발 / YOON Junhyeok^{1,2}, SONG Inwoo^{2,3}, SHIN Haewon^{1,2}, HAN Yoonseong^{1,2}, HWANG Junghoo^{1,2}, CHOE Wonho^{*1,2} (¹Department of Nuclear and Quantum Engineering, KAIST, ²Impurity and Edge plasma Research Center, KAIST, ³Department of Physics, KAIST,4KAIST)

P1-pl.207

Development of 2D Plasma/Neutral Transport Simulation System from Core to Wall in KSTAR / LEE Jae Gon¹, PARK Jin Myung², LEE Chan Young¹, NA Yong Su^{*1} (¹Nuclear Engineering, Seoul National University, ²Fusion Energy Division, Oak Ridge National Laboratory)

P1-pl.208

Disruption prediction in KSTAR using Neural Network / PARK J.K.¹, LEE Jeongwon², LEE Y.S.¹, NA Yong-Su¹ (¹Seoul National University, ²National Fusion Research Institute)

P1-pl.209

The Cs-free Negative Hydrogen Ion Source Project at KAERI for Future N-NBI Systems / HUH Sung-Ryul¹, JUNG Bong-Ki¹, PARK Min¹, JEONG Seung Ho¹, KIM Tae-Seong¹, CHANG Dae-Sik¹ (¹Nuclear Physics Application Research Division, KAERI)

P1-pl.210

Comparison of KSTAR impurity measurements with neoclassical impurity transport theory / LEE Hyojong¹ (¹Hanyang University)

P1-pl.211

Study of Hydrogen-isotope permeation in Tungsten for fusion applications / SEO Hee Jeong^{1,4}, KIM Hee Soo¹, BYEON Woo Jun², CHUNG Bo-Hyun³, NOH Seung Jeong^{1,4} (¹Dankook University, ²Center for Scientific Instrumentation, KBSI, ³Department of R&D, KAPRA, ⁴Department of Physics, Dankook University)

P1-pl.212

Investigation of the n=0 MHD resistive wall mode in a tokamak with the effects of a negative triangular plasma shape / SONG Junhyuk¹, LEE Hyojong¹, LEE Jungpyo¹ (¹Nuclear Engineering, Hanyang University)

P1-pl.213

Geometric effect on profile flattening of magnetic island in Tokamak / TAE Wonjun², YOON Eisung¹, HUR Min Sup² (¹Department of Nuclear Engineering, UNIST, ²Department of Physics, UNIST)

P1-pl.214

KSTAR H-mode 플라즈마에서 D₂ 연료가스 및 Ne 가스 주입에 의한 경계 플라즈마 물성 변화 분석 / HWANG Junghoo^{1,2}, PARK Jae-Sun³, PITTS Richard³, LEE Hyungho⁴, HAN Yoon Seong^{1,2}, JUHN June-Woo⁴, BAK Jun-Gyo⁴, HONG Suk-Ho⁴, CHOE Wonho^{1,2} (¹Department of Nuclear and Quantum Engineering, KAIST, ²Impurity and Edge plasma Research Center, KAIST, ³Science division, ITER, ⁴국가핵융합연구소, NFRI, ⁵KAIST)

P1-pl.215

Development of a full-orbit plasma particle trajectory code for the wave-particle resonance of energetic ions in a tokamak / JIHEON Song¹, JUNGPYO Lee¹ (¹Nuclear Engineering, Hanyang University)

P1-pl.216

토카막 플라즈마 진단에 활용되는 분산간섭계의 광정렬 문제를 개선하는 Single Crystal Dispersion Interferometer(SCDI)의 개발 및 설치 / LEE Dong-Geun¹, LEE Jae-Seok¹, LEE K.C.², JUHN J.-W.², GHIM Young Chul¹ (¹KAIST, ²Advanced Plasma Research Division, NFRI)

P1-pl.217

Introducing unstructured mesh support to a developing gyrokinetic code, gKPSP2 / YOON Eisung¹, JO Gahyung², PARK Jae Yun¹, SEO Janghoon², KWON Jae-Min² (¹Department of Nuclear Engineering, UNIST, ²Advanced Physics Research Division, NFRI)

P1-pl.218

Development of a Fokker-Planck code with Rosenbluth potentials using MFEM library / LEE Hyeonjun¹, YOON Eisung², LEE Jungpyo¹ (¹Department of Nuclear Engineering, Hanyang University, ²School of Mechanical, Aerospace, and Nuclear Engineering, UNIST)

P1-pl.219

Effects of target materials on the heat flux at divertors in KSTAR / KWON KyuBeen¹, RA Ookjoo¹, HUR Min Sup¹ (¹Physics, UNIST, ²Divertor System, NFRI)

P1-pl.220

KSTAR 플라즈마에 주입한 크립톤 밀도에 따른 ELM 완화 및 내부수송장벽 생성 현상 연구 / CHOE Wonho^{2,3}, SHIN Haewon^{2,3}, YOON Junhyeok^{2,3}, HWANG Junghoo^{2,3}, HAN Yoon Seong^{2,3}, JANG Juhyeok⁴ (¹KAIST, ²Department of Nuclear and Quantum Engineering, KAIST, ³Impurity and Edge plasma Research Center, KAIST, ⁴Plasma Diagnostics Research Team, National Fusion Research Institute)

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Room: Virtual poster room

P1-se.101

Magnetic field controlling of the thermoelectric efficiency under spin density waves / YUN Jae-Hyun¹, RHYEE JongSoo¹ (¹applied physics department, Kyung Hee University)

P1-se.102

에너지 수확을 위해 마찰전기 폴리머에 내장된 ZnO 나노 플레이크의 합성 및 특성 / MANCHI Punnarao², GRAHAM Sontyana Adonijah², HARISHKUMARREDDY Patnam², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

P1-se.103

A Highly Efficient Soot Based Bilayer Solar Vapor Generator / RASHID Mamoon Ur¹, TAHIR Zeeshan¹, KIM Sungdo¹, PARK Jongwoo¹, PARK Jin Jae¹, KIM Yong Soo^{*1} (¹physics / Semiconductor device Research, University of Ulsan)

P1-se.104

Simple and Facile Fabrication of Anion Vacancy Induced MoO_{3-x} Catalysts for Enhanced Hydrogen Evolution Activity / JO Seunghwan¹, HONG John², SOHN Junginn^{*1} (¹Dongguk University, ²School of Materials Science and Engineering, Kookmin University)

P1-se.105

Electron beam engineered monolayer MoS₂ for an efficient hydrogen evolution reaction electrocatalyst / PARK Jongwoo¹, NGUYEN Duc Anh¹, KIM Sungdo¹, LE Tam Chinh¹, KIM Yongsoo^{*1} (¹Semiconductor Device/Physics Department, University of Ulsan)

P1-se.106

리튬 이온 배터리를 음극재로 Fe₂VO₄ 나노 구 구조의 합성 및 특성 / ASHOK Kumar Kakarla², D. Narsimulu¹, ANKI Reddy Mule², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

P1-se.107

리튬 이온 배터리의 음극으로 바인더가 없는 3차원 Co₃O₄/Ni 복합 구조의 합성 및 특성 / ANKI Reddy Mule², D. Narsimulu¹, ASHOK Kumar Kakarla², YU Jae Su^{*1,2} (¹Department of Electronic Engineering, Kyung Hee University, ²Department of Electronics and Information Convergence Engineering, Kyung Hee University)

P1-se.108

Cubic CdS 단결정 박막의 엘립소메트리 및 투과 측정 / LEE Jongwon^{1,2}, KIM Daejung¹
(¹Department of New Materials Engineering, Hanbat National University, ²School of Basic Sciences, Hanbat National University)

P1-se.109

Characteristics of Ga₂O₃ solar-blind photodetector fabricated by pulsed laser deposition / JEONG Sangha¹, VU Oanh Thi Kim¹, KIM Eun Kyu¹ (¹Department of Physics, Hanyang University)

P1-se.110

Effect of internal electric field according to the strain of InAsSb/GaSb interface / KIM Jong Su¹, KWAK Minsoo¹, JO Hyun-Jun¹, KIM Yeong ho², LEE Sang Jun² (¹Yeungnam University, ²크리스 Micro & Smart Devices Team)

P1-se.111

건식공정으로 합성한 MaPb₃ 페로브스카이트 박막의 전기적 및 광학적 물성 / AHN Chang Wan¹, 김영환², 한일기², KIM Eun Kyu¹ (¹Department of Physics, Hanyang University, ²나노포토닉스연구센터, KIST)

P1-se.112

디지털 합금 InGaAlAs 다중 양자 우물의 열처리 온도에 따른 광학적 특성 연구 / KIM Jong Su¹, PARK Gyoung Du¹, JO Hyun Jun¹, RYU Mee Yr², SONG Jin Dong³ (¹Yeungnam University, ²department of physics, Kangwon National University, ³Center for Opto-Electronic Materials and Devices, KIST)

P1-se.113

Wafer-scale homogenous growth of high quality tungsten disulfides via surfactant-assisted metal-organic chemical vapor deposition / KOO Do Hyoung¹, KANG Hee Seong¹, LEE Chul-Ho¹ (¹Korea University)

P1-se.114

Optical and magnetic properties in Mn-doped layered 2D n-butylammonium bromide single crystals / BYUN Hye Ryung¹, SO Hyeon-Kyeong¹, LEE Sang-Eon¹, JUNG Myung-Haw¹, JANG Joon Ik¹ (¹Physics, Sogang University)

P1-se.115

Amplified spontaneous emission from a bulk CsPbBr₃ single crystal at Room temperature / JANG Joon Ik¹, KIM Donggyu¹, RYU Hongsun¹, LIM Soo Yeon¹, MCCALL Kyle^{2,3}, KANATZIDIS Mecour², CHEONG Hyeonsik¹ (¹Physics, Sogang University, ²Department of Chemistry, Northwestern University, ³Department of Chemistry and applied biosciences, Laboratory of Inorganic chemistry)

P1-se.116

광섬유 통신용 파장의 단광자 생성을 위한 양자점 성장 / SONG JIN DONG^{*1}, PARK SUK IN¹
(¹Center for Opto-Electronic Materials and Devices Research, KIST)

P1-se.117

Far-field Fluorescence Mapping Using a Home-made Single Laser Cantilever-type Near-field Scanning Optical Microscope / NG'ANG'A Douglas Kagoiya¹, ALI Luqman¹, LEE Yoong Joong¹, BYEON Clare Chisu^{*1} (¹School of Mechanical Engineering, Kyungpook National University)

P1-se.118

전력소자용 GaN on Si 과 SiC on SiC 반도체의 ex-situ 깊이 의존성 변형을 분포에 대한 분석 / JUNG Gunwoo¹, KIM Kyuheon¹, JEONG Wonchae¹, JEON Boram¹, KIM Jaesun¹, SUNG Yujin¹, MOON Youngboo², SONG Jung Hoon^{*1} (¹Kongju National University, ²UJL, (주)UJL)

P1-se.119

Optical Characterization of InGaAsP/InGaAs tandem solar cells with excitation wavelength. / KIM Jong Su^{*1}, HEO Da young¹, JO Hyun Jun¹, KIM Yeong Ho², LEE Sang Jun² (¹Yeungnam University, ²Micro & Smart Devices Team, KRISS)

P1-se.120

Role of organic surfactant decomposition via O₂ pre-annealing in CVD-grown hexagonal WS₂ / AN GWANGHWI¹, LEE Hyun Seok^{*1} (¹Department of Physics, Chungbuk National University)

P1-se.121

Nonlinear optical properties of β -Ga₂O₃ as probed by wavelength-dependent optical excitation spectroscopy / CHO Jeong Bin¹, JUNG Gunwoo², KIM Kyuheon², KIM Ji Hoon¹, HONG Soon-Ku³, SONG Jung-Hoon², JANG Joon Ik^{*1} (¹Physics, Sogang University, ²Physics, Kongju National University, ³Materials science and engineering, Chungnam National University)

P1-se.122

Enhancement of surface morphology and electrical properties of Cd₃As₂ via photo-assisted molecular beam epitaxy / PARK Kwangwook^{*1}, RICE Anthony D², ALBERI Kirsin² (¹Advanced Materials Engineering, Jeonbuk National University, ²Materials Physics Group, National Renewable Energy Laboratory)

P1-se.123

Dissimilarity in similarities between GaN nanorods grown on Si (111) and Si (100) substrates / PARK Kwangwook^{*1}, MIN Jung-Wook², KIM Jongmin³, KANG Chul⁴ (¹Advanced Materials Engineering, Jeonbuk National University, ²Photonics Laboratory, King Abdullah University of Science and Technology, ³Device Technology Laboratory, Korea

Advanced Nano Fab Center, ⁴Advanced Photonics Research Institute, Gwangju Institute of Science and Technology)

P1-se.124

Unusual optical phonon behaviors in $\text{Ge}_{1-x}\text{Sn}_x$ layers / KIM Young Chan¹, LEE Taegeon¹, RYU Mee-Yi², KOUVETAKIS John³, RHO Heesuk^{*1} (¹Department of Physics, Jeonbuk National University, ²Department of Physics, Kangwon National University, ³School of Molecular Science, University of Arizona)

P1-se.125

Population dynamics of excitons and biexcitons in a 2D halide perovskite single crystal / NAM Seo hyun¹, YANG Jae hyun², YI Yeon jin², JANG Joon Ik^{*1} (¹Physics, Sogang University, ²Department of physics, Yonsei University)

P1-se.126

Anomalous photoluminescence of CVD-grown MoSe_2 monolayer: role of residual promoters and surfactants / KIM Su Jin¹, LEE Hyun Seok^{*1} (¹Department of Physics, Chungbuk National University)

P1-se.127

Rashba and polaron effects in optical transitions of MAPbX_3 (X=Cl, Br, and I) under pulsed Magnetic fields / KIM Yongmin^{*1}, SHIN Y.¹, CHOI Halim¹, JEONG M. S.², PARK D. Y.² (¹Physics, Dankook University, ²Energy Science, Sungkyunkwan University)

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P1-se.201

Analysis of spin Hall effect of sputtered W_3Ta thin film in a $W_3Ta/Co_{20}Fe_{60}B_{20}/MgO$ structure / SONG Sang youn¹, KIM Hyeon jun¹ (electron engineering, Hanyang University)

P1-se.202

Dependence of Forming-free GeSex based Conductive-Bridging Random-Access-Memory Characteristics on Thicknesses and Chemical Composition Ratio of GeSex / PARK Sanghong^{1,3}, KIM Dongwon^{2,3}, KIM Heajee^{2,3}, JIN Soomin^{2,3}, WOO Daeseong^{2,3}, JUNG Sungmok^{2,3}, PARK Jeagun^{1,2,3} (1Department of Electronics and Computer Engineering, Hanyang University, 2Department of Nanoscale Semiconductor Engineering, Hanyang University, 3Hanyang University)

P1-se.203

Dependency of Current Voltage Characteristics of IGZO TFT on 8-mercaptopentanoic acid Solution Concentration for Sensing Breast Cancer / LEE Wooguk¹, KWON Hyojun², SON Seunghan³, KIM Chulgeun³, SHIM Taehun⁴, PARK Jeagun⁴ (1Department of Nanoscale Semiconductor Engineering, Hanyang University, 2Department of Electronic and Computer Engineering, Hanyang University, 3Department of Life Science and Research Institute for Natural Sciences, Hanyang University, 4Hanyang University)

P1-se.204

Relaxation Frequency Variation in Blue Organic Light-Emitting Diodes / KIM Yeeun¹, NA Inyeob², SEO Youkyung¹, CHAE Heeyoung², OH Kilhwan², YANG Joonyoung², YOON Sooyoung², JOO Min-Kyu^{1,3} (1Department of Physics, Sookmyung Women's University, 2LG Display research center, LG Display, 3Department of Applied Physics, Sookmyung Women's University)

P1-se.205

Highly Reliable Contact Resistance and Characteristic Trap Energy Extraction Methods in Blue Organic Light-Emitting Diodes / JOO Min-Kyu^{1,2}, SEO Youkyung², NA Inyeob³, KIM Yeeun², CHAE Heeyoung³, OH Kilhwan³, YANG Joonyoung³, YOON Sooyoung³ (1Department of Applied Physics, Sookmyung Women's University, 2Department of Physics, Sookmyung Women's University, 3Display Research Center, LG Display)

P1-se.206

PbS 광전압 소자에서 광전류 과도 현상(transient)의 입사광 세기 의존성 / NOH DaeGwon¹, EMMANUEL Ampadu Kwame¹, OH Eunsoo^{*1} (¹Department of Physics, Chungnam National University)

P1-se.207

Investigation of charge transport properties in a ZnO nanowire field effect transistor / SHIN Ki Hoon¹, YOON Jongwon², SEO Min-Kyu¹, HONG Woong-Ki², SOHN Junginn^{*1} (¹Dongguk University, ²Jeonju Center, KBSI)

P1-se.208

Vacuum deposition of organic-inorganic hybrid perovskite for the realization of red, green and blue light emitting diode / JUNG Na Eun¹, KANG Donghee¹, PARK Jeehong¹, LEE Hyunbok^{*2}, YI Yeonjin^{*1} (¹Department of Physics, Yonsei University, ²Department of Physics, Kangwon National University)

P1-se.209

CdSe 양자점 / PbS 양자점 photodiode pixel array / CHANG Sehwan^{1,3}, KYHM Jihoon², PARK Hong-Gyu³, SONG JIN DONG^{*1} (¹Center for Opto-Electronic Materials and Devices Research, KIST, ²Quantum-Functional Semiconductor Research Center, Dongguk University, ³Department of Physics, Korea University)

P1-se.210

Structure, optical and magnetic properties of yttrium iron garnet doped with erbium / CHO Suyeon^{*1}, CHO Yujin¹, LEE Sujin¹, KANG Seohui¹, BAE Dongyeon¹, KIM Dongkyu², KIM Zaeill² (¹division of chemical engineering and materials science, Ewha Womans University, ²Quantum Physics Technology Directorate, Agency for Defense Development)

P1-se.211

Noise analysis and optimization of vanadium pentoxide V₂O₅-based highly sensitive thermistor / LEE Wonhee^{*1,2}, CHAE Minho¹ (¹Department of Physics, KAIST, ²Department of Bio and Brain Engineering, KAIST)

P1-se.212

Resonant tunneling current in a SrRuO₃/SrTiO₃ superlattice / SUH Dongseok^{*1}, CHOI Woo Seok^{*2}, HONG Sung Ju³, KIM Hyeonbeom¹, JEONG Seung Gyo² (¹Department of Energy Science, Sungkyunkwan University, ²Department of Physics, Sungkyunkwan University, ³Division of Science Education, Kangwon National University)

P1-se.213

Environmental effects on optical properties and carrier dynamics of CsPbBr₃ nanocrystals with different reaction times / KIM Yong Bin^{1,2}, KIM Sung Hun¹, YIM Sang Youp², LEE Hong Seok^{*1} (¹Department of Physics, Jeonbuk National University, ²Advanced Photonics Research Institute, GIST)

P1-se.214

MoS₂ 전자 수송층을 이용한 페로브스카이트 광 다이오드/태양전지 나노 시스템 연구 / KO Jung Sun¹, LEE Won Jun¹, SHIN Dong Hee², KIM Sung¹, CHOI Suk-Ho^{*1} (¹Department of Applied Physics, Kyung Hee University, ²Department of Physics, Andong National University)

P1-se.215

MoS₂를 중간층으로 사용한 그래핀/다공성 실리콘 태양전지의 효율 향상 / JANG Chan Wook¹, KO Jung Sun¹, LEE Won Jun¹, KIM Jae Kuk¹, KIM Sung¹, SHIN Dong Hee², CHOI Suk-Ho^{*1} (¹Department of Applied Physics, Kyung Hee University, ²Department of Physics, Andong National University)

P1-se.216

Influence of dopant concentration on optical properties of Mn-doped ZnSe quantum dots / KIM Ju Seok¹, KIM Sung Hun¹, LEE Hong Seok^{*1} (¹Department of Physics, Jeonbuk National University)

P1-se.217

Biaxial strain engineering for exciton-polaritons in transition metal dichalcogenides / SHIN Dong-Jin¹, SUNG Jung-Hyun¹, GONG Su-Hyun^{*1} (¹Department of Physics, Korea University)

P1-se.218

Simultaneous Raman and photoluminescence studies of chemically doped two-dimensional MoS₂ layers / LEE Taegeon¹, KIM Hanul¹, KO Hayoung², KIM Soo Min³, RHO Heesuk^{*1} (¹Department of Physics, Jeonbuk National University, ²Department of Energy Science, Sungkyunkwan University, ³Department of Chemistry, Sookmyung Women's University)

P1-se.219

Photocurrent study of bilayer-graphene systems / KIM Yeongjun¹, HUSSAIN Wajahat¹, JU Seoungmin¹, CHO Jongweon^{*1} (¹Department of Physics, Myongji University)

P1-se.220

Study on Magnetoconductance of Monolayer MoS₂ / KIM Namme^{*1}, YOU Suejeong¹, KIM Heesang¹, PARK Dae Han¹ (¹Physics, Soongsil University)

P1-se.221

Observation of circularly polarized polariton mode in WS₂ layers / SUH Hyunduk¹, SUNG Junghyun¹, CHO Hyunhee¹, GONG Su-Hyun^{*1} (¹Department of Physics, Korea University)

P1-se.222

Atomic-layer Multiple Quantum Wells Structure Fabricated by Layer-by-layer Oxidation of MoS₂ / KANG Sojung¹, KIM Yoon Seok², JEONG Jae Hwan¹, KIM Jong Hun³,

LEE Chul-Ho², LEE Gwan-Hyoung³ (1Department of Materials Science and Engineering, Yonsei University, 2KU-KIST Graduate School of Converging Science and Technology, Korea University, 3Department of Materials Science and Engineering, Seoul National University)

P1-se.223

Nanoscale investigation of hydrogen-free carbon nanocrystal film: tailoring the electrical and physical performance by tuning the sp^2 - sp^3 configuration / LEE Gwan-Hyoung^{*1,2,3,5}, KIM Jong Hun^{1,2}, KANG Sojung⁴, JUNG Jonghoon⁶ (1Department of Materials Science and Engineering, Seoul National University, 2Research Institute of Advanced Materials, Seoul National University, 3Institute of Applied Physics, Seoul National University, 4Department of Materials Science and Engineering, Yonsei University, 5Institute of Engineering Research, Seoul National University, 6Department of Physics, Inha University)

P1-se.224

광촉매 정수 응용을 위한 gC-CuO-ZnO 나노 구조의 합성 및 특성 / EDUGULLA Girja Shankar², KRISHNA B. N. Vamsi², YU Jae Su^{*1,2} (1Department of Electronic Engineering, Kyung Hee University, 2Department of Electronics and Information Convergence Engineering, Kyung Hee University)

P1-se.225

Facile and Universal Growth of Monolayer Transition Metal Dichalcogenides by Liquid-Phase Deposition / KIM Minseong¹, SEO Jihyung¹, PARK HYESUNG^{*1} (1Department of Materials Science and Engineering, UNIST)

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Room: Virtual poster room

P1-st.001

Invasion of a simple population dynamics with Allee effect on one-dimensional patch / LEE Jae Woo^{*1}, JUNG Nam¹, LEE KyoungEun² (¹Inha University, ²Exotic Species, National Institute of Ecology)

P1-st.002

Yang-Lee Edge Singularity of the Ising Ferromagnet in an External Magnetic Field / KIM Seung-Yeon^{*1} (¹School of Liberal Arts and Sciences, Korea National University of Transportation)

P1-st.003

Free energy measurements by the generalized fluctuation theorems: theory and numerical study of a model filament. / CHAE Min-Kyung¹, KIM Yunha¹, LEE Nam Kyung^{1,2}, JOHNER Albert², PARK Jeong-Man³ (¹Department of Physics and Astronomy, Sejong University, ²Department of Physics, The Catholic University of Korea, ³Department of Physics, Institute Charles Sadron)

P1-st.004

Effects of the self-propulsion parity on the fuel efficiency of an active heat engine / BAEK Yongjoo^{*1}, OH Yongjae¹ (¹Department of Physics and Astronomy, Seoul National University)

P1-st.005

Initial growth pattern of Parylene-C film on the liquid surface / SHIN Jungyu¹, LEE In Jae^{*1} (¹Department of Physics, Chonbuk National University)

P1-st.006

Rank-unbounded evolving hypergraph model / GOH KWANG-IL^{*1}, ROH Dahae¹ (¹Korea University)

P1-st.007

Urban scaling and transition in Korean economy / HONG Inho^{*1}, KWON Minji^{*2}, KIM Junchul², NA Sehun³, JUNG Woo-Sung^{4,5} (¹Center for Humans and Machines, Max Planck Institute for Human Development, ²Smart City Department, Seoul Institute of Technology, ³Big Data Division, Seoul Metropolitan Government, ⁴Department of Physics, Pohang University of Science and Technology, ⁵Department of Industrial and Management Engineering, Pohang University of Science and Technology)

P1-st.008

Explaining the varying exponent of gravity model on urban landscapes / KWON Oh-Hyun¹, HONG Inho², JUNG Woo-Sung^{1,3}, JO Hang-Hyun⁴ (¹Department of Physics, POSTECH, ²Center for Humans and Machines, Max Planck Institute for Human Development, ³Department of Industrial and Management Engineering, POSTECH, ⁴Department of Physics, The Catholic University of Korea)

P1-st.09

Evolutionary game dynamics with chain-reaction death on networks / BAHK Jiwon¹, JEONG Hyeong-Chai¹ (¹Department of Physics and Astronomy, Sejong University)

P1-st.010

랜덤워크 기반 모형을 통한 서울시 편의 시설 및 지하철 분포 분석 / 김현정¹, 김채영¹, 박도율¹, 강대성¹, KIM Jong Won¹ (¹Healthcare IT, Inje University)

P1-st.011

The cover time on networks of random walks with stochastic revisiting / BAE Youngkyoung¹, SON Gangmin¹, JEONG Hawoong^{1,2} (¹Physics Department, KAIST, ²Center for Complex Systems, KAIST)

P1-st.012

Network Analysis of scientific collaboration and knowledge flow / LEE Deok Young^{1,2}, WOO Hyungsoo¹, YANG Jae-Suk¹ (¹Graduate School of Future Strategy, KAIST, ²Agency for Defense Development)

P1-st.013

Time evolution of political polarization in the National Assembly of Republic of Korea / KIM Jonghoon¹, BAEK Seung Ki¹ (¹Department of Physics, Pukyong National University)

P1-st.014

Mean-field model for real epidemic spreading / JEONG Dong Ryeol², YOOK Soon Hyung¹ (¹Department of Physics, Kyung Hee University, ²Department of Applied Bigdata Systems Engineering, Kyung Hee University)

P1-st.015

Deep learning of chaos classification / LEE Woo Seok¹, FLACH Sergej¹ (¹PCS, IBS)

P1-st.016

Lumped permutation entropy: A robust complexity measure on noisy time series under state transitions. / JOO Panguy¹, KIM Seung Hwan¹ (¹Department of Physics, POSTECH)

P1-st.017

Microbial groups as evolutionary units: variance of group traits / LEE Juhee¹, PARK Hye Jin¹ (¹APCTP)

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Room: Virtual poster room

P1-te.001

동영상에 기록된 정보의 해석을 통해 살펴보는 법과학에서 사용되는 기초 물리학 / JEON Oc Yeub¹, SHIM Kyu-Sun¹, KIM Jin-Hwan¹, PARK Nam-In¹, LEE Jung Hwan¹, NA Gi-Hyun¹ (¹National Forensic Service, Republic of Korea)

P1-te.002

Actual Experiment of Radiation in Primary School Science / KIM Taekyu^{*1} (¹Department of Science Education, Jeonju National University of Education)

P1-te.003

The dependence of tilting of wooden board on various variables / KIM Taekyu^{*1} (¹Department of Science Education, Jeonju National University of Education)

P1-te.004

Exact analytical solution for a double-wire line with ideal conductors of circular cross-section / ISHIKAEV Salavat Mansurovich^{*1} (¹Physics and Earth science, Korea Science Academy)

P1-te.005

공간을 전파하는 음파의 횡적 파형 측정 / KIM Sohee¹, PARK Jongha¹, CHO Joonghyun¹, LEE Kiwon^{*1} (¹Kongju National University)

P1-te.006

지구온난화에 의한 영구동토층 융해에 따른 온실기체 배출 실험 모델 / CHO Joonghyun¹, KIM Sohee¹, PARK Jongha¹, LEE Kiwon^{*1}, HONG Sayong¹, KIM Yong-gi¹ (¹Kongju National University)

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KIM Gee Yeong	P1-ap.209	KIM Hong Joo	D2.04, E4.02, F1.06, P1-as.001, P1-nu.005, P1-nu.006, P1-nu.015, P1-nu.017, P1-pa.210, P1-pa.212, P1-pa.215
KIM Geunwoo	P1-nu.002		
KIM Gi-Hwan	D17.01		
KIM Gilhan	F12.07		
KIM Gon-Ho	G14.02		
KIM Gowoon	H1.04		
KIM Gui Nyun	P1-nu.008	KIM Hong Joo	P1-nu.013
KIM Gunn	P1-co.402, P1-co.407	KIM Hongbin	F13.03
KIM Gwang Su	A10.05	KIM Hongjoo	G2.02
KIM Gyehyeon	P1-co.214, P1-co.215	KIM Hong-Seok	P1-co.309
KIM Gyeonghun	B11.01, B11.07	KIM Huijin	P1-ap.512
KIM Gyurin	A1.05	KIM Hwan Sik	H15.08
KIM Gyu-Tae	P1-ap.219	KIM Hyegyeyong	B5.01, E9.01
KIM HAN BEOM	D2.01	KIM Hyelim	H1.01
KIM Han Sung	P1-pl.104, P1-pl.115	KIM Hye-Lim	D2.02
KIM Ha-Na	D14.02	KIM Hyeon jun	P1-se.201
KIM Hanbeom	H1.01	KIM Hyeonbeom	P1-se.212
KIM Han-Bum	D2.02	KIM Hyeonoh	H12.02
KIM Hangbae	D4.01	KIM HyeonSu	C8.07
KIM Hangbae	D4.02	KIM Hyeonwoo	P1-op.006
KIM Hangil	C12.07	KIM Hyo Jung	A7.03
		KIM Hyo Jung	F7.05
		KIM Hyo-Im	B10.06
		KIM Hyuk Jin	E7.04, F7.02

KIM Hyun	P1-at.003	KIM Jangwon	P1-ap.117,
KIM Hyun Ho	D10.04		P1-op.004,
KIM Hyun Soo	A10.08		P1-op.005
KIM Hyunchul	P1-nu.003	KIM Jayeong	B5.01, E18.02,
KIM Hyun-Chul	F3.04		F10.02, F10.06,
KIM Hyung-Rae	P1-bp.001		F10.08, P1-ap.207
KIM Hyunhak	H15.05	KIM Jayeong	F18.02
KIM Hyunil Benjamin		KIM Jayhyun	E14.01
	P1-pl.108	KIM JAYHYUN	P1-pl.122
KIM Hyun-Joong	B10.04	KIM Je Hyung	E15.03
KIM Hyun-Joong	E9.03	KIM Jea-II	B10.04
KIM Hyunsoo	A2.03	KIM Jehyun	B10.05, B11.03
KIM Hyunsoo	P1-pa.213	KIM Jeong Hwa	H2.08
KIM HyunSoo	F1.03	KIM Jeong Mi	G12.04, G12.06
KIM HyunSoo	P1-pa.214	KIM Jeong Rae	C7.01
KIM III Won	P1-co.214,	KIM Jeong Rae	P1-ap.314
	P1-co.215	KIM Jeong Rae	P1-co.211
KIM In Joo	G12.04, G12.06	KIM Jeongcho	E4.03
KIM Inseo	B5.02, E8.06	KIM Jeongcho	G4.02
KIM In-Sik	C15.05	KIM Jeongrae	P1-co.202
KIM J Y	P1-pa.104	KIM Ji Hoon	P1-se.121
KIM J. Y.	H2.01, H2.02,	KIM Ji-Hee	C15.04
	H2.03	KIM Ji-Hee	E11.06
KIM J. Y.	H2.04	KIM Ji-Hee	G10.05
KIM J.Y	P1-pa.106	KIM Jih E	F1.08
KIM J.Y.	P1-pa.103	KIM Jihye	E6.04
KIM Jae Ha	P1-co.210,	KIM Jihyun	A10.01, A10.06
	P1-op.004,	KIM JIhyun	P1-ap.309
	P1-op.005	KIM Jin Hong	P1-ap.101
KIM Jae Hoon	G5.04, P1-ap.117,	KIM Jin Woo	G7.04
	P1-ap.403,	KIM Jinhee	P1-co.206
	P1-co.210,	KIM Jin-Hun	B11.06, P1-ap.514
	P1-op.004,	KIM Jin-Hwan	P1-te.001
	P1-op.005	KIM JinJu	P1-pl.108
KIM Jae Hyeok	P1-nu.017	KIM Jinkwon	C7.01
KIM Jae Kuk	P1-se.215	KIM Jinkwon	P1-ap.314
KIM Jae Yong	E6.03	KIM Jinkwon	P1-co.117,
KIM Jaesun	P1-op.007,		P1-co.211
	P1-se.118	KIM JinKyun	G6.03
KIM Jaewan	G16.05	KIM Jinkyung	F6.07
KIM Jaeyong	B10.06	KIM Jinmi	G12.04, G12.06
KIM Jaeyong	G14.02	KIM Jinseok	P1-co.115
KIM Jaeyool	H1.06, H1.07,	KIM Jin-Soo	F18.04
	H1.08, P1-pa.201	KIM Jinsu	B8.05

KIM Jin-Tae	P1-at.008	KIM Jungcheol	P1-ap.119,
KIM Jinwoo	P1-pl.109,		P1-ap.121
	P1-pl.202	KIM Jungdae	G6.02
KIM Jinyoung	P1-pa.206	KIM Jungdong	P1-ap.206
KIM Jinyu	F1.05	KIM Jungho	E11.06
KIM Jisu	P1-ap.313	KIM Junghwan	P1-ap.104,
KIM Jiwoong	B5.01		P1-co.302,
KIM Jiwoong	F2.09, F2.10		P1-co.303
KIM Jlwoong	E9.01	KIM Jung-Wook	E2.05
KIM Jong Chan	F10.04, G10.01,	KIM Junhyung	P1-ap.513
	P1-ap.108	KIM Junlee	C3.01, C3.02
KIM Jong Hun	A10.08	KIM Junlee	P1-nu.001
KIM Jong Hun	E18.04, P1-se.223	KIM Junwoo	P1-ap.408
KIM Jong Hun	P1-se.222	KIM JunWoo	F16.01
KIM Jong Hyuk	P1-co.116,	KIM Juran	A10.06, P1-ap.316
	P1-co.201,	KIM Kab-Jin	E10.02
	P1-co.207	KIM Kab-Jin	P1-ap.313
KIM Jong Su	G18.04, G18.05,	KIM Kanghyun	P1-ap.311
	G18.06, P1-se.110,	KIM KangLib	P1-ap.411
	P1-se.112,	KIM Kangwon	F10.01, F10.04,
	P1-se.119		P1-co.108
KIM Jong Su	G18.07	KIM Kang-wook	G14.01
KIM Jong Tae	P1-op.001,	KIM Kee Hoon	B7.02, C6.01
	P1-op.002	KIM Keun Soo	P1-ap.214
KIM Jong Won	P1-st.010	KIM Keun su	P1-ap.102
KIM Jonggeon	H1.08	KIM Keun Su	P1-ap.103,
KIM Jonggun	H1.05, H1.06,		P1-ap.109
	H1.07, P1-pa.201	KIM Keun Young	E2.06, E2.10
KIM Jong-Ho	G12.06	KIM KeunSoo	P1-ap.206
KIM Jonghoon	P1-st.013	KIM Keun-Young	E2.02
KIM Jonghyuk	P1-co.115	KIM Ki Kang	A9.01, E17.03
KIM Jongmin	P1-se.123	KIM Ki Kang	F10.05
KIM Joo Sung	D11.04	KIM Ki Kang	P1-ap.127
KIM Joon Hyun	F16.04	KIM Ki-Bum	P1-pl.101
KIM Joonho	G4.03	KIM Kihwan	A10.09
KIM Joonsoo	C15.04	KIM Kihwan	D15.01
KIM Joonwoo	P1-ap.122	KIM Kitae	P1-ap.402
KIM Ju Seok	P1-se.216	KIM Ki-Won	F12.04
KIM Jun Lee	A3.07	KIM Ki-Yeon	P1-ap.122
KIM Jun Sung	B7.04, D10.03	KIM Kook Tae	E7.02, E7.06
KIM Jun Sung	E6.04	KIM Kui-Young	P1-nu.016
KIM Junchul	P1-st.007	KIM Kwangjin	H15.02
KIM June-Seo	P1-ap.122	KIM Kwangsu	P1-co.110
KIM Jung Dae	P1-co.110	KIM Kwanpyo	G10.01

KIM Kwanpyo	G6.03, P1-ap.210	KIM Minsoo	G2.05
KIM Kwanpyo	P1-ap.123	KIM Minsoo	G2.06, G2.07, G2.08, G2.09, P1-pa.110
KIM Kye-Ryung	P1-nu.016		
KIM Kyoo	D6.02		
KIM Kyoo	D6.03	KIM Minsoo	P1-co.201
KIM Kyoo	G5.02	KIM Minsoo	P1-co.204
KIM Kyoo	P1-co.113	KIM Minsu	P1-ap.102
KIM Kyoung Won	P1-pa.202	KIM Minyoung	B11.07
KIM Kyoung-Whan	D7.02, P1-ap.305	KIM Miyoung	P1-co.117
KIM Kyuheon	P1-op.007, P1-se.118	KIM Miyoung	P1-co.211
		KIM Moohyuk	D15.04
KIM Kyuheon	P1-se.121	KIM Myung Hwa	P1-ap.207
KIM Kyun Kiu	E2.02	KIM Myung Ki	D15.04, G10.08
KIM Kyung Hyun	P1-pl.104	KIM Myunghun	G16.03
KIM Kyung Kiu	E2.09	KIM Myunghun	P1-at.009, G16.06
KIM Kyung Taec	C15.07	KIM Myunghwa	F10.06
KIM Kyungho	G2.01	KIM Nam	D5.01
KIM Kyungmin	D4.07	KIM Nam-Hee	P1-co.309
KIM Kyung-Pil	P1-ap.316	KIM Namkyu	F7.04
KIM Kyungsik	D3.06	KIM Nammee	P1-se.220
KIM Kyungtae	F16.07, P1-at.005	KIM Rak-Hee	P1-co.301
KIM Leeyeong	F16.06	KIM S B	P1-pa.104
KIM M. J.	P1-nu.007	KIM S. B.	H2.01, H2.02, H2.03, H2.04
KIM M.H.	D4.05		
KIM Mi Kyung	E8.04	KIM S.B	P1-pa.106
KIM Mi Kyung	P1-co.208	KIM S.B.	P1-pa.103
KIM Mi Ran	A2.04, F2.04	KIM S.K.	E14.01
KIM Min Jae	E7.04	KIM S.S.	E14.02
KIM Min Jae	P1-ap.214	KIM Sang Goon	H1.01
KIM Minho	C14.01	KIM Sang Soo	G12.04, G12.06
KIM Minhyo	D4.01	KIM Sang yong	H1.06
KIM Minhyo	D4.02	KIM Sang yong	P1-pa.201
KIM Minhyuk	G16.05	KIM Sang Yong	H1.05
KIM Minjae	D12.02	KIM Sangho	G3.01
KIM Minju	G18.03	KIM Sanghoon	P1-ap.303, P1-ap.313, P1-co.107, P1-co.110, P1-co.112
KIM Minjun	E11.05		
KIM Min-Jung	C18.01	KIM Sangwoo	D4.01
KIM Minkyoo	E2.06	KIM Sangwoo	D4.02
KIM Minseok	D14.03	KIM Sangyong	H1.07
KIM Minseong	P1-se.225	KIM Sangyong	H1.08
KIM Minsoo	E5.03	KIM Sang-Yoon	G12.05
KIM Minsoo	E8.02		
KIM Minsoo	G12.04		
KIM Minsoo	G12.06		

KIM Se Hun	P1-co.501	KIM Sungdo	P1-se.103
KIM Se Kwon	B6.01, D7.04, D8.08	KIM Sungdo	P1-se.105
KIM Se Kwon	B8.01, P1-ap.304	KIM Sunghyun	G2.03
KIM Se Yong	A1.02	KIM Sung-Jo	G12.01
KIM Sejin	P1-pa.112	KIM SungWon	F2.09, F2.10
KIM Seok-Jong	P1-ap.304	KIM Sun-Ho	P1-pl.107
KIM SeongCheol	P1-pl.205	KIM Sun-Ho	P1-pl.113, P1-pl.205
KIM Seonghyun	P1-ap.404	KIM Sunkee	H2.10
KIM Seongsik	P1-pa.115	KIM Tae Heon	P1-ap.303, P1-co.214, P1-co.215
KIM Seung	C8.03	KIM Tae Heon	P1-co.117
KIM Seung Hwan	P1-st.016	KIM Tae hoon	P1-pl.101
KIM Seungchul	H15.01	KIM TAE JEONG	A2.06
KIM Seungchul	P1-op.003	KIM Tae Yeon	P1-ap.502
KIM Seung-Lee	G4.03	KIM Taegyung	E2.04
KIM Seung-Yeon	P1-st.002	KIM Taeheon	P1-co.212
KIM Shin Hyung	B3.03	KIM Tae-Hwan	E5.01
KIM Sohee	P1-ap.202, P1-te.005, P1-te.006	KIM Tae-Hwan	F6.06
KIM Sohwi	P1-ap.308	KIM Taehyun	D11.01
KIM Soo Min	A9.01	KIM Taejeong	A2.01
KIM Soo Min	P1-se.218	KIM Taekyu	P1-te.002, P1-te.003
KIM Soo Yeon	G18.02	KIM Tae-Seong	P1-pl.107
KIM Soobong	H1.08	KIM Tae-Seong	P1-pl.113
KIM Soo-Bong	H1.05, H1.06, H1.07	KIM Tae-Seong	P1-pl.209
KIM Soo-Bong	P1-pa.201	KIM Tae-Wook	P1-ap.412, P1-ap.413
KIM Soonbin	A1.06	KIM Taeyoung	P1-ap.111
KIM Sooran	D6.02, D6.03	KIM Teun-Teun	G17.02
KIM Soo-Whan	B8.05	KIM Tongil	F2.09, F2.10
KIM Sora	H1.01	KIM Uhjin	F6.04, P1-co.310
KIM Su Jin	P1-se.126	KIM U-Rae	H13.02, H13.03
KIM Sujae	H15.01	KIM U-Shin	B11.08
KIM Sun Ho	P1-pl.204	KIM U-Shin	P1-ap.515
KIM Sun Kee	P1-pa.202	KIM W	P1-pa.104, P1-pa.106
KIM Sung	P1-se.214, P1-se.215	KIM W.	H2.01, H2.02, H2.03, H2.04, P1-pa.103
KIM Sung Hun	E18.01, P1-se.213, P1-se.216	KIM Wonsik	P1-ap.406
KIM Sung Hyun	F2.03	KIM Wonsik	P1-ap.407
KIM Sung Jong	E10.03	KIM Wonsik	P1-ap.409
KIM Sung Won	E4.04		
KIM Sung yeop	G18.04		

KIM Wooyoung	H1.05	KIM Yoon Seok	P1-se.222
KIM Wooyoung	H1.06, H1.07, H1.08, P1-pa.201	KIM Yoon Sok	P1-ap.111
KIM Y.-K.	P1-co.103	KIM Yoon-Ho	B11.02, B11.09
KIM Yeeun	C18.03	KIM Yoon-Ho	B11.04
KIM Yeeun	P1-se.204, P1-se.205	KIM Yoon-Ho	B11.06, P1-ap.514, P1-ap.515
KIM Yejin	E11.03, E11.04, P1-ap.403, P1-ap.501	KIM Yoon-Ho	B11.08
KIM Yejin	P1-ap.118	KIM Yosep	B11.02, B11.09
KIM Yeon Soo	A10.01, A10.06, E11.04, P1-ap.309	KIM Yosep	B11.04
KIM Yeon Soo	A10.04	KIM Yosep	P1-ap.515
KIM Yeong Gyun	F2.03	KIM Young Chan	P1-se.124
KIM Yeong ho	P1-se.110	KIM Young Duck	B9.03
KIM Yeong Ho	P1-se.119	KIM Young Jin	G12.04
KIM Yeongduk	H1.04	KIM Young Jun	A3.07
KIM Yeongduk	H2.11	KIM Young Soo	P1-ap.205, P1-op.008
KIM Yeongho	G18.07	KIM Youngdo	P1-ap.314
KIM Yeongjun	P1-se.219	KIM Youngdo	P1-co.201
KIM Yong Bin	P1-se.213	KIM Younghak	A7.04
KIM Yong Kyun	F2.02	KIM Younghak	E7.04
KIM Yong Soo	A6.05	KIM Youngho	P1-pl.102
KIM Yong Soo	E18.02, E18.05, E9.01	KIM Youngho	P1-pl.116, P1-pl.118
KIM Yong Soo	P1-se.103	KIM Youngho	P1-pl.120
KIM Yong-gi	P1-ap.202, P1-te.006	KIM Youngjun	G2.03
KIM Yong-Hamb	D2.01	KIM Young-Kwang	B20.01
KIM Yong-Hamb	D2.02, H1.01	KIM Young-Kyoung	P1-co.104
KIM Yong-Hoon	E11.03	KIM Youngmi	P1-ap.218
KIM Yong-Hoon	P1-ap.501	KIM Young-Min	E8.01
KIM Yongjae	C6.04	KIM Younsik	P1-co.101
KIM Yong-Jae	C6.02	KIM Younsik	P1-co.207
KIM Yongkyu	P1-pa.101, P1-pa.102	KIM Yujin	P1-pa.111
KIM Yongmin	P1-se.127	KIM Yunah	D11.04
KIM Yongsam	G7.02	KIM Yunha	P1-st.003
KIM Yongsoo	P1-se.105	KIM Yun-Ho	P1-ap.124
KIM Yongsun	C3.05	KIM Yunseok	B5.01
KIM Yongsun	E1.02, P1-nu.002	KIM Zaeil	P1-co.118
KIM Yoon Ki	E19.07	KIM Zaeill	P1-ap.513
KIM Yoon Seok	F10.04, P1-ap.108	KIM Zaeill	P1-se.210
		KIM Zee Hwan	A15.01
		KIRCHMANN Patrick S.	G8.03
		KLEIN Olivier	B10.03
		KLING Matthias	C15.03

KLUTE Markus	C1.01	KUMAR Manish	A7.04
KO Byeonghak	A2.03	KUMAR Manoj	C14.05, P1-pl.103
KO Dogyun	F8.05	KUMAR Manoj	D14.02
KO Do-Kyeong	C15.05, C15.06, H15.07	KURZYŃSKI Paweł	G16.04
KO Eun Kyo	P1-co.117	KWAG M. S.	P1-nu.007
KO Eunji	E18.02, P1-ap.207	KWAK Donghyun	A3.01, A3.04
KO Hayoung	P1-se.218	KWAK Donghyun	H2.05
KO Heamin	G3.06	KWAK Hojae	P1-op.006
KO Hye-Won	P1-ap.305	KWAK Jeonghun	C11.04
KO Jaehyeon	P1-co.212	KWAK Jong Gu	P1-pl.204
KO Jae-Woo	F2.02	KWAK K.	P1-nu.007
KO Jae-Woo	F2.03	KWAK Minsoo	G18.06, P1-se.110
KO Jung Sun	P1-se.214, P1-se.215	KWAK Yongsu	P1-co.206
KO Sanghyun	G2.05, G2.08, P1-pa.110	KWEON Hyukmin	D11.04
KO Sanghyun	G2.06, G2.09	KWEON Jin Jung	B10.06
KO Sanghyun	G2.07	KWEON Min Jung	B3.01, D3.01, P1-nu.004
KO Yong-il	P1-ap.214	KWEON Min Jung	C3.03
KO Young Gun	P1-ap.512	KWEON MinJung	C3.02
KO Young Ju	D2.09, F1.04	KWON Dohyung	D2.01
KO Young Ju	P1-pa.202	KWON Dohyung	H1.01
KO Youngju	D2.10	KWON Do-Hyung	D2.02
KO Youngju	H2.10	KWON Du Hyuk	P1-ap.220
KOHNO Ryuhei	B10.03	KWON Eun Hyang	H1.08
KONG Heejung	F9.04	KWON Eunhyang	H1.05, H1.06, H1.07, P1-pa.213
KONG Kyoungchul	A1.11	KWON Eunhyang	P1-pa.201
KOO Do Hyoung	P1-se.113	KWON EunHyang	F1.03
KOO Jahyun	D6.02	KWON EunHyang	P1-pa.214
KOO Min	P1-ap.411	KWON Hyeok Jung	P1-pl.104
KOO Seulgi	G10.02	KWON Hyeok-Jung	P1-nu.016
KOO Tae-Yeong	G7.02	KWON Hyeok-Jung	P1-pl.105
KOTAKOSKI Jani	P1-ap.215	KWON Hyeok-Jung	P1-pl.114, P1-pl.115, P1-pl.121
KOUVETAKIS John	P1-se.124	KWON Hyojun	P1-se.203
KOVALEV Vadim	A8.05	KWON Hyug Moo	E19.05
KOVALEV Vadim	G10.07	KWON Jae-Min	E14.02
KOZIK Evgeny	G8.04	KWON Jae-Min	P1-pl.217
KREM Sona	P1-bp.004	KWON Jisung	G10.08
KRISHNA B. N. Vamsi	D18.02, P1-se.224	KWON Jiyeon	C3.03
KRISHNA Sanjay	G18.04	KWON Junyoung	E8.02
KRISHNA Sanjay	G18.05	KWON Junyoung	E8.04
KRYLOV Denis	F6.07	KWON Kiryang	F16.07, P1-at.005

KWON Kyu Been	E14.03	LEE Chan Young	P1-pl.207
KWON KyuBeen	P1-pl.219	LEE Chang Woo	F8.06
KWON Minji	P1-st.007	LEE Changgu	P1-co.110, D10.02
KWON Oh Young	G7.04	LEE Changhui	P1-nu.008
KWON Oh-Hyun	P1-st.008	LEE ChangYoung	F16.06
KWON Osung	P1-co.307	LEE Chanki	E7.04
KWON Seong-Hoon		LEE Chanwoo	F17.02
	C15.05	LEE Chanyooung	C14.06
KWON Sera	C18.01	LEE Chul-Ho	F10.04, P1-ap.108,
KWON Soyeong	E18.02, F10.05,		P1-se.113
	P1-ap.127	LEE Chul-Ho	P1-ap.413,
KWON Taeg Yong	D16.03		P1-se.222
KWON Taeg Yong	E16.01, P1-at.004	LEE Chung-Hyun	B11.04
KWON Yongjae	P1-ap.114	LEE Chung-Hyun	B11.08
KWON Youngjoon	G2.01	LEE Chung-Uk	G4.03
KWON Youngjoon	G2.04, P1-pa.101,	LEE Daemin	G16.04
	P1-pa.102	LEE Daesu	C7.01
KWON Young-Kyun	B9.01, F8.06,	LEE Daesu	G9.03
	P1-co.406	LEE Deok Young	D16.02, F16.03
KYAE Bum Seok	A1.04	LEE Deok Young	P1-st.012
KYHM Jihoon	P1-se.209	LEE Deokjae	D12.04
KYHM Kwangseuk	G18.03	LEE Deok-Sun	C12.05
KYRITSIS Dimitrios	P1-pl.110	LEE Dong Ha	H2.02
KYUNG Wonshik	E8.02	LEE Dong Jae	C7.02
KYUNG Wonshik	P1-co.204	LEE Dong Ryeol	E7.02, E7.06
		LEE Dong Woo	A10.08
		LEE Donggeun	P1-pl.112
		LEE Dong-Geun	P1-pl.216
		LEE Dongha	P1-pa.201
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