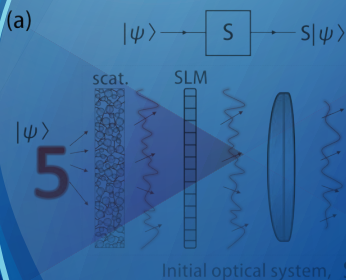


2016.04  
제34권 제1호

Bulletin of the  
Korean Physical Society



# 한국 물리학회 회보

2016 봄학술논문발표회  
및 제92회 정기총회

2016.4.20(수)~22(금)  
대전컨벤션센터



**KPS** 한국물리학회  
The Korean Physical Society

*The Korean Physical Society*

# 구두발표논문 시간표

Oral session schedule



**[Y1-Or] Plenary Lecture I**

2016년 4월 20일 수요일 17:00 – 17:48

장소: 301호

좌장: 제 원 호 서울대 물리학과

**Fifty years of revolutions in atomic physics and quantum optics /**  
Serge Haroche(Collège de France and Seoul National University)

The last fifty years have witnessed tremendous progresses in atomic physics and in optics, largely triggered by the development of lasers as unique tools to probe and manipulate matter. What we can achieve now, in high resolution spectroscopy and time measurement precision, in atomic motion control, in single quantum particle manipulation or in ultra-fast atomic or molecular processes observation, could not even have been dreamed about when I started my life as a physicist, half a century ago. In my talk, I will reflect on some of these major advances, analyse how the perspective of an atomic physicist has changed over this period of time, and try to guess what the future holds for this physics.

## [Y2-Or] Plenary Lecture II

2016년 4월 21일 목요일 13:00 – 13:48

장소: 301호

좌장: 박 제 근 서울대 물리학과

### **Large Mixing-Induced CP Violations in B-meson Decays** / Stephen Lars Olsen(Institute for Basic Science)

The citation for this year's Panofsky Prize in Experimental Particle Physics reads as:

"For leadership in the BaBar and Belle Experiments, which established the violation of CP symmetry in B-meson decay, and furthered our understanding of quark mixing and quantum chromodynamics."

In this talk I will discuss the background, method and results of the BaBar and Belle measurements that confirmed Kobayashi and Maskawa's proposed mechanism for accommodating CP violation into the Standard Model, and led to their receiving the 2008 Nobel prize for physics. In addition I will describe other measurements done by Belle that challenge theoretical models for the long-distance behavior of quantum chromodynamics, the component of the Standard Model that addresses the spectroscopy and strong interactions of hadrons.

**[A11-Or] Open KIAS 특강  
(Open KIAS Lecture)**

2016년 4월 20일 수요일 13:00 - 14:48

장소: 204호

좌장: 고 병 원 고등과학원

**암흑광자 물리학**

암흑광자는 암흑물질과 표준모형 내의 물질들 사이의 상호작용을 매개하는 입자로서 최근 이를 탐색하는 실험들이 세계 곳곳에서 진행 또는 계획되고 있습니다. 본 특별세션은 암흑광자의 이론적인 배경과 이를 탐색하는 실험의 최신 동향들에 대해 논의하고자 합니다.

[13:00-13:50]

**Physics of Dark Gauge Interaction / 이혜성(IBS Center for Theoretical Physics of the Universe)**

[13:50-14:40]

**Searches for Dark Photons / 최수용(고려대 물리학과)**

**[A13-Or] 정책세션  
(Forum on Science Policy)**

2016년 4월 20일 수요일 13:00 - 14:48

장소: 206호

좌장: 이 주 한 KBSI

**정부출연연에서의 물리학 연구기회: 박사후 연수 및 석박사 학연과정 소개 및 전망**

청년실업이 중요한 사회적 문제가 되어있고 물리학 및 관련 분야를 전공자들의 취업 상황이 점점 열악해지는 현실에서, 정출연이 운영하고 있는 학연과정 및 박사후 연수과정을 소개하고 그 절차 및 진행상황을 설명함으로써, 졸업 이후 진로결정 및 취업에 실질적 도움이 되는 세션을 개최 하고자 합니다. 특히 정출연 포스트닥과 학연과정 학생의 바람직한 연구활동 모델 및 경력관리 방안을 함께 고민하는 토론시간도 가지고자 합니다.

[13:00-13:20]

**우리나라 이공계 포스트닥 현황 / 박기범(과학기술정책연구원)**

[13:20-13:40]

**출연연 포스트닥 및 석박사 학연과정 학생 운영 현황 / 이주한(한국기초과학지원연구원)**

[13:40-14:00]

**출연연 포스트닥 및 석박사 학연과정 운영 개선 방안 / 박갑동(과학기술연합대학원대학교)**

[14:00-14:48]

**종합토론** / (현재 정출연 포스트닥 2명, 프로그램발표자 3명 패널토론 및 질의 응답)

**[B11-Or] 여성세션**

**(The lecture of the committee on the status of women in physics)**

2016년 4월 20일 수요일 15:00 – 16:48

장소: 204호

후원: (재)한국여성과학기술인 지원센터 좌장: 임 혜 인 숙명여대

**젠더혁신**

이번 강연을 통하여 연구활동을 하는데 있어 젠더혁신이 얼마나 중요한지에 대해 배울 수 있는 좋은 기회가 될 것입니다. 중견연구자뿐만 아니라 대학원생들에게도 큰 도움이 되는 시간이 될 것으로 기대합니다. 또한 지난해에 젊은 여성과학자상을 수상한 학생들의 강연이 있습니다. 여성세션의 강연을 통해 많은 노하우를 얻어 가시길 바랍니다. 오셔서 많이 격려해주시고 좋은 의견들 부탁드립니다.

[15:00-15:10]

**인사말 및 WSET 소개** / 유경화(여성위 위원장, 연세대)

[15:10-15:25]

**'여성'연구자? 여성'연구자'!** / 양미선(부경대)

[15:25-15:40]

**여성연구자로서의 나** / 함선영(GIST)

[15:40-16:20]

**"젠더혁신"** / 이해숙(WSET 소장)

[16:20-16:40]

**다과 및 토의**

**[B15-Or] APCTP 저자 강연**

**(APCTP Authors Lecture)**

2016년 4월 20일 수요일 15:00 – 16:48

장소: 301호

좌장: 이 강 영 경상대

〈APCTP 선정 올해의 과학도서〉에 선정된 10권의 우수과학도서 저자 중에서 2명을 초청하여 〈저자와의 대화〉를 마련하고자 합니다.

[15:00-15:10]

**인사말 및 사회** / 이강영(경상대)

[15:10-15:50]

**끊임없이 변하는 공룡의 세계** / 박진영(서대문자연사 박물관)

[15:50-16:30]

세상물정의 물리학 / 김범준(성균관대학교 물리학과)



**[F7-Or] 범물리학과장협의회 포럼**

**(KPS Forum of Physics Department Chairs)**

2016년 4월 21일 목요일 16:00 - 17:48

장소: 107호

좌장: 송 종 현 충남대

**범물리학과장협의회 구성 보고 및 달라진 정부 연구비 정책과 효과적인 연구비 수주**

현재 수혜율의 확보에 치중하고, 기초과학연구원과 같은 초대형 프로젝트에 매몰되어 있는 초유의 상황으로 인해 각 대학과 연구소의 물리관련 연구인력들은 연구비 확보 측면에 있어 매우 많은 어려움을 겪고 있습니다. 특히 지역의 대학은 인력과 지원의 부족이라는 이중고로 인하여 연구와 교육에 많은 어려움을 겪고 있는 것이 사실입니다. 이러한 어려움을 극복하고자 2015년 4월 봄학회에서 범물리학과장협의회를 구성한 바 있습니다. 이번 학회에서 실제 연구비 배분 정책과 선정의 현장에 계신 연사를 초청하여 올해부터 달라진 정부연구비 정책과 이 가운데 현재 연구에 몸담고 있는 연구자들이 어떠한 전략으로 효과적인 연구비 수주를 할 수 있을 것인가의 주제로 강연과 질의 및 토론을 할 수 있는 효율적인 시간을 갖고자 합니다.

[16:00-16:20]

**인사말 및 범물리학과장협의회 중간 보고 / 김승환(한국물리학회장, 포항공대)**

[16:20-16:50]

**범물리학과장협의회 구성 보고 / 정윤철(범물리학과장협의회장, 부산대)**

[16:50-17:40]

**달라진 정부연구비 정책 및 효과적인 연구비 수주 / 남계춘 단장  
(한국연구재단)**

**E [E8-Or, F8-Or] 한국-베트남 세션**

**(Forum for collaborations between Korea and Vietnam in physics)**

2016년 4월 21일 목요일 14:00 - 15:48, 16:00 - 17:50

장소: 108호

좌장: 조 성 래 울산대

국내 재학중인 베트남 대학원생 증가 추세이며 한국물리학회 차원에서 베트남 물리학회와의 교류가 필요한 시점입니다. V-KIST 설립 및 운영 노하우 제공 협약 체결이 체결된 상태이며, 삼성전자 베트남 하노이 사업장에서 한국어 구사 직원 700명을 채용하여 영어 사용자보다 우대하고 있습니다. 인도차이나반도 (베트남, 미얀마, 태국, 말레이시아, 라오스) 국가와의 교류 증대를 위해 중심국가인 베트남과의 좋은 사례를 논의하고자 합니다.

[14:00-14:10]

**Welcome Address / Prof. Seunghwan Kim(Korean Physical Society President, POSTECH)**

[14:10-14:30]

**Vietnam Physical Society; Activities and prospects** / Prof. Dai Hung Nguyen(Vietnam Physical Society President, Vietnamese Academy of Science)

[14:30-14:50]

**Collaborations between HUST and Korea Universities** / Prof. Duc Chien Nguyen(Vietnam Physical Society Vice President, Hanoi University of Science and Technology)

[14:50-15:10]

**Collaborations between VNU in Hanoi and Korea Universities** / Prof. Huu Duc Nguyen(Vice President, Vietnam National University in Hanoi)

[15:10-15:30]

**Collaborations of between HNUE and Korea Universities** / Prof. Minh Thuy Nguyen(Dean, Hanoi National University of Education)

[15:30-15:50]

**"What can we do now for both sides?"** / Prof. Sunglae Cho(Department of Physics, University of Ulsan)

[16:00-16:20]

**For the better collaborations based on my experiences** / Prof. Cheol Gi Kim(Emerging Materials Science, DGIST)

[16:20-16:40]

**Suggestions for collaboration between Korean and Vietnamese physicists** / Prof. William Jo(Director of New and Renewable Energy Research Center, Ewha Womans University)

[16:40-17:00]

**About NRF and Programs for International Cooperation** / Dr. Taesun Min(Division Director, America & Asia Cooperation Team, National Research Foundation of Korea)

[17:00-17:50]

**Panel Discussion**

### 고등학생 물리 페스티벌 및 고교생 대상강연

2016년 4월 21일 목요일 14:00 - 17:30

장소: 대전 컨벤션 센터 2층 로비 및 301호

좌장: 서 정 필 DGIST

‘고등학생 물리 페스티벌’ 세션에서는 과학고, 과학중점고등학교, 일반 고등학교에 재학중인 고등학생으로 이루어진 팀이 R&E, 과제연구, 자유탐구로 수행한 독자적인 연구 활동을 통해 얻어진 결과를 발표하는 자리입니다. 미래 물리학자의 꿈을 가진 학생들의 행사에 회원분들의 많은 관심 부탁드립니다.

[14:00-16:00]

포스터 및 작품 발표

[16:20-17:00]

고교생 대상강연

나노 (압전, 전기)발전기 개발 / 이민백(인하대학교 물리학과)

[17:00-17:30]

우수 발표 시상

### [W1-Or] KIAS 대중강연

(Open KIAS Public Lecture)

2016년 4월 21일 목요일 18:00 - 19:30

장소: 301호

좌장: 백 승 원 KIAS

### 물리학의 최전선(Frontier of Physics)

‘물리학의 최전선’에서 활동하고 계시는 전문가의 최첨단 연구 결과 및 최근의 노벨상 수상 해설 강연을 통하여 기초과학에 대한 대중의 관심을 높이고 과학문화의 대중화에 기여하고자 합니다.

[18:00-18:45]

중성미자 이야기 / 전응진(KIAS)

[18:45-19:30]

원손과 오른손, 그리고 힉스 입자 / 최강신(이화여대)

**[W2-Or] KIAS 중력파 검출 GW150914 특별 강연**

**(Special lectures on the detection of gravitational waves, GW150914)**

2016년 4월 21일 목요일 19:30 – 21:30

장소: 201호

좌장: 강 궁 원 KIAS

지난 2월 블랙홀 쌍성 병합으로부터 발생한 중력파가 지상에 건설된 2대의 라이고에서 검출되었다고 발표되었습니다. 아인슈타인의 중력파 예측 이후 100년만이며 인류 최초의 블랙홀 쌍성 관측이기도 합니다. 더구나 피지컬 리뷰 레터에 게재된 논문에는 14명의 한국 과학자가 들어있습니다. 이런 획기적인 과학사적 대사건을 맞아 중력파 검출의 내용과 의의, 그리고 향후 전망을 들어보는 자리를 마련하였습니다.

[19:30-19:40]

**개회사 / 김승환**(한국물리학회 회장, 포항공대)

[19:40-20:30]

**중력파 검출의 의미와 전망 / 이형목**(서울대)

[20:30-21:20]

**중력파: 검출을 위한 100년의 여정과 미래 / 오정근**(국가수리과학연구소)

**[H10-Or] IOP 특별행사**

**(Special Session for Institute of Physics)**

2016년 4월 22일 금요일 11:00 – 12:58

장소: 202호

좌장: 박 제 근 서울대

IOP 영국물리학회출판사는 물리학에 관한 본학회의 고품질 저널, 이북과 학술대회 논문집등을 소개해드리며, 본 출판사의 퍼블리싱팀과의 만남의 장소를 마련하고자 합니다. 홍병희 교수님(서울대학교, IOP저널2D Materials의 지역 편집장)이 2차원 물질에 관한 최신의 글로벌 발전 동향등을 소개해드립니다. IOP세션이 연구자들과 대학원생들에게도 큰 도움이 되는 시간이 될 것으로 기대합니다.

[10:30-11:00]

**등록**

[11:00-11:10]

**인사말 / 남순건**(한국물리학회 부회장, 경희대학교)

[11:10-11:20]

**인사말 / Dr. Olaf Ernst**(IOP 영국물리학회출판사 Executive Vice President Sales, Marketing & Business Development)

[11:20-11:40]

**2차원 물질의 글로벌 발전 동향 / 홍병희**(IOP저널2D Materials의 지역 편집장, 서울대학교)

**[T1-se]**

2016년 4월 20일 수요일 11:00 - 12:58

장소: 102호

좌장: 유 영 준 ETRI

[11:00-12:30]

**나노분광학을 이용한 나노물질의 분석법 / 정문석(성균관대학교 에너지과학과)**

나노물질은 한 축의 크기가 대략 1~100nm 사이의 크기인 물질로 정의된다. 빛을 이용하는 광학적 분석은 빛의 회절현상으로 인해 파장의 절반정도로 공간분해능이 제약을 받게 된다. 따라서 일반적인 가시광선을 이용한 광분석은 공간분해능이 수백 nm로 제한되기 때문에 단일나노구조체를 볼 수 없고 나노구조체들의 앙상블 특성을 관찰할 수 밖에 없다. 본 강연에서는 광학적인 공간분해능의 한계를 뛰어넘는 나노광학 현미경에 대해 소개하고 이를 이용한 나노구조의 분석기술에 대해 소개할 예정이다. 대표적으로 나노발광, 나노라만산란, 나노적외선분광법을 이용한 그래핀, MoS2 등의 2차원 나노물질의 분석을 예를 들어 나노분광학의 중요성을 강조하려한다.

[T2-co]

2016년 4월 20일 수요일 11:00 – 12:58

장소: 201호

좌장: 김 재 훈 연세대

[11:00-12:30]

## Topological phases of matter / 박권(KIAS)

Topological phases of matter are novel phases of matter, which cannot be characterized by conventional order parameters describing the symmetry, but rather by topological invariants describing the topological order. In this talk, I would like to explain that the concept of the topological invariants is fundamentally based on the Berry phase, which is particularly defined in the momentum space. In fact, there is an intriguing connection between the topological matter, the Rabi oscillation, and the magnetic monopole. I would like to discuss how the topological matter is different from the conventional one due to the presence of the non-trivial topological order.

**[T3-op]**

2016년 4월 21일 목요일 11:00 - 12:58

장소: 102호

좌장: 문 한 섭 부산대

[11:00-11:36]

**기본물리상수와 새 국제단위계 / 이호성(한국표준과학연구원)**

현재 사용되고 있는 국제단위계(SI)는 7개의 기본량(길이, 시간, 질량, 온도, 전기, 광도, 물질의 양)에 해당하는 기본단위(미터, 초, 킬로그램, 켈빈, 암페어, 칸델라, 몰)를 각각 정의하고 있다. 그런데 2018년에는 이 체계가 바뀔 예정이다. 즉 기본량과 관련된 7개의 기본물리상수의 값을 고정시키고 (불확도가 0이 되고), 이 상수로부터 기본단위를 유도해내는 방식이다. 이 기본물리상수들은 세슘-133 원자의 초미세 분리 주파수, 진공에서의 빛의 속력, 플랑크 상수, 볼츠만 상수, 기본전하, 시감 상수, 아보가드로 상수다. 이 기본물리상수들 중에서 초를 정의하는데 사용되는 세슘원자의 초미세 주파수는 물을 제외한 다른 5개 기본단위에 모두 영향을 미친다. 국제단위계가 이렇게 바뀔에 따라 기존에 불확도가 0인 여러 기본물리상수들 (예: 전기상수, 자기상수, 탄소-12의 몰 질량 등)은 불확도를 가지게 되고, 불확도를 가지던 여러 상수들 (예: 물 기체상수, 패러데이 상수 등)은 불확도가 0이 된다. 본 발표에서는 새 SI 체계에 대해서 설명하고, 몇몇 기본단위들에 대해서 구체적으로 알아본다. 특히, 큰 변화가 생기는 두 단위인 킬로그램과 켈빈 및 그와 관련된 플랑크 상수 및 볼츠만 상수에 대해서 두 전문가가 이어서 발표한다.

[11:36-12:12]

**볼츠만 상수와 열역학적 온도 단위 / 양인석(한국표준과학연구원)**

현재 물의 삼중점에 273.16 K이라는 값을 지정함으로써 정의되어 있는 열역학적 온도의 단위인 켈빈은 2018년 이후에는 볼츠만 상수에 특정한 값을 지정하는 정의로 바뀔 것이다. 이 개정된 정의로 인하여 켈빈은 에너지와 직접적인 연관을 맺으면서 다른 SI 단위인 kg, m, s와 연결된다. 새로운 정의가 현재의 정의와 불연속성이 없도록 만들기 위해서는 현재의 켈빈 정의하에서 볼츠만 상수를 정확하게 측정하는 것이 중요하다. 많은 표준기관에서는 지난 10년간 다양한 방법으로 볼츠만 상수를 측정하기 위하여 노력해왔으며 현재 가장 정확한 결과는 10-6 정도의 상대불확도를 갖고 있다. CODATA는 이런 결과들을 종합하여 최근에 볼츠만 상수의 조정 불확도를  $5.7 \times 10^{-7}$ 으로 발표하였다.

볼츠만 상수를 측정하는 방법 중 가장 정확한 방법은 기체 내의 음속 측정을 통한 음향기체온도계 방법이다. 최근에 이 방법과 관련한 국제적인 볼츠만 상수 측정값의 불일치를 한국표준과학연구원이 아르곤 물질량을 정밀 측정함으로써 해소한 바 있다. 볼츠만 상수 측정의 다른 방법으로는 온도에 따른 기체의 유전상수 변화를 이용한 유전상수기체온도계나 저항에서 측정되는 전압 잡음의 온도 의존성을 이용하는 잡음온도계도 있다. 모든 측정은 현재의 정의와의 연결을 위하여 물의 삼중점 (273.16 K)과 매우 가까운 온도에서 수행되고 있다. 그러나 개정 이후에는 볼츠만 상수를 이용하여 열역학적 온도를 현시하는 실험이 어떤 온도에서도 수행될 수 있다.



[12:12-12:48]

## 플랑크 상수와 질량 단위 / 이광철(한국표준과학연구원)

현재 SI 단위계 중 질량의 단위인 kg은 백금과 이리듐으로 만들어진 킬로그램 원기의 질량으로 정의되어 있다. 인공물인 킬로그램 원기는 안정적이지 못하므로 변하지 않는 물리상수인 플랑크 상수를 이용하여 kg이 재정의될 예정이다. kg을 재정의 하기 위해서는 플랑크 상수를 정확하게 또한 안정적으로 측정하는 것이 중요하다. 현재 와트저울과 아보가드로 프로젝트 두 가지 독립적인 방법으로 플랑크 상수를 측정하고 있다. kg이 재정의 된 이후에는 위 두 가지 방법을 이용하여 kg을 구현하게 될 것이다.

와트저울은 mechanical watt  $mgv$ 와 electrical watt  $U^2/R$  를 비교하는 실험이다. electrical watt는 조셉슨 전압 ( $h/2e$ )과 양자홀 저항 ( $h/e^2$ )을 이용하여 측정하므로 플랑크상수와 주파수의 곱으로 표현된다. 와트저울은 전자기력과 중력을 비교하는 weighing 모드와 자기장안에서 코일이 움직일 때 발생하는 전압을 측정하는 moving 모드로 이루어진다. weighing 모드에서는 중력과 전자기력의 평형을 이루는 전류  $I = mg/(BL)$ 를 측정하며 moving 모드에서는 코일이 움직일 때 발생하는 전압  $U = (BL)v$ 를 측정한다. 측정한  $UI = mgv$ 와 양자 홀 저항과 조셉슨 전압의 관계식으로부터 플랑크 상수  $h$ 를 원기의 질량  $m$ , 원기 위치에서의 중력가속도  $g$ , moving 모드에서의  $z$ 축 방향의 코일 속도  $v$ 의 곱으로 나타낼 수 있다. 본 발표에서는 킬로그램 재정의의 실현하기 위한 와트저울 연구 동향과 표준연 와트저울 개발현황을 보고한다.

[T4-co]

2016년 4월 22일 금요일 09:00 – 10:48

장소: 106호

좌장: 김 재 훈 연세대

[09:00-10:30]

**Pump-probe spectroscopic techniques to investigate non-equilibrium states in condensed matters / 이종석(GIST)**

Photon-based spectroscopic techniques have long been developed and served as a powerful means to investigate novel electric and magnetic states of condensed matters with the help of direct or indirect interactions between photon and fundamental degrees of freedom in solids, namely charge, spin, orbital, and lattice. Nowadays, such spectroscopic applications are extended to investigate non-equilibrium states which are prepared by photon illuminations, for example. In this presentation, the review will be given on the pump-probe spectroscopic techniques and their applications to investigate the ultrafast dynamics of charge, spin, and lattice degrees of freedom in strongly correlated electron systems, topological insulators, and so on.

## SESSION A

2016년 4월 20일(수) 오후

### [A1-nu] General: Hadron Physics

2016년 4월 20일 수요일 13:00 - 14:24

장소: 101호

좌장: 안 정 근 고려대

A1,01\* [13:00-13:12]

**The radiative decay of pion from the instanton vacuum / SHIM Sang-In\*, KIM Hyun-Chul**(Department of Physics, Inha University)

A1,02\* [13:12-13:24]

**Dibaryons with one heavy flavor in a constituent quark model / PARK Aaron, PARK Woosung, LEE Su Houn\***(Department of Physics, Yonsei University)

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

**Dibaryons with two strange quarks and total spin zero in a constituent quark model / PARK Woosung, PARK Aaron, LEE Su Houn\***(Department of Physics, Yonsei University)

A1,04\* [13:36-13:48]

**Gamma-ray spectroscopy of at J-PARC / 양성배\***(서울대학교 물리천문학부)

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

**Deeply virtual Compton scattering cross sections with CLAS / JO Hyon-Suk\***(Institute for Basic Science)

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

**Chiral quark soliton model and the excited baryons / 손현동, 김현철\***(인하대학교 물리학과)

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

**Instanton effects on the heavy-quark static potential / TURIMOV Bobur, KIM Hyun-Chul\***(Department of Physics, Inha University)

## [A2-se] Low dimensional nano-materials

2016년 4월 20일 수요일 13:00 - 14:24

장소: 102호

좌장: 최 석 호 경희대

A

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

**High performance of WS<sub>2</sub> based flash memories with van der Waals heterostructures** / 추동일, 박성재, 이승교, 송다예, 김은규\*  
(한양대학교 물리학과)

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

**In<sub>2</sub>Se<sub>3</sub>-graphene herero-structure for phase change application** / YANG Chenxi, CHOI Min Sup, RA Chang Ho, YOO Won Jong\* (SKKU Advanced Institute of Nano-Technology, Sungkyunkwan University)

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

**Dielectric constants of monolayer MoS<sub>2</sub> and WSe<sub>2</sub>** / 이성연<sup>1</sup>, 정태영<sup>1</sup>, 윤석준<sup>3</sup>, 김지희<sup>2</sup>, 이기주\*<sup>1</sup>(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>성균관대학교 나노구조물리연구단, <sup>3</sup>성균관대학교 에너지과학과, 나노구조물리연구단)

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

**Effects of gas adsorption and charge transfer on the electrical properties of CVD-grown MoS<sub>2</sub> thin films** / CHO Yunae<sup>1</sup>, SOHN Ahnum<sup>1</sup>, KIM Sujung<sup>1</sup>, KIM Dong-Wook\*<sup>1</sup>, CHO Byungjin<sup>2</sup>, HAHM Myung Gwan<sup>2</sup>, KIM Dong-Ho<sup>2</sup>(<sup>1</sup>Department of Physics, Ewha Womans University, Seoul 120-750, Korea, <sup>2</sup>Advanced Functional Thin Films Department, Korea Institute of Materials Science (KIMS), Changwon 64)

### A2.05\* [13:48-14:00]

**2-dimensional GaSe: Single crystal growth and optical properties** / NGUYEN Thanh Huong Thi<sup>1</sup>, NGUYEN Phuong Anh<sup>1</sup>, NGUYEN Quang Van<sup>1</sup>, DUONG Tuan Anh<sup>1</sup>, SONG Jae Yong<sup>2</sup>, PARK Hyun-Min<sup>2</sup>, CHO Sunglae\*<sup>1</sup> (<sup>1</sup>Department of Physics and Energy Harvest Storage Research Center, University of Ulsan, Ulsan 680 - 7, <sup>2</sup>Materials Genome Center, Korea Research Institute of Standards and Science, Daejeon 305-340, Republic)

### A2.06\* [14:00-14:12]

**Solution process-derived n/p- ZnO nanorod architecture arrays and their p-n homojunctions for optoelectronic applications** / KO WonBae<sup>1</sup>, LEE ChoongHyun<sup>1</sup>, CHOI DaSong<sup>1</sup>, YANG SeungMo<sup>1</sup>, YANG JungYup<sup>2</sup>, HONG JinPyo\*<sup>1</sup> (<sup>1</sup>Novel Functional Materials and Device Laboratory, Department of Physics, Hanyang University, Korea, <sup>2</sup>Department of physics, Kunsan national University, South Korea)

### A2.07\* [14:12-14:24]

**High quality topological insulator Bi<sub>2</sub>Se<sub>3</sub> grown on h-BN using**

**molecular beam epitaxy /** PARK Joon Young<sup>1,2</sup>, LEE Gil-Ho<sup>3</sup>, JO Janghyun<sup>2,4</sup>, CHENG Austin Kcon<sup>3</sup>, YOON Hosang<sup>1,2</sup>, WATANABE Kenji<sup>5</sup>, TANIGUCHI Takashi<sup>5</sup>, KIM Miyoung<sup>2,4</sup>, KIM Philip<sup>\*3</sup>, YI Gyu-Chul<sup>\*1,2</sup>(<sup>1</sup>Department of Physics and Astronomy and Institute of Applied Physics, Seoul National University, <sup>2</sup>Research Institute of Advanced Materials, Seoul National University, <sup>3</sup>Department of Physics, Harvard University, <sup>4</sup>Department of Materials Science and Engineering, Seoul National University, <sup>5</sup>Advanced Materials Laboratory, National Institute for Materials Science)

**[A3-ap] Surface, Interface & Thin Films**

2016년 4월 20일 수요일 13:00 – 14:36

장소: 103호

좌장: 장 성 호 건국대

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

**Effect of Metal Clusters on the Decomposition of SiO<sub>2</sub> /** JANG Dongsoo, JUE Miyeon, YOON Hansub, KIM Donghoi, KIM Chinkyoo\* (Department of Physics, Kyung Hee University)

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

**Topotactic transition induced by oxygen vacancy migration in calcium-doped bismuth ferrite films /** LIM JiSoo, YANG Chanhoo\* (Department of Physics, KAIST)

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

**Protein adhesion layer for ultra-thin and-smooth gold layer /** UMAR Muhammad<sup>1</sup>, MIN Kyungtaek<sup>1</sup>, KIM Sunghwan<sup>\*1,2</sup>(<sup>1</sup>Department of Energy Systems Research, Ajou University, <sup>2</sup>Department of Physics, Ajou University)

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

**Defects induced physical property variations in VO<sub>2</sub> films /** KIM Hyegyeong<sup>1</sup>, LEE Dooyong<sup>1,2</sup>, LIM Chang-hyun<sup>2</sup>, YUN Hyung-Joong<sup>2</sup>, JANG Yun Hyeong<sup>3</sup>, CHO Jin-Hyung<sup>4</sup>, PARK Sungkyun<sup>\*1</sup>(<sup>1</sup>Department of Physics, Pusan National University, <sup>2</sup>Advanced Nano Surface Research Group, Korea Basic Science Institute, <sup>3</sup>Nextron Corp., <sup>4</sup>Department of Physics Education, Pusan National University)

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

**Effect of hydrogen annealing on the epitaxial VO<sub>2</sub> films /** LEE Dooyong<sup>1,3</sup>, KIM Hyegyeong<sup>1</sup>, KIM Ji Woong<sup>1</sup>, JANG Yun Hyeong<sup>2</sup>, YUN Hyung-Joong<sup>3</sup>, LEE Jouhahn<sup>3</sup>, PARK Sungkyun<sup>\*1</sup>(<sup>1</sup>Advanced Nano Surface Research Group, Korea Basic Science Institute, <sup>2</sup>Nextron Corp., <sup>3</sup>Department of Physics, Pusan National University)

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

**Post-annealing Effect on Surface Structure of Indium Tin Oxide Films** / LIM Ho-Joon<sup>1</sup>, MUN Bongjin Simon<sup>\*1</sup>, YANG Hyeok-Jun<sup>2</sup>, KIM Ji Woong<sup>3</sup>, PARK Sung kyun<sup>\*3</sup>, BAE Jong seung<sup>4</sup>, JUNG Byeom-Kyun<sup>5</sup>, CRUMLIN Ethan<sup>5</sup>(<sup>1</sup>Department of Physics and Photon Science, GIST, Gwangju, Korea, <sup>2</sup>Department of Physics, KAIST, Daejeon, Korea, <sup>3</sup>Department of Physics, Pusan National University, Busan 46241, Korea, <sup>4</sup>Busan Center, Korea Basic Science Institute, Busan 618-230, Korea, <sup>5</sup>Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, USA)

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

**Thermoelectric characterization and fabrication of p-type Bi<sub>0.5</sub>Sb<sub>1.5</sub>Te<sub>3</sub> and n-type Bi<sub>2</sub>Te<sub>3</sub> thin film thermoelectric energy generator** / 박노원<sup>1</sup>, 박태현<sup>1</sup>, 안재영<sup>1</sup>, 강소현<sup>2</sup>, 윤순길<sup>2</sup>, 이상권<sup>\*1</sup>(<sup>1</sup>중앙대학교 물리학과, <sup>2</sup>충남대학교 재료공학과)

A3.08 [14:24-14:36]

**Microscopic Physical Morphology and Chemical Structure Analyses of Au Electrode for Enhanced CO<sub>2</sub> Reduction Activity** / KIM Haeri<sup>\*1</sup>, JEON Hyo Sang<sup>1,2</sup>, NURSANTO Eduardus Budi<sup>1,2</sup>, JEE Michael Shincheon<sup>1</sup>, KOH Jai Hyun<sup>1</sup>, SINGH Jitendra Pal<sup>3</sup>, CHAE Keunhwa<sup>3</sup>, HWANG Yun Jeong<sup>\*1,2</sup>, MIN Byong Koun<sup>\*1,2,4</sup>(<sup>1</sup>Clean Energy Research Center, Korea Institute of Science and Technology (KIST), 02792, <sup>2</sup>Korea University of Science and Technology, 34113, <sup>3</sup>Nano Material Analysis Center, Korean Institute of Science and Technology (KIST), 02792, <sup>4</sup>Green School, Korea University, 02841)

**[A4-st] Phase Transitions and Nonequilibrium Phenomenon**

2016년 4월 20일 수요일 13:00 - 14:30

장소: 104호

좌장: 노재동 시립대

A4.01(초) [13:00-13:24]

**Percolation as a process of coagulation and network emergence** / SON Seung-Woo<sup>\*</sup>(Department of Applied Physics, Hanyang University)

A4.02(초) [13:24-13:48]

**Realization of a Brownian motor through a Maxwell's demon** / LEE Dong yun<sup>\*1</sup>, UM Jaegon<sup>2</sup>, PANERU Govind<sup>1</sup>, PAK Hyuk Kyu<sup>1,3</sup>(<sup>1</sup>Center for Soft and Living Matter, Institute for Basic Science (IBS), <sup>2</sup>School of Physics, Korea Institute for Advanced Study, <sup>3</sup>Department of Physics, Ulsan National Institute of Science and Technology)

A4.03 [13:48-14:00]

**Criticality of deterministic fixed energy sandpiles with toppling balance** / PARK Su-Chan<sup>\*</sup>(Department of physics, The Catholic University of Korea)

A4.04 [14:00-14:12]

**A finite-size nonequilibrium phase transition** / 이주련\*(숭실대학교 생명정보학과)

A4.05 [14:12-14:24]

**Efficiency at the maximum power output for simple two-level heat engine** / LEE Sang Hoon<sup>\*1</sup>, UM Jaegon<sup>2</sup>, PARK Hyunggyu<sup>1, 2</sup>(<sup>1</sup>School of Physics, Korea Institute for Advanced Study, Seoul 02455, Korea, <sup>2</sup>Quantum Universe Center, Korea Institute for Advanced Study, Seoul 02455, Korea)

A4.06 [14:24-14:36]

**Dynamic instability in a dissipative feedback process with time delay** / 엄재곤<sup>\*1</sup>, 노재동<sup>2</sup>, 권철안<sup>3</sup>, 박형규<sup>1, 4</sup>(<sup>1</sup>고등과학원 양자우주센터, <sup>2</sup>서울시립대 물리학과, <sup>3</sup>명지대학교 물리학과, <sup>4</sup>고등과학원 물리학과)

**[A5-co] Focus: Nano / Mesoscopic System**

2016년 4월 20일 수요일 13:00 – 14:48

장소: 105호

좌장: 도 용 주 광주과학기술원

A5.01(초) [13:00-13:36]

**Coherent proximity coupling in superconductor-graphene heterostructures** / LEE Hu-Jong<sup>\*1</sup> (<sup>1</sup>Department of Physics, POSTECH, <sup>2</sup>Center for Topological Matter, POSTECH)

A5.02(초) [13:36-14:12]

**Spin transport in a strong spin-orbit coupling channel** / KOO Hyun Cheol<sup>\*1, 2</sup>(<sup>1</sup>Center for Spintronics, Korea Institute of Science and Technology, Seoul 136-791, Korea, <sup>2</sup>KU-KIST Graduate School of Converging Science and Technology, Korea University, Seoul, 136-701, Kor)

A5.03(초) [14:12-14:48]

**Probing Electronic Properties of Two-Dimensional Materials by Tunneling Spectroscopy Measurements** / JUNG Suyong\*(Korea Research Institute of Standards and Science)

## [A6-co] Electronic structure calculations

2016년 4월 20일 수요일 13:00 - 14:36

장소: 106호

좌장: 김 용 훈 한국과학기술원

A

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

**Interedge magnetic correlation in p-doped zigzag edge of graphene nanoribbon** / 이호식\*(울산과학기술원)

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

**On the myth of the localization of the polar catastrophic charge in the STO/LAO interface** / KIM Maengsuk<sup>1</sup>, SHIN Dongbin<sup>1</sup>, LEE Jun Hee<sup>2</sup>, PARK Noejung\*<sup>1</sup>(<sup>1</sup>Department of Physics, Ulsan National Institute of Science and Technology, <sup>2</sup>School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology)

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

**Electronic structure of undercoordinated cation defects in amorphous oxide semiconductors** / 한우현\*, 장기주(카이스트 물리학과)

A6.04\* [13:36-13:48]

**Density functional theory plus the Hubbard U potential on molecular orbitals for ionic-bonded molecular crystals and adsorptions on surfaces** / SHIN Dongbin, PARK Noejung\*(Department of Physics, Ulsan National Institute of Science and Technology)

A6.05\* [13:48-14:00]

**First principle study of Electronic and Thermal Transport Properties in Phosphorene and Phosphorene Oxide** / 이승준, 박제준, 강승훈, 권영균\*(경희대학교 물리학과)

A6.06\* [14:00-14:12]

**First-principles calculation of the Electronic structure and Nonlinear optical properties in BiO(IO<sub>3</sub>) Nanoplates** / 송나영, 김복기\*(부산대학교 물리학과)

A6.07\* [14:12-14:24]

**Strain induced tuning of Dirac states in 1T'-MoX<sub>2</sub>(X=S, Se, Te)** / 성하준, 최덕현, 장기주\*(한국과학기술원 물리학과)

A6.08\* [14:24-14:36]

**SnS<sub>2</sub> /graphene heterostructure as an anode material for Na ion batteries: A first principles study** / SAMAD Abdus, SHIN Young-Han\*(Department of Physics, University of Ulsan, Ulsan 44610, Republic of Korea)



**[A7-co] Surface/Interface I**

2016년 4월 20일 수요일 13:00 - 14:12

장소: 107호

좌장: 조 성 재 한국과학기술원

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

**Topological band order transition in X-Bi(X=Ga,In,Tl) (111) bilayer**  
/ KIM Youngjae, YUN Won Seok, LEE J. D.\* (Department of Emerging Materials Science, DGIST)

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

**Identification of native defects on the Te- and Bi-doped Bi<sub>2</sub>Te<sub>3</sub> surface** / DUVJIR Ganbat<sup>1</sup>, HWANG Chanyong<sup>\*1</sup>, DUGERJAV Otgonbayar<sup>1</sup>, KIM Jinsu<sup>2</sup>, LEE Hyun-Seong<sup>2</sup>, TAPASZTO Levente<sup>3</sup>, KIM Yong Sung<sup>4</sup>, JUNG Myung-Wha<sup>2</sup>(<sup>1</sup>Nano-Metrology Center, Korea Research Institute of Standards and Science, <sup>2</sup>Physics Department, Sogang University, <sup>3</sup>Centre for Energy Research, Institute for Technical Physics and Materials Science, Budapest, Hungary, <sup>4</sup>Materials Genome Center, Korea Research Institute of Standards and Science)

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

**Charge Doping Driven Potential Ferromagnetic Armchair Black Phosphorene Nanoribbon** / FAROOQ Muhammad Umar, HASHMI Arqum, HONG Jisang\* (Department of Physics, Pukyong National University)

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

**Raman signatures of antiferromagnetic phase transitions in atomically thin FePS<sub>3</sub>** / LEE Jae-Ung<sup>1</sup>, LEE Sungmin<sup>2, 3</sup>, PARK Je-Geun<sup>2, 3</sup>, CHEONG Hyeonsik<sup>\*1</sup>(<sup>1</sup>Department of Physics, Sogang University, <sup>2</sup>Center for Correlated Electron Systems, Institute for Basic Science (IBS), <sup>3</sup>Department of Physics and Astronomy, Seoul National University(SNU))

**A7.05\*** [13:48-14:00]

**Sublattice interference effect on high-energy kinks in the  $\sigma$  bands of graphene** / 정성원<sup>1, 2</sup>, 김지민<sup>1, 2</sup>, 신우종<sup>1, 2</sup>, 김근수<sup>\*1</sup>. (<sup>1</sup>Center for Artificial Low Dimensional Electronic Systems, Institute for Basic Science (IBS), Pohang, <sup>2</sup>Department of Physics, Pohang University of Science and Technology (POSTECH), Pohang)

**A7.06** [14:00-14:12]

**Adsorptions and Diffusions of a Boron and a Nitrogen Atoms on Pt(111)** / 김규형, 정석민\* (전북대학교 물리학과)

## **E [A8-co] Focus: Nonequilibrium physics in condensed matter systems**

2016년 4월 20일 수요일 13:00 – 14:48

장소: 108호

좌장: 박 권 고등과학원

**A8.01(초)** [13:00-13:36]

**Precession of Spins Pumped by Pulsed Terahertz Magnetic Fields /** LEE Howon, HA Taewoo, KIM Jong Hyeon, JO Young Chan, SIM Kyung Ik, KIM Jangwon, OH S. H., CHOI Y. J., KIM Jae Hoon\*(Department of Physics, Yonsei University)

**A8.02(초)** [13:36-14:12]

**Ultrafast phase transitions in Mott insulator  $\text{Ca}_2\text{RuO}_4$  /** KIM Kyungwan\*(Department of Physics, Chungbuk National University)

**A8.03(초)** [14:12-14:48]

**Ultrafast terahertz-control of magnetization states in a canted antiferromagnetic  $\text{YFeO}_3$  /** KIM Taeheon<sup>1</sup>, KOVALEV Sergey<sup>2</sup>, GENSCHE Michael<sup>2</sup>, TOKUNAGA Yusuke<sup>3</sup>, TOKURA Yoshinori<sup>3</sup>, LEE Jongseok\*<sup>1</sup>(<sup>1</sup>Department of Physics and Photon Science, Gwangju Institute of Science and Technology (GIST), <sup>2</sup>Helmholtz-Zentrum Dresden-Rossendorf, Germany, <sup>3</sup>RIKEN Center for Emergent Matter Science (CEMS), Japan)

## **E [A9-co] Pioneer: High temperature superconductor and spectroscopic techniques I**

2016년 4월 20일 수요일 13:00 – 14:48

장소: 201호

좌장: 문 은 국 한국과학기술원

**A9.01(초)** [13:00-13:36]

**Glassy Charge Order in Numerical Data and STM Data, Their Mechanism and Roles /** KIM Eun-Ah\*(Department of Physics, Cornell University, Ithaca, NY 14853, USA)

**A9.02(초)** [13:36-14:12]

**Atomic-scale observation of plaquette antiferromagnetic order and electron-phonon coupling in tetragonal FeAs monolayer encapsulated in perovskite monolayers using spin-polarized STM /** LEE Jhinwhan\*(Department of Physics, KAIST)

**A9.03(초)** [14:12-14:48]

**Quantitative determination of the self-energy and pairing interaction for high  $T_c$  cuprate from ARPES experiment. /** BOK Jin Mo\*(Institute for Basic Science Research, SungKyunKwan University)

**[A12-pl] General: Basic Plasma & Nuclear Fusion**

2016년 4월 20일 수요일 13:00 – 15:00

장소: 205호

좌장: 김 재 현 국가핵융합연구소

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

**New process of light emission in plasma** / KIM Byungwhan\*

(Department of Electrical Engineering, Sejong University)

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

**Bohm diffusion mystery solved** / LEE Kwan Chul\*(National Fusion Research Institute)

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

**Kinetic-fluid transitions of atmospheric pressure micro-sized plasmas driven by high frequencies** / YUN Gunsu\*, LEE M.U., JEONG S.Y., LEE J.K.(Pohang University of Science and Technology, Pohang, 37673, Korea)

**A12,04\*** [13:36-13:48]

**Physical properties of the phase correlation between the pressure and the electrical potential in the turbulence derived from the drift Alfvén 3-D model** / 안찬용\*, 민병훈, 김창배(숭실대학교 물리학과)

**A12,05** [13:48-14:00]

**Modification of guiding-center orbits in 3D tokamaks and implications for toroidal momentum transport** / KIM Kimin\*, CHOE Wonho(Korea Advanced Institute of Science and Technology)

**A12,06** [14:00-14:12]

**Gyrotron research activities at KERI** / 한성태\*, 김종수, 배준한, 장성록, 하태현(한국전기연구원)

**A12,07\*** [14:12-14:24]

**Feed-forward Plasma Position and Shape Control in VEST** / YANG Jeong-hun, KIM Seong-Chol, JANG Jae-Young, LEE Jeongwon, CHUNG Kyoung-Jae, HWANG Yong-Seok\*(Department of Engineering, Seoul National University)

**A12,08** [14:24-14:36]

**Erosion and deuterium retention in tungsten exposed to KSTAR and EAST plasmas** / WU Jing<sup>1</sup>, HONG Suk-Ho<sup>\*2</sup>, GAO Liang<sup>3</sup>, LUO Guang-Nan<sup>\*1</sup>(<sup>1</sup>Institute of Plasma Physics, Chinese Academy of Sciences, <sup>2</sup>National Fusion Research Institute, <sup>3</sup>IPP Garching, Max-Planck-Institut für Plasmaphysik)

A12.09 [14:36-14:48]

**The current status of KBSI heavy ion accelerator project / 원미숙\*, 이병섭, 최세용, 윤장희, 옥정우, 박진용, 김성준, 방정배, 홍종기(한국기초과학지원연구원)**

A12.10 [14:48-15:00]

**The Development of high power RF system for CW RFQ accelerator in KBSI / 이병섭\*, 방정배<sup>1</sup>, 홍종기<sup>1</sup>, 김은산<sup>2</sup>, 원미숙<sup>1</sup>, 옥정우<sup>1</sup>, 윤장희<sup>1</sup>, 최세용<sup>1</sup>, 박진용<sup>1</sup>, 김성준<sup>1</sup>(<sup>1</sup>한국기초과학지원연구원, <sup>2</sup>고려대학교)**

**[A14-pa] General: Field and string theory**

2016년 4월 20일 수요일 13:00 - 14:48

장소: 209호

좌장: 김 석 서울대학교

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

**Quons in a Quantum Dissipative System / LEE Taejin\*(Department of Physics, Kangwon National University)**

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

**Diamagnetic property of quantum matter with Holography / SEO Yunseok<sup>1</sup>, KIM KeunYoung<sup>2</sup>, KIM KyungKyu<sup>3</sup>, SIN Sang-Jin\*<sup>1</sup>(<sup>1</sup>Hanyang University, <sup>2</sup>GIST, <sup>3</sup>Yonsei)**

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

**Kaluza-Klein Holography and the LLM geometry / 장동민, 김윤배, 권오갑\*, Driba D. Tolla(성균관대학교 물리학과)**

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

**Scaling property in the anomalous Hall effect from Holography / SEO Yunseok\*<sup>1</sup>, SIN Sang-Jin<sup>2</sup>, KIM Keun-Young<sup>3</sup>, KIM Kyung Kiu<sup>4</sup>(<sup>1</sup>APCTP, <sup>2</sup> Hanyang University, <sup>3</sup>GIST, <sup>4</sup>Yonsei University)**

A14.05 [13:48-14:00]

**Hysteresis Curve from 11 dimensions / KIM Kyung Kiu\*<sup>1</sup>, SIN Sang-Jin<sup>2</sup>, SEO Yunseok<sup>3</sup>, KIM Keun-Young<sup>4</sup>(<sup>1</sup>Department of physics Yonsei University, <sup>2</sup>Department of physics Hanyang University, <sup>3</sup>APCTP, <sup>4</sup>Gwangju Institute of Science and Technology)**

A14.06\* [14:00-14:12]

**Scalar Hairy AdS3 Black Holes and Smarr Relation / 안병준, 김경규\*(연세대학교 물리학과)**

A14.07\* [14:12-14:24]

**Canonical energy and hairy AdS black holes / HYUN Seungjoon, PARK**

Sang-A, YI Sang-Heon\* (Department of Physics, Yonsei University)

**A14.08\*** [14:24-14:36]

**Firewalls in Israel-Hartle-Hawking state /** EUNE Myungseok<sup>2</sup>, GIM Yongwan\*<sup>1</sup>, KIM Wontae<sup>1</sup> (<sup>1</sup>Department of physics Sogang University, <sup>2</sup>College of Liberal Arts, Sangmyung University)

**A14.09** [14:36-14:48]

**Holographic Study on Quarkonium Dissociation in Medium /** PARK Chanyong<sup>1,3</sup>, LEE Bum-hoon<sup>1,2</sup>, NAM Siyoung\*<sup>1</sup> (<sup>1</sup>Asia Pacific Center for Theoretical Physics, Pohang, 790-784, Korea, <sup>2</sup>Department of Physics, Sogang University, Seoul, Korea 121-742, <sup>3</sup>Department of Physics, Postech, Pohang, 790-784, Korea)

## SESSION B

2016년 4월 20일(수) 오후

B

### [B1-nu] General: Nuclear Reaction/Nuclear Structure

2016년 4월 20일 수요일 15:00 – 16:12

장소: 101호

좌장: 오 용 석 경북대

#### B1.01\* [15:00-15:12]

**Search for optimal combinations synthesizing superheavy elements /**  
CHUNG Minhuk<sup>1</sup>, ARITOMO Yoshihiro<sup>2</sup>, KIM Youngman<sup>\*3</sup>(<sup>1</sup>Department of Physics,  
Yonsei University, <sup>2</sup>Faculty of Science and Engineering, Kindai University, <sup>3</sup>Rare Isotope  
Science Project Institute for Basic Science)

#### B1.02 [15:12-15:24]

**Photodisintegration of molybdenum isotopes /** ISHKHANOV B. S.<sup>1,2</sup>,  
KUZNETSOV A. A.<sup>2</sup>, HAN Dong Yoon<sup>\*1</sup>(<sup>1</sup>Department of Physics, Moscow State  
University, Moscow 119991, Russia, <sup>2</sup>Skobeltsyn Institute of Nuclear Physics,  
Moscow State University, Moscow 119991, Russia)

#### B1.03 [15:24-15:36]

**Study of (n,α) scattering phase shifts using NCSM results /**  
Myeong-Hwan Mun<sup>\*1</sup>, Hyeong Il Kim<sup>1</sup>, Young-Ouk Lee<sup>1</sup>, Ik Jae Shin<sup>2</sup>, A.  
M. Shirokov<sup>3</sup>, J. P. Vary<sup>4</sup>(<sup>1</sup>Korea Atomic Energy Research Institute (KAERI),  
<sup>2</sup>Rare Isotope Science Project (RISP), <sup>3</sup>Skobeltsyn Institute of Nuclear Physics,  
Lomonosov Moscow State University, <sup>4</sup>Department of Physics and Astronomy,  
Iowa State University)

#### B1.04 [15:36-15:48]

**Measurement of photo-neutron cross-sections and yields in <sup>103</sup>Rh**  
**using 55- and 60-MeV bremsstrahlung /** RAHMAN Md. Shakilur<sup>1</sup>,  
KIM Guinyun<sup>\*1</sup>, KIM Kwangsoo<sup>1</sup>, NADEEM Muhammad<sup>1</sup>, HIEN Nguyen Thi<sup>1</sup>,  
YANG Sung-Chul<sup>2</sup>, SHIN Sung-Gyun<sup>3</sup>, CHO Moo-Hyun<sup>3</sup>, LEE Man Woo<sup>4</sup>, KANG  
Yeong-Rok<sup>4</sup>, YANG Gwang-Woo<sup>4</sup>(<sup>1</sup>Department of Physics, Kyungpook National  
University, <sup>2</sup>Nuclear Data Center, Korea Atomic Energy Research Institute, <sup>3</sup>Division  
of Advanced Nuclear Engineering, Pohang University of Science and Technology,  
<sup>4</sup>Dongnam Institute of Radiological and Medical Science)

#### B1.05\* [15:48-16:00]

**Single Particle Energy of Deformed Nuclei /** 김성현, 하은자, 천명기\*  
(숭실대학교 물리학과)

#### B1.06 [16:00-16:12]

**Neutron-proton pairing effects on the Gamow-Teller transitions by**  
**using the deformed QRPA /** HA Eunja\*, CHEOUN Myung-Ki(Department of

**[B2-se] Focus: Plasmonics-based bio-devices**

2016년 4월 20일 수요일 15:00 – 17:00

장소: 102호

좌장: 정 문 석 성균관대

**B2.01(초) [15:00-15:24]**

**나노 광학 기반의 바이오센서를 이용한 생체분자 측정 및 영상화 (Biomolecular detection and imaging with nanoplasmonic optical biosensing platforms) / KIM Donghyun\***(School of Electrical and Electronic Engineering, Yonsei University)

**B2.02(초) [15:24-15:48]**

**A Localized Surface Plasmon Resonance (LSPR) aptasensor for small molecule detection / KIM Min-Gon\***(Department of Chemistry, GIST)

**B2.03(초) [15:48-16:12]**

**Gold nanoparticle-enhanced surface plasmon resonance for multifunctional applications / LEE Hye Jin\***(Department of Chemistry and Green-Nano Materials Research Center, Kyungpook National University)

**B2.04(초) [16:12-16:36]**

**Plasmonic Nanoparticles for Biomedical Applications / PARK Ji-Ho\***(Department of Bio and Brain Engineering, KAIST)

**B2.05(초) [16:36-17:00]**

**Combination of near-infrared pulses and targeted gold nanorods for enhanced photothermal neural stimulation / BYUN Kyung Min\***(Department of Biomedical Engineering, Kyung Hee University)

**[B3-ap] Nanomaterials and nanodevices 1 (2D Materials)**

2016년 4월 20일 수요일 15:00 – 16:48

장소: 103호

좌장: 정 현 중 건국대학교

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

**그래핀-양자점-실리콘 옥사이드-실리콘 소자의 전기적·광학적 특성 / 박준하, 박홍기, 최재우\***(경희대학교 정보디스플레이학과)

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

**Direct Graphene Transfer Using PDMS Adhesion Engineering / JANG Heejun<sup>1</sup>, KANG Il-suk<sup>2</sup>, AHN Chiwon<sup>2</sup>, LEE Wonhee<sup>\*1</sup>**(<sup>1</sup>Graduate School of Nanoscience and Technology KAIST, <sup>2</sup>National Nanofab Center KAIST)

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

**Atomic-resolution TEM imaging of few-layer black phosphorus and reconstructed crystalline edge** / Yangjin Lee<sup>1</sup>, Jun-Yeong Yoon<sup>1</sup>, Declan Scullion<sup>3</sup>, Elton J. G. Santos<sup>3,4</sup>, Hu Young Jeong<sup>2</sup>, Kwanpyo Kim\*<sup>1</sup>(<sup>1</sup>Department of Physics, Ulsan National Institute of Science and Technology (UNIST), <sup>2</sup>UNIST Central Research Facilities (UCRF), <sup>3</sup>School of Mathematics and Physics, Queen's University Belfast, <sup>4</sup>School of Chemistry and Chemical Engineering, Queen's University Belfast)

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

**Excitonic resonance Raman effects in few-layer MoSe<sub>2</sub>** / 김강원, 이재웅, 남다현, 정현식\*(서강대학교 물리학과)

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

**A Multi-level Graphene Nano-electro-mechanical Switch** / SHIN Dong Hoon, KIM Hakseong, MCALLISTER Kirstie, LEE Sang Wook\*(Division of Quantum Phases & Devices, School of Physics, Konkuk University)

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

**Polarized Raman and photoluminescence spectroscopy with differing angles of laser incidence on a single layer MoS<sub>2</sub>** / AHN Hyun-Jai<sup>1</sup>, SENTHILKUMAR V<sup>2</sup>, LE Chinh Tam<sup>2</sup>, KIM Yong Soo<sup>2</sup>, SEONG Maeng-Je\*<sup>1</sup>(<sup>1</sup>Department of Physics, Chung-Ang University, <sup>2</sup>Department of Physics, University of Ulsan)

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

**Fermi Level Pinning and Contact Resistance between 2D TMDCs and Metal Contact** / 김창식<sup>1</sup>, 문인용<sup>1</sup>, 남승걸<sup>2</sup>, 조연주<sup>2</sup>, 신현진<sup>2</sup>, 박성준<sup>2</sup>, 유원종\*<sup>1</sup>(<sup>1</sup>Samsung-SKKU Graphene Center (SSGC), SKKU Advanced Institute of Nano-Technology (SAINT), Sungkyunkw, <sup>2</sup>Device & System Research Center, Samsung Advanced Institute of Technology (SAIT), 130 Samsung-ro, Y)

B3.08 [16:24-16:36]

**Spin Transport and Giant Electroresistance in Ferromagnetic Graphene Vertical** / PARK Hee Chul\*<sup>1</sup>, MYOUNG Nojoon<sup>1</sup>, LEE Seung Joo\*<sup>2</sup>(<sup>1</sup>Center for Theoretical Physics of Complex Systems, IBS, <sup>2</sup>Quantum-functional Semiconductor Research Center, Dongguk University)

B3.09\* [16:36-16:48]

**Wet-spun highly conductive and mechanically strong graphene-CNT fiber** / YEO Changsu<sup>1,2</sup>, KIM Hyuk Joon<sup>1,3</sup>, RHEE Joo Yull<sup>2</sup>, SHIN Min Kyoon\*<sup>1</sup>, PARK Sang Yoon\*<sup>1</sup>(<sup>1</sup>Advanced Institutes of Convergence Technology, <sup>2</sup>Department of Physics, Sungkyunkwan University, <sup>3</sup>Graduate School of Convergence Science & Technology, Seoul National University, Seoul)



**[B4-st] Phase Transitions and Nonequilibrium Phenomenon**

2016년 4월 20일 수요일 15:00 – 16:36

장소: 104호

좌장: 김진민 숭실대

**B4.01(초)** [15:00-15:24]

**Long-range correlation of rigid rods adsorbed onto two-dimensional lattices** / BAEK Seung Ki\* (Department of Physics Pukyong National University)

**B4.02** [15:24-15:36]

**Bundle formation in directed polymers with competing interactions** / DUTTA Sandipan<sup>1</sup>, BENETATOS Panayotis\*<sup>2</sup>, JHO Yong Seok\*<sup>1,3</sup> (<sup>1</sup>Asia Pacific Center for Theoretical Physics, <sup>2</sup>Department of Physics, Kyungpook National University, <sup>3</sup>Department of Physics, Pohang University of Science and Technology)

**B4.03\*** [15:36-15:48]

**The Manning Transition Revisited** / 차민령<sup>1</sup>, 김용운\*<sup>1</sup>, 이주연\*<sup>2</sup> (한국과학기술원 나노과학기술대학원, <sup>2</sup>부산대학교 물리학과)

**B4.04** [15:48-16:00]

**Quasiperiodic driving of Anderson localized waves in one dimension** / HATAMI Hani<sup>1</sup>, DANIELI Carlo<sup>2</sup>, BODYFELT Joshua<sup>2</sup>, FLACH Sergej\*<sup>1,2</sup> (<sup>1</sup>Center for Theoretical Physics of Complex Systems, IBS, <sup>2</sup>New Zealand Institute for Advanced Study, Centre for Theoretical)

**B4.05\*** [16:00-16:12]

**Transitional Steady States of Exchange Dynamics between Finite Quantum Systems** / 전의진<sup>1</sup>, 김용운\*<sup>1</sup>, 이주연\*<sup>2</sup> (한국과학기술원 나노과학기술대학원, <sup>2</sup>부산대학교 물리학과)

**B4.06** [16:12-16:24]

**Phase transitions and dynamics of coupled Ising models exchanging particles** / GOH Segun<sup>1</sup>, FORTIN Jean-Yves\*<sup>2</sup>, CHOI M.Y.\*<sup>1</sup> (<sup>1</sup>Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University, <sup>2</sup>Département de Physique de la Matière et des Matériaux, Institut Jean Lamour, CNRS-UMR)

**B4.07\*** [16:24-16:36]

**Role of Heterogeneity in Generalized Epidemic Process** / 정기흥<sup>1</sup>, 백용주<sup>2</sup>, 김영호<sup>3,5</sup>, 하미순\*<sup>4</sup>, 정하웅<sup>1</sup> (한국과학기술원 물리학과, <sup>2</sup>테크니온 물리학과, 이스라엘, <sup>3</sup>산타페, 미국, <sup>4</sup>조선대학교 물리교육학과, <sup>5</sup>한국과학기술원 자연과학연구소)

**[B5-co] Focus: Nano/Mesoscopic System**

2016년 4월 20일 수요일 15:00 – 16:48

장소: 105호

좌장: 구 현 철 한국과학기술연구원

**B5.01 [15:00-15:36]**

**Toward quantum hybrid systems of electrons and phonons /** KIM Minjin<sup>2</sup>, KIM Jihwan<sup>2</sup>, SHIM Seung-Bo<sup>1</sup>, SUH Junho<sup>\*1</sup>(<sup>1</sup>Center for Quantum Measurement Science, Korea Research Institute of Standards and Science, <sup>2</sup>Department of Chemistry, Korea Advanced Institute of Science and Technology)

**B5.02(초) [15:36-16:12]**

**Large linear magnetoresistance in heavily-doped Nb:SrTiO<sub>3</sub> epitaxial thin films /** 이수연\*(한국과학기술연구원 전자재료연구단)

**B5.03(초) [16:12-16:48]**

**Magnetotransport of low-dimensional materials, probed up 60 T /** 장성호\*(건국대학교 물리학과)

**[B6-co] Electronic structure calculations**

2016년 4월 20일 수요일 15:00 – 16:24

장소: 106호

좌장: 정 석 민 전북대학교

**B6.01 [15:00-15:12]**

**Thermoelectric property of a new silicon crystal /** 채기성<sup>1</sup>, 최선명<sup>1</sup>, 김덕영<sup>2</sup>, 손영우<sup>\*1</sup>(<sup>1</sup>고등과학원, <sup>2</sup>Carnegie Institute of Washington, USA)

**B6.02\* [15:12-15:24]**

**Computational search for direct band gap carbon allotropes with efficient optical transition /** KIM Sunghyun<sup>\*1</sup>, OH Young Jun<sup>1</sup>, LEE In-Ho<sup>2</sup>, LEE Jooyoung<sup>3</sup>, CHANG Kee Joo<sup>1</sup>(<sup>1</sup>Department of Physics, Korea Advanced Institute of Science and Technology, Daejeon 34141, <sup>2</sup>Research Institute of Standards and Science, Daejeon 34113, <sup>3</sup>Center for In Silico Protein Science, School of Computational Science, KIAS, Seoul 02455)

**B6.03\* [15:24-15:36]**

**High-throughput screening of metal-porphyrin-like graphenes for selective capture of carbon dioxide /** 배현후, 이훈경\*(건국대학교 물리학과)

**B6.04\* [15:36-15:48]**

**Thermoelectric and phonon transport properties of two-dimensional IV–VI compounds: SnSe, SnS, GeSe, and GeS /** SHAFIQUE Aamir, SHIN Young-Han<sup>\*</sup>(Department of Physics, University of Ulsan, Ulsan 44610, Republic of Korea)

B6.05\* [15:48-16:00]

**Atomic self-interaction correction calculations of transition metal dichalcogenides multilayers and heterostructures** / KIM Hyo Seok, SHIM Yoon Su, KIM Yong-Hoon\* (Graduate School of EEWS, Korea Advanced Institute of Science and Technology)

B6.06\* [16:00-16:12]

**Quantum Monte Carlo study for black phosphorus monolayer** / AHN Jeonghwan, KWON Yongkyung\* (Department of Physics Konkuk University)

B6.07\* [16:12-16:24]

**Ab Initio Study of Ge-Sb-Te Based Phase Change Materials : Structural Properties and Phase Change Mechanism** / 박한진, 송호신, 김철운, 권영균\* (경희대학교 물리학과)

**[B7-co] Focus: Physics in low dimensions**

2016년 4월 20일 수요일 15:00 - 16:48

장소: 107호

좌장: 정 현 종 건국대학교

B7.01(초) [15:00-15:36]

**Chiral edge states in a one-dimensional system** / LEE Sung-Hoon\* (Center for Artificial Low Dimensional Electronic Systems, Institute for Basic Science)

B7.02(초) [15:36-16:12]

**Exotic properties of 2-dimensional materials transition metal dichalcogenides and electrides** / KIM SungWng\* (Department of Energy Science, Sungkyunkwan University)

B7.03 [16:12-16:24]

**Long-Range Magnetic Ordering and Switching of Magnetic State by Electric Field in Porous Phosphorene** / HASHMI Arqum, FAROOQ Muhammad Umar, HONG Jisang\* (Department of Physics, Pukyong National University)

B7.04 [16:24-16:36]

**Magnetic effects in sulfur-decorated graphene** / HWANG Choongyu<sup>\*2</sup>, CYBART Shane A<sup>2</sup>, SHIN S J<sup>2,7</sup>, KIM Sooran<sup>3</sup>, KIM Kyoo<sup>3</sup>, RAPPOPORT T G<sup>4</sup>, WU S M<sup>2</sup>, JOZWIAK C<sup>5</sup>, FEDOROV A V<sup>5</sup>, MO S -K<sup>5</sup>, LEE D -H<sup>6</sup>, MIN B I<sup>3</sup>, HALLER E E<sup>2,7</sup>, DYNES R C<sup>2,8</sup>, CASTRO NETO A H<sup>9</sup>, LANZARA Alessandra <sup>\*2, 6</sup>(<sup>1</sup>Department of Physics, Pusan National University, <sup>2</sup>Materials Sciences Division, Lawrence Berkeley National Laboratory, <sup>3</sup>Department of Physics, Pohang University of Science and Technology, <sup>4</sup>Instituto de Fisica, Universidade Federal do Rio de Janeiro, <sup>5</sup>Advanced Light Source, Lawrence Berkeley National Laboratory, <sup>6</sup>Department of Physics, University of

California, Berkeley, <sup>7</sup>Department of Materials Science and Engineering, University of California, Berkeley, <sup>8</sup>Department of Physics, University of California, San Diego, <sup>9</sup>Centre for Advanced 2D Materials, National University of Singapore)

B

B7.05 [16:36-16:48]

**Scanning Tunneling Microscopy and Landau Level Spectroscopy on Topological Surface States in  $\text{Bi}_{1.5}\text{Sb}_{0.5}\text{Te}_{1.7}\text{Se}_{1.3}$**  / 고원희<sup>\*1</sup>, 박준범<sup>2</sup>, 전인수<sup>1</sup>, 김효원<sup>1</sup>, 권혁산<sup>1</sup>, 오영택<sup>1</sup>, 김준성<sup>2</sup>, 서환수<sup>1</sup>, 황성우<sup>1</sup>(<sup>1</sup>삼성전자종합기술원, <sup>2</sup>포항공과대학교)

**E [B8-co] Focus: Nonequilibrium physics in condensed matter systems**

2016년 4월 20일 수요일 15:00 – 16:48

장소: 108호

좌장: 전 건 상 이화여자대학교

B8.01(초) [15:00-15:36]

**Superconductors in non-equilibrium: Higgs oscillations and induced superconductivity** / MANSKE Dirk<sup>\*</sup>(Max Planck Institute for Solid State Research)

B8.02(초) [15:36-16:12]

**Topological phases of matter in nonequilibrium: Topology of the Wannier-Stark ladder** / PARK Kwon<sup>\*</sup>(School of Physics, KIAS)

B8.03(초) [16:12-16:48]

**Adiabatic theory of electron-photon interaction in simple models** / HAN Jung Hoon<sup>\*</sup>(Department of Physics, Sungkyunkwan University)

**E [B9-co] Pioneer: High temperature superconductor and spectroscopic techniques II**

2016년 4월 20일 수요일 15:00 – 16:48

장소: 201호

좌장: 서 정 필 대구경북과학기술원

B9.01(초) [15:00-15:36]

**Topological Surface States and Superconductivity in Stoichiometric Noncentrosymmetric  $\text{PbTaSe}_2$**  / CHUANG Tien-Ming<sup>\*</sup>(Institute of Physics, Academia Sinica, Taipei 11529, Taiwan)

B9.02(초) [15:36-16:12]

**Distinct recovery dynamics of Cooper pairs in  $\text{BaFe}_{1.87}\text{Co}_{0.13}\text{As}_2$**  / KIM Kyungwan<sup>\*</sup>(Department of Physics, Chungbuk National University)

B9.03(초) [16:12-16:48]

**Electron-boson spectral density function of correlated multiband systems obtained from optical data / HWANG jungseek\***(Department of Physics, Sungkyunkwan University)

**E [B12-p] Pioneer: Frontiers in Laboratory, Space, and Astrophysical Plasma Science I**

2016년 4월 20일 수요일 15:00 – 16:48

장소: 205호

좌장: 최 원 호 KAIST

B12.01(초) [15:00-15:36]

**Fundamental plasma processes of chemically reactive plasma interacting with multiphase and multifunctional surfaces / KOEPKE Mark\***(Department of Physics and Astronomy, West Virginia University, Morgantown, WV 26506 USA)

B12.02(초) [15:36-16:12]

**Laboratory Experiments of Merging Tokamaks and Spheromaks for Reconnection-Heating Physics and Applications / ONO Yasushi\*, TANABE Hiroshi, KIMURA Kokoro, KAWANAMI Masashi, ISHIDA Syunsuke, NAKAI Ryoma, INOMOTO Michiaki, CHENG Chio Zong**(The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8656, Japan)

B12.03(초) [16:12-16:48]

**High-beta Plasmas in Astrophysical Environments / RYU Dongsu\***(Department of Physics, Ulsan National Institute of Science and Technology, Ulsan, Republic of Korea)

**[B13-pa] General: Non-accelerator-based experiments II**

2016년 4월 20일 수요일 15:00 – 16:48

장소: 206호

좌장: 이 무 현 기초과학연구원

B13.01 [15:00-15:12]

**Precise measurement of reactor neutrino flux and spectrum at RENO / 현관 서<sup>\*1</sup>, 상용 김<sup>1</sup>, 수봉 김<sup>1</sup>, 선희 서<sup>1</sup>, 정열 양<sup>1</sup>, 동하 이<sup>1</sup>, 원국 최<sup>1</sup>, 우영 김<sup>2</sup>, 성우 박<sup>2</sup>, 인곤 박<sup>3</sup>, 지승 장<sup>4</sup>, 명렬 박<sup>5</sup>, 준호 최<sup>5</sup>, 한일 장<sup>6</sup>, 장희 양<sup>7</sup>, 인태 유<sup>7</sup>, 영일 최<sup>7</sup>, 영덕 김<sup>8</sup>, 현수 김<sup>8</sup>, 바로 김<sup>9</sup>, 승찬 김<sup>9</sup>, 재률 김<sup>9</sup>, 령균 박<sup>9</sup>, 창동 신<sup>9</sup>, 인성 여<sup>9</sup>, 인택 임<sup>9</sup>, 경광 주<sup>9</sup>**(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Department of Physics, Kyungpook National University, <sup>3</sup>Department of Physics, Gyeongsang National University, <sup>4</sup>GIST College, <sup>5</sup>Department of Radiology, Dongshin University, <sup>6</sup>Department of Fire Safety, Seoyeong University, <sup>7</sup>Department of Physics, Sungkyunkwan University, <sup>8</sup>Department of Physics and Astronomy, Sejong University, <sup>9</sup>Department of Physics, Chonnam National University)

### B13.02 [15:12-15:24]

**Status and R&D efforts for RENO-50** / JOO Kyung Kwang<sup>\*1</sup>, KIM Seung Chan<sup>1</sup>, CHOI Kyu Jeong<sup>1</sup>, KIM Soo Bong<sup>2</sup>, KIM Sang Yong<sup>2</sup>, SEO Hyun Kwan<sup>2</sup>, SEO Seon-Hee<sup>2</sup>(<sup>1</sup>Department of Physics, Chonnam National University, <sup>2</sup>Department of Physics, Seoul National University)

### B13.03 [15:24-15:36]

**Prompt energy calibration at RENO** / CHOI Juneho<sup>\*1</sup>, PAC Myoung Youl<sup>1</sup>, KIM Wooyoung<sup>2</sup>, PARK Seongwoo<sup>2</sup>, PARK Ingon<sup>3</sup>, JANG Hanil<sup>4</sup>, KIM Sangyong<sup>5</sup>, KIM Soo-Bong<sup>5</sup>, SEO Seon-Hee<sup>5</sup>, SEO Hyunkwan<sup>5</sup>, YANG Jeongyeol<sup>5</sup>, LEE Dongha<sup>5</sup>, CHOI Won-Qook<sup>5</sup>, YANG Janghee<sup>6</sup>, YU Intae<sup>6</sup>, CHOI Youngil<sup>6</sup>, KIM Youngdeug<sup>7</sup>, KIM Hyunsoo<sup>7</sup>, KIM Baro<sup>8</sup>, KIM Seungchan<sup>8</sup>, KIM Jaeyool<sup>8</sup>, PARK Ryeonggoon<sup>8</sup>, SHIN Changdong<sup>8</sup>, YEO Insung<sup>8</sup>, LIM Intaek<sup>10</sup>, JOO Kyungkwang<sup>8</sup>, JANG Jeeseung<sup>9</sup>(<sup>1</sup>Department of Radiology, Dongshin University, <sup>2</sup>Department of Physics, Kyungpook National University, <sup>3</sup>Department of physics Gyeongsang National University, <sup>4</sup>Department of Fire Safety, Seoyeong University, <sup>5</sup>Department of Physics and Astronomy, Seoul National University, <sup>6</sup>Department of Physics, Sungkyunkwan University, <sup>7</sup>Department of Physics and Astronomy, Sejong University, <sup>8</sup>Department of Physics, Chonnam National University, <sup>9</sup>GIST College, Gwangju Institute of Science and Technology, <sup>10</sup>Department of Physics Education, Chonnam National University)

### B13.04 [15:36-15:48]

**Spectral measurment of theta13 and|dm\_ee^2| at RENO** / SEO Seon-Hee<sup>\*1</sup>, KIM Wooyoung<sup>2</sup>, PARK Seongwoo<sup>2</sup>, PARK Ingon<sup>3</sup>, JANG Jeeseung<sup>4</sup>, PAC Myoung Youl<sup>5</sup>, CHOI Juneho<sup>5</sup>, JANG Hanil<sup>6</sup>, KIM Sangyong<sup>1</sup>, KIM Soo-Bong<sup>\*1</sup>, SEO Hyunkwan<sup>1</sup>, YANG Jeongyeol<sup>1</sup>, LEE Dongha<sup>1</sup>, CHOI Won-Qook<sup>1</sup>, YANG Janghee<sup>7</sup>, YU Intae<sup>7</sup>, CHOI Youngil<sup>7</sup>, KIM Yeongduk<sup>8</sup>, KIM Hyunsoo<sup>8</sup>, KIM Baro<sup>9</sup>, KIM Seungchan<sup>9</sup>, KIM Jaeyool<sup>9</sup>, PARK Ryeonggoon<sup>9</sup>, SHIN Changdong<sup>9</sup>, YEO Insung<sup>9</sup>, LIM Intaek<sup>10</sup>, JOO Kyungkwang<sup>9</sup>(<sup>1</sup>Department of physics and astronomy Seoul National University, <sup>2</sup>Department of physics Kyungpook National University, <sup>3</sup>Department of physics Gyeongsang National University, <sup>4</sup>GIST College, Gwangju Institute of Science and Technology , <sup>5</sup>Department of radiology Dongshin University, <sup>6</sup>Department of fire safety Seoyeong University, <sup>7</sup>Department of physics Sungkyunkwan University, <sup>8</sup>Department of physics and astronomy Sejong University, <sup>9</sup>Department of physics Chonnam National University, <sup>10</sup>Department of physcis education Chonnam National University)

### B13.05\* [15:48-16:00]

**Internal background measurement on  $^{40}\text{Ca}^{100}\text{MoO}_4$  crystal** / KIM Inwook<sup>\*</sup>(Institute of Basic Science)

### B13.06\* [16:00-16:12]

**Measurement of theta13 with neutron capture on hydrogen at RENO** / 신창동<sup>1</sup>, 주경광<sup>\*1</sup>, 김바로<sup>1</sup>, 김승찬<sup>1</sup>, 김재률<sup>1</sup>, 박령균<sup>1</sup>, 여인성<sup>1</sup>, 임인택<sup>1</sup>,

김우영<sup>2</sup>, 박성우<sup>2</sup>, 박인곤<sup>3</sup>, 장지승<sup>4</sup>, 박명렬<sup>5</sup>, 최준호<sup>5</sup>, 장한일<sup>6</sup>, 김상용<sup>7</sup>, 김수봉<sup>7</sup>, 서선희<sup>7</sup>, 서현관<sup>7</sup>, 양정열<sup>7</sup>, 이동하<sup>7</sup>, 최원국<sup>7</sup>, 양장희<sup>8</sup>, 유인태<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>9</sup>, 김현수<sup>9</sup>(<sup>1</sup>전남대학교, <sup>2</sup>경북대학교, <sup>3</sup>경상대학교, <sup>4</sup>광주과기원, <sup>5</sup>동신대학교, <sup>6</sup>서영대학교, <sup>7</sup>서울대학교, <sup>8</sup>성균관대학교, <sup>9</sup>세종대학교)

**B13.07\*** [16:12-16:24]

**Search for sterile neutrinos at RENO** / 여인성<sup>1</sup>, 김우영<sup>2</sup>, 박성우<sup>2</sup>, 장지승<sup>4</sup>, 박명렬<sup>5</sup>, 최준호<sup>5</sup>, 장한일<sup>6</sup>, 김상용<sup>7</sup>, 김수봉<sup>7</sup>, 서선희<sup>7</sup>, 서현관<sup>7</sup>, 양정열<sup>7</sup>, 이동하<sup>7</sup>, 최원국<sup>7</sup>, 양장희<sup>8</sup>, 유인태<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>9</sup>, 김현수<sup>9</sup>, 김바로<sup>1</sup>, 김승찬<sup>1</sup>, 김재률<sup>1</sup>, 박령균<sup>1</sup>, 신창동<sup>1</sup>, 임인택<sup>1</sup>, 주경광<sup>\*</sup>, 박인곤<sup>3</sup>(<sup>1</sup>전남대학교, <sup>2</sup>경북대학교, <sup>3</sup>경상대학교, <sup>4</sup>광주과기원, <sup>5</sup>동신대학교, <sup>6</sup>서영대학교, <sup>7</sup>서울대학교, <sup>8</sup>성균관대학교, <sup>9</sup>세종대학교)

**B13.08\*** [16:24-16:36]

**Progress of NEOS Experiment** / KO Youngju<sup>\*2</sup>, KIM Baro<sup>1</sup>, KIM Siyeon<sup>2</sup>, KIM Yeongduk<sup>3</sup>, KIM Jinyu<sup>6</sup>, KIM Hyunsoo<sup>6</sup>, KIM Hongjoo<sup>5</sup>, PARK Kangsoon<sup>3</sup>, PARK Hyangkyu<sup>3</sup>, SEO Kyungmin<sup>6</sup>, SUN Gwangmin<sup>4</sup>, LEE Moohyun<sup>3</sup>, LEE Jaison<sup>3</sup>, JEON Eunju<sup>3</sup>, JOO Kyungkwang<sup>1</sup>, HAN Boyoung<sup>4</sup>, OH Yoomin<sup>3</sup>, LEE Jooyoung<sup>5</sup>(<sup>1</sup>Department of Physics, Chonnam National University, <sup>2</sup>Department of Physics, Chung-Ang University, <sup>3</sup>Center for Underground Physics, Institute of Basic Science, <sup>4</sup>Korea Atomic Energy Research Institute, <sup>5</sup>Department of Physics, Kyungpook National University, <sup>6</sup>Department of Physics, Sejong University)

**B13.09\*** [16:36-16:48]

**Understanding and reduction of NaI(Tl) crystal's background for the KIMS-NaI experiment** / ADHIKARI Pushparaj<sup>\*</sup>(Department of Physics, Sejong University)

**[B14-pa] Pioneer: New resonance searches at the LHC and impacts on BSM phenomenology I**

2016년 4월 20일 수요일 15:00 – 16:36

장소: 209호

좌장: 박 명 훈 기초과학연구원

**B14.01(초)** [15:00-15:24]

**The 750 GeV Diphoton Excess May Not Imply a 750 GeV Resonance** / CHO Won Sang<sup>1</sup>, KIM Doojin<sup>\*2</sup>, KONG Kyoungchul<sup>3</sup>, LIM Sung Hak<sup>4</sup>, MATCHEV Konstantin T.<sup>2</sup>, PARK Jong-Chul<sup>5</sup>, PARK Myeonghun<sup>1</sup>(<sup>1</sup>Center for Theoretical Physics of the Universe, Institute for Basic Science (IBS), Daejeon, Korea, <sup>2</sup>Department of Physics, University of Florida, Gainesville, FL 32611, USA, <sup>3</sup>Department of Physics and Astronomy, University of Kansas, Lawrence, KS 66045, USA, <sup>4</sup>Department of Physics, KAIST, 291 Daehak-ro, Yuseong-gu, Daejeon, 34141, Korea, <sup>5</sup>Department of Physics, Chungnam National University, Daejeon 305-764, Korea)

B14.02(초) [15:24-15:48]

**A new scalar resonance at 750 GeV in favor of strongly interacting theories** / SON Minho\* (Department of Physics, KAIST)

B14.03(초) [15:48-16:12]

**750 GeV Di-photon Resonance and 125 GeV SM Higgs boson** / LEE Jae Sik\* (Chonnam National University)

B14.04(초) [16:12-16:36]

**Resonance-continuum interference in the 750 GeV diphoton excess** / SONG Jeonghyeon, YOON Yeo Woong\* (Department of Physics, Konkuk University)

B



## SESSION C

2016년 4월 21일(목) 오전

### [C1-nu] General: Relativistic Heavy Ion Collisions

2016년 4월 21일 목요일 09:00 – 10:24

장소: 101호

좌장: 권영일 연세대

C1.01 [09:00-09:12]

**Kinetic freeze-out conditions in heavy ion collisions** / CHO Sungtae<sup>\*1</sup>, SONG Taesoo<sup>2</sup>, LEE Su Houn<sup>3</sup>(<sup>1</sup>Kangwon National University, <sup>2</sup>Frankfurt Institute for Advanced Studies, Johann Wolfgang Goethe Universitat, <sup>3</sup>Yonsei University)

C1.02\* [09:12-09:24]

**대형강입자충돌기(LHC)의 대형이온충돌기실험(A Large Ion Collider Experiment: ALICE)에서 측정된 강입자 생성 연구** / 송지혜<sup>\*1, 2</sup>, 유인권<sup>\*1, 2</sup> (부산대학교 물리학과, <sup>2</sup>ALICE collaboration)

C1.03\* [09:24-09:36]

**Simulation to calculate differential cross section of electron pair production & kinetic distribution of electrons using Bethe-Heitler formula** / 방혜선\*(인하대학교 물리학과)

C1.04\* [09:36-09:48]

**Measurement of double helicity asymmetries ( $A_{LL}$ ) in  $\pi^0$  production at mid-rapidity in longitudinally polarized  $p+p$  collisions at  $\sqrt{s} = 510$  GeV with PHENIX experiment** / 문태봉\*(연세대학교 물리학과/RIKEN)

C1.05\* [09:48-10:00]

**실리콘 픽셀 검출기 시뮬레이션** / 권지연\*(인하대학교 물리학과)

C1.06 [10:00-10:12]

**ALICE 실험 업그레이드에 이용되는 실리콘 칩 특성 연구: Supply voltage and temperature dependence of the chip response** / 박종한, 권민정\*(인하대학교 물리학과)

C1.07 [10:12-10:24]

**Higher order cumulants of net-particle distributions in Pb+Pb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV in ALICE at LHC** / BEHERA Nirbhay Kumar, KWEON Minjung\*(Department of Physics, Inha University)

**[C2-se] Focus: High Mobility 2D Layered Semiconductor**

2016년 4월 21일 목요일 09:00 – 11:24

장소: 102호

좌장: 서은경 전북대

**C2.01(초)** [09:00-09:24]

**2D Layered Optoelectronic Devices** / KIM Sunkook\* (Dept. of Electronics and Radio Eng., Kyung Hee University)

**C2.02(초)** [09:24-09:48]

**Large-area transition metal dichalcogenides prepared by chemical vapor deposition** / KIM Ki Kang\* (Department of Energy and Materials Engineering, Dongguk University)

**C2.03(초)** [09:48-10:12]

**Synthesis of large area 2D metal chalcogenides** / LEE Changgu\*, LEE Jinhwan, KIM Youngchan (School of Mechanical Engineering)

**C2.04(초)** [10:12-10:36]

**Ultracapacitive Energy Storage Using 2D Nanomaterials Under Extreme Conditions** / PARK Ho Seok\* (School of Chemical Engineering, Sungkyunkwan University)

**C2.05(초)** [10:36-11:00]

**Single crystal  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> dielectrics of atomic-size surface roughness for MoS<sub>2</sub> semiconductor field-effect transistors** / HWANG Wan Sik<sup>\*1</sup>, GALAZKA Zbigniew<sup>2</sup>, JENA Debdeep<sup>3</sup> (<sup>1</sup>Department of Materials Engineering, Korea Aerospace University, <sup>2</sup>Leibniz Institute for Crystal Growth, <sup>3</sup>Department of Electrical and Computer Engineering, and Department of Materials Science & Engineering)

**C2.06(초)** [11:00-11:24]

**Graphene barristors and Graphene Tunneling Devices** / CHUNG Hyun-Jong\* (Department of Physics, Konkuk University)

**[C3-ap] Nanomaterials and nanodevices 2 (Oxide)**

2016년 4월 21일 목요일 09:00 – 10:36

장소: 103호

좌장: 정창욱 한국외국어대학교

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

**Gate-Tunable Spin Exchange Interactions and Inversion of Magnetoresistance in Ferromagnetic ZnO Nanowire** / MODEPALI Vijayakumar<sup>1</sup>, JIN Mi-Jin<sup>1</sup>, PARK Jungmin<sup>1</sup>, JO Junhyeon<sup>1</sup>, KIM Ji-Hyun<sup>1</sup>, BAIK Jeong Min<sup>1</sup>, SEO Changwon<sup>2</sup>, KIM Jeongyong<sup>2,3</sup>, YOO Jung-Woo<sup>\*1</sup> (<sup>1</sup>School

of Materials Science and Engineering, UNIST, <sup>2</sup>IBS Center for Integrated Nanostructure Physics, Sungkyunkwan University, <sup>3</sup>Department of Energy Science, Sungkyunkwan University)

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

**Influence of dislocations on local metal-insulator transition behaviors of VO<sub>2</sub>/TiO<sub>2</sub> thin films** / SOHN Ahum<sup>1</sup>, KIM Dong-Wook<sup>\*1</sup>, KANKI Teruo<sup>2</sup>, TANAKA Hidekazu<sup>2</sup>(<sup>1</sup>Department of Physics, Ewha Womans University, Seoul 120-750, Korea, <sup>2</sup>The Institute of Scientific and Industrial Research, Osaka University, 565-0871, Japan)

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

**Synthesis and luminescent properties of Tb<sup>3+</sup> or Sm<sup>3+</sup> ions activated Sr<sub>2</sub>Gd<sub>8</sub>Si<sub>6</sub>O<sub>26</sub> oxyapatite materials** / KHAJA HUSSAIN SK., YU Jae Su<sup>\*</sup>(Department of Electronics and Radio Engineering Kyung Hee University)

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

**Mie-resonance-mediated light trapping and spatial modulation of photo-generated carriers in P3HT/Si nanopillars** / KIM Eunah, CHO Yuna, LEE Y.U., WU J.W., KIM Dong-Wook<sup>\*</sup>(Department of Physics, Ewha Womans University, Seoul 120-750, Korea)

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

**High Brightness Quantum Dots Light-Emitting Devices using Polyvinyl pyrrolidone-capped ZnO Nanoparticles** / LEE Jun-Woo<sup>1</sup>, LEE Jae-Sung<sup>1</sup>, KIM Ok-Sik<sup>2</sup>, KIM Sang-Hyup<sup>1</sup>, LEE Sang-Won<sup>1</sup>, KIM Sae-Wan<sup>1</sup>, KIM Ju-Seong<sup>1</sup>, KWON Jin-Beom<sup>1</sup>, CHOI Kyung-Jae<sup>2</sup>, KANG Shin-Won<sup>\*1</sup> (<sup>1</sup>School of Electronics Engineering, College of IT Engineering, Kyungpook National University, <sup>2</sup>Department of Sensor and Display Engineering, Kyungpook National University)

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

**Thermodynamic and Memory Characteristic Aspects of Fixed Oxide Charge and Cobalt Quantum Dot in Metal-Semiconductor Hybrid Nanostructures** / AHN Hanyeol, GU Minseon, JOO Beom Soo, HAN Monnsup<sup>\*</sup>(Department of Physics University of Seoul)

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

**Effect of Auger Recombination on Luminescence Properties of Si-NC/SiO<sub>2</sub> Multi-layers Induced by Donor and Acceptor State** / JOO Beom Soo<sup>1</sup>, JANG Seunghun<sup>2</sup>, GU Minseon<sup>1</sup>, PARK Youngju<sup>1</sup>, HAN Moon-sup<sup>\*1</sup>(<sup>1</sup>Department of Physics University of Seoul, <sup>2</sup>Advanced Materials Division Korea Research Institute of Chemical Technology)

C3.08\* [10:24-10:36]

**Consistent Bipolar Resistive Switching Behavior of Epitaxial Brownmillerite  $\text{SrFeO}_{2.5}$  Thin Film for Nonvolatile Memory Application** / RAVEENDRA Nallagatla Venkata, ACHARYA Susant Kumar, JUNG Chang Uk\* (Department of Physics and Oxide Research Centre, Hankuk University of Foreign Studies)

**[C4-st] Complex Systems**

2016년 4월 21일 목요일 09:00 – 10:24

장소: 104호

좌장: 김 범 준 성균관대

C4.01 [09:00-09:12]

**Effect of Network Architecture on Population Synchronization in A Scale-Free Network of Bursting Neurons** / 김상윤, 임우창\* (대구교육대학교 과학교육과, 계산신경과학연구소)

C4.02 [09:12-09:24]

**Burstiness parameter for finite event sequences** / KIM Eun-Kyeong<sup>1</sup>, JO Hang-Hyun\*<sup>2,3</sup> (<sup>1</sup>GeoVISTA Center, Department of Geography, Pennsylvania State University, PA, USA, <sup>2</sup>Department of Physics, POSTECH, Korea, <sup>3</sup>Department of Computer Science, Aalto University, Finland)

C4.03 [09:24-09:36]

**Inverse transitions in a spin-glass model on a scale-free network** / 김도현\* (서강대학교 물리학과)

C4.04 [09:36-09:48]

**Mapping Out Narrative Structures and Dynamics Through Network Modeling and Computational Linguistics** / MIN Semi, PARK Juyong\* (Graduate School of Culture Technology, KAIST)

C4.05 [09:48-10:00]

**Generating synthetic populations** / 손우식\* (국가수리과학연구소)

C4.06 [10:00-10:12]

**Complexity in financial analysts: Role of information disparity in analyst forecasts** / KIM Chansoo<sup>1</sup>, KIM Daniel S.<sup>2</sup>, LIN Yingdong<sup>1,2</sup>, AHN Kwangwon\*<sup>2</sup>, CHOI MooYoung\*<sup>3</sup> (<sup>1</sup>Computational Economics Lab., Center for Computational Science, Korea Insti. of Science and Tech., <sup>2</sup>HSBC Business School, Peking University, <sup>3</sup>Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University)

C4.07 [10:12-10:24]

**An efficient algorithm for solving traveling salesman problems /**

JOUNG InSuk, LEE Jooyoung\* (School of Computational Sciences, Korea Institute for Advanced Study)

**[C5-st] Strongly Correlated Systems I**

2016년 4월 21일 목요일 09:00 - 10:36

장소: 105호

좌장: 문 은 국 한국과학기술원

C5.01 [09:00-09:12]

**Featureless Quantum Insulator on the Honeycomb Lattice / 이현**

용\* (성균관대학 물리학과)

C5.02\* [09:12-09:24]

**Entanglement and corner Hamiltonian spectra of integrable open spin chains /**

KIM Panjin<sup>\*1</sup>, KATSURA Hosho<sup>2</sup>, TRIVEDI Nandini<sup>3</sup>, HAN Jung Hoon<sup>1</sup>  
(<sup>1</sup>Department of Physics, Sungkyunkwan University, <sup>2</sup>Department of Physics, Graduate School of Science, The University of Tokyo, <sup>3</sup>Department of Physics, The Ohio State University)

C5.03\* [09:24-09:36]

**Formation of a Topological Monopole Lattice and its Dynamics in Three-dimensional Chiral Magnets /**

YANG Seong-Gyu<sup>\*1</sup>, LIU Yehua<sup>2</sup>, HAN Jung Hoon<sup>1</sup> (<sup>1</sup>Department of Physics, Sungkyunkwan University, Suwon 16419, Korea, <sup>2</sup>Theoretische Physik, ETH Zurich, 8093 Zurich, Switzerland)

C5.04 [09:36-09:48]

**Quantum Anomaly Manifestation of Lieb-Shultz-Mattis Theorem via gauging translation symmetry / 조길영\* (한국과학기술원 물리학과)**

C5.05\* [09:48-10:00]

**An efficient approach for computing quantum entanglement in Kondo systems /**

SHIM Jeong Min<sup>\*1</sup>, LEE Seung-Sup<sup>2</sup>, SIM Heung-Sun<sup>1</sup>  
(<sup>1</sup>Department of Physics, Korea Advanced Institute of Science and Technology, <sup>2</sup>Arnold Sommerfeld Center for Theoretical Physics, Ludwig-Maximilians-University Munich)

C5.06 [10:00-10:12]

**Exciton-polariton condensation in transition metal dichalcogenide bilayer heterostructure /**

LEE Ki Hoon<sup>1,2</sup>, JEONG Jae-Seung<sup>1,2</sup>, MIN Honki<sup>1</sup>, CHUNG Suk Bum<sup>\*1,2</sup> (<sup>1</sup>Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea, <sup>2</sup>Center for Correlated Electron Systems, Institute for Basic Science (IBS), Seoul 151-747, Korea)

C5.07\* [10:12-10:24]

**Phase Transitions in Frustrated Ferromagnetic Spin-1 Chains** / LEE Hyeon Jun<sup>1</sup>, JEON Gun Sang<sup>\*2</sup>, CHOI MooYoung<sup>1</sup>(<sup>1</sup>Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University, <sup>2</sup>Department of Physics, Ewha Womans University)

C5.08 [10:24-10:36]

**Non-symmorphicity and space group fractionalization in two dimensions** / LEE SungBin\* (KAIST)

**E [C6-co] Pioneer: Quantum Sensing & Imaging**

2016년 4월 21일 목요일 09:00 – 10:48

장소: 106호

좌장: 최 만 수 고려대학교

C6.01(초) [09:00-09:36]

**Quantum optics with single spins in diamond** / BASSETT Lee C\* (Department of Electrical & Systems Engineering University of Pennsylvania)

C6.02(초) [09:36-10:12]

**Proposal for Observing Dynamic Jahn-Teller Effect of Single Solid State Defects** / ZHAO Nan\* (Beijing Computational Science Research Center)

C6.03(초) [10:12-10:48]

**Photonic qubits and artificial atomic qubits in KIST** / YUNE Jiwon, KIM Yong-Su, HAN Sang-Wook, MOON Sung\* (Center for Quantum Information, KIST (Korea Institute of Science and Technology))

**[C7-co] Surface/Interface II**

2016년 4월 21일 목요일 09:00 – 10:24

장소: 107호

좌장: 안 영 환 아주대학교

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

**Electronic structure of anisotropic metal-insulator junctions in a Phase-Separated Quasi 1-D System** / SONG Sunkyu<sup>1,2</sup>, YEOM Hanwoong<sup>\*1,2</sup>(<sup>1</sup>Department of Physics, Pohang University of Science and Technology, <sup>2</sup>Center for Artificial Low Dimensional Electronic Systems, Institute for Basic Science)

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

**Origin of the Metal-Insulator Transition of Indium Atom Wires on Si(111)** / KIM Sun-Woo, CHO Jun-Hyung\* (Department of Physics, Hanyang University)

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

**Tuning Kondo Effect of Magnetic Molecules on Au(111) by Vertical Coordination** / CHANG Min Hui<sup>1</sup>, CHANG Yun Hee<sup>2</sup>, KIM Howon<sup>1</sup>, LEE Soon-Hyeong<sup>1</sup>, KIM Yong-Hyun<sup>2</sup>, KAHNG Se-Jong<sup>\*1</sup>(<sup>1</sup> Department of Physics, Korea University, <sup>2</sup>Graduate School of Nanoscience and Technology, KAIST)

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

**Nature of Insulating Ground State of Two-Dimensional Sn Atom Lattice on SiC(0001)** / YI Seho<sup>1</sup>, LEE Hunpyo<sup>2</sup>, CHOI Jin-Ho<sup>3</sup>, CHO Jun-Hyung<sup>\*1</sup>(<sup>1</sup>Department of Physics and Research Institute for Natural Sciences Hanyang University, <sup>2</sup>School of General Studies Kangwon National University, <sup>3</sup>Research Institute of Mechanical Technology Pusan National University)

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

**First-principles study of the electronic properties of Ge/Sn core-shell nanowires** / PRATIDHINA Elisabeth, KIM Sunghyun, CHANG Kee Joo\*(Department of Physics, Korea Advanced Institute of Science and Technology, Daejeon 34141)

C7.06 [10:00-10:12]

**Au nanoparticle formation on Au-C diffused membrane via Ostwald ripening** / CHOI Seong Soo<sup>\*1</sup>, PARK Myoung Jin<sup>1</sup>, HAN Chul Hee<sup>1</sup>, OH Se-Joung<sup>1</sup>, PARK Nam Kyou<sup>2</sup>(<sup>1</sup>Research Center for Nanobio Science, SunMoon University, <sup>2</sup>School of Electrical Engineering, Seoul National University)

C7.07 [10:12-10:24]

**Nanotribological and electromechanical properties of vanadium dioxide crossing the metal-insulator transition** / KIM Jong Hun<sup>1, 2</sup>, PARK Jeong Young<sup>\*1, 2</sup>, FU Deyi<sup>3</sup>, WU Junqiao<sup>3</sup>(<sup>1</sup>Center for Nanomaterials and Chemical Reactions, Institute for Basic Science (IBS), <sup>2</sup>Graduate School of EEWS, Korea Advanced Institute of Science and Technology (KAIST), <sup>3</sup>Department of Materials Science and Engineering, University of California, Berkeley)

**[C8-co] Dielectrics**

2016년 4월 21일 목요일 09:00 – 10:36

장소: 108호

좌장: 송 태 권 창원대학교

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

**Structural phase variations in T-phase BiFeO<sub>3</sub> thin films on LaAlO<sub>3</sub> probed by X-ray microdiffraction** / WI Sangwon, PARK Jung Hyun, CHUNG Jin-Seok\*(Dept. of Physics, Soongsil University)

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

**Ferroelastic twin structure in epitaxial  $\text{WO}_3$  thin films** / 윤신희<sup>\*1</sup>, 우창수<sup>1</sup>, 김기엽<sup>2</sup>, Pankaj Sharma<sup>3</sup>, 이진홍<sup>1</sup>, 주강현<sup>1</sup>, 송종현<sup>4</sup>, 정성윤<sup>5,6</sup>, Jan Seidel<sup>3</sup>, 최시영<sup>2</sup>, 양찬호<sup>\*1,6</sup>(<sup>1</sup>KAIST 물리학과, <sup>2</sup>KIMS, <sup>3</sup>University of New South Wales, <sup>4</sup>충남대학교 물리학과, <sup>5</sup>KAIST EEWs, <sup>6</sup>KAIST Institute for the NanoCentury)

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

**Understanding of strain and defects in  $\text{SrTiO}_3$**  / 최민석\*(인하대학교 물리학과)

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

**The charge density of head-to-head and tail-to-tail structures in ferroelectric barium titanate** / YUN Sung-woo, SHIN Young-han\* (Department of Physics, University of Ulsan, Ulsan 44610, Republic of Korea)

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

**Nanoscale dielectric capacitor composed of graphene and graphane layers: A first principle study.** / ULLAH Hamid, SHIN Young-Han\* (Department of Physics, University of Ulsan, Ulsan 44610, Republic of Korea)

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

**In-situ Coherent X-ray Diffraction Study for Platinum Nanoparticles during Catalytic Process** / KIM Dongjin<sup>1</sup>, CHUNG Myungwoo<sup>1</sup>, KIM Sungwon<sup>1</sup>, CARNIS Jerome<sup>1</sup>, KANG Jinback<sup>1</sup>, YUN Kyuseok<sup>1</sup>, KIM Jaeseung<sup>1</sup>, CHA Wonsuk<sup>2</sup>, MAXEY Evan<sup>3</sup>, HARDER Ross<sup>3</sup>, ZOZULYA Alexey<sup>4</sup>, SPRUNG Michael<sup>4</sup>, KIM Hyunjung<sup>\*1</sup>(<sup>1</sup>PETRA III, Deutsches Elektronen-Synchrotron, Germany, <sup>2</sup>Materials Science Division, Argonne National Laboratory, USA, <sup>3</sup>Advanced Photon Source, Argonne National Laboratory, USA, <sup>4</sup>Department of Physics Sogang University)

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

**Three dimensional imaging of the internal structure of a mitochondrion using coherent x-ray diffractive imaging** / KIM Yoonhee<sup>1</sup>, KIM Chan<sup>2</sup>, KIM Sang Soo<sup>3</sup>, NAM Daewoong<sup>4</sup>, SONG Changyong<sup>4</sup>, NOH Do Young<sup>\*2</sup>(<sup>1</sup>School of Materials Science and Engineering, GIST, 123 Cheomdan-gwagiro, Buk-gu, Gwangju 61005, Korea, <sup>2</sup>Department of Physics and Photon Science, GIST, 123 Cheomdan-gwagiro, Buk-gu, Gwangju 61005, Korea, <sup>3</sup>Pohang Accelerator Laboratory, 80 Jigokro-127-beongil, Nam-gu, Pohang 790-834, Korea, <sup>4</sup>Department of Physics, POSTECH, San31, Hyoja-dong, Nam-gu, Pohang 790-784, Korea)

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

**Time-resolved Strain Development of Zeolites in Catalytic Reactions using X-ray Free Electron Laser** / KANG Jinback<sup>1</sup>, CARNIS



Jerome<sup>1</sup>, KIM Dongjin<sup>1</sup>, CHUNG Myungwoo<sup>1</sup>, AN Gukil<sup>1</sup>, SONG Sanghoon<sup>2</sup>, SIKORSKI Marcin<sup>2</sup>, ROBERT Aymeric<sup>2</sup>, PHAM Tung Chao Thanh<sup>3</sup>, YOON Kyung Byung<sup>3</sup>, HARDER Ross<sup>4</sup>, CLARK Jesse<sup>5</sup>, ROBINSON Ian K<sup>5</sup>, KIM Hyunjung<sup>\*1</sup>(<sup>1</sup>Department of Physics, Sogang University, Seoul 04107, Korea, <sup>2</sup>SLAC National Accelerator Laboratory, 2575 Sand Hill Rd., Menlo Park, CA 94025, USA, <sup>3</sup>Department of Chemistry, Sogang University, Seoul 04107, Korea, <sup>4</sup>Advanced Photon Source, Argonne National Laboratory, Argonne, IL 60439, USA, <sup>5</sup>London Centre for Nanotechnology, University College London WC1E 6BT, UK)

**E [C9-co] Pioneer: Physical phenomena and applications of materials under high pressure**

2016년 4월 21일 목요일 09:00 – 11:00

장소: 201호

좌장: 김재용 한양대학교

**C9.01(초) [09:00-09:24]**

**Hydrogen Storage Capabilities of TiZrNi Quasicrystals Under High Pressure / KIM Jaeyong<sup>\*1</sup>, LEE Sangwha<sup>1</sup>, LEE Yongjae<sup>2</sup>, CYNN Hyunchae<sup>3</sup>**  
(<sup>1</sup>Department of Physics, Hanyang University, <sup>2</sup>Department of Earth System Sciences, Yonsei University, <sup>3</sup>Department of Physics and Life Sciences, Lawrence Livermore National Laboratory, Livermore, CA 94550)

**C9.02(초) [09:24-09:48]**

**Porous materials under pressure / LEE Yongjae<sup>\*</sup>**(Department of Earth System Science Yonsei University)

**C9.03(초) [09:48-10:24]**

**High pressure research on advanced materials with synchrotron sources / YANG Wenge<sup>\*</sup>**(Center for High Pressure Science and Technology Advanced Research (HPSTAR))

**C9.04(초) [10:24-11:00]**

**Pressure-induced competition of superconductivity and charge-density wave order: implications for the mechanism of superconductivity / STRUZHNIKIN Viktor V<sup>\*</sup>**(Geophysical Laboratory, Carnegie Institution of Washington)

**E [C11-as] Focus: Large scale structure I**

2016년 4월 21일 목요일 09:00 – 10:48

장소: 204호

좌장: 조인용 서울과기대

**C11.01(초) [09:00-09:36]**

**Ground experiment, DESI / SONG Yong Seon<sup>\*</sup>**(KASI)

C11.02(초) [09:36-10:12]

**Space experiment, NISS and SPHEREx / COORAY Asantha\***(UCI)

C11.03(초) [10:12-10:48]

**Relativistic non-linear perturbations in a universe. / GONG Jinnouk\***  
(APCTP)

**[C12-pl] Accelerator/Beam & Plasma Appl.**

2016년 4월 21일 목요일 09:00 – 11:00

장소: 205호

좌장: 유 신 재 충남대

C12.01\* [09:00-09:12]

**Intensity Dependent XFEL Absorption by Dense Aluminum Plasma / CHO Min Sang<sup>1,2</sup>, KIM M.J.<sup>1,2</sup>, CHUNG H.-K.<sup>3</sup>, CHO B.I.\*<sup>1,2</sup>**(<sup>1</sup>Department of Physics and Photon Science, Gwangju Institute of Science and Technology, <sup>2</sup>Center for Relativistic Laser Science, Institute of Basic Science, <sup>3</sup>Atomic and Molecular Data Unit, Nuclear Data Section, IAEA)

C12.02\* [09:12-09:24]

**Linear Plasma Enhanced Chemical Vapor Deposition of SiNx at Low Temperature (< 100 °C) as a Gas Permeation Barrier for Flexible OLED Displays / YUN Seungjin<sup>1,2</sup>, KIM Sungjin<sup>1</sup>, CHOI Jungsu<sup>2</sup>, CHO Byeongseong<sup>2</sup>, CHUNG Seogchul\*<sup>2</sup>**(<sup>1</sup>Materials Science and Engineering, Kumoh National Institute of Technology, <sup>2</sup>LIG INVENIA Co. Ltd)

C12.03\* [09:24-09:36]

**Development of sterilization packaging pouch using atmospheric pressure plasma / LIM Youbong<sup>1,2</sup>, CHOE Wonho\*<sup>1</sup>, PARK Jooyoung<sup>1</sup>**  
(<sup>1</sup>Department of Physics, Korea Advanced Institute of Science and Technology, <sup>2</sup>Plasmapp Co., Ltd.)

C12.04\* [09:36-09:48]

**K $\alpha$  Imaging Spectroscopy for Titanium Foils Irradiated by Intense Laser Pulses / BAE Leejin<sup>1,2</sup>, CHO Minsang<sup>1,2</sup>, KIM Minju<sup>1,2</sup>, KIM Young Hoon<sup>1,2</sup>, LEE Jong-won<sup>1,2</sup>, CHO Byoung-ick\*<sup>1,2</sup>**(<sup>1</sup>Department of Physics and Photon Science, Gwangju Institute of Science and Technology, <sup>2</sup>Center for Relativistic Laser Science, Institute for Basic Science)

C12.05 [09:48-10:00]

**Biophysical Properties of Proton Beam for KHIMA Project / CHO Ilsung, JUNG Won-Gyun\***(Korea Institute of Radiological and Medical Sciences)

C12.06 [10:00-10:12]

**Purely optical two stage laser wakefield acceleration / PATHAK**

Vishwa Bandhu<sup>\*1</sup>, KIM Hyung Taek<sup>1,2</sup>, NAKAJIMA Kajuhisa<sup>1</sup>, SILVA Luis O<sup>3</sup>, NAM Chang Hee<sup>1,4</sup>(<sup>1</sup>Center for Relativistic Laser Science, Institute for Basic Science (IBS), Gwangju, Republic of Korea, <sup>2</sup>Advanced Photonics Research Institute, GIST, Gwangju, Republic of Korea, <sup>3</sup>GoLP/Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Lisboa, Portugal, <sup>4</sup>Dept of Physics and Photon Science, GIST, Gwangju, Republic of Korea)

C12.07 [10:12-10:24]

**New electron injection method using nanoparticles in laser wakefield acceleration** / CHO MyungHoon\* (Center for Relativistic Laser Science, Institute for Basic Science, Gwangju 61005, South Korea)

C12.08 [10:24-10:36]

**Generation of quasi-monoenergetic protons from a double-species target driven by the radiation pressure of an ultraintense laser pulse** / PAE Ki Hong<sup>\*1</sup>, KIM Chul Min<sup>1,2</sup>, NAM Chang Hee<sup>1,3</sup>(<sup>1</sup>Center for Relativistic Laser Science, Institute for Basic Science, <sup>2</sup>Advanced Photonics Research Institute, Gwangju Institute of Science and Technology, <sup>3</sup>Department of Physics and Photon Science, Gwangju Institute of Science and Technology)

C12.09 [10:36-10:48]

**Resonances and envelope instability of high intensity linear accelerators** / JEON Dong-O\*, JANG Ji-Ho, JIN Hyunchang(Rare Isotope Science Project, Institute for Basic Science)

C12.10\* [10:48-11:00]

**홀 추력기 플라즈마의 다중전하 이온 및 방전특성 연구** / 김호락<sup>1</sup>, 이승훈<sup>1,2</sup>, 임유봉<sup>1</sup>, 김준범<sup>1</sup>, 최원호<sup>\*1</sup>(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>재료연구소 표면기술연구본부)

**[C13-at] Atomic, Molecular Physics**

2016년 4월 21일 목요일 09:00 – 10:24

장소: 206호

좌장: 유 대 혁 한국표준과학연구원

C13.01 [09:00-09:12]

**준고전적 방법을 사용한 파속의 진행** / 변창우<sup>1</sup>, 이민호<sup>1</sup>, 최낙렬<sup>\*1</sup>, 김대성<sup>2</sup>(<sup>1</sup>금오공과대학교, <sup>2</sup>경기과학기술대학교)

C13.02\* [09:12-09:24]

**Generation of bright source of polarization-entangled photons using a PPKTP pumped by a broadband multi-mode diode laser** / JEONG Youn-Chang\*, HONG Kang-Hee\*, KIM Yoon-Ho\*(Department of Physics, POSTECH)

C13.03 [09:24-09:36]

**Quantum State Tomography of Superconducting Qubits in Dispersive-Regime Circuit QED** / 노태완<sup>1</sup>, 박관열<sup>1, 2</sup>, 하동광<sup>1</sup>, 송운<sup>1</sup>, 이순걸<sup>2</sup>, 정연욱\*<sup>(<sup>1</sup>한국표준과학연구원, <sup>2</sup>고려대학교 세종캠퍼스)</sup>

C13.04\* [09:36-09:48]

**Measurement of the optical lengths of 174Yb with a Bose-Einstein condensate using photoassociation spectroscopy.** / KIM Min-Seok<sup>1</sup>, LEE Jeongwon<sup>2</sup>, LEE Jae Hoon<sup>2</sup>, SHIN Yong-il<sup>1</sup>, MUN Jongchul\*<sup>2</sup>  
(<sup>1</sup>Department of Physics and Astronomy Seoul National University, <sup>2</sup>Center for Time and Frequency Korea Research Institute of Standards and Science)

C13.05\* [09:48-10:00]

**Rotational-state- and alignment-dependent dispersion of molecules by pulsed optical standing waves** / 김이영, 조범석\*(울산과학기술원)

C13.06 [10:00-10:12]

**New geometric phase of a dipole under a nonlocal magnetic field** / 이강호, 강기천\*(전남대학교 물리학과)

C13.07 [10:12-10:24]

**Local quantum phase estimation in the Mach-Zehnder interferometer** / 이수용\*(고등과학원 계산과학부)

**E [C14-pa] Pioneer: New resonance searches at the LHC and impacts on BSM phenomenology II**

2016년 4월 21일 목요일 09:00 – 10:48

장소: 209호

좌장: 최 수 용 고려대학교

C14.01(초) [09:00-09:36]

**Searches for new physics with di-boson signatures with the ATLAS detector** / JINNOUCHI Osamu\*(Department of Physics Tokyo Institute of Technology)

C14.02(초) [09:36-10:12]

**Searches for New Physics with diboson signatures at the CMS** / YANG Un-ki\*(Department of Physics and Astronomy, Seoul National University)

C14.03(초) [10:12-10:48]

**13TeV LHC, How new physics will be revealed.** / NOJIRI Mihoko\*(KEK)

## SESSION D

2016년 4월 21일(목) 오전

### [D1-nu] General: Nuclear Astrophysics

2016년 4월 21일 목요일 11:00 – 11:48

장소: 101호

좌장: 권영관 IBS

#### D1.01\* [11:00-11:12]

**Constraint on the  $^{17}\text{F}(\alpha, p)^{20}\text{Ne}$  reaction rate with the spectroscopy of  $^{21}\text{Na}$**  / 차수미<sup>1</sup>, 채경욱<sup>\*1</sup>, S. H. Ahn<sup>2</sup>, D. W. Bardayan<sup>3</sup>, K. A. Chipps<sup>4</sup>, J. A. Cizewski<sup>5</sup>, M. E. Howard<sup>5</sup>, A. Kim<sup>1</sup>, R. L. Kozub<sup>6</sup>, M. S. Kwag<sup>1</sup>, E. J. Lee<sup>1</sup>, B. Manning<sup>5</sup>, M. Matos<sup>7</sup>, P. D. O'Malley<sup>5</sup>, S. D. Pain<sup>3</sup>, W. A. Peters<sup>8</sup>, S. T. Pittman<sup>3</sup>, A. Ratkiewicz<sup>5</sup>, M. S. Smith<sup>3</sup>, S. Strauss<sup>5</sup>(<sup>1</sup>Sungkyunkwan University, <sup>2</sup>University of Tennessee, <sup>3</sup>Oak Ridge National Laboratory, <sup>4</sup>Colorado School on Mines, <sup>5</sup>Rutgers University, <sup>6</sup>Tennessee Technological University, <sup>7</sup>Louisiana State University, <sup>8</sup>Oak Ridge Associated Universities)

#### D1.02 [11:12-11:24]

**A new neutrino source for the study of the solar neutrino physics in the vacuum-matter transition region** / 신재원<sup>\*1</sup>, 천명기<sup>1</sup>, Toshitaka Kajino<sup>2</sup>, <sup>3</sup>(<sup>1</sup>송실대학교 물리학과, <sup>2</sup>Division of Theoretical Astronomy National Astronomical Observatory of Japan, <sup>3</sup>Department of Astronomy Graduate School of Science University of Tokyo)

#### D1.03\* [11:24-11:36]

**The mass-radius relation of proto-neutron star according to ratio of trapped neutrinos to electrons** / 최순철, 천명기<sup>\*</sup>(송실대학교 물리학과)

#### D1.04\* [11:36-11:48]

**EFFECTS OF STERILE NEUTRINO AND EXTRA DIMENSION ON BIG BANG NUCLEOSYNTHESIS** / JANG Dukjae<sup>\*1</sup>, KUSAKABE Motohiko<sup>2</sup>, CHEOUN Myung-Ki<sup>1</sup>(<sup>1</sup>Department of Physics, Soongsil University, <sup>2</sup>Center for Astrophysics, Department of Physics, University of Notre Dame)

### [D3-ap] Nanomaterials synthesis and properties

2016년 4월 21일 목요일 11:00 – 12:36

장소: 103호

좌장: 김근수 세종대

#### D3.01\* [11:00-11:12]

**임피던스 분광법을 이용한 그래핀-실리콘 이종접합구조에서 계면 특성분석** / 박흥기, 박준하, 최재우<sup>\*</sup>(경희대학교 정보디스플레이학과)

D3.02\* [11:12-11:24]

**Synthesis and Characterization of Three Atom Thick Continuous Uniform Tungsten Selenide Film** / ULLAH Farman, LE Chinh Tam, CHO Heung-Yeol, ALI Ahmed I., KIM Yong Soo\* (Department of physics and Energy Harvest-Storage Research Center, University of Ulsan)

D3.03\* [11:24-11:36]

**Scalable ZnO nanotube arrays grown on CVD-graphene films** / PARK Jun Beom<sup>1</sup>, PARK Jongwoo<sup>1</sup>, KIM Nam-Jung<sup>2</sup>, YI Gyu-Chul\*<sup>1</sup>(<sup>1</sup> Department of Physics and Astronomy, and institute of Applied Physics, Seoul National University, <sup>2</sup>Department of Physics and Chemistry, Korea Military Academy)

D

D3.04\* [11:36-11:48]

**Optoelectronic properties of the device based on  $\text{Mo}_{1-x}\text{W}_x\text{Se}_2$**  / 이섬균, 박성진, 오동건, 최영재\*, 유경화\*(연세대학교 물리학과)

D3.05\* [11:48-12:00]

**티타늄 산화반응을 이용한 그래핀 저온 성장** / 최재우\*, 이창묵(경희대학교 정보디스플레이학과)

D3.06\* [12:00-12:12]

**S-shaped shift of photoluminescence of graphene quantum dots depending on excitation energy** / JANG Min-Ho, CHO Yong-Hoon\* (Department of Physics, KAIST)

D3.07\* [12:12-12:24]

**Nearly single crystal, few-layered hexagonal boron nitride films with centimeter size using reusable Ni(111)** / 오홍석<sup>1,3</sup>, 조장현<sup>2,3</sup>, 윤호상<sup>1,3</sup>, 최영빈<sup>1,3</sup>, 김성수<sup>4</sup>, 김미영<sup>2,3</sup>, 손병혁<sup>4</sup>, 이규철<sup>1,3</sup>(<sup>1</sup>서울대학교 물리천문학부, <sup>2</sup>서울대학교 재료공학부, <sup>3</sup>서울대학교 신소재공동연구소, <sup>4</sup>서울대학교 화학부)

D3.08\* [12:24-12:36]

**탄소나노튜브를 에칭마스크로 사용한 고분자 나노구조물의 형성과정 연구** / 임웅빈, 정희성, 박세준, 이순일, 안영환, 박지용\*(아주대학교 에너지시스템학부)

**[D4-st] Complex Systems**

2016년 4월 21일 목요일 11:00 - 12:24

장소: 104호

좌장: 권 철 안 명지대

D4.01(초) [11:00-11:24]

**Standing up for BMI** / YI Su Do\*<sup>1</sup>, NOH Jae Dong<sup>2,3</sup>, MINNHAGEN Petter<sup>4</sup>, SONG Mi-Young<sup>5</sup>, CHON Tae-Soo<sup>6</sup>, KIM Beom Jun<sup>7</sup>(<sup>1</sup>Department of Physics, Pukyong National University, <sup>2</sup>Department of Physics, University of Seoul, <sup>3</sup>School of Physics, Korea Institute for Advanced Study, <sup>4</sup>Department of Physics, Umeå

University, <sup>5</sup>Inland Fisheries Research Institute, National Institute of Fisheries Science, <sup>6</sup>Department of Biological Sciences and Ecology & EnFRA, Pusan National University, <sup>7</sup>Department of Physics, Sungkyunkwan University)

**D4.02** [11:24-11:36]

**Origin of the biological synaptic plasticity rule** / 조명원<sup>\*1</sup>, 최무영<sup>2(성신여자대학교 글로벌의과학과, <sup>2</sup>서울대학교 물리천문학부)</sup>

**D4.03** [11:36-11:48]

**The Multi-Scale Network Landscape of Collaboration** / BAE Arram<sup>1</sup>, PARK Doheum<sup>1</sup>, AHN Yong-Yeol<sup>2</sup>, PARK Juyong<sup>\*1(1</sup>Graduate School of Culture Technology, KAIST, <sup>2</sup>Indiana University, Bloomington, USA)

**D4.04\*** [11:48-12:00]

**양식 측정학을 이용한 한국 역사 기록물 분석과 N-gram 웹 서비스** / 이병휘<sup>1</sup>, 김영호<sup>2</sup>, 김동우<sup>3</sup>, 정하웅<sup>\*1, 4, 5(1</sup>한국과학기술원 물리학과, <sup>2</sup>한국과학기술원 자연과학연구소, <sup>3</sup>카카오 판교오피스, <sup>4</sup>한국과학기술원 바이오 융합 연구소, <sup>5</sup>아태이론 물리센터)

**D4.05\*** [12:00-12:12]

**Collective Behaviors of Self-propelled Ising Spins** / SHIM Pyoung-Seop<sup>1</sup>, NOH Jae Dong<sup>\*1, 2(1</sup>Department of Physics, University of Seoul, Seoul 130-743, Korea, <sup>2</sup>School of Physics, Korea Institute for Advanced Study, Seoul 130-722, Korea)

**D4.06** [12:12-12:24]

**The role of the exceptional point in the transient behaviors of amplitude death in coupled limit-cycle oscillators.** / RYU Jung-Wan<sup>\*1</sup>, SON Woo-Sik<sup>2</sup>, HWANG Dong-Uk<sup>2</sup>, LEE Soo-Young<sup>3</sup>, KIM Sang Wook<sup>4(1</sup>Center for Theoretical Physics of Complex Systems, Institute for Basic Science (IBS), <sup>2</sup>National Institute for Mathematical Sciences, <sup>3</sup>School of Electronics Engineering, Kyungpook National University, <sup>4</sup>Department of Physics Education, Pusan National University)

**[D5-co] Strongly Correlated Systems II**

2016년 4월 21일 목요일 11:00 – 12:36

장소: 105호

좌장: 노 한 진 전남대학교

**D5.01\*** [11:00-11:12]

**Multi-orbital iterative perturbation theory as an impurity solver for DFT+DMFT** / 한만천<sup>1, 2</sup>, 이충기<sup>2</sup>, 최형준<sup>\*1, 2(1</sup>연세대학교 물리학과 물리및응용물리사업단, <sup>2</sup>연세대학교 첨단전자물성계산연구단)

D5.02\* [11:12-11:24]

**Effects of spin-orbit coupling on collective electron-hole excitations in noncentrosymmetry Weyl semimetal** / 안교훈<sup>1</sup>, W. E. Pickett<sup>3</sup>, 이관우<sup>\*1, 2</sup>(<sup>1</sup>고려대학교 대학원 응용물리학과, <sup>2</sup>고려대학교 세종캠퍼스 디스플레이-반도체 물리학과, <sup>3</sup>Department of Physics, Univ. of California, Davis, CA, USA)

D5.03 [11:24-11:36]

**Competition of Spin-orbit and correlation interactions in high Chern number Ferromagnetic BaFe<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>** / 이관우<sup>\*1, 2</sup>, 송영준<sup>1</sup>, 안교훈<sup>1</sup>, W. E. Pickett<sup>3</sup>(<sup>1</sup>고려대학교 대학원 응용물리학과, <sup>2</sup>고려대학교 세종캠퍼스 디스플레이-반도체 물리학과, <sup>3</sup>Department of Physics, Univ. of California, Davis, CA, USA)

D

D5.04\* [11:36-11:48]

**DFT+DMFT study of LaTiO<sub>3</sub>/LaAlO<sub>3</sub> superlattice** / 심재훈<sup>1</sup>, 이훈표<sup>2</sup>, 한명준<sup>\*</sup>(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>강원대학교 교양학부)

D5.05\* [11:48-12:00]

**Temperature scales of the Kondo lattice model studied by DMFT** / KANG Hanhim<sup>1</sup>, KIM Jae Nyeong<sup>1</sup>, CHOI Hong Chul<sup>1</sup>, SHIM Ji-Hoon<sup>\*1, 2, 3</sup>(<sup>1</sup>Department of Chemistry, POSTECH, <sup>2</sup>Department of Physics, POSTECH, <sup>3</sup>Division of Advanced Nuclear Engineering)

D5.06 [12:00-12:12]

**Structural aspects of transition temperature upshift in the VO<sub>2</sub>/AlN/Si heterostructure** / SLUSAR Tetiana<sup>\*1</sup>, CHO Jin-Cheol<sup>1, 2</sup>, KIM Bong-Jun<sup>1</sup>, KIM Hyun-Tak<sup>\*1</sup>(<sup>1</sup>MIT Lab, ETRI, <sup>2</sup>Department of Advanced Device Technology, UST)

D5.07\* [12:12-12:24]

**Direct observation of M2 phase on insulator-metal transition in VO<sub>2</sub> film by conducting AFM** / KIM Hoon<sup>1, 2</sup>, SLUSAR Tetiana V<sup>3</sup>, WULFERTING Dirk<sup>1, 2</sup>, JHO Jin-Cheol<sup>3</sup>, LEE Minkyung<sup>2, 4</sup>, CHOI Hee Cheul<sup>2, 4</sup>, JEONG Yoon Hee<sup>1</sup>, YEOM Han Woong<sup>1, 2</sup>, KIM Hyun-Tak<sup>3</sup>, KIM Jeehoon<sup>\*1, 2</sup>(<sup>1</sup>Department of Physics, Pohang University of Science and Technology, <sup>2</sup>Center for Artificial Low Dimensional Electronic Systems, Institute for Basic Science, <sup>3</sup>Electronics and Telecommunications Research Institute, <sup>4</sup>Department of Chemistry, Pohang University of Science and Technology)

D5.08 [12:24-12:36]

**Finite band renormalization across bandwidth controlled Mott transition in Ni<sub>2-x</sub>Se<sub>x</sub>** / HAN Garam<sup>1, 2</sup>, KIM Changyoung<sup>\*1, 2</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University (SNU), Seoul 151-742, Korea, <sup>2</sup>Center for Correlated Electron Systems, Institute for Basic Science, Seoul 151-742, Korea)



## **E [D6-co] Pioneer: Quantum Sensing & Imaging**

2016년 4월 21일 목요일 11:00 - 12:48

장소: 106호

좌장: 강 기 천 전남대학교

**D6.01(초)** [11:00-11:36]

**Scanned probe imaging of nanoscale magnetism at cryogenic temperatures with a single-spin quantum sensor / PELLICCIONE Matthew\***(Department of Physics University of California at Santa Barbara)

**D6.02(초)** [11:36-12:12]

**Strain coupling of a mechanical resonator to a single-spin quantum emitter in diamond / LEE Donghun\***(Department of Physics Korea University)

**D6.03(초)** [12:12-12:48]

**Qubit coupled nanomechanical system for quantum measurement in a nanomechanical resonator / SHIM Seung-Bo\*, SUH Junho**(Korea Research Institute of Standards and Science)

## **[D7-co] Focus: Advanced nanoscale functional imaging**

2016년 4월 21일 목요일 11:00 - 12:48

장소: 107호

좌장: 김 태 환 포항공과대학교

**D7.01(초)** [11:00-11:36]

**Non-equilibrium dynamics of photoexcited carriers revealed by space-time imaging / CHO Jongwon\***(Department of Physics Myongji University)

**D7.02(초)** [11:36-12:12]

**펄스초 광전류 측정법을 이용한 나노소자 초고속 전하수송특성 연구 / 안영환\***(아주대학교 물리학과)

**D7.03(초)** [12:12-12:48]

**Origin of hysteresis loop in piezoresponse force microscopy / KIM Yunseok\***(School of Advanced Materials Science and Engineering, Sungkyunkwan University)

## **[D8-co] Physics in Soft Matters and Biological Systems**

2016년 4월 21일 목요일 11:00 - 12:48

장소: 108호

좌장: 이 중 봉 포항공과대학교

**D8.01(초)** [11:00-11:24]

**Non-Gaussian lateral diffusion in protein-crowded membranes / 전재형\***(고등과학원)

D8.02\* [11:24-11:36]

**Functional HER family dimer pull down and reconstitution of p-tyrosine signaling enables direct observation of the early stage of cellular signaling.** / CHOI Byungsan, CHA Minkwon, YOON Taeyoung\*  
(Department of Physics KAIST)

D8.03 [11:36-11:48]

**Photo-addressed Nematic Microrotor** / CHOI Hyunhee<sup>\*1, 2</sup>, TAKEZOE Hideo<sup>2, 3</sup>(<sup>1</sup>Department of Physics Soongsil University, <sup>2</sup>Department of Organic and Polymeric Materials Tokyo Institute of Technology, <sup>3</sup>Toyota Physical and Chemical Research Institute)

D

D8.04 [11:48-12:00]

**Origin and dynamics of vortex rings in drop splashing** / LEE Ji San\*, JE Jung Ho\*(X-ray Imaging Center, Pohang University of Science and Technology)

D8.05 [12:00-12:12]

**Relative free energy difference between dipolar and quadrupolar configurations in nematic colloidal system** / 김성조\*, 김종현(충남대학교 물리학과)

D8.06 [12:12-12:24]

**Force spectroscopy of single SUVs** / KIM Jichul<sup>1</sup>, YOON Tae-Young<sup>\*2</sup>  
(<sup>1</sup>Natural Science Research Institute, KAIST, <sup>2</sup>Department of Physics, KAIST)

D8.07\* [12:24-12:36]

**Interpreting and controlling initial motion of a reactive droplet** / HWANG In Gyu<sup>1</sup>, KIM Jin Young<sup>2</sup>, WEON Byung Mook<sup>\*1, 2</sup>(<sup>1</sup>School of Advanced Materials Science and Engineering, Sungkyunkwan University, <sup>2</sup>SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University)

D8.08\* [12:36-12:48]

**Pinning-depinning transition during evaporation of water bridges between microspheres** / 조건<sup>1</sup>, 김예슬<sup>2</sup>, 임준<sup>3</sup>, 김준한<sup>4</sup>, 원병묵<sup>\*1, 2</sup>(<sup>1</sup>성균관대학교 신소재과, <sup>2</sup>성균관대학교 성균관나노과학기술학과, <sup>3</sup>포항가속기연구소 X-선 빔라인, <sup>4</sup>광주과학기술원 고등광기술연구소)

**E [D9-co] Pioneer: Physical phenomena and applications of materials under high pressure**

2016년 4월 21일 목요일 11:00 – 13:00

장소: 201호

좌장: 김 기 훈 서울대학교

**D9.01(초)** [11:00-11:24]

**Glasses under extreme compression and 2 dimensional confinement**  
/ LEE Sung Keun\*(School of Earth and Environmental Sciences, Seoul National University)

**D9.02(초)** [11:24-11:48]

**Pressure Study on the Cerium-based Heavy Fermion Compound CeMn<sub>5</sub>** / PARK Tuson\*(Department of Physics, Sungkyunkwan University)

**D9.03(초)** [11:48-12:24]

**Development of High Pressure Study for Condensed Matter Physics Research at Seoul National University** / MURATA Keizo, JANG Dong Hyun, SUR Yeahan, JEON Byung-Gu, MIN ByeongHun, KIM Kee Hoon\*(CeNSCMR and IAP, Dept of Physics and Astronomy, Seoul National Univ., Seoul)

**D9.04(초)** [12:24-13:00]

**Pressure induced new physical phenomena and pressure device** / UWATOKO Yoshiya\*(Institute for Solid State Physics, The University of Tokyo)

**E [D10-se] Pioneer: Physics under high magnetic fields I**

2016년 4월 21일 목요일 11:00 – 12:12

장소: 202호

좌장: 김 용 민 단국대

**D10.01(초)** [11:00-11:36]

**Magneto Resistance of Low Dimensional Conductors in High Electric Field** / PARK Yung Woo\*(Department of Physics and Astronomy, Seoul National University)

**D10.02(초)** [11:36-12:12]

**Solid-State Quantum Limit Phenomena Induced by Megagauss Magnetic Fields** / TAKEYAMA Shojiro\*(International Megagauss Science Lab., Kashiwa, Institute for Solid State Physics, U. Tokyo)

**E [D11-as] Focus: Large scale structure II**

2016년 4월 21일 목요일 11:00 – 12:48

장소: 204호

좌장: 조 인 용 서울과학기술대학교

**D11.01(초)** [11:00-11:36]

**Search for evidences beyond the standard model of cosmology /**

SHAFIELOO Arman\* (KASI)

**D11.02(초)** [11:36-12:12]

**WIMP DM and iscurvature perturbation /** CHOI Ki-Young\* (Chonnam National University)

**D11.03(초)** [12:12-12:36]

**Anisotropies of the redshift space power spectrum from perturbation theory /** LEE Seokcheon\* (Physics department, Korea Institute for Advanced Study)

**D11.04** [12:36-12:48]

**The M-sigma Relation of Super Massive Black Holes from the Scalar Field Dark Matter Theory /** 이재원<sup>\*</sup>, 이정재<sup>2</sup>, 김형찬<sup>3</sup> (중원대학교, <sup>2</sup>대진대학교, <sup>3</sup>한국교통대)

**E [D12-pl] Pioneer: Frontiers in Laboratory, Space, and Astrophysical Plasma Sciences II**

2016년 4월 21일 목요일 11:00 – 12:48

장소: 205호

좌장: 박 현 거 UNIST

**D12.01(초)** [11:00-11:36]

**Explosive instabilities in tokamak plasmas /** WILSON Howard\* (York Plasma Institute, Department of Physics, University of York, Heslington, York, UK)

**D12.02(초)** [11:36-12:12]

**Modern Nonlinear Gyrokinetic Theory and Its Application to Zonal Flow Physics /** HAHM Taik Soo<sup>\*1, 2</sup> (<sup>1</sup>Seoul National University, Seoul, Republic of Korea, <sup>2</sup>National Fusion Research Institute, Daejeon, Republic of Korea)

**D12.03(초)** [12:12-12:48]

**Gyrokinetic simulation of the whole volume tokamak plasma /** CHANG Choong-Seock\* (Princeton Plasma Physics Laboratory, Princeton, NJ, USA)

D

**[D13-at] Atomic, Molecular Physics**

2016년 4월 21일 목요일 11:00 - 12:24

장소: 206호

좌장: 최재민 전북대학교

**D13.01** [11:00-11:12]

**Cooperative Optical Response on Two-Dimensional(2D) Dense Lattices** / YOO Sung-Mi<sup>\*1</sup>(<sup>1</sup>Liberal Arts, Hongik University, <sup>2</sup>Department of Physics, University of Connecticut)

**D13.02\*** [11:12-11:24]

**Coherent beam splitting with quantum memory operation in cold atoms** / PARK Kwang-Kyoon<sup>\*1</sup>, ZHAO Tian-Ming<sup>1</sup>, LEE Jong-Chan<sup>1</sup>, CHOUGH Young-Tak<sup>2</sup>, KIM Yoon-Ho<sup>1</sup>(<sup>1</sup>Department of Physics, POSTECH, <sup>2</sup>Department of Medical Technology, Gwangju University)

**D13.03** [11:24-11:36]

**Onset of superfluidity in two-dimensional Rashba spin-orbit-coupled Fermi gases** / LEE Juhee, KIM Dong-Hee<sup>\*</sup>(Department of Physics and Photon Science, Gwangju Institute of Science and Technology)

**D13.04\*** [11:36-11:48]

**Quench Dynamics of a Quasi-2D Antiferromagnetic Spin-1 Condensates** / 강세지, 서상원, 김준현, 신용일<sup>\*</sup>(서울대학교 물리천문학부)

**D13.05** [11:48-12:00]

**Transfer of pseudo-thermal distribution via collimated blue light generation in rubidium vapor** / IHN Yong Sup, PARK Kwang-Kyoon, KIM Yosep, KIM Yoon-Ho<sup>\*</sup>(Department of Physics POSTECH)

**D13.06** [12:00-12:12]

**Simple point vortex model for the relaxation of 2D superfluid turbulence in a Bose-Einstein condensate** / 김준현, 권우진, 신용일<sup>\*</sup>(서울대학교 물리천문학부)

**D13.07** [12:12-12:24]

**Reciprocity theorem and time reversal symmetry in quantum reflection of helium atom beams from a blazed grating** / JIN ByungGwon<sup>1</sup>, KIM LeeYeong<sup>2</sup>, ZHAO BumSuk<sup>\*1, 2</sup>, SCHOELLKOPF Wieland<sup>3</sup>(<sup>1</sup>Department of Chemistry Ulsan National Institute of Science and Technology (UNIST), <sup>2</sup>Department of Physics Ulsan National Institute of Science and Technology (UNIST), <sup>3</sup>Fritz-Haber-Institut der Max-Planck-Gesellschaft)

**E [D14-pa] Pioneer: New resonance searches at the LHC and impacts on BSM phenomenology III**

2016년 4월 21일 목요일 11:00 – 12:48

장소: 209호

좌장: 이 현 민 중앙대학교

**D14.01(초)** [11:00-11:36]

**Interpreting the 750 GeV diphoton resonance using photon jets /**  
CHEUNG Kingman\* (Department of Physics National Tsing Hua University)

**D14.02(초)** [11:36-12:12]

**The 750 GeV excess /** SANZ Veronica\* (Department of Physics and Astronomy  
University of Sussex)

**D14.03(초)** [12:12-12:48]

**Shining light on the diphoton resonance /** ZUPAN Jure\* (Department of  
Physics University of Cincinnati)

D

## SESSION E

2016년 4월 21일(목) 오후

### **E [E1-nu] Pioneer: Nuclear forces and nuclear structure I**

2016년 4월 21일 목요일 14:00 – 15:48

장소: 101호

좌장: 현 창 호 대구대

**E1.01(초)** [14:00-14:36]

**Experimental study on production of neutron-rich isotopes around  $N = 126$  by multinucleon transfer reaction for KISS project /** WATANABE Yutaka<sup>\*1, 2, 3</sup>(<sup>1</sup>Wako Nuclear Science Center (WNSC), <sup>2</sup>Institute of Particle and Nuclear Studies (IPNS), <sup>3</sup>High Energy Accelerator Research Organization (KEK))

**E1.02(초)** [14:36-15:12]

**Search for a neutron electric dipole moment /** GOLUB Robert<sup>\*</sup> (Department of Physics North Carolina State University)

**E1.03(초)** [15:12-15:48]

**Neutron Recoil Polarization in Low-energy Photodisintegration of the Deuteron /** SEO Pil-Neyo<sup>\*</sup> (University of Virginia/Triangle Universities Nuclear Laboratory at Duke University)

### **[E2-se] Focus: Device applications of Perovskites I**

2016년 4월 21일 목요일 14:00 – 16:00

장소: 102호

좌장: 고 민 재 KIST

**E2.01(초)** [14:00-14:24]

**Effective charge extraction and transportation at perovskite-conducting polymer hybrid solar cells /** PARK Taiho<sup>\*</sup> (Chemical Engineering, POSTECH)

**E2.02(초)** [14:24-14:48]

**Carrier transport and stability issues of  $\text{CH}_3\text{NH}_3\text{Pb}(\text{I}, \text{Br})_3$  perovskite solar cells /** JO William<sup>\*</sup>, KIM Gee Yeong, NGUYEN Bich Phuong, JUNG Hye-Ri, KIM Juran, JIN Hye-Jin (Department of Physics, Ewha Womans University)

**E2.03(초)** [14:48-15:12]

**Computational Study of Organic-Inorganic Hybrid Perovskite Materials and Photovoltaic Devices /** HONG Ki-Ha<sup>\*</sup> (Department of Materials Science and Engineering, Hanbat National University)

E2.04(초) [15:12-15:36]

**Synthesis of Cesium Lead Bromide ( $\text{CsPbX}_3$ ,  $X = \text{Cl, Br, I}$ ) Nanocrystals and their optoelectronic Application** / RAMASAMY Parthiban<sup>1</sup>, LIM Da-Hye<sup>1</sup>, KIM Bumjin<sup>1</sup>, LEE Seung-Ho<sup>1</sup>, LEE Min-Sang<sup>2</sup>, LEE Jong-Soo\*<sup>1</sup>(<sup>1</sup>Department of Energy Systems Engineering, DGIST, <sup>2</sup>Ecolumy Co., Ltd. University-Industry Cooperation Center, DGIST)

E2.05(초) [15:36-16:00]

**Metal oxide semiconductors for inorganic-organic hybrid halide perovskite solar cells** / NOH Jun Hong\* (Advanced Materials Division, Korea Research Institute of Chemical Technology)

**[E3-ap] Organic electronics and Photonics I**

2016년 4월 21일 목요일 14:00 - 15:48

장소: 103호

좌장: 조 상 완 연세대

E3.01(초) [14:00-14:24]

**Solution-processed organic-inorganic hybrid light emitting transistors** / SEO Jung Hwa\* (Department of Materials Physics Dong-A University)

E3.02(초) [14:24-14:48]

**Spintronics with carbon-based materials** / 유정우\* (울산과학기술원)

E3.03\* [14:48-15:00]

**Investigation of Electrical Characteristics of benzenedithiolate flexible molecular electronic devices with graphene electrodes** / 장연식, 정현학, 김동구, 황왕택, 김준우, 이택희\* (서울대학교 물리천문학부)

E3.04\* [15:00-15:12]

**Efficiency of Inverted Quantum-Dot Light Emitting Diodes with Different Anode Buffer Layer** / 맹민재<sup>1</sup>, 김지훈<sup>1</sup>, 홍종암<sup>1</sup>, 사공정훈<sup>1</sup>, 조예람<sup>2</sup>, 강필구<sup>2</sup>, 신동한<sup>2</sup>, 서민철<sup>2</sup>, 박용섭\*<sup>1</sup>(<sup>1</sup>경희대학교 물리학과, <sup>2</sup>경희대학교 정보디스플레이학과)

E3.05\* [15:12-15:24]

**Understanding of hysteresis in perovskite solar cells based on the energy level alignment** / SHIN Dongguen<sup>1</sup>, KANG Donghee<sup>1</sup>, JEONG Junckyeong<sup>1</sup>, PARK Soohyung<sup>1</sup>, LEE Hyunbok\*<sup>2</sup>, YI Yeonjin\*<sup>1</sup>(<sup>1</sup>Institute of Physics and Applied Physics, Yonsei University, 50 Yonsei-ro, Seodaemun-Gu, Seoul 037, <sup>2</sup>Department of Physics, Kangwon National University, 1 Gangwondaehak-gil, Chuncheon-si, Gangwon-do 2)



E3.06\* [15:24-15:36]

**Study of thermal property in TIPS-pentacene and carbon-material composites for organic semiconductor devices /** 복문정<sup>1</sup>, 다구찌 다 이<sup>2</sup>, 이와모토 미즈마사<sup>2</sup>, 임은주\*<sup>1</sup>(<sup>1</sup>단국대학교 과학교육학과/창의제조공학과, <sup>2</sup>도쿄공업대학 물리전자공학과)

E3.07\* [15:36-15:48]

**LSPR peak shift of Ag Nanodot Arrays in Polymer Solar Cells by Tuning the Refractive Index of Surrounding Medium /** 송세영<sup>1</sup>, 허정우<sup>2</sup>, 이태경<sup>1</sup>, 염혜림<sup>1</sup>, 박수진<sup>1</sup>, 워커 브라이트<sup>1</sup>, 곽상규<sup>1,3</sup>, 김진영\*<sup>1</sup>(<sup>1</sup>UNIST 에너지 및 화학공학부, <sup>2</sup>UNIST 물리및응용수학부, <sup>3</sup>IBS 다차원 탄소재료 연구단)

**[E4-st] Biophysics**

2016년 4월 21일 목요일 14:00 – 15:36

장소: 104호

좌장: 이 승 종 수원대

E4.01(초) [14:00-14:24]

**Tau is electrostatic switch regulating microtubule machinery /** CHOI Myung Chul\* (Bio and Brain Engineering, KAIST)

E4.02\* [14:24-14:36]

**The Role of Flow Symmetry and Singularity in Chiral Separation /** 노승한<sup>1</sup>, 이주연<sup>2</sup>, 김용운\*<sup>1</sup>(<sup>1</sup>Graduate School of Nanoscience and Technology, KAIST, <sup>2</sup>Department of Physics, Pusan National University)

E4.03\* [14:36-14:48]

**Study on the conformational change of c-Src tyrosine kinase: Targeted Molecular Dynamics Simulation /** YOON Hyunjung<sup>1</sup>, PARK Sun Joo<sup>2</sup>, WU Sangwook\*<sup>1</sup>(<sup>1</sup>Department of Physics, Pukyong National University, Busan 608-737, Korea, <sup>2</sup>Department of Chemistry, Pukyong National University, Busan 608-737, Korea)

E4.04 [14:48-15:00]

**Transcription factor network to investigate cell differentiation based on open chromatin landscapes /** 이성민\* (한국고등과학원 물리학과)

E4.05 [15:00-15:12]

**Folding Mechanisms of Small Protein GB1 and LB1 /** CHENG Qianyi, JOUNG InSuk, KUWAJIMA Kunihiro, LEE Jooyoung\* (Korea Institute for Advanced Study)

E4.06 [15:12-15:24]

**A contact-based topological quantity and its relationships with the folding kinetics of non-two-state proteins and two-state proteins /** MANAVALAN Balachandran, LEE Jooyoung\* (Center for Insilico Protein Science, School of computational Sciences, Korea Institute for Advanced)

E4.07 [15:24-15:36]

**Protein Structure Modeling using Sparse and Ambiguous NMR restraints /** JOO Keehyoung<sup>1,2</sup>, JOUNG InSuk<sup>1,3</sup>, CHENG Qianyi<sup>1,3</sup>, LEE Sung Jong<sup>1,4</sup>, LEE Jooyoung\*<sup>1,3</sup> (<sup>1</sup>Center for In Silico Protein Science, Korea Institute for Advanced Study, 130-722, Korea, <sup>2</sup>Center for Advanced Computation, Korea Institute for Advanced Study, 130-722, Korea, <sup>3</sup>School of Computational Sciences, Korea Institute for Advanced Study, 130-722, Korea, <sup>4</sup>Department of Physics, University of Suwon, Hwaseong-Si, 445-743, Korea)

**E [E5-co] Focus: New perspectives in quantum fluids and solid**

2016년 4월 21일 목요일 14:00 – 15:48

장소: 105호

좌장: 최 형 순 한국과학기술원

E5.01(초) [14:00-14:36]

**Fascinating phenomena on free surface of superfluid helium probed by surface charges /** KONO Kimitoshi\* (Low temperature laboratory RIKEN)

E5.02(초) [14:36-15:00]

**Half-Quantum Vortices in a Spin-1 Nematic Superfluid /** SHIN Yong-il\* (Department of Physics and Astronomy, Seoul National University)

E5.03(초) [15:00-15:24]

**Prediction of new commensurate solids of <sup>4</sup>He on graphite /** KWON Yongkyung\* (Department of Physics Konkuk University)

E5.04(초) [15:24-15:48]

**Simultaneous investigation on shear modulus and torsional resonance of solid <sup>4</sup>He /** KIM Eunseong\*, SHIN Jaeho, CHOI Jaewon (Department of Physics, KAIST, Republic of Korea)

**[E6-co] Focus: Electronic structure calculations for novel low-dimensional materials: Recent progress in theory-experiment collaboration**

2016년 4월 21일 목요일 14:00 – 15:36

장소: 106호

좌장: 정 석 민 전북대학교

**E6.01(초)** [14:00-14:24]

**Structural and topological phase transitions in transition metal dichalcogenides** / CHANG Kee Joo\*, CHOE Duk-Hyun, SUNG Ha-June(Department of Physics, KAIST)

**E6.02(초)** [14:24-14:48]

**Combined electron microscopy and first-principles studies of defects in two dimensional materials** / 이재광\*(부산대학교 물리학과)

**E6.03(초)** [14:48-15:12]

**쌓여 있는 이차원 결정들에서 층간 상호작용의 역할** / 손영우\*(고등과학원)

**E6.04(초)** [15:12-15:36]

**Recovery of Dirac Point by Self Assembling Molecular Structures on Graphene** / CHOI Jiil, SHIM Yoon su, KIM Yong-Hoon\*(Graduate school of EEWS, KAIST)

**[E7-co] Focus: Graphene & Topological Insulators**

2016년 4월 21일 목요일 14:00 – 15:48

장소: 107호

좌장: 이 후 중 포항공과대학교

**E7.01(초)** [14:00-14:36]

**Topological phase transitions in line-nodal superconductors** / MOON Eun-Gook\*, HAN SangEun, CHO Gil Young(Department of Physics, KAIST)

**E7.02(초)** [14:36-15:12]

**Two-dimensional van der Waals heterostructure device platform for advanced electronics** / LEE Gwan-Hyoung\*(Department of Materials Science and Engineering, Yonsei University)

**E7.03(초)** [15:12-15:48]

**Raman and resonance investigation of graphene and 2D materials** / LEE Jae-Ung, KIM Kangwon, CHEONG Hyeonsik\*(Department of Physics, Sogang University)

**E [E9-co] Pioneer: Quantum mechanical phenomena studied with scanning tunneling microscopy**

2016년 4월 21일 목요일 14:00 – 15:48

장소: 201호

좌장: 국 양 서울대학교

**E9.01(초)** [14:00-14:36]

**Quantum Nanoscience** / HEINRICH Andreas\* (IBM Research Center, Almaden, CA, USA)

**E9.02(초)** [14:36-15:00]

**The amazing properties of atomic spins on surfaces: a theory perspective** / FERNANDEZ-ROSSIER Joaquin\* (International Iberian Nanotechnology Laboratory, Portugal)

E

**E9.03(초)** [15:00-15:24]

**Towards coherent control of quantum spins on surfaces** / BAUMANN Susanne\* (IBM Research Center, Almaden, CA, USA)

**E9.04(초)** [15:24-15:48]

**Electronic structure of epitaxially grown Iron Pnictide superconductor BaFe<sub>2</sub>As<sub>2</sub>** / KIM Sungmin, YI Sunwouk, LEE Minjun, LEE Hanho, JEON Hoyeon, YOO Yong-Chan, ZOH Inhae, ZHANG Chao, OH Myungchul, KUK Young\* (Department of Physics and Astronomy)

**E [E10-se] Pioneer: Physics under high magnetic fields II**

2016년 4월 21일 목요일 14:00 – 15:48

장소: 202호

좌장: S. Takeyama Univ. of Tokyo

**E10.01(초)** [14:00-14:36]

**X-ray and Neutron Scattering in High Magnetic Fields** / NOJIRI Hiroyuki\* (Institute for Materials Research, Tohoku University)

**E10.02(초)** [14:36-15:12]

**Thermal conductivity investigations of quantum matter under high magnetic fields** / KIM Kee Hoon\* (CeNSCMR and IAP, Department of physics and astronomy, Seoul National University)

**E10.03(초)** [15:12-15:48]

**The pulsed high magnetic field facility at Wuhan National High Magnetic Field Center** / LI Liang\*, PENG T, DING H, HAN X, DING T, XIE J, XIAO H, LU Y, PAN Y (Wuhan National High Magnetic Field Center, Huazhong University of Science and Technology, China)

## **E [E11-as] Pioneer: Gravitational Wave Perspectives I**

2016년 4월 21일 목요일 14:00 – 15:48

장소: 204호

좌장: 이 창 환 부산대학교

**E11.01(초)** [14:00-14:24]

**Detection Principles for Gravitational Waves Interacting with Light**  
/ KANG Gungwon\*(Supercomputing Center at KISTI)

**E11.02(초)** [14:24-14:48]

**Observation of Gravitational Waves and Data Analysis** / OH Sang Hoon\*(National Institute for Mathematical Sciences)

**E11.03(초)** [14:48-15:12]

**Gravitational-Wave Astrophysics** / KIM Chunglee\*(Seoul National University)

**E11.04(초)** [15:12-15:36]

**How LIGO can directly measure the gravitational wave?** / CHO Kyuman\*(Department of Physics Sogang University)

**E11.05** [15:36-15:48]

**The follow-up of electro-magnetic counterparts to Gravitational-wave transient using the BOOTES Network** / PARK II H\*<sup>1</sup>, JEONG Soomin\*<sup>1</sup>, CASTRO-TIRADO Alberto J\*<sup>1</sup>(<sup>1</sup>Department of Physics, Sungkyunkwan University, <sup>2</sup>CSIC-IAA and Sungkyunkwan University, <sup>3</sup>CSIC-IAA)

## **E [E12-pl] Pioneer: Frontiers in Laboratory, Space, and Astrophysical Plasma Science III**

2016년 4월 21일 목요일 14:00 – 15:48

장소: 205호

좌장: Mark Koepke West Virginia University

**E12.01(초)** [14:00-14:36]

**Particle Acceleration in the Plasma Universe** / HOSHINO Masahiro\*(University of Tokyo)

**E12.02(초)** [14:36-15:12]

**Generation of high wavenumber fluctuations by external magnetic field perturbations in edge pedestal plasmas** / SINGH R.\*<sup>1</sup>, JHANG Hogun, KIM Juhyung(Advance Technology Research Center, National Fusion, Research Institute, Daejeon, Rep. Korea 305-333)

E12.03(초) [15:12-15:48]

**Advancement of Fusion Science Research and Role of KSTAR / PARK Hyeon K.** \*<sup>1</sup>, <sup>2</sup>(<sup>1</sup>National Fusion Research Institute, Daejeon, Korea, <sup>2</sup>Ulsan National Institute of Science and Technology, Ulsan, Korea)

**[E13-pa] General: Non-accelerator-based experiments II**

2016년 4월 21일 목요일 14:00 – 15:36

장소: 206호

좌장: 서 선 희 서울대학교

E13.01 [14:00-14:12]

**Status of the KIMS-Nal experiments / 박정식\***(Institute for Basic Science)

E

E13.02 [14:12-14:24]

**Internal and External Background Simulation for AMoRE-I / YOON Young Soo\***(Center for Underground Physics, Institute of Basic Science)

E13.03 [14:24-14:36]

**64채널 실리콘 광증배소자 SIPM의 제작과 테스트 / 이해영, 박일흥\*, 이직, 전진아**(성균관대학교 우주과학기술연구소)

E13.04 [14:36-14:48]

**Analysis on AMoRE pilot run-1 data / 김건보**(on behalf of the AMoRE collaboration)\* (Institute for Basic Science(기초과학연구원))

E13.05 [14:48-15:00]

**Performance of the MMC sensors used in AMoRE Pilot Experiment / So-Ra Kim\*, The AMoRE Collaboration**(Institute for Basic Science)

E13.06 [15:00-15:12]

**Measurement of NaI(Tl) scintillation crystal quenching factors / 주한울\*, 박현서<sup>2</sup>**(서울대학교 물리학과, <sup>2</sup>한국표준과학연구원)

E13.07 [15:12-15:24]

**Detector performance in AMoRE-Pilot run-2 / JO Hyon-Suk\*** (Institute for Basic Science)

E13.08 [15:24-15:36]

**Status of on AMoRE-pilot experiment / SO Jungho\***(AMoRE collaboration)

**[E14-pa] General: Particle theory 1**

2016년 4월 21일 목요일 14:00 – 15:24

장소: 209호

좌장: 김 세 용 세종대학교

**E14.01** [14:00-14:12]

**Measurement of  $V_{cb}$  using the Oktay-Kronfeld action** / BAILEY Jon A.<sup>1</sup>, JANG Yong-Chul<sup>2</sup>, LEE Weonjong<sup>\*1</sup>, LEEM Jaehoon<sup>1</sup>, PARK Sungwoo<sup>1</sup>  
(<sup>1</sup>Department of Physics & Astronomy, Seoul National University, <sup>2</sup>Los Alamos National Laboratory, Theoretical Division T-2)

**E14.02** [14:12-14:24]

**Calculation of Quark Condensates using Improved Staggered Fermions** / JEONG Hwancheol, LEE Weonjong<sup>\*</sup> (Seoul National University)

**E14.03<sup>\*</sup>** [14:24-14:36]

**Nonperturbative Renormalization in the RI-SMOM Scheme with Twisted Boundary Condition** / CHOI Benjamin Jaedon<sup>1</sup>, KIM Jangho<sup>\*2</sup>, LEE Weonjong<sup>\*1</sup>, PARK Sungwoo<sup>\*1</sup> (<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Faculty of Physics, Bielefeld University)

**E14.04<sup>\*</sup>** [14:36-14:48]

**Lattice calculation of Kaon BSM B-parameters using staggered quarks from  $N_f = 2+1$  QCD** / 임재훈<sup>1</sup>, 정환철<sup>1</sup>, 박정환<sup>1</sup>, 박성우<sup>1</sup>, 최재돈<sup>1</sup>, 이원종<sup>\*1</sup>, 정철우<sup>\*2</sup>, Stephen R. Sharpe<sup>\*3</sup>, 윤보람<sup>4</sup> (<sup>1</sup>서울대학교 물리천문학부, <sup>2</sup>Physics Department, Brookhaven National Laboratory, USA, <sup>3</sup>Physics Department, University of Washington, USA, <sup>4</sup>Los Alamos National Laboratory, USA)

**E14.05<sup>\*</sup>** [14:48-15:00]

**Performance of GTX Titan X GPUs and Code Optimization using CUBLAS** / JEONG Hwancheol<sup>1</sup>, LEE Weonjong<sup>\*1</sup>, KIM Jangho<sup>2</sup>, PAK Jeonghwan<sup>1</sup>  
(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Faculty of Physics, Bielefeld University)

**E14.06<sup>\*</sup>** [15:00-15:12]

**Glue to light signal of a new particle** / 정태현<sup>\*</sup>, 최동진, 김형도, Radovan Dermisek (서울대학교 물리천문학부)

**E14.07<sup>\*</sup>** [15:12-15:24]

**Inflection point inflation and reheating** / CHOI Soomin, LEE Hyun Min<sup>\*</sup>  
(Department of Physics Chung-Ang University)

## SESSION F

2016년 4월 21일(목) 오후

### **E [F1-nu] Pioneer: Nuclear forces and Nuclear structure II**

2016년 4월 21일 목요일 16:00 – 17:48

장소: 101호

좌장: 김 영 만 IBS

#### **F1.01(초) [16:00-16:24]**

**Photoresponse of exotic nuclei and shell structure effects / PANAGIOTA Papakonstantinou\***(Rare Isotope Science Project, Institute for Basic Science, Daejeon, Korea)

#### **F1.02(초) [16:24-16:48]**

**Neutron rich nuclei with deformed Relativistic Hartree Bogoliubov theory / LIM Yeunhwan\*<sup>1</sup>, KIM Youngman<sup>1</sup>, XIA Xuewei<sup>2</sup>, MENG Jie<sup>3</sup>**  
(<sup>1</sup>Research Collaboration Team, Rare Isotope Science Project, <sup>2</sup>School of Physics and Nuclear Energy Engineering, Beihang University, <sup>3</sup>State Key Laboratory of Nuclear Physics and Technology, School of Physics, Peking University)

#### **F1.03(초) [16:48-17:24]**

**Recent developments of isospin-nonconserving shell model with applications to the structure and decay of proton-rich nuclei / SMIRNOVA Nadya\***(CNRS/IN2P3 – Université Bordeaux)

#### **F1.04(초) [17:24-17:48]**

**Effective field theory motivated energy density approach for dense nuclear matter / PAPAKONSTANTINOU Panagiota<sup>1</sup>, LIM Yeunhwan Lim<sup>1</sup>, HYUN Chang Ho<sup>2</sup>, PARK Tae-Sun\*<sup>3</sup>**(<sup>1</sup>Rare Isotope Science Project, Institute for Basic Science, <sup>2</sup>Department of Physics Education, Daegu University, <sup>3</sup>Department of Physics, Sungkyunkwan University)

### **[F2-se] Compound Semiconductors**

2016년 4월 21일 목요일 16:00 – 17:48

장소: 102호

좌장: 이 삼 녕 해양대

#### **F2.01(초) [16:00-16:24]**

**질소 플라스마 생성 조건을 최적화한 고품질 GaN와 InGaN 나노로드 성장 / 서혜원\*<sup>1</sup>, Dever P Norman<sup>2</sup>, Samir M. Hamad<sup>3</sup>, Filiz Keles<sup>4</sup>**(<sup>1</sup>제주대학교 물리학과, <sup>2</sup>Dept of Physics, Henderson State University, AR., USA, <sup>3</sup>Dept of Mathematics, Soran University, Erbil, Iraq, <sup>4</sup>University of Arkansas at Little Rock, AR., USA)

#### **F2.02\* [16:24-16:36]**

**피라미드 꼭지점에 형성된 InGaN/GaN 반도체 양자점의 광학적 특성 분석**



/ 여환섭, 심영출, 임승혁, 조종희, 김영민, 조용훈\*(한국과학기술원 물리학과)

**F2.03\*** [16:36-16:48]

**Carbon nanotube intermediate layer for stress-relaxed Si-doped GaN of InGaN/GaN light-emitting diodes** / 이건희<sup>1</sup>, 박아현<sup>1</sup>, S. Chandramohan<sup>1</sup>, 서태훈<sup>2</sup>, 민경현<sup>1</sup>, 김희수<sup>1</sup>, 여동규<sup>1</sup>, 김명중<sup>2</sup>, 서은경<sup>\*1</sup>(<sup>1</sup>School of semiconductor and Chemical Engineering, Chonbuk National University, <sup>2</sup>Soft Innovative Materials Research Center, Korea Institute of Science and Technology)

**F2.04\*** [16:48-17:00]

**Single photon emission from an InGaN/GaN single quantum-dot embedded in a nano-pyramid structure** / CHO Jong-Hoi, KIM Y.M., YEO Hwan-Seop, LIM Seung-Hyuk, KIM Sejeong, GONG Su-Hyun, CHO Yong-Hoon\*(Department of Physics and KI for the NanoCentury, Korea Advanced Institute of Science and Technology)

**F2.05\*** [17:00-17:12]

**Fabrication of GaN Ring Structure using Wet Etching Techniques and Their Mechanism** / SIM Young-Chul, LIM Seung-Hyuk, YOO Yang-Seok, CHO Yong-Hoon\*(Department of Physics and KI for the NanoCentury, KAIST, Daejeon, Republic of Korea)

**F2.06\*** [17:12-17:24]

**Enhanced optical absorption of Si wafers with plasmonic Ag heptamer nanocluster arrays** / KIM Sujung, CHO Yuna, SOHN Ahum, KIM Dong-Wook\*(Department of Physics, Ewha Womans University, Seoul, 120-750, Korea)

**F2.07\*** [17:24-17:36]

**Enhanced electron mobility in epitaxial (Ba,Lu)SnO<sub>3</sub> films on BaSnO<sub>3</sub>(001) substrates** / 이웅재<sup>1</sup>, 김형준<sup>1</sup>, 손이곤<sup>1</sup>, 김태훈<sup>1</sup>, 박주영<sup>1</sup>, 박완서<sup>2</sup>, 정현학<sup>2</sup>, 이택희<sup>2</sup>, 김진혁<sup>3</sup>, 최기영<sup>1</sup>, 김기훈<sup>\*1</sup>, <sup>2</sup>(<sup>1</sup>서울대학교 물리천문학부 첨단 복합물질상태연구단, <sup>2</sup>서울대학교 물리천문학부 응용물리연구소, <sup>3</sup>전남대학교 신소재공학부)

**F2.08** [17:36-17:48]

**Effect of indium tin oxide layer on ohmic contact to p-type Si for AlZnO/ZnTe:Cr/p-Si solar cells** / 이경수, 오규진, 김은규\*(한양대학교 물리학과)

**[F3-ap] Organic electronics and Photonics II & Applied Physics  
Awardee Lecture**

2016년 4월 21일 목요일 16:00 - 17:48

장소: 103호

좌장: 이 연 진 연세대

**F3.01\* [16:00-16:12]**

**The effect of silver grid size between PET substrate and graphene transparent electrodes for flexible organic solar cells** / CHA Myoung Joo<sup>1</sup>, KIM Sung Man<sup>3</sup>, WALKER Bright<sup>2</sup>, SEO Jung Hwa<sup>\*1</sup>, KANG Seong Jun<sup>\*3</sup>  
(<sup>1</sup>Department of Materials Physics Dong-A University, <sup>2</sup>School of Energy and Chemical Engineering Ulsan National Institute of Science and Technology, <sup>3</sup>Department of Advanced Materials Engineering for Information and Electronics Kyung Hee University)

**F3.02\* [16:12-16:24]**

**Improved performance of n-type organic field-effect transistors with a non-conjugated polyelectrolyte layer** / PARK Yu Jung<sup>1</sup>, CHA Myoung Joo<sup>1</sup>, CHO Shinuk<sup>2</sup>, WALKER Bright<sup>3</sup>, SEO Jung Hwa<sup>\*1</sup>(<sup>1</sup>Department of Materials Physics Dong-A University, <sup>2</sup>Department of Physics and EHSRC University of Ulsan, <sup>3</sup>School of Energy and Chemical Engineering Ulsan National Institute of Science and Technology)

**F3.03\* [16:24-16:36]**

**Electronic structure of potassium-doped copper phthalocyanine studied by photoemission spectroscopy and density functional theory** / KIM Jong Hoon, IM Yeong Ji, JI Dong Hyun, AHN Sun Woo, RYU Bo Kyung, RYU Sim Hee, CHO Sang Wan<sup>\*</sup>(Department of Physics Yonsei University)

**F3.04\* [16:36-16:48]**

**Preparation and analysis of carbonized organic materials** / 이주호, 임은주 <sup>\*</sup>(단국대학교 창의융합제조공학과/과학교육학과)

**F3.05\* [16:48-17:00]**

**Characterization of PI:PCBM organic nonvolatile resistive memory devices at elevated temperature** / KIM Youngrok<sup>1</sup>, YOO Daekyoung<sup>1</sup>, JANG Jingon<sup>1</sup>, SONG Younggul<sup>1</sup>, JEONG Hyunhak<sup>1</sup>, CHO Kyungjune<sup>1</sup>, HWANG Wang-Taek<sup>1</sup>, LEE Woocheol<sup>1</sup>, KIM Tae-Wook<sup>\*2</sup>, LEE Takhee<sup>\*1</sup>(<sup>1</sup>Department of Physics and Astronomy Seoul National University, <sup>2</sup>Soft Innovative Materials Research Center, Korea Institute of Science and Technology)

**F3.06 [17:00-17:12]**

**Signal Transfer Characteristics of Surface Enhanced Raman Scattering (SERS) of Organic Crystalline Microrod and Bio-sensing Application** / 조성기<sup>1</sup>, 김정용<sup>2</sup>, 김진상<sup>3</sup>, 주진수<sup>\*1</sup>(<sup>1</sup>고려대학교 물리학과, <sup>2</sup>성균관

F3.07 [17:12-17:24]

**Improved electron extraction in inverted organic photovoltaics by doped ZnO intercalation** / KIM Hyeok\*<sup>1</sup>, AN Kunsik<sup>2</sup>, LEE Changhee<sup>2</sup>, KIM Jun Young<sup>3</sup>(<sup>1</sup>Korea Institute of Industrial Technology (KITECH), <sup>2</sup>Department of Electrical and Computer Engineering, Seoul National University, <sup>3</sup>OLED Advanced Technology Team, LG Display)

F3.08(초) [17:24-17:48]

**Low Dimensional Nanostructure Based NEMS; Physics and Applications** / LEE Sang Wook\*(Department of Physics, Konkuk University)

**[F4--st] Bio and Soft Matter Physics**

2016년 4월 21일 목요일 16:00 – 17:36

장소: 104호

좌장: 김 용 운 KAIST

F4.01(초) [16:00-16:24]

**Single Molecule Dynamics in Soft Matter** / BAE Sung Chul\*(School of Life Sciences, Ulsan National Institute of Science and Technology)

F4.02(초) [16:24-16:48]

**Biophysical modelling of bacterial chromosomes: coarse-graining with benefits** / HA Bae-Yeun\*, JEON C., KIM J., JEONG H., JUN S., JUNG Y. (Department of Physics & Astronomy, University of Waterloo)

F4.03\* [16:48-17:00]

**Interaction between polydisperse polymer-grafted nanoparticles in polymer nanocomposites** / PARK Sojung, KIM Jaeup\*(Department of Physics and Applied Mathematics, UNIST)

F4.04 [17:00-17:12]

**Marangoni shock in obstructed soap film flows** / KIM ILDOO\*, MANDRE Shreyas(School of Engineering, Brown University)

F4.05 [17:12-17:24]

**General Differential Contact Identities for Macromolecules** / JHO YongSeok\*, LEE YongJin(Asia Pacific Center for Theoretical Physics)

F4.06 [17:24-17:36]

**Wetting ridge dynamics on soft solids during spreading and evaporation** / PARK Su Ji\*<sup>1</sup>, KWAK Ho Jae<sup>2</sup>(<sup>1</sup>Research Reactor Utilization Department, Korea Atomic Energy Research Institute (KAERI), <sup>2</sup>Department of

**[F5-co] Strongly Correlated Systems III**

2016년 4월 21일 목요일 16:00 – 17:36

장소: 105호

좌장: 박 두 선 성균관대학교

**F5.01\*** [16:00-16:12]

**Anionic Excess Electrons in Quasi-Two-Dimensional Electride  $\text{Ca}_2\text{N}$  / OH Ji Seop<sup>\*1, 2</sup>**(<sup>1</sup>Center for Correlated Electron Systems, Institute for Basic Science, Seoul 151-742, Korea, <sup>2</sup>Department of Physics and Astronomy, Seoul National University, Seoul 151-742, Korea)

**F5.02\*** [16:12-16:24]

**Photoinduced Phase Transitions by Time-Resolved Spectroscopy in the Mott Insulator  $\text{Ca}_2\text{RuO}_4$  / LEE Min-Cheol<sup>\*1, 2</sup>**(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Center for Correlated Electron Systems, Institute for Basic Science)

**F5.03\*** [16:24-16:36]

**2D correlation analysis and principal component analysis of the Raman spectra of boron purity dependent  $\text{SmB}_6$  (6N) and  $\text{SmB}_6$  (3N) single crystals / NGUYEN Thi Huyen<sup>1</sup>, NGUYEN Thi Minh Hien<sup>2, 3</sup>, KANG Boyoun<sup>4, 5</sup>, CHO Beongki<sup>4, 5</sup>, PARK Yeonju<sup>6</sup>, JUNG YoungMee<sup>6</sup>, YANG In-Sang<sup>\*1</sup>**(<sup>1</sup>Department of Physics, Ewha Womans university, <sup>2</sup>Center for Correlated Electron Systems, Institute for Basic Science (IBS), <sup>3</sup>Department of Physics and Astronomy, Seoul National University, <sup>4</sup>School of Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), <sup>5</sup>Department of Photonics and Applied Physics, Gwangju Institute of Science and Technology (GIST), <sup>6</sup>Department of Chemistry, Kangwon National University)

**F5.04\*** [16:36-16:48]

**Anisotropic magnetocaloric effect in the double perovskite  $\text{Gd}_2\text{CoMnO}_6$  / MOON Jaeyoung, KIM MiKyung, LEE Nara\*, CHOI YoungJai\***(Department of Physics and IPAP Yonsei University)

**F5.05** [16:48-17:00]

**Frustrated magnetism and Spin-Peierls like transition in Mott insulating  $(\text{V}_{1-x}\text{Cr}_x)_2\text{O}_3$  / LEINER Jonathan Carl<sup>\*1</sup>, JESCHKE H O<sup>2</sup>, VALENTI R<sup>2</sup>, BROHOLM C<sup>3</sup>**(<sup>1</sup>Center for Correlated Electron Systems, Institute for Basic Science (IBS), <sup>2</sup>Institut für Theoretische Physik, Goethe-Universität Frankfurt, <sup>3</sup>Quantum Condensed Matter Division, Oak Ridge National Laboratory)

**F5.06\*** [17:00-17:12]

**Structural and spectroscopic evidence of oxidation in  $\text{MoO}_2$  / AHN**

EunYoung<sup>1</sup>, CHO JinHyung<sup>2</sup>, LEE Inwon<sup>3</sup>, JEEN Hyoungjeen\*<sup>1</sup>(<sup>1</sup>Department of Physics, Pusan National University, <sup>2</sup>Department of Physics Education, Pusan National University, <sup>3</sup>Global Core Research Center of Ships and offshore Plants, Pusan National University)

F5.07 [17:12-17:24]

**Electron-Phonon Mechanism for Superconductivity in  $\text{Sr}_2\text{VO}_3\text{FeAs}$**   
/ 최석환<sup>1</sup>, 이현정\*, 장원준<sup>1, 2</sup>, 옥종목<sup>3</sup>, 최현우<sup>1</sup>, 이태경<sup>4</sup>, 정진오<sup>1</sup>, 손동현<sup>1</sup>, 서환수<sup>5</sup>, 김준성<sup>3</sup>, Yannis K. Semertzidis<sup>1, 2</sup>, 이진환<sup>1</sup>(<sup>1</sup>Department of Physics, Korea Advanced Institute of Science and Technology, Daejeon 34141, Korea, <sup>2</sup>Center for Axion and Precision Physics, Institute of Basic Science, Daejeon 34141, Korea, <sup>3</sup>Department of Physics, Pohang University of Science and Technology, Pohang 37673, Korea, <sup>4</sup>Department of Applied Physics and Applied Mathematics, Columbia University, New York 10027, USA, <sup>5</sup>Samsung Advanced Institute of Technology, Suwon 16678, Korea)

F5.08 [17:24-17:36]

**Room-Temperature Electronic Structure of MnO: Ab Initio Study**  
/ YOON Sangmoon<sup>1, 2</sup>, KIM Kuntae<sup>1</sup>, JIN Kyoungsuk<sup>1</sup>, KANG Seoung-Hun<sup>2</sup>, NAM Ki Tae<sup>1</sup>, KIM Miyoung\*, KWON Young-Kyun\*<sup>2</sup>(<sup>1</sup>Department of Materials Science and Engineering, Seoul National University, <sup>2</sup>Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

[F6-co] Focus: Electronic structure calculations for novel low-dimensional materials: Recent progress in theory-experiment collaboration

2016년 4월 21일 목요일 16:00 – 17:36

장소: 106호

좌장: 김 옹 훈 한국과학기술원

F6.01(초) [16:00-16:24]

**Materials research through first-principles electronic structure calculations** / PARK Noejung\*(Department of Physics, Ulsan National Institute of Science and Technology)

F6.02(초) [16:24-16:48]

**SPM-DFT Collaboration Revealing Microscopic Phonon Dynamics**  
/ KIM Yong-Hyun\*(Graduate School of Nanoscience and Technology, KAIST)

F6.03(초) [16:48-17:12]

**Directional-growth of inorganic nanowires on graphene from experiments and first principles** / 이훈경\*, 김관표<sup>2</sup>, 정훈영<sup>3</sup>, 이원철<sup>4</sup>, 박정원<sup>5</sup>(<sup>1</sup>건국대학교 물리학과, <sup>2</sup>울산과학기술대학교 물리학과, <sup>3</sup>울산과학기술대학교 연구지원본부, <sup>4</sup>한양대학교 기계공학과, <sup>5</sup>Harvard대학교 물리학과)

F6.04(초) [17:12-17:36]

**Active hydrogen evolution in a pristine MoTe<sub>2</sub> single crystal** / LEE Jun-Ho<sup>1</sup>, SEOK Jinbong<sup>2,3</sup>, CHO Suyeon<sup>3</sup>, JI Byungdo<sup>2</sup>, KIM Hyo Won<sup>4</sup>, KIM Sung Wng<sup>2</sup>, LEE Young Hee<sup>2,3</sup>, SON Young-Woo<sup>\*1</sup>, YANG Heejun<sup>2</sup>(<sup>1</sup>Korea Institute for Advanced Study, Seoul, Korea, <sup>2</sup>Department of Energy Science, Sungkyunkwan University, Suwon, Korea, <sup>3</sup>IBS Center for Integrated Nanostructure Physics (CINAP), Institute for Basic Science, Suwon, Korea, <sup>4</sup>Device Lab., Samsung Advanced Institute of Technology, Suwon, Korea)

**E [F9-co] Pioneer: Quantum mechanical phenomena studied with scanning tunneling microscopy**

2016년 4월 21일 목요일 16:00 – 17:36

장소: 201호

좌장: **A. Heinrich** IBM Research Center

F9.01(초) [16:00-16:24]

**Accessing the magnetic content of endohedral fullerenes** / GREBER Thomas<sup>\*</sup>(Physik-Institut, University of Zurich, Switzerland)

F9.02(초) [16:24-16:48]

**Influence of graphene-substrate interactions on the electronic properties of graphene on Pt(111)** / KIM Hyo Won<sup>\*</sup>(Samsung Advanced Institute of Technology)

F9.03(초) [16:48-17:12]

**Towards coherent control of quantum spins on surfaces** / ARDAVAN Arzhang<sup>\*</sup>(Department of Physics, Oxford University, UK)

F9.04(초) [17:12-17:36]

**Switching chiral solitons for logic operation in Z4 topological insulators** / KIM Tae-Hwan<sup>\*</sup>(Department of Physics POSTECH)

**E [F10-se] Pioneer: Physics under high magnetic fields III**

2016년 4월 21일 목요일 16:00 – 18:36

장소: 202호

좌장: **L. Li** Wuhan National High Magnetic Field Center

F10.01(초) [16:00-16:36]

**Transconductance fluctuations as a probe for charge localization in quantum Hall regime in graphene** / LEE Dong Su<sup>\*1</sup>, KIM Youngwook<sup>2,3</sup>, JUNG Suyong<sup>4</sup>, SKAKALOVA Viera<sup>5</sup>, TANIGUCHI Takashi<sup>6</sup>, WATANABE Kenji<sup>6</sup>, KIM Jung Sung<sup>\*2</sup>, SMET Jurgen H<sup>3</sup>(<sup>1</sup>KIST Jeonbuk Institute of Advanced Composite Materials, <sup>2</sup>Pohang University of Science and Technology, <sup>3</sup>Max Planck Institute for Solid State Research, Germany, <sup>4</sup>Korea Research Institute of Standards and Science, <sup>5</sup>Vienna University, Austria, <sup>6</sup>National Institute for Materials Science, Japan)

F10.02(초) [16:36-17:12]

**Research with Non-destructive pulsed magnets: Current Status and Future Prospects at International MegaGauss Science Laboratory / KOHAMA Yoshimitsu\*, KINDO Koichi**(Department of Physics, University of Tokyo)

F10.03(초) [17:12-17:48]

**Possible Flude-Ferrell-Larkin-Ovchinnikov superconducting state in high quality FeSe single crystal / KIM Jun Sung\***(Department of Physics, POSTECH)

F10.04(초) [17:48-18:12]

**Anomalous diamagnetic shifts in InP-GaP lateral nanostructures under pulsed magnetic fields and the progress report on developing pulsed magnetic field facility at Dankook University / KIM Yongmin\***(Department of Physics, Dankook University)

F10.05(초) [18:12-18:36]

**The New Trend Toward High Magnetic Field / KIM Dong Lak\***(Division of Scientific Instrumentation, Korea Basic Science Institute, Daejeon 305-806, Korea)

**[F11-as] Pioneer: Gravitational Wave Perspectives II**

2016년 4월 21일 목요일 16:00 – 17:48

장소: 204호

좌장: 이 형 목 서울대학교

F11.01(초) [16:00-16:36]

**LIGO-India: Preparations for an era of multi-messenger astronomy with gravitational waves / BOSE Sukanta\***(Inter-University Center for Astronomy and Astrophysics)

F11.02(초) [16:36-17:12]

**KAGRA: a Gravitational-Wave Antenna in Japan / ANDO Masaki\***(Department of Physics at University of Tokyo)

F11.03(초) [17:12-17:48]

**SOGRO, New Low-Frequency Gravitational-Wave Detector With Superconducting Instrumentation / PAIK Ho Jung\***(Department of Physics at University of Maryland)

**[F12-op] General: Lasers & Applications**

2016년 4월 21일 목요일 16:00 - 17:36

장소: 205호

좌장: 장 규 하 원자력연구원

**F12.01** [16:00-16:12]

**Frequency comb transferred by surface plasmon resonance / KIM**

Seungchul\* (Department of Physics Pohang university of science and technology)

**F12.02** [16:12-16:24]

**Compact Autocorrelator using a GaP photodetector / LIM Yong-Sik\*,**

SHIN Sung-Il (Nano Science & Mechanical Engineering Konkuk University)

**F12.03** [16:24-16:36]

**Passive Q-switching of Ho:YAG ceramic microchip lasers by employing carbon nanostructure-based saturable absorbers /**

최선영<sup>1</sup>, Ruijun Lan<sup>2,3</sup>, Pavel Loiko<sup>4,5</sup>, Xavier Mateos<sup>2,4</sup>, Yicheng Wang<sup>2</sup>, Jiang Li<sup>6</sup>, Yubai Pan<sup>6</sup>, 김미혜<sup>7</sup>, 이상민<sup>\*1</sup>, Anatoly Yasukevich<sup>5</sup>, Konstantin Yumashev<sup>5</sup>, Uwe Griebner<sup>2</sup>, Valentin<sup>2</sup> (1Center for Optical Materials and Technologies, Belarusian National, Minsk, Belarus, 2Física i Cristal · lografia de Materials i Nanomaterials, Universitat Rovira i Virgili, Spain, 3Shanghai Institute of Ceramics, Chinese Academy of Sciences, China, 4Center for Quantum-Beam-based Radiation Research, Korea Atomic Energy Research Institute, Korea, 5Department of Energy Systems Research, Ajou University, Korea, 6Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy, Germany, 7School of Opto-Electronic Information Science and Technology, Yantai University, China)

**F12.04** [16:36-16:48]

**Current Status of a hard X-ray beamline and end-station for pump and probe experiments at Pohang Accelerator Laboratory X-ray Free**

**Electron Laser facility / 김수남\*, 박재구, 김광우(포항가속기 연구소)**

**F12.05\*** [16:48-17:00]

**조성적으로 무질서한 광자결정계에서 발현되는 레이징 모드에 대한 연구 /**  
이명재<sup>1</sup>, 전현수<sup>\*1,2</sup> (1서울대학교 물리천문학부, 2서울대학교 생물물리 및 화학생물학과)

**F12.06\*** [17:00-17:12]

**Narrowing intrinsic linewidth of external cavity diode laser by optical feedback from long optical fiber cavity / KIM Kyungtae<sup>1</sup>,**

LEE Jae Hoon<sup>\*2</sup>, KIM Min-Seok<sup>3</sup>, MUN Jongchul<sup>2</sup>, AHN Jaewook<sup>1</sup> (1Department of Physics Korea Advanced Institute of Science and Technology, 2Center for Time and Frequency Korea Research Institute of Standards and Science, 3Department of Physics and Astronomy Seoul National University)



F12.07\* [17:12-17:24]

해양수심 측정용 LiDAR 시스템의 기하 광학적 구조 설계 연구 / 최재준<sup>1</sup>, 김재순<sup>\*</sup>, 조은길<sup>1</sup>, 임승일<sup>1</sup>, 오지영<sup>1</sup>, 양한모<sup>1</sup>, 위광재<sup>2</sup>, 김은영<sup>2</sup>, 김재완<sup>3</sup>, 이재영<sup>3</sup>(<sup>1</sup>명지대학교 물리학과, <sup>2</sup>(주)지오스토리, <sup>3</sup>한국표준과학연구원)

F12.08\* [17:24-17:36]

XXnm 웨이퍼 결함 검사를 위한 UV 라인 스캐닝 광학 시스템 개발 / 권오형<sup>1</sup>, 이상철<sup>1</sup>, 조은길<sup>1</sup>, 오승철<sup>2</sup>, 주승용<sup>2</sup>, 김재순<sup>\*</sup>(<sup>1</sup>NEMO 연구실, 명지대학교, 물리학과, <sup>2</sup>AUROS Technology 경기도 화성시 445-170)

**[F13-pa] General: Accelerator-based experiments I**

2016년 4월 21일 목요일 16:00 – 17:36

장소: 206호

좌장: 안 정 근 고려대학교

F13.01(초) [16:00-16:24]

KL0->pi0 nu nubar의 표준모형 테스트와 J-PARC KOTO 실험 현황 / 이종원<sup>\*</sup>, 안정근<sup>1</sup>, 김준이<sup>1</sup>, 김은주<sup>2</sup>, 우종관<sup>3</sup>, 임계엽<sup>4</sup>(<sup>1</sup>고려대학교, <sup>2</sup>전북대학교, <sup>3</sup>제주대학교, <sup>4</sup>KEK)

F13.02 [16:24-16:36]

Radiation tests for new RPCs in the Phase-II CMS RPC upgrade / LEE Kyong Sei\*, CHO Sungwoong, LIM Jaehoon, CHOI Suyong, PARK Sung Keun, GO Yeonju, HONG Byungsik(Korea University)

F13.03 [16:36-16:48]

The ultimate Si sensor for the high energy & nuclear physics experiment / 권영일\*(연세대학교 물리학과)

F13.04 [16:48-17:00]

Development of 2D X-ray Imaging Detector (2DxID) with GEMs / RYU Min Sang, PARK Inkyu\*, JENG Young Gun, LEE Jason(Department of Physics, University of Seoul)

F13.05 [17:00-17:12]

GEM software overview for the CMS muon upgrades / LEE Jason\*, PARK Inkyu\*(Department of Physics University of Seoul)

F13.06 [17:12-17:24]

Convergence research cluster for dark matter based on computational science / CHO Kihyeon\*(Korea Institute of Science and Technology Information)

F13.07\* [17:24-17:36]

Ladder Assembly Procedures for Silicon Vertex Detector of Belle II

/ PARK Hwanbae\*, KANG Kookhyun, JEON Hyebin, KIM Hongjoo(Kyungpook National University)

**[F14-pa] General: Particle theory II**

2016년 4월 21일 목요일 16:00 – 17:36

장소: 209호

좌장: 이 원 종 서울대학교

F14.01 [16:00-16:12]

**Composite (pseudo) scalar contributions to muon g-2** / HONG Deog Ki\*, KIM Du Hwan(Department of Physics, Pusan National University)

F14.02 [16:12-16:24]

**Lattice NRQCD study of thermal Sommerfeld Effect** / KIM Seyong<sup>\*1</sup>, LAINE Mikko<sup>2</sup>(<sup>1</sup>Department of Physics, Sejong University, <sup>2</sup>Institute of Theoretical Physics, University of Bern)

F

F14.03 [16:24-16:36]

**Spin dependent WIMP-nucleus interaction for direct detection and DAMA** / YOON Kookhyun\*(Department of Physics Sogang University)

F14.04 [16:36-16:48]

**Singlet fermionic dark matter and naturalness** / NAM Soo-hyeon\*(Department of Physics, Korea University)

F14.05 [16:48-17:00]

**The Diphoton Resonance as a Gravity Mediator of Dark Matter** / LEE Hyun Min<sup>\*1</sup>, PARK Myeonghun<sup>2</sup>(<sup>1</sup>Department of Physics Chung-Ang University, <sup>2</sup>Center for Theoretical Physics and Universe Institute for Basic Science)

F14.06 [17:00-17:12]

**New Dark Matter Interpretation for Cosmic-Ray Excesses** / PARK Jong-Chul<sup>\*1</sup>, KIM Doojin<sup>2</sup>(<sup>1</sup>Department of Physics, Chungnam National University, <sup>2</sup>Department of Physics, University of Florida)

F14.07 [17:12-17:24]

**Dark Scalar Search at SHiP** / Y. G. Kim<sup>\*1</sup>, C. S. Yoon<sup>2</sup>, K. Y. Lee<sup>2</sup>, B. D. Park<sup>2</sup>, S. H. Kim<sup>2</sup>, J. K. Woo<sup>3</sup>, J. Ko<sup>3</sup>, D. Liu<sup>3</sup>, K.-Y. Choi<sup>4</sup>(<sup>1</sup>Gwanju National University of Education, <sup>2</sup>Gyeongsang National University, <sup>3</sup>Jeju National University, <sup>4</sup>Chonnam National University)

F14.08 [17:24-17:36]

**Dark matter in scale invariant extension of the standard model with strongly interacting hidden sector** / 정동원\*(고려대학교 물리학과)

## SESSION G

2016년 4월 22일(금) 오전

### [G1-nu] General: Nuclear Exp. Method etc. I

2016년 4월 22일 금요일 09:00 – 10:24

장소: 101호

좌장: 천 명 기 송실대학교

#### G1.01 [09:00-09:12]

**Measurement of prompt gammas for range verifications** / 이경세\*, 박성근, 강민호(고려대학교)

#### G1.02 [09:12-09:24]

**The ultimate Si sensor for the high energy & nuclear physics experiment**  
/ 권영일\*(연세대학교 물리학과)

#### G1.03\* [09:24-09:36]

**Growth and Scintillation Properties of  $\text{Na}_2\text{Mo}_2\text{O}_7$  Single Crystals** / PANDEY Indra Raj, KIM HongJoo\*(Department of Physics Kyungpook National University)

#### G1.04\* [09:36-09:48]

**Status of the design of the KoBRA facility** / PARK Junesic\*<sup>1,2</sup>, TSHOO KyoungHo<sup>2</sup>, SATOU Yoshiteru<sup>2</sup>, BERG Georg Peter<sup>3</sup>, CHAE Hyunwoo<sup>2,4</sup>, CHOI Seonho<sup>4</sup>, KATO Seigo<sup>5</sup>, KUBONO Shigeru<sup>6</sup>, HASHIMOTO Takahashi<sup>2</sup>, KWON Youngkwan<sup>2</sup>, JEONG Sun-Chan<sup>2</sup>, KIM Yong-kyun<sup>1</sup>(<sup>1</sup>Department of Nuclear Engineering, Hanyang University, <sup>2</sup>Rare Isotope Science Project, Institute for Basic Science, <sup>3</sup>Department of Physics and The Joint Institute for Nuclear Astrophysics, University of Notre Dame, <sup>4</sup>Department of Physics and Astronomy, Seoul National University, <sup>5</sup>Department of Physics, Yamagata University, <sup>6</sup>RIBF, RIKEN)

#### G1.05 [09:48-10:00]

**Construction and Commissioning of a Position-Sensitive Ionization Chamber** / CHAE Kyungyuk\*(Department of Physics, Sungkyunkwan University)

#### G1.06 [10:00-10:12]

**실리콘 광증배 소자로 만들어진 핀홀 카메라의 제작과 테스트** / 전진아, 박일흥\*, 이해영, 이직(성균관대학교 우주기술연구소)

#### G1.07 [10:12-10:24]

**Development of microwave read-out for large scale x-ray microcalorimeter arrays** / YOON Wonsik\*(NASA Goddard Space Flight Center)

## [G2-se] Focus: Device applications of Perovskites II

2016년 4월 22일 금요일 09:00 – 10:36

장소: 102호

좌장: 조 율 려 이화여대

### G2.01(초) [09:00-09:24]

**High Performance and Ultra-Flexible Perovskite Solar Cells** / KO Min Jae\*<sup>1,2</sup>(<sup>1</sup>Photo-Electronic Hybrids Reserach Center, KIST, <sup>2</sup>KU-KIST Graduate School of Converging Science and Technology, Korea University)

### G2.02(초) [09:24-09:48]

**Optoelectrical effects by metal nanostructures in thin-film solar cells** / LEE Jung-Yong\*(Graduate School of EEWS, KAIST)

### G2.03(초) [09:48-10:12]

**Development of Conductive Polymers for High Efficiency Perovskite Solar Cells with High Long-term Stability** / 조제웅<sup>1</sup>, 서명석<sup>1,2</sup>, 손병혁<sup>1,2</sup>, 고민재<sup>1</sup>, 손해정\*(한국과학기술연구원, 광전하이브리드연구센터, <sup>2</sup>서울대학교, 화학과)

### G2.04(초) [10:12-10:36]

**Fabrication and Characterization of Electron Collecting Nanomaterials in Perovskite Solar Cells** / JUNG Hyun Suk\*(School of Advanced Materials Science and Engineering)

## [G3-ap] Biophysics and Softmatter

2016년 4월 22일 금요일 09:00 – 10:12

장소: 103호

좌장: 김 하 진 UNIST

### G3.01\* [09:00-09:12]

**Flexible Parylene Microfluidics with Microscale Bending Radius** / KIM Jihye, NAM Sung Min, LEE Wonhee\*(Graduate School of Nanoscience and Technology, KAIST)

### G3.02\* [09:12-09:24]

**Tunable thin film microfluidic lens using parylene** / SEO Sumin, KIM Jihye, LEE Wonhee\*(Graduate of Nanoscience and Technology, Daejeon, KAIST)

### G3.03\* [09:24-09:36]

**Microfluidic calorimeter for absolute dosimetry** / KIM Jonghyun, LEE Wonhee\*(Graduate of Nanoscience and Technology, Daejeon, KAIST)

### G3.04\* [09:36-09:48]

**Photophysical properties and bioimaging of hemicurcuminoid borondifluoride derivatives** / KIM Eunsun<sup>1</sup>, FELOUAT Abdellah<sup>2</sup>,

ZABOROVA Elena<sup>2</sup>, RIBIERRE Jean-Charles<sup>1</sup>, SENATORE Sébastien<sup>3</sup>, MATTHEWS Cédric<sup>3</sup>, LENNE Pierre-François<sup>3</sup>, BAFFERT Carole<sup>4</sup>, KARAPETYAN Artak<sup>2, 5</sup>, GIORGI Michel<sup>6</sup>, JACQUEMIN Denis<sup>7, 8</sup>, PONCE-VARGAS Miguel<sup>9</sup>, GUENNIC Boris Le<sup>9</sup>, FAGES Frédéric<sup>2</sup>, D'ALONZO Anthony<sup>2</sup>, WU Jeong Weon<sup>\*1</sup>(<sup>1</sup>Department of Physics and CNRS-Ewha International Research Center, Ewha Womans University, <sup>2</sup>Aix Marseille Université, CNRS, CINaM UMR 7325, <sup>3</sup>Aix Marseille Université, CNRS, IBDM UMR 7288, <sup>4</sup>Aix Marseille Université, CNRS, BIP UMR7281, <sup>5</sup>NAS Armenia, Inst Phys Res, <sup>6</sup>Aix-Marseille Université, CNRS, Spectropole FR 1739, <sup>7</sup>Laboratoire CEISAM, UMR CNRS 6230, Université de Nantes, <sup>8</sup>Institut Universitaire de France, 103 Boulevard Saint-Michel, <sup>9</sup>Institut des Sciences Chimiques de Rennes, UMR 6226 CNRS-Université de Rennes 1)

G3.05\* [09:48-10:00]

**Single-molecule analysis of interactions between RNA and protein using a glass nanopore** / Choongman Lee<sup>1</sup>, Kyo-Seok Lee<sup>1</sup>, Joo Hyoung Kim<sup>1</sup>, Eunice Eunkyong Kim<sup>2</sup>, Kyung-Hwa Yoo<sup>\*1</sup>(<sup>1</sup>Department of Physics, Yonsei University, <sup>2</sup>Advanced Analysis Center, KIST)

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

**3D microparticle generation in non-rectangular microchannels using flow lithography** / NAM Sung Min<sup>1</sup>, KIM Kibeom<sup>2</sup>, PARK Wook<sup>2</sup>, LEE Wonhee<sup>\*1</sup>(<sup>1</sup>Graduate School of Nanoscience and Technology, KAIST, <sup>2</sup>Department of Electronics and Radio Engineering, Kyunghee University)

#### [G5-co] Superconductivity I

2016년 4월 22일 금요일 09:00 – 10:12

장소: 105호

좌장: 이관우 고려대학교

G5.01 [09:00-09:12]

**Sudden Death and Birth of Topological Entanglement in 1D Fermions at Finite Temperature** / PARK YEJE, LEE Seung-Sup, SIM Heung-Sun<sup>\*</sup>(KAIST)

G5.02 [09:12-09:24]

**Crossed Andreev conversion of quantum Hall edge state in graphene** / LEE Gil-Ho<sup>1</sup>, HUANG Ko-Fan<sup>1</sup>, WEI Di<sup>1</sup>, HART Sean<sup>1</sup>, EFETOV Dmitri K.<sup>2</sup>, TANIGUCHI Takashi<sup>3</sup>, WATANABE Kenji<sup>3</sup>, YACOBY Amir<sup>1</sup>, KIM Philip<sup>\*1</sup>(<sup>1</sup>Department of Physics, Harvard University, Cambridge, MA 02138, USA, <sup>2</sup>Department of Electrical Engineering and Computer Science, MIT, Cambridge, MA 02139, USA, <sup>3</sup>National Institute for Materials Science, Namiki 1-1, Tsukuba, Ibaraki 305-0044, Japan)

G5.03 [09:24-09:36]

**High performance MgB<sub>2</sub> bulk superconductors doped with PMMA-derived amorphous carbon** / RANOT Mahipal<sup>1</sup>, JANG Se-Hoon<sup>2</sup>, SHINDE

Kiran Prakash<sup>2</sup>, OH Young-Seok<sup>1</sup>, KANG Seong-Hoon<sup>1</sup>, CHUNG Kookchae<sup>\*2</sup>  
(<sup>1</sup>Materials Deformation Department, Korea Institute of Materials Science, <sup>2</sup>Nano functional Materials Research Department, Korea Institute of Materials Science)

G5.04\* [09:36-09:48]

**Realistic Method of Detecting Majorana Edge Modes in Superfluid**  
/ JEONG Jinhoon<sup>1,2</sup>, KIM Sang Goon<sup>2</sup>, BYUN HeeSu<sup>1</sup>, SIM Seung-Bo<sup>2</sup>, SUH Junho<sup>2</sup>, CHOI Hyounsoon<sup>\*1</sup>(<sup>1</sup>Department of Physics, KAIST, <sup>2</sup>Korea Research Institute of Standards and Science)

G5.05\* [09:48-10:00]

**Interplay of charge density wave and multiband superconductivity in 2H-Pd<sub>x</sub>TaSe<sub>2</sub>** / BHOI Dilip Kumar, KHIM Seunghyun, NAM Woohyun, LEE Bumsung, KIM Chanhee, JEON Byung-Gu, MIN Byeong Hun, PARK Seeun, KIM Kee Hoon<sup>\*</sup>(CeNSCMR & IAP, Department of Physics and Astronomy, Seoul National University)

G5.06\* [10:00-10:12]

**Model study of electric-field-dependence of superconducting transition in Josephson Junctions.** / 김동훈, 이재동<sup>\*</sup>(대구경북과학기술원 신물질과학전공)

**E [G7-co] Pioneer: Emerging Science with Advanced X-rays: XFELs and more**

2016년 4월 22일 금요일 09:00 - 10:48

장소: 107호

좌장: 송창용 포항공과대학교

G7.01(초) [09:00-09:36]

**Zone plate based scanning soft-x-ray spectro-nanoprobes** / SHIN Hyun-Joon<sup>\*1</sup>, BAIK Jaeyoon<sup>1</sup>, KIM Namdong<sup>1</sup>, GIANONCELLI Alessandra<sup>2</sup>, KOUROUSIAS George<sup>2</sup>, ALTISSIMO Matteo<sup>2</sup>, BEDOLLA Diana E.<sup>2</sup>, MEROLLE Lucia<sup>2</sup>, STOLFA Andrea<sup>2</sup>(<sup>1</sup>Pohang Accelerator Laboratory, Pohang University of Science and Technology, Pohang, 790-784, Korea, <sup>2</sup>Elettra-sincrotrone Trieste, Area Science Park, 34149 Basovizza, Trieste, Italy)

G7.02(초) [09:36-10:00]

**X-ray imaging with and for nanotechnology** / HWU Yeukuang<sup>\*</sup>  
(Institute of Physics, Academia Sinica, Taipei, Taiwan)

G7.03(초) [10:00-10:24]

**X-ray nano imaging for soft matter** / WEON Byung Mook<sup>\*</sup>(School of Advanced Materials Science and Engineering, Sungkyunkwan University)

G7,04(초) [10:24-10:48]

**Berry-phase effects in X-ray optics and periodic systems / SAWADA Kei\***(RIKEN SPring-8 Center, Japan)

**[G8-co] Magnetism I**

2016년 4월 22일 금요일 09:00 – 10:48

장소: 108호

좌장: 박 병 국 한국과학기술원

G8,01\* [09:00-09:12]

**Strain-controllable magnetic properties of asymmetrically terminated FeRh(001) thin film / 제갈소영, 임성현, 홍순철\***(울산대학교 물리학과)

G8,02\* [09:12-09:24]

**Investigation of tunneling magnetoresistance in hybrid Fe/GaAlAs/GaMnAs magnetic tunnel junctions / CHOI Seonghoon<sup>1</sup>, YOO Taehee<sup>1,2</sup>, BAC Seul-Ki<sup>1</sup>, LEE Sangyeop<sup>1</sup>, LEE Sanghoon<sup>\*1</sup>, LIU X.<sup>2</sup>, FURDYNA J. K.<sup>2</sup>**(<sup>1</sup>Physics Department, Korea University, Seoul 136-701, Korea, <sup>2</sup>Physics Department, University of Notre Dame, Notre Dame, IN 46556, USA)

G8,03\* [09:24-09:36]

**Magnetization switching in GaMnAs layers by current induced magnetic field / LEE Sangyeop<sup>1</sup>, CHOI Seonghoon<sup>1</sup>, BAC Seul-Ki<sup>1</sup>, NASIR Alviu Rey<sup>1</sup>, LEE Sanghoon<sup>\*1</sup>, LIU X.<sup>2</sup>, FURDYNA J. K.<sup>2</sup>**(<sup>1</sup>Physics Department, Korea University, <sup>2</sup>Physics Department, University of Notre Dame)

G8,04\* [09:36-09:48]

**Coercivity enhancement in Ni film deposited on crystalline Bi<sub>2</sub>Se<sub>3</sub> surface / NASIR Alviu Rey<sup>1</sup>, YOO Taehee<sup>2</sup>, BAC Seul-Ki<sup>1</sup>, CHOI Seonghoon<sup>1</sup>, LEE Sangyeop<sup>1</sup>, LEE Hakjoon<sup>1</sup>, TIVAKORNASATHORN Kritsanu<sup>1,3</sup>, LEE Sanghoon<sup>\*1</sup>, LIU X.<sup>2</sup>, FURDYNA J. K.<sup>2</sup>**(<sup>1</sup>Physics Department, Korea University, Seoul 136-713, Korea, <sup>2</sup>Physics Department, University of Notre Dame, Notre Dame, Indiana 46556, USA, <sup>3</sup>Physics Department, Faculty of Science, Mahidol University, Bangkok 10400, Thailand)

G8,05\* [09:48-10:00]

**Temperature dependent sign inversion of planar Hall resistance in Fe film grown on GaAs substrate / LEE Kyungjae<sup>1</sup>, CHOI Sanghoon<sup>1</sup>, BAC Seul-Ki<sup>1</sup>, LEE Sangyeop<sup>1</sup>, NASIR Alviu Rey<sup>1</sup>, LEE Sanghoon<sup>\*1</sup>, LIU X.<sup>2</sup>, FURDYNA J. K.<sup>2</sup>**(<sup>1</sup>Physics Department, Korea University, <sup>2</sup>Physics Department, University of Norte Dame)

G8,06 [10:00-10:12]

**Spin and force oscillation generated by a static magnetic field**

with a gradient in a free nanomagnet / 김광희\*(세종대학교 물리학과)

G8.07 [10:12-10:24]

과잉산소 육방정계 망간산화물의 연 X선 방사광 분광 연구 / 김대현<sup>1</sup>, 이은숙<sup>1</sup>, 김현우<sup>1</sup>, 성승호<sup>1</sup>, 강정수\*, S. Kolesnik<sup>2</sup>, B. Dabrowski<sup>2</sup>, 고윤영<sup>3</sup>, 김재영<sup>3</sup>(<sup>1</sup>가톨릭대학교 물리학과, <sup>2</sup>Northern Illinois University, <sup>3</sup>포항가속기연구소)

G8.08 [10:24-10:36]

Interlayer exchange coupling in GaMnAs/InGaAs/GaMnAs trilayer structures grown on a ZnCdSe buffer / TIVAKORNSASITHORN Kritsanu<sup>1,3</sup>, CHOI Seonghoon<sup>1</sup>, LEE Hakjoon<sup>1</sup>, YOO Taehee<sup>1,2</sup>, LEE Sanghoon<sup>\*1</sup>, LIU X.<sup>2</sup>, FURDYNA J. K.<sup>2</sup>(<sup>1</sup>Physics Department, Korea University, Seoul 136-713, Korea, <sup>2</sup>Physics Department, University of Notre Dame, Notre Dame, Indiana 46556, USA, <sup>3</sup>Physics Department, Faculty of Science, Mahidol University, Bangkok 10400, Thailand)

G8.09 [10:36-10:48]

Direct observation of dynamics of magnetic topological defects in parent compound superconductor  $\text{Sr}_2\text{VO}_3\text{FeAs}$  / 장원준<sup>1,2</sup>, 최석환<sup>2</sup>, 옥종목<sup>3</sup>, 이현정<sup>2</sup>, 최현우<sup>2</sup>, 강세종<sup>4</sup>, 국양<sup>5</sup>, 구자용<sup>6</sup>, 정상욱<sup>7</sup>, 김준성<sup>3</sup>, 이진환<sup>\*1</sup>. <sup>2</sup>(<sup>1</sup>기초과학연구원 액시온 및 극한 상호 작용 연구단, <sup>2</sup>한국과학기술원 물리학과, <sup>3</sup>포항공과대학교 물리학과, <sup>4</sup>고려대학교 물리학과, <sup>5</sup>서울대학교 물리학과, <sup>6</sup>한국표준과학연구원, <sup>7</sup>Rutgers Center for Emergent Materials and Department of Physics and Astronomy, Rutgers University)

**E [G9-co] Pioneer: Optical and magnetic properties of low-dimensional materials: first-principles calculation approach**

2016년 4월 22일 금요일 09:00 - 10:36

장소: 201호

좌장: 박 노 정 울산과학기술원

G9.01(초) [09:00-09:36]

Non-linear optical response in solids from real-time simulations / ATTACALITE Claudio\*(CINaM, CNRS/Aix-Marseille Universite, France)

G9.02(초) [09:36-10:00]

Optical responses of transition-metal-dichalcogenide hetero-layers and metals with sub-nm gaps / PARK Cheol-Hwan\*(Department of Physics and Astronomy, Seoul National University)

G9.03(초) [10:00-10:24]

Coherent charge transfer and phonon-induced dephasing of excited carrier in van der Waals heterostructures / BANG Junhyeok<sup>\*1</sup>, WANG Han<sup>2</sup>, SUN Yiyang<sup>2</sup>, LIANG Liangbo<sup>2,3</sup>, WEST Damien<sup>2</sup>, MEUNIER



Vincent<sup>2</sup>, ZHANG Shengbai<sup>2</sup>(<sup>1</sup>Spin Engineering Physics Team, Korea Basic Science Institute, <sup>2</sup>Department of Physics, Applied Physics, and Astronomy, Rensselaer Polytechnic Institute, <sup>3</sup>Center for Nanophase Materials Sciences, Oak Ridge National Laboratory)

G9.04 [10:24-10:36]

**GW calculation of the electronic and optical properties of two-dimensional transition metal dichalcogenide bilayers** / LAMJED Debbichi\*, KIM Yong-Hoon\*(Graduate School of Energy, Environment, Water, and Sustainability KAIST)

**[G11-as] General: Astrophysics Experiment**

2016년 4월 22일 금요일 09:00 – 10:24

장소: 204호

좌장: 오 정 근 국가수리과학연구소

G11.01(초) [09:00-09:24]

**Status of the Silicon Charge Detector for the ISS-CREAM experiment** / LEE Jik\*, LEE Hye Young, JEON Jin-A, CHOI Gwangho, PARK Il Hung (Department of Physics Sungkyunkwan University)

G11.02\* [09:24-09:36]

**Status of Electron Physics Study for Top and Bottom Counting Detectors of ISS-CREAM Experiment** / PARK Jeongmin<sup>1</sup>, KIM Hongjoo<sup>\*1</sup>, PARK H.<sup>1</sup>, JEON H.B.<sup>1</sup>, HYUN H.J.<sup>2</sup>, HWNAG Y.S.<sup>3</sup>(<sup>1</sup>Kyungpook National University, <sup>2</sup>Pohang Accelerator Laboratory, <sup>3</sup>KAERI, <sup>4</sup>ISS-CREAM)

G11.03 [09:36-09:48]

**GRB 140304A at z=5.283: Implications on the high redshift universe and the observed flaring activities** / JEONG Soomin<sup>\*1,2</sup>, PARK Il H.<sup>1</sup>, CASTRO-TIRADO Alberto J.<sup>2</sup>(<sup>1</sup>Institute for Science and Technology in Space, Department of Physics, SungKyunKwan University, <sup>2</sup>Instituto de Astrfísica de Astronomia - CSIC, Granada, Spain)

G11.04 [09:48-10:00]

**Observation of early photons of Gamma-ray bursts from UFFO** / JEONG Soomin<sup>\*1,2</sup>, PARK Il H.<sup>1</sup>(<sup>1</sup>Institute for Science and Technology in Space, SungKyunKwan University, <sup>2</sup>Instituto de Astrfísica de Astronomia - CSIC, Granada, Spain)

G11.05\* [10:00-10:12]

**The results of long-term operation of UFFO-pathfinder at laboratory.** / KIM Minbin\*, GAYKOV Georgii, JEONG Soomin, PARK Woochan, JEONG Hyomin, LEE Jik, PARK Il H.(Department of Physics Sungkyunkwan University)

G11.06\* [10:12-10:24]

**The last tests and improvements on on-board software of Slewing Mirror Telescope** / GAIKOV Georgii, PARK Ilhung\* (Department of Physics of Sungkyunkwan University)

**[G12-op] General: THz waves & Spectroscopy**

2016년 4월 22일 금요일 09:00 - 10:36

장소: 205호

좌장: 유 난 이 고등광기술연구소

G12.01 [09:00-09:12]

**Study of pure cerium oxide thin film using terahertz spectroscopy** / JEWARIYA Mukesh<sup>1,2</sup>, BAEK In Hyung<sup>2</sup>, KIM Young Chan<sup>2</sup>, JEONG Young Uk\*<sup>2</sup> (<sup>1</sup>National Physical Laboratory, New Delhi, India, <sup>2</sup>Center for Quantum Beam-based Radiation Research, Korea Atomic Energy Research Institute, Korea)

G12.02\* [09:12-09:24]

**Tunneling plasmonics of nanoantennas with intense terahertz fields** / KIM Joon-Yeon<sup>1</sup>, KANG Bong Joo<sup>2</sup>, PARK Joohyun<sup>3</sup>, BAHK Young-Mi<sup>1</sup>, KIM Won Tae<sup>2</sup>, RHIE Jiyeah<sup>1</sup>, JEON Hyeongtag<sup>3,4</sup>, ROTERMUND Fabian<sup>2</sup>, KIM Dai-Sik\*<sup>1</sup> (<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Department of Physics and Department of Energy Systems Research, Ajou University, <sup>3</sup>Department of Nanoscale Semiconductor Engineering, Hanyang University, <sup>4</sup>Division of Materials Science and Engineering, Hanyang University)

G

G12.03\* [09:24-09:36]

**Topological charge identification of a high power THz gyrotron based Laguerre Gaussian beam** / YU Dongho<sup>1</sup>, SAWANT Ashwini<sup>2</sup>, KIM Dongsung<sup>1</sup>, CHOI Eunmi\*<sup>1</sup> (<sup>1</sup>School of Natural Science, Ulsan National Institute of Science and Technology, <sup>2</sup>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology)

G12.04\* [09:36-09:48]

**The Experimental Verification of Quasi-Optical Photo Conductivity Decay (QO-PCD) Technique with a 2D Mapping** / CHOE Mun Seok<sup>1</sup>, SAWANT Ashwini<sup>2</sup>, LEE Kyu-Sup<sup>3</sup>, YU Nan Ei<sup>4</sup>, CHOI Eunmi\*<sup>1,2</sup> (<sup>1</sup>Department of Physics and Applied Mathematics UNIST, <sup>2</sup>Department of Electrical and Computer Engineering UNIST, <sup>3</sup>Department of Physics and Photon Science GIST, <sup>4</sup>Advanced Photonics Research Institute GIST)

G12.05\* [09:48-10:00]

**High-power Broadband THz vortex Generation and Spectroscopy** / 강봉주<sup>1</sup>, Katsuhiko Miyamoto<sup>2</sup>, 김원태<sup>1</sup>, Takashige Omatsu<sup>2</sup>, 이상민\*<sup>1</sup> (<sup>1</sup>아주대학교 물리학과/에너지시스템학과, <sup>2</sup>Graduate School of Advanced Integration Science, Chiba University)

G12,06\* [10:00-10:12]

**Comparison of coherent lattice vibration in WSe<sub>2</sub> and MoSe<sub>2</sub>** / 정태영<sup>1,2</sup>, 정수용<sup>2</sup>, 이기주\*<sup>(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>한국표준과학연구원 양자측정센터)</sup>

G12,07\* [10:12-10:24]

**Measurements of Second Order Correlation Function of Heralded Single Photons** / 이중성, 홍성혁, 이진형, 이광걸\*<sup>(한양대학교 물리학과)</sup>

G12,08 [10:24-10:36]

**형광상관분광법을 이용한 K<sup>+</sup> 이온농도에 따른 G-rich DNA의 확산 계수 측정** / 이재란, 김석원\*<sup>(울산대학교 물리학과)</sup>

[G13-pa] General: Accelerator-based experiments II

2016년 4월 22일 금요일 09:00 – 10:36

장소: 206호

좌장: 박인규 <sup>(서울시립대학교)</sup>

G13,01 [09:00-09:12]

**A study of flavour changing neutral current in the single top and top quark pair production mode at the LHC** / ABU ZEID Shimaa<sup>2</sup>, ANDREA Jeremy<sup>3</sup>, BASSO Lorenzo<sup>5</sup>, COLLARD Caroline<sup>3</sup>, CONTE Eric<sup>3</sup>, DEROOVER Kevin<sup>2</sup>, DHONDT Jorgen<sup>2</sup>, FUKS Benjamin<sup>7</sup>, HAMMAD Gregory<sup>4</sup>, KIM Tae Jeong\*<sup>1</sup>, VAN PARIJS Isis<sup>2</sup>, VAN ONSEM Gerrit<sup>6</sup><sup>(<sup>1</sup>Hanyang University, <sup>2</sup>Vrije Universiteit Brussel, <sup>3</sup>IPHC Strasbourg, <sup>4</sup>University of Mons, <sup>5</sup>CPM Marseille, <sup>6</sup>DESY, <sup>7</sup>LPHE Paris)</sup>

G13,02 [09:12-09:24]

**Measurement of ttbar cross section at sqrt(s)=13 TeV with CMS** / ROH Youn Jung\*, CHOI Suyong<sup>(CMS Collaboration)</sup>

G13,03 [09:24-09:36]

**Higgs boson on-shell production at 13 TeV proton-proton collision, and off-shell production and decay rate at 8 TeV collision** / 이상은\*, 손동철, 김귀년, 카킴잔 부타노브, 하미드 유수포브, 박상일<sup>(경북대학교 물리학과)</sup>

G13,04 [09:36-09:48]

**Measurement for the electroweak Z + production in association with two jets and a search for anomalous quartic gauge couplings in pp collisions at TeV** / YuChul Yang\*, DongHee Kim<sup>(Department of Physics, Kyungpook National University)</sup>

G13,05\* [09:48-10:00]

**Study of top quark mass measurement using D\* inside jets at LHC** /

RYU Geonmo, PARK Inkyu\*, KIM Ji Hyun\*(Department of Physics University of Seoul)

G13.06\* [10:00-10:12]

**Differential  $t\bar{t}$  cross sections in the dilepton channel at center of mass of 13 TeV** / 전다정<sup>1</sup>, 박인규<sup>\*1</sup>, 이상훈<sup>1</sup>, 최수용<sup>2</sup>, 노연정<sup>2</sup>, 고정환<sup>3</sup>(<sup>1</sup>서울시립대학교 물리학과, <sup>2</sup>고려대학교 물리학과, <sup>3</sup>성균관대학교 물리학과)

G13.07\* [10:12-10:24]

**A study of Initial State Gluon Radiation on the Drell-Yan process in pp collisions at  $\sqrt{s}=8$  & 13 TeV** / 최준호\*, 김준호, 박재균, 유금봉, John Almond, 양운기(서울대학교 물리천문학부)

G13.08\* [10:24-10:36]

**Drell-Yan differential cross section measurement in dimuon channel in pp collisions at  $\sqrt{s} = 13$  TeV** / 이경필\*, 남경욱, 유휘동\*(서울대학교 물리천문학부)

**E [G14-pa] Pioneer: Axion and Electric Dipole Moment (EDM) experiments in Korea I**

2016년 4월 22일 금요일 09:00 - 10:24

장소: 209호

좌장: 김 영 임 기초과학연구원

G14.01(초) [09:00-09:36]

**Overview of the storage ring proton EDM experiment / SEMERTZIDIS Yannis K\***(Center for Axion and Precision Physics Research/Institute for Basic Science)

G14.02(초) [09:36-10:00]

**Exploring beyond the standard model with EDM and axions / CHOI Kiwoon\***(CTPU/IBS)

G14.03(초) [10:00-10:24]

**In Search of a Dark Sector Inspired by a Moment / DAVOUDIASL Hooman\***(BNL)

## SESSION H

2016년 4월 22일(금) 오전

### [H1-nu] General: Nuclear Exp. Method etc. II

2016년 4월 22일 금요일 11:00 – 11:48

장소: 101호

좌장: 채 경 욱 성균관대

#### H1.01 [11:00-11:12]

**KEK Isotope Separation System (KISS) for b-decay spectroscopy**  
/ JUNG Hyo Soon<sup>\*1</sup>, HIRAYAMA Yoshikazu<sup>1</sup>, WATANABE Yutaka<sup>1</sup>, MIYATAKE Hiroari<sup>1</sup>, SCHURY Peter<sup>1</sup>, WADA Michiharu<sup>1, 2</sup>, KAKIGUCHI Yutaka<sup>1</sup>, OYAIZU Michihiro<sup>1</sup>, KIMURA Sota<sup>2, 3</sup>, MUKAI Momo<sup>2, 3</sup>(<sup>1</sup>Wako Nuclear Science Center/ High Energy Accelerator Research Organization (KEK), Wako, Japan, <sup>2</sup>Nishina Accelerator-based Research Center/RIKEN, Wako, Japan, <sup>3</sup>Department of Physics/ University of Tsukuba, Ibaraki, Japan)

#### H1.02 [11:12-11:24]

**Development of LAMPS Time Projection Chamber at RAON** / 이효상\*, 김영진, 이광복, 김은희, Charles Anthony Akers, 박진형, 권영관(기초과학연구원, 중이온가속기건설구축사업단)

#### H1.03 [11:24-11:36]

**Performance test and future plan for a PPAC for use with the KOBRA spectrometer** / AKERS Charles Anthony\*, LEE Hyo Sang, LEE Kwang Bok, KIM Eun Hee, PARK Jin Hyung, KWON Young Kwan, KIM Young Jin(Institute for Basic Science)

#### H1.04 [11:36-11:48]

**A high sensitivity alpha particle counter at the Yangyang underground laboratory** / HA Chang Hyon\*(Center for Underground Physics, Institute for Basic Science)

### [H2-se] Semiconductor devices

2016년 4월 22일 금요일 11:00 – 11:48

장소: 102호

좌장: 장 문 규 한림대학교

#### H2.01 [11:00-11:12]

**Study on vanadium oxide thin film as an interfacial layer for silicon solar cells** / 오규진, 김은규\*(한양대학교)

#### H2.02 [11:12-11:24]

**Enhancement of the photo conversion efficiencies in Cu(In,Ga)(Se,S)<sub>2</sub> solar cells fabricated by two-step sulfurization process** /

YANG JungYup<sup>\*1</sup>, NAM Junggyu<sup>2</sup>, LEE Dongho<sup>2</sup>, KIM GeeYeong<sup>3</sup>, JO William<sup>3</sup>, HONG JinPyo<sup>\*4</sup>(<sup>1</sup>Department of Physics, Kunsan National University, 54150, South Korea, <sup>2</sup>Photovoltaic Development Team, Energy Storage Business Division, Samsung SDI, <sup>3</sup>Department of Physics and New and Renewable Energy Research Center, Ewha Womans University, <sup>4</sup>New Functional materials and device lab. Department of Physics, Hanyang University)

## H2.03\* [11:24-11:36]

**Electroforming-dependent multifunctional resistive switches: Transition from bipolar with multi-level states to complementary resistive switching dynamics** / LEE Ah Rahm<sup>1</sup>, BAEK Gwang Ho<sup>1</sup>, KIM Tae Yoon<sup>2</sup>, HONG Jin Pyo<sup>\*1, 2</sup>(<sup>1</sup>Department of Nanoscale Semiconductor Engineering, Hanyang University, Seoul, 133-791, South Korea, <sup>2</sup>Novel Functional Materials and Devices Lab, Department of Physics, Hanyang University)

## H2.04\* [11:36-11:48]

**Enhanced hot electron flow on plasmonic nanodiodes by adsorption of PbS quantum dots** / LEE Changhwan<sup>1, 2</sup>, CHOI Hyekyoung<sup>3</sup>, LEE Young Keun<sup>1, 2</sup>, JEONG Sohee<sup>3</sup>, PARK Jeong Young<sup>\*1, 2</sup>(<sup>1</sup>Center for Nanomaterials and Chemical Reactions, Institute for Basic Science, <sup>2</sup>Graduate School of EEWS, Korea Advanced Institute of Science and Technology (KAIST), <sup>3</sup>Nanomechanical Systems Research Division, Korea Institute of Machinery and Materials)

### [H3-ap] Photonics and optoelectronics

2016년 4월 22일 금요일 11:00 - 12:48

장소: 103호

좌장: 문 봉 진 광주과학기술원

## H3.01 [11:00-11:12]

**Intuitive theory for effective density** / LEE Sam Hyeon<sup>\*1</sup>, WRIGHT Oliver Bernard<sup>2</sup>(<sup>1</sup>Institute of Physics and Applied Physics, Yonsei University, <sup>2</sup>Division of Applied Physics, Faculty of Engineering, Hokkaido University)

## H3.02 [11:12-11:24]

**Intuitive theory for effective modulus** / LEE Sam Hyeon<sup>\*1</sup>, WRIGHT Oliver Bernard<sup>2</sup>(<sup>1</sup>Institute of Physics and Applied Physics, Yonsei University, <sup>2</sup>Division of Applied Physics, Faculty of Engineering, Hokkaido University)

## H3.03\* [11:24-11:36]

**Control of electromagnetically-induced transparency-like and snake-shape-resonator metamaterials** / HWANG Ji Sub<sup>1</sup>, YOO Young Joon<sup>1</sup>, KIM Young Ju<sup>1</sup>, KIM Ki Won<sup>2</sup>, RHEE Joo Yull<sup>3</sup>, PARK Sang Yoon<sup>4</sup>, LEE YoungPak<sup>\*1</sup>(<sup>1</sup>Dept. of Physics, Hanyang University, Seoul 133-791, <sup>2</sup>Dept. of Information Display, Sunmoon University, Asan 336-708, <sup>3</sup>Institute of Basic Sciences and Dept. of Physics, Sungkyunkwan University, Suwon 446-746, <sup>4</sup>Advanced Institutes of Convergence Technology, Seoul National University, Suwon 443-270)

**H3.04** [11:36-11:48]

**Spectroscopic investigations of Nd<sup>3+</sup> doped gadolinium calcium silica borate glasses for the NIR emission at 1059 nm / KESAVULU C.R.\*<sup>1</sup>, KIM H.J.<sup>1</sup>, KAEWJAENG S.<sup>2</sup>, KOTHAN S.<sup>2</sup>, WANTANA N.<sup>3</sup>, KAEWKHAO J.<sup>3</sup>**(<sup>1</sup>Department of Physics, Kyungpook National Univ., <sup>2</sup>Department of Radiologic Technology, Faculty of Associated Medical Sciences, Chiang Mai Univ., <sup>3</sup>Center of Excellence in Glass Technology and Materials Science (CEGM), Nakhon PathomRajabhat Univ.)

**H3.05\*** [11:48-12:00]

**Synthesis and luminescent property of Eu<sup>3+</sup>-doped (Na<sub>0.5</sub>Gd<sub>0.5</sub>) MoO<sub>4</sub> phosphors / DU Peng, YU Jae Su\***(Department of Electronics and Radio Engineering, Kyung Hee University)

**H3.06** [12:00-12:12]

**Graphene plasmons in THz laser waveguides / Eunsongyi Lee\*<sup>1, 2</sup>, Thomas G. Folland<sup>1</sup>, Konstantin S. Novoselov<sup>2</sup>, Subhasish Chakraborty<sup>1</sup>**(<sup>1</sup>School of Physics and Astronomy, University of Manchester, <sup>2</sup>School of Electrical and Electronic Engineering, University of Manchester)

**H3.07** [12:12-12:24]

**Energy Scattering in Nonequilibrium Quantum Systems / SAVENKO Ivan\*<sup>1</sup>, LIEW Timothy H.C.<sup>2</sup>**(<sup>1</sup>Center for Theoretical Physics of Complex Systems, IBS, <sup>2</sup>Nanyang Technological University)

**H3.08\*** [12:24-12:36]

**Halide perovskite를 이용한 2차원 광자결정 레이저 / 차형래<sup>1</sup>, 배승환<sup>3</sup>, 이명재<sup>2</sup>, 전현수\*<sup>1</sup>**(<sup>1</sup>서울대학교 생물물리 및 화학생물학과, <sup>2</sup>서울대학교 물리천문학부, <sup>3</sup>서울대학교 재료공학부)

**H3.09\*** [12:36-12:48]

**Microtube Light-Emitting Diode Arrays with Metal Cores / TCHOE Youngbin<sup>1</sup>, LEE Chul-ho<sup>2</sup>, PARK Junbeom<sup>1</sup>, BAEK Hyeonjun<sup>1</sup>, CHUNG Kunook<sup>1</sup>, JO Janghyun<sup>3</sup>, KIM Miyoung<sup>3</sup>, YI Gyu-Chul\*<sup>1</sup>**(<sup>1</sup>Department of Physics and Astronomy and Research Institute of Advanced Materials, Seoul Nat'l Univ., <sup>2</sup>Department of Nano-Bio-Information-Technology, Korea University, <sup>3</sup>Department of Material Science and Engineering and RIAM, Seoul National University)

**[H4-ap] Magnetism & Thermoelectrics**

2016년 4월 22일 금요일 11:00 – 12:30

장소: 104호

좌장: 홍 정 일 DGIST

**H4.01** [11:00-11:12]

**The effect of growth temperature on structural and magnetic**

**properties of FeMn<sub>2</sub>O<sub>4</sub> epitaxial films on MgO(100) substrate by molecular beam epitaxy** / DUONG Van Thiet, DUONG Anh Tuan, NGUYEN Van Quang, CHO Sunglae\* (Department of Physics and Energy Harvest Storage Research Center)

**H4.02\*** [11:12-11:24]

**감마선 조사에 따른 비납계 강유전체의 전기적 특성 변화** / 조삼연, 최기쁨, 강신욱, 부상돈\* (전북대학교 물리학과)

**H4.03\*** [11:24-11:36]

**Diffusion barrier-controlled perpendicular magnetic anisotropy of metal/CoFeB/MgO frames** / AN Gwang-Guk<sup>1</sup>, YANG Seung-Mo<sup>1</sup>, PARK Hae-Soo<sup>1</sup>, CHUNG Woo-Seong<sup>2</sup>, YANG Jung-Yup<sup>3</sup>, HONG Jin-Pyo\*<sup>1</sup> (Department of Physics Hanyang University, <sup>2</sup>Department of Electronics and Computer Engineering Hanyang University, <sup>3</sup>Department of physics Kunsan national University)

**H4.04\*** [11:36-11:48]

**Non-Local Spin Signal in Quasi-2DEG of LAO/STO** / JIN Mi-Jin<sup>1</sup>, MOON Seon Young<sup>2</sup>, MODEPALLI Vijayakumar<sup>1</sup>, PARK Jungmin<sup>1</sup>, JO Junhyeon<sup>1</sup>, BAEK Seung-Hyub<sup>2</sup>, YOO Jung-Woo\*<sup>1</sup> (<sup>1</sup>School of Material science and Engineering, Ulsan National Institute of Science and Technology (UNIST), <sup>2</sup>Electronic Materials Research Center, Korea Institute of Science Technology (KIST))

H

**H4.05\*** [11:48-12:00]

**Sign reversal of damping-like spin-orbit torque in collinear antiferromagnet** / 천수익, 이현우\* (포항공과대학교 물리학과)

**H4.06** [12:00-12:12]

**Power factor enhancement of the CuI doped polycrystalline Bi<sub>2</sub>Te<sub>2.7</sub>Se<sub>0.3</sub>** / KIM Jin Hee<sup>1</sup>, KIM Yoon Min<sup>1</sup>, KIM Min Jae<sup>1</sup>, OH Suekyung<sup>1</sup>, PARK Su-Dong<sup>2</sup>, RHYEE Jong-Soo\*<sup>1</sup> (<sup>1</sup>Department of Applied Physics and Institute of Natural Sciences, Kyung Hee University, <sup>2</sup>Advanced Electrical Materials Group, Korea Electrotechnology Research Institute)

**H4.07\*** [12:12-12:24]

**Thermoelectric properties and extremely low lattice thermal conductivity in p-type Bismuth Tellurides by Pb-doping and PbTe precipitation** / LIN Chan-Chieh, GINTING Dianta, LYDIA R., LEE Min Ho, RHYEE Jong-Soo\* (Department of Applied Physics and Institute of Natural Sciences, Kyung Hee University)

**H4.08\*** [12:24-12:36]

**High thermoelectric performance in pseudo quaternary compounds**



**of  $(\text{PbTe})_{0.95-x}(\text{PbSe})_x(\text{PbS})_{0.05}$  by nano precipitation and band structure engineering** / GINTING Dianta<sup>1</sup>, LIN Chan-Chieh<sup>1</sup>, SNYDER G. Jeffrey<sup>2</sup>, RHYEE Jong-Soo\*<sup>1</sup>(<sup>1</sup>Department of Applied Physics and Institute of Natural Sciences, Kyung Hee University, <sup>2</sup>Department of Materials Science and Engineering, Northwestern University)

**[H5-co] Superconductivity II**

2016년 4월 22일 금요일 11:00 – 12:00

장소: 105호

좌장: 박 승 룡 인천대학교

**H5.01 [11:00-11:12]**

**Epitaxial Growth of  $\text{Ba}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$  and  $\text{LiFeAs}$  Pnictide Layers using ultrahigh Vacuum Pulsed laser Deposition** / LEE Hanho, YI Sunwouk, KIM Sungmin, NAM Woo Hyun, KIM Kee Hoon, KUK Young\*(Department of Physics and Astronomy, Seoul National University)

**H5.02\* [11:12-11:24]**

**Coexistence of interfacial phonons and spin waves in  $\text{Sr}_2\text{VO}_3\text{FeAs}$**  / 최석환<sup>1</sup>, 최현우<sup>1</sup>, 이현정<sup>1</sup>, 장원준<sup>1,2</sup>, 옥종목<sup>3</sup>, 이태경<sup>4</sup>, 정진오<sup>1</sup>, 손동현<sup>1</sup>, 서환수<sup>5</sup>, 김준성<sup>3</sup>, Yannis K. Semertzidis<sup>1,2</sup>, 이진환\*(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>기초과학연구원 액시온 및 극한상호작용 연구단, <sup>3</sup>포항공과대학교 물리학과, <sup>4</sup>Department of Applied Physics and Applied Mathematics, Columbia University, <sup>5</sup>삼성종합기술원)

**H5.03\* [11:24-11:36]**

**Optical Properties of the iron-based superconductor  $(\text{Ca}_{1-x}\text{La}_x)_{10}(\text{Pt}_3\text{As}_8)(\text{Fe}_{10}\text{As}_{10})$  ( $x=0.15$ ) single crystal** / SEO Yuil<sup>1</sup>, CHOI W.J.<sup>1</sup>, KIMURA S.<sup>2</sup>, KWON Y.S.\*<sup>1</sup>(<sup>1</sup>Department of Emerging Materials Science, DGIST, Daegu, <sup>2</sup>Graduate School of Frontier Biosciences, Osaka University, Suita 565-0871, Japan)

**H5.04 [11:36-11:48]**

**Synthesis and superconducting properties of  $\text{Ca}_{1-x}\text{La}_x\text{FeAs}_2$  single crystal** / 민병훈, 김찬희, 장동현, 남우현, Dilipkumar Bhoi, 김기훈\*(서울대학교 물리천문학부)

**H5.05\* [11:48-12:00]**

**Enhanced superconductivity of surface induced state of bulk  $\text{FeSe}$**  / 서정진\*<sup>1,2</sup>, 김범영<sup>3,4</sup>, 김범서<sup>2,5</sup>, 정종근<sup>1</sup>, 고윤영<sup>3</sup>, 옥종목<sup>3</sup>, 김준성<sup>3</sup>, J. D. Denlinger<sup>4</sup>, 모성관<sup>4</sup>, 김창영<sup>2,5</sup>, 김용관<sup>2,4,5</sup>(<sup>1</sup>연세대학교 물리학과, <sup>2</sup>BS 강상관계물 질연구단, <sup>3</sup>포항공과대학교 물리학과, <sup>4</sup>Advanced light source, <sup>5</sup>서울대학교 물리학과)

## [H6-co] Focus: Nano/Mesoscopic System

2016년 4월 22일 금요일 11:00 - 13:00

장소: 106호

좌장: 정수용 한국표준과학연구원

### H6.01(초) [11:00-11:24]

**Transport spectroscopy for electronic bands in carbon-based nanomaterials with weak-bond contacts** / 배명호<sup>\*1</sup>, 최동환<sup>2</sup>, 장승훈<sup>3</sup>, 정두원<sup>3</sup>, 이정오<sup>3</sup>, 장현주<sup>3</sup>, 하동한<sup>1</sup>, 이승미<sup>1</sup>, 김주진<sup>2</sup>(<sup>1</sup>한국표준과학연구원, <sup>2</sup>전북대학교, <sup>3</sup>한국화학연구원)

### H6.02(초) [11:24-11:48]

**Analysis of Electron Mobility on  $^3\text{He}$ - $^4\text{He}$  Mixture** / IKEGAMI Hiroki<sup>1</sup>, KIM Kitak<sup>2</sup>, SATO Daisuke<sup>1</sup>, KONO Kimitoshi<sup>1, 3, 4</sup>, CHOI Hyoungsoon<sup>\*2</sup>(<sup>1</sup>The Center for Emergent Matter Science, RIKEN, Japan, <sup>2</sup>Department of Physics, KAIST, <sup>3</sup>Institute of Physics, National Chiao Tung University, Taiwan, <sup>4</sup>Institute of Physics, Kazan Federal University, Russia)

### H6.03\* [11:48-12:00]

**Adiabatic Green's function technique and the transient behavior in time-dependent fermion-boson coupled models** / 오윤탁<sup>\*1</sup>, 히가시요이치<sup>1</sup>, 찬칭킷<sup>2</sup>, 한정훈<sup>1</sup>(<sup>1</sup>성균관대학교 물리학과, <sup>2</sup>Department of physics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA)

### H6.04\* [12:00-12:12]

**Electron Quantization in Segmented Au Atomic Wires** / DO Eui Hwan<sup>1, 2</sup>, YEOM Han Woong<sup>\*1, 2</sup>(<sup>1</sup>CALDES IBS, <sup>2</sup>Department of Physics POSTECH)

### H6.05\* [12:12-12:24]

**First-principles study of reduction of Fermi-level pinning at Au-MoS<sub>2</sub> interfaces by surface treatment of Au** / Kyung-Ah Min<sup>1</sup>, Jinwoo Park<sup>1</sup>, Robert M. Wallace<sup>2</sup>, Kyeongjae Cho<sup>2</sup>, Suklyun Hong<sup>\*1</sup>(<sup>1</sup>Department of Physics and Graphene Research Institute, Sejong University, <sup>2</sup>Department of Materials Science and Engineering, The University of Texas at Dallas)

### H6.06 [12:24-12:36]

**Cotunneling drag effect in Coulomb-coupled quantum dots** / KELLER A. J.<sup>1</sup>, LIM Jong Soo<sup>\*2</sup>, SANCHEZ David<sup>3</sup>, LOPEZ Rosa<sup>3</sup>, AMASHA S.<sup>1</sup>, KATINE J. A.<sup>4</sup>, SHTRIKMAN H.<sup>5</sup>, GOLDBABER-GORDON D.<sup>1</sup>(<sup>1</sup>Department of Physics, Stanford University, <sup>2</sup>School of Physics, Korea Institute for Advanced Study, <sup>3</sup>IFISC (UIB-CSIC), <sup>4</sup>HGST, <sup>5</sup>Department of Condensed Matter Physics, Weizmann Institute of Science)

### H6.07 [12:36-12:48]

**Topological anyonic vacuum bubble** / HAN Cheolhee, SIM Heung-Sun<sup>\*</sup>(KAIST)

H

H6.08 [12:48-13:00]

강유전체 기판을 이용한 그래핀 소자에서 계면에 삽입한 절연체의 효과 분석 / 강해용\*, 박나희, 서동석(성균관대학교 에너지과학과)

**[E] [H7-co] Pioneer: Emerging Science with Advanced X-rays: XFELs and more**

2016년 4월 22일 금요일 11:00 – 12:36

장소: 107호

좌장: 노도영 광주과학기술원

H7.01(초) [11:00-11:24]

**Visualizing bond formation in solution with femtosecond X-ray scattering** / ADACHI Shin-ichi\*(Photon Factory, Institute of Materials Structure Science (IMSS), KEK, Japan)

H7.02(초) [11:24-11:48]

**Times resolved THz spectroscopy and its future opportunities** / PARK Jaehun\*(Pohang Accelerator Laboratory)

H7.03(초) [11:48-12:12]

**Synchrotron x-ray studies of newly synthesized nanoparticles using diffraction and spectroscopy** / SAKATA Osami\*(National Institute for Materials Science (NIMS), Japan)

H7.04(초) [12:12-12:36]

**Development of Ambient Pressure XPS and its Application to Liquid-Solid Interface** / MUN Bongjin Simon\*(Gwangju Institute of Science and Technology)

**[H8-co] Magnetism II**

2016년 4월 22일 금요일 11:00 – 12:36

장소: 108호

좌장: 조영훈 한국기초과학지원연구원

H8.01\* [11:00-11:12]

**Observation of electronic structures on triangular antiferromagnet PdCrO<sub>2</sub> using scanning tunneling microscopy and spectroscopy** / 정진오<sup>1</sup>, 장원준<sup>1,2</sup>, 최현우<sup>1</sup>, 최석환<sup>1</sup>, 옥종목<sup>3</sup>, 손동현<sup>1</sup>, 서환수<sup>4</sup>, 김준성<sup>3</sup>, 이진환<sup>\*1,2</sup> (한국과학기술원 물리학과, <sup>2</sup>엑시온 및 극한 상호작용 기초 과학 연구단, <sup>3</sup>포항공과대학교 물리학과, <sup>4</sup>삼성종합기술원)

H8.02\* [11:12-11:24]

**Atomic-scale observation of plaquette antiferromagnetic order in a tetragonal FeAs layer** / 최석환<sup>1</sup>, 장원준<sup>1,2</sup>, 옥종목<sup>3</sup>, 이현정<sup>1</sup>, 최현우<sup>1</sup>, 강세종<sup>4</sup>, 국양<sup>5</sup>, 구자용<sup>6</sup>, 정상욱<sup>7</sup>, 김준성<sup>3</sup>, 이진환<sup>\*1,2</sup> (한국과학기술원, <sup>2</sup>기초과학

연구원, <sup>3</sup>포항공과대학교, <sup>4</sup>고려대학교, <sup>5</sup>서울대학교, <sup>6</sup>한국표준과학연구원, <sup>7</sup>Rutgers University)

#### H8.03\* [11:24-11:36]

**Size-dependence of magnetoelectric coupling in Fe<sub>3</sub>O<sub>4</sub> nanoparticles**  
/ Kyongjun Yoo<sup>1</sup>, Deepak Rajaram Patil<sup>1</sup>, Byung-Gu Jeon<sup>1</sup>, Sae Hwan Chun<sup>1</sup>, Jung-tak Jang<sup>2</sup>, Seung-hyun Noh<sup>2</sup>, Yong-jun Lim<sup>2</sup>, Jinwoo Cheon<sup>2</sup>, Kee Hoon Kim\*<sup>1</sup>(<sup>1</sup>Center for Novel States of Complex Materials Research and Institute of Applied Physics, Department, <sup>2</sup>Center for Evolutionary Nanoparticles, Department of Chemistry, Yonsei University)

#### H8.04\* [11:36-11:48]

**Magnon-phonon hybridization and two-magnon continuum in CuCrO<sub>2</sub>** / PARK Kisoo<sup>1,2</sup>, OH Joosung<sup>1,2</sup>, LEINER Jonathan C.<sup>1,2</sup>, JEONG Jaehong<sup>1,2</sup>, RULE Kirrily<sup>3</sup>, LE Manh Duc<sup>1,2</sup>, PARK Je-Geun\*<sup>1,2</sup>(<sup>1</sup>Center of Correlated Electron Systems, Institute for Basic Science (IBS), <sup>2</sup>Department of Physics and Astronomy, Seoul National University (SNU), <sup>3</sup>Australian Nuclear Science and Technology Organisation)

#### H8.05\* [11:48-12:00]

**Investigation of magnetoelectric coupling in spinel structure MnGa<sub>2</sub>O<sub>4</sub>** / 장동현, 김기훈\*(서울대학교 물리학과)

H

#### H8.06 [12:00-12:12]

**Order induced by disorder in pyrochlore XY antiferromagnets**  
/ ANDREANOV Alexei\*<sup>1</sup>, MCCLARTY Paul<sup>2</sup>(<sup>1</sup>Center for Theoretical Physics of Complex Systems, IBS, <sup>2</sup>ISIS Neutron and Muon Source, STFC, Rutherford-Appleton Laboratory, Harwell Campus, Oxfordshire, OX)

#### H8.07 [12:12-12:24]

**CoFe<sub>2</sub>O<sub>4</sub>/Fe<sub>3</sub>O<sub>4</sub> superlattices; MBE growth and magnetic properties**  
/ NGUYEN Van Quang<sup>1</sup>, RHIM Sonny H.\*<sup>1</sup>, SHIN Yooleemi<sup>2</sup>, DUONG Anh Tuan<sup>1</sup>, NGUYEN Minh Hai Thi<sup>1</sup>, CHO Sunglae\*<sup>1</sup>, MENY Christian<sup>2</sup>(<sup>1</sup>Department of Physics, and Energy Harvest Storage Research Center, University of Ulsan, <sup>2</sup>Institute of Physics and Chemistry for Materials of Strasbourg)

#### H8.08 [12:24-12:36]

**Room-temperature magnetic field effect in a top-emitting spin-OLED** / LEE Nyun Jong<sup>1</sup>, BAE Yu Jeong<sup>1</sup>, JUNG Heeyoung<sup>2</sup>, LEE Changhee<sup>2</sup>, KIM Tae Hee\*<sup>1</sup>(<sup>1</sup>Department of Physics, Ewha Womans University, Seoul, Republic of Korea, <sup>2</sup>School of Electrical Engineering and Computer Science, Seoul National University, Seoul, Republic of)

**[E] [H9-co] Pioneer: Optical and magnetic properties of low-dimensional materials: first-principles calculation approach**

2016년 4월 22일 금요일 11:00 – 12:12

장소: 201호

좌장: 박 철 환 서울대학교

**H9.01(초)** [11:00-11:36]

**Effective exchange interactions and magnetoelastic effects in the spin dimer compound  $\text{SrCu}_2(\text{BO}_3)_2$**  / SAUL Andres<sup>\*1, 2</sup>(<sup>1</sup>CINaM/CNRS Marseille, France, <sup>2</sup>Aix-Marseille University, France)

**H9.02** [11:36-11:48]

**Ab initio study of magnetic single layer  $\text{MPX}_3$  metal phosphorous trichalcogenides** / CHITTARI Bheema Lingam<sup>1, 2</sup>, PARK Youngju<sup>2</sup>, LEE Dongkyu<sup>2</sup>, HAN Moonsup<sup>2</sup>, HWANG Euyheon<sup>\*1</sup>, MACDONALD Allan H.<sup>3</sup>, JUNG Jeil<sup>\*2</sup>(<sup>1</sup>SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Suwon, 16419, Korea, <sup>2</sup>Department of Physics, University of Seoul, Seoul 130-743, Korea, <sup>3</sup>Department of Physics, The University of Texas at Austin, Austin, Texas 78712, USA)

**H9.03** [11:48-12:00]

**Femtoseconds responses of electron-atom coupled system beyond Born-Oppenheimer approximation; Ab initio study with real-time propagation** / PARK Noejung<sup>\*</sup>, SHIN Dongbin(Department of Physics, Ulsan National Institute of Science and Technology)

**H9.04** [12:00-12:12]

**Co-existing ferro and anti-ferromagnetic order in ultrathin  $\text{CrPS}_4$**  / CHITTARI Bheema Lingam<sup>1, 2</sup>, LEE Dongkyu<sup>2</sup>, HWANG Euyheon<sup>\*1</sup>, JUNG Jeil<sup>\*2</sup>(<sup>1</sup>SAINT, Sungkyunkwan University, Suwon, 16419, Korea, <sup>2</sup>Department of Physics, University of Seoul, Seoul 130-743, Korea)

**[H11-as] General: Astrophysics Theory**

2016년 4월 22일 금요일 11:00 – 12:36

장소: 204호

좌장: 이 정 재 대전대학교

**H11.01(초)** [11:00-11:24]

**Classification of self-gravitating radiations** / KIM Hyeong-Chan<sup>\*</sup> (School of Liberal Arts and Sciences Korea National University of Transportation)

**H11.02** [11:24-11:36]

**Instability and thermodynamic properties of a black hole in (dilaton) Einstein-Gauss-Bonnet theory** / LEE Wonwoo<sup>\*1</sup>, KIMPHUN Sunly<sup>2</sup>, LEE Bum-Hoon<sup>1, 2, 3</sup>(<sup>1</sup>CQUeST, Sogang University, <sup>2</sup>Department of Physics, Sogang University, <sup>3</sup>Asia Pacific Center for Theoretical Physics)

H11.03 [11:36-11:48]

**Thermodynamics of Three-dimensional Black Holes via Charged Particle Absorption /** 곽보근<sup>\*1</sup>, 이범훈<sup>1, 2</sup>(<sup>1</sup>서강대학교 양자시공간연구센터, <sup>2</sup>서강대학교 물리학과)

H11.04 [11:48-12:00]

**Fubini instantons and tunneling without a barrier /** 노대호<sup>\*1</sup>, 이범훈<sup>1, 2</sup>, 이원우<sup>2</sup>(<sup>1</sup>아시아 태평양 이론물리센터, <sup>2</sup>서강대학교 물리학과)

H11.05 [12:00-12:12]

**Effects of Radiation Reaction on Gravitational Waves /** KIM Dong-Hoon<sup>\*</sup>(Basic Science Research Institute Ewha Womans University)

H11.06 [12:12-12:24]

**Puncture black hole geometry of collapsing supermassive stars /** KIM Hee Il<sup>\*</sup>, LEE Hyung Mok(Department of Physics and Astronomy Seoul National University)

H11.07 [12:24-12:36]

**Initial data construction for black hole universe with rotation /** 박찬<sup>\*1</sup>, 강궁원<sup>2</sup>(<sup>1</sup>한국과학기술원, <sup>2</sup>한국과학기술정보연구원)

H

**[H12-op] General: Properties of Light & Geometrical Optics**

2016년 4월 22일 금요일 11:00 - 12:24

장소: 205호

좌장: 안 광 준 아주대

H12.01 [11:00-11:12]

**Rainbow refractometry for deformed liquid microjets /** MOON Songky<sup>1</sup>, SHIN Younghoon<sup>2</sup>, KIM Soyun<sup>2</sup>, AN Kyungwon<sup>\*2</sup>(<sup>1</sup>Faculty of Liberal Education, Seoul National University, <sup>2</sup>School of Physics and Astronomy, Seoul National University)

H12.02<sup>\*</sup> [11:12-11:24]

**Polarization Independent Phase only Spatial Light Modulator for real time wave applications /** 최민호, 최재우<sup>\*</sup>(경희대학교 정보디스플레이학과)

H12.03 [11:24-11:36]

**Open quantum mechanics and Lamb shift in circular dielectric resonator /** 박규원<sup>\*1</sup>, 김제완<sup>2</sup>, 정갑균<sup>3</sup>(<sup>1</sup>서강대 물리학과, <sup>2</sup>고등 과학원, <sup>3</sup>서울대 물리 천문학부)

H12,04\* [11:36-11:48]

반도체 웨이퍼 표면 상의 2Xnm급 결함검출을 위한 Ultra-high NA 광학계 설계 **Ultra-High NA of optical system design to inspect 2Xnm defects on a surface of semiconductor wafer** / 오지영<sup>1</sup>, 김재순<sup>\*1</sup>, 조은길<sup>1</sup>, 한우준<sup>1</sup>, 오승철<sup>2</sup>, 추승룡<sup>2</sup>, 김경주<sup>2</sup>(<sup>1</sup>명지대학교 물리학과, <sup>2</sup>(주)오로스테크놀로지)

H12,05\* [11:48-12:00]

간섭계를 이용한 반도체 포토 공정 내에서의 공정변위 측정 방법에 대한 연구. **Study on interferometric measurement for process variation of semiconductor photolithography** / 임승일<sup>1</sup>, 김재순<sup>\*1</sup>, 윤성민<sup>1</sup>, 양한모<sup>1</sup>, 최재준<sup>1</sup>, 오승철<sup>2</sup>, 정우성<sup>2</sup>, 이재용<sup>3</sup>(<sup>1</sup>한국 표준과학연구원, <sup>2</sup>명지대학교 물리학과, <sup>3</sup>(주)오로스테크놀로지)

H12,06\* [12:00-12:12]

단일파 광 시간역행 거울 / 이겨레<sup>1</sup>, 이준성<sup>2</sup>, 박정훈<sup>1</sup>, 박지호<sup>2</sup>, 박용근<sup>\*1</sup>(<sup>1</sup>한국과학기술원(KAIST) 물리학과, <sup>2</sup>한국과학기술원(KAIST) 바이오및뇌공학과)

H12,07\* [12:12-12:24]

소형 카메라 이미지 분석을 통한 자동 광축 정렬 방법에 관한 연구 **Study on the automatic optical axis alignment method using the small camera image analysis** / 양한모<sup>1</sup>, 조은길<sup>1</sup>, 오지영<sup>1</sup>, 최재준<sup>1</sup>, 윤성민<sup>1</sup>, 김재순<sup>\*1</sup>, 위관재<sup>2</sup>, 김은영<sup>2</sup>(<sup>1</sup>명지대학교 물리학과, <sup>2</sup>GEOSTORY)

**[H13-pa] General: Accelerator-based experiments III**

2016년 4월 22일 금요일 11:00 – 12:36

장소: 206호

좌장: 이 세 욱 경북대학교

H13,01 [11:00-11:12]

**Search for Heavy Neutrinos in the Same-sign Di-lepton Events at = 13TeV Using the CMS Detector** / LEE Haneol\*, ALMOND John\*, JEON Si Hyun\*, KIM Jae Sung\*, OH Sungbin\*, SEO Seon-Hee\*, YU Geumbong\*, YANG Un-ki\*(Department of Physics and Astronomy, Seoul National University)

H13,02 [11:12-11:24]

**Search for new physics with tau lepton pairs in pp collisions at = 13 TeV** / OH Youngdo\*, KIM DongHee(Department of Physics, Kyungpook Nat. University)

H13,03 [11:24-11:36]

**Status Report of the SHiP Experiment** / YOON C. S.\*<sup>1</sup>, LEE K. Y.\*<sup>1</sup>, PARK B. D.<sup>1</sup>, KIM S. H.<sup>1</sup>, WOO J. K.<sup>2</sup>, KO J.<sup>2</sup>, LIU D.<sup>2</sup>, KIM Y. G.<sup>3</sup>, CHOI K.-Y.<sup>4</sup>(<sup>1</sup>Gyeongsang National University, <sup>2</sup>Jeju National University, <sup>3</sup>Gwangju National University of Education, <sup>4</sup>Chonnam National University)

H13.04\* [11:36-11:48]

**Searches for heavy neutrinos in tri-leptons at 8 TeV and 13 TeV using the CMS detector.** / 김재성\*, 양운기\*, 오성빈\*, 유금봉\*, 이한얼\*, John Almond\*, 서선희\*, 전시현\*(서울대학교 물리학과)

H13.05\* [11:48-12:00]

**Search for charged Higgs decaying into  $c\bar{b}$  at the CMS** / JWA Yeon-jae\*, YU GeumBong, ALMOND John Leslie, YANG Un-ki(Department of Physics, Seoul National University)

H13.06\* [12:00-12:12]

**Search for high-mass resonances in  $Z(\ell)\gamma$  final state** / YOO Hwidong, NAM Kyungwook\*, LEE Kyeongpil(Department of Physics & Astronomy Seoul National University)

H13.07\* [12:12-12:24]

**Observation of doubly Cabibbo-suppressed decay of a charmed baryon,** / 양성배\*(서울대학교 물리천문학부)

H13.08\* [12:24-12:36]

**Study of  $B^+ \rightarrow (c\bar{c})K^+ \rightarrow p\bar{p}K^+$ , and  $B^0 \rightarrow (c\bar{c})K^0_s \rightarrow p\bar{p}K^0_s$  Decays at Belle** / LEE Jaekeum\*<sup>1</sup>, OLSEN Stephen Lars<sup>2</sup>, CHOI Sookyung<sup>3</sup>, KIM Sunkee<sup>1</sup>(<sup>1</sup>Department of Physics & Astronomy, Seoul National University, <sup>2</sup>Center for Underground Physics, Institute for Basic Science, <sup>3</sup>Department of Physics, Gyeongsang National University)

**E [H14-pa] Pioneer: Axion and Electric Dipole Moment (EDM) experiments in Korea II**

2016년 4월 22일 금요일 11:00 – 12:36

장소: 209호

좌장: 박 성 태 기초과학연구원

H14.01(초) [11:00-11:24]

**Electric field plate development plan for the storage ring proton EDM experiment** / BOWCOCK Themis\*(University of Liverpool)

H14.02(초) [11:24-11:48]

**Recent Advances in Storage Ring EDM Feasibility** / STEPHENSON Edward\*(Indiana University Center for Spacetime Symmetries)

H14.03(초) [11:48-12:12]

**Status of hardware developments for pEDM experiment at CAPP/IBS** / HACIOMEROGLU Selcuk\*(CAPP/IBS)



H14,04(초) [12:12-12:36]

**Muon beam phase space matching for the muon g-2 experiment at  
FNAL / KIM Young-Im\*(CAPP/IBS)**

## SESSION I

2016년 4월 22일(금) 오후

### [I11-te] General: Physics Teaching

2016년 4월 22일 금요일 13:00 - 14:36

장소: 204호

좌장: 박 윤 배 경북대

#### I11.01 [13:00-13:12]

개화기 소학교 물리 교과서의 역학 내용 비교 연구 / 홍석인\*, 박철(경인교육대학교 과학교육과)

#### I11.02 [13:12-13:24]

Seeing balancing toys graphically and gravitationally / HONG Seok-In\*(Department of Science Education, Gyeongin National University of Education)

#### I11.03 [13:24-13:36]

전류에 의한 자기장에 관한 중학생의 표상 해석, 구성, 적용 능력 / 윤혜경, 조현국<sup>2</sup>, 조광희<sup>3</sup>(<sup>1</sup>춘천교육대학교 과학교육과, <sup>2</sup>단국대학교 교양학부, <sup>3</sup>조선대학교 물리교육과)

#### I11.04 [13:36-13:48]

한국의 봄을 위한 아름다운 물리교육 Wonderful physics education for spring in Korea-디즈니 영화 '겨울왕국(Frozen)'을 중심으로- / 이수이\*, 석창원<sup>2</sup>, 정은식<sup>3</sup>, 박준일<sup>4</sup>, 이윤정<sup>5</sup>, 주시은<sup>6</sup>, 임지혜<sup>7</sup>, 최원석<sup>8</sup>(<sup>1</sup>경북대학교 물리교육과, <sup>2</sup>상인고, <sup>3</sup>대구과학영재고, <sup>4</sup>경산과학고, <sup>5</sup>KERIS, <sup>6</sup>경북여고, <sup>7</sup>혜화여고, <sup>8</sup>신상중)

#### I11.05 [13:48-14:00]

중학교 과학 교사들의 과학용어 '힘' 사용 형태 분석 / 윤은정, 박윤배\*(경북대학교)

#### I11.06 [14:00-14:12]

Polage의 색변화 탐색: 간단한 광학실험 및 설명 / 정용욱\*, 최우석(서울대학교 물리교육과)

#### I11.07 [14:12-14:24]

20세기 구축주의 양식을 통한 현대물리학의 이해: 나움 가보와 안토니 고클리의 사례 Understanding of modern physics shown in the constructionism in the 20th century: Naum Gabo and Antony Gormley / 조현국\*(단국대학교 교양학부)

#### I11.08 [14:24-14:36]

Didaktik에 기반한 교수를 위한 내용 구조화의 특징과 시스템 개념의 적용 / 지영래\*(서울대학교 물리교육과)



*The Korean Physical Society*

# 포스터발표논문 시간표

Poster session schedule



계시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소 : 포스터발표장

## P1-ap.101

**MCNPX 기반 반도체 소자의 손상 저감 필터 연구** / 박찬중, 박혜민, 김정호, 박기현, 주관식\*(명지대학교 물리학과)

## P1-ap.102\*

**Colloidal Quantum Dot Solar Cell Performance Enhancement through Stable Self-Assembled Monolayers** / KIM Gi-Hwan<sup>1,2</sup>, DE ARQUER F. Pelayo Garcia<sup>1</sup>, YOON Yung Jin<sup>2</sup>, LAN Xinzhen<sup>1</sup>, LIU Mengxia<sup>1</sup>, VOZNYI Oleksandr<sup>1</sup>, YANG Zhenyu<sup>1</sup>, FAN Fengjia<sup>1</sup>, IP Alexander H.<sup>1</sup>, KANJANABOOS Pongsakorn<sup>1</sup>, HOOGLAND Sjoerd<sup>1</sup>, KIM Jin Young<sup>\*2</sup>, SARGENT Edward H.<sup>1</sup>(<sup>1</sup>Department of Electrical and Computer Engineering University of Toronto, <sup>2</sup>School of Energy and Chemical Engineering UNIST)

## P1-ap.103\*

**Ultra-thin broadband metamaterial absorber containing resistive layers** / KIM Young Ju<sup>1</sup>, YOO Young Joon<sup>1</sup>, HWANG Ji Sub<sup>1</sup>, SON Hye Mi<sup>1</sup>, RHEE Joo Yull<sup>2</sup>, KIM Ki Won<sup>3</sup>, PARK Sang Yoon<sup>4</sup>, LEE YoungPak<sup>\*1</sup>(<sup>1</sup>Department of Physics, Hanyang University, Seoul, Korea, <sup>2</sup>Department of Physics, Sungkyunkwan University, Suwon, Korea, <sup>3</sup>Department of Information Display, Sunmoon University, Asan, Korea, <sup>4</sup>Advanced Institutes of Convergence Technology, Seoul National University, Suwon, South Korea)

## P1-ap.104\*

**Flexible metamaterial absorber based on simple layered structure** / SON Hye Mi<sup>1</sup>, YOO Young Joon<sup>1</sup>, KIM Young Ju<sup>1</sup>, HWANG Ji Sub<sup>1</sup>, RHEE Joo Yull<sup>2</sup>, KIM Ki Won<sup>3</sup>, LEE YoungPak<sup>\*1</sup>(<sup>1</sup>Department of Physics, Hanyang University, Seoul, Korea, <sup>2</sup>Department of Physics, Sungkyunkwan University, Suwon, Korea, <sup>3</sup>Department of Information Display, Sunmoon University, Asan, Korea)

## P1-ap.105

**위그너 방정식에 의한 가우션 웨이브 패킷과 무반사 포텐셜과의 상호작용 연구** / 이준호, 신민철\*(한국과학기술원)

## P1-ap.106

**Characterization of a Hybrid Composite for Triboelectric and Piezoelectric Generation** / CHOI Moonkang, LEE Minbaek\*(Department of Physics Inha University)

P1-ap.107

**Characterization of Triboelectric Effect of Graphenes depending on Dopants and Metal substrates** / HWANG Sungmin, KIM Seoyoung, LEE Minbaek\*(Department of Physics Inha University)

P1-ap.108\*

**A Fast and Reversible Insulator-Metal Transition in Vanadium Dioxide by Ionic Liquid Gate Voltage** / ABBAS Kaleem<sup>2</sup>, KANG Dae Joon\*<sup>1,2</sup>(<sup>1</sup>Department of Energy Science, Sungkyunkwan University, <sup>2</sup>Department of Physics, Sungkyunkwan University)

P1-ap.109\*

**Wearable Piezoelectric Nanogenerators Using Ultra-thin ZnO Nanoflakes** / OH Simgeon<sup>2</sup>, KANG Dae Joon\*<sup>1,2</sup>(<sup>1</sup>Department of Energy Science, Sungkyunkwan University, <sup>2</sup>Department of Physics, Sungkyunkwan University)

P1-ap.110

**All-CVD Growth of High-Performance Graphene on Ultra-thin h-BN as Dielectric Layer FETs by Using Layer-by-Layer Method** / NGOC Huynh Van<sup>1</sup>, QIAN Yongteng<sup>2</sup>, KANG Dae Joon\*<sup>1,2</sup>(<sup>1</sup>Department of Physics, Sungkyunkwan University, <sup>2</sup>Interdisciplinary Department of Physics and Chemistry, Sungkyunkwan University)

P1-ap.111

**Porous PDMS/GO as a Negative Triboelectric Layer** / HARNCHANA Viyada, KANG Dae Joon\*(Department of Physics, Sungkyunkwan University)

P1-ap.112\*

**Fe<sub>3</sub>O<sub>4</sub> 나노 입자가 주입된 rugate 다공성 실리콘 박막에서의 유기증기, 압력 및 자기장 감응 특성 연구** / 한성범, 이재준, 김나경, 김영유, 이기원\*(공주대학교 물리학과)

P1-ap.113\*

**Towards a reusable graphene mass detector** / MCALLISTER Kirstie Elizabeth<sup>1</sup>, SHIN Dong Hoon<sup>1</sup>, KIM Hakseong<sup>2</sup>, LEE Sang Wook\*<sup>1</sup>(<sup>1</sup>Division of Quantum Phases & Devices, School of Physics, Konkuk University, <sup>2</sup>The Korea Research Institute of Standards and Science)

P1-ap.114\*

**Construction of Cryogen-Free Nuclear Demagnetization Cryostat for Ultra Low Temperature Research** / BYUN HeeSu<sup>1</sup>, KIM Kitak<sup>1</sup>, OH B.-Y.<sup>1</sup>, JEON Seong Hyeok<sup>1</sup>, JEONG Jinhoon<sup>1</sup>, CHOI H.\*<sup>1</sup>, BLAAUWGEERS Rob<sup>2</sup>(<sup>1</sup>Department of Physics, KAIST, Daejeon, South Korea, <sup>2</sup>BlueFors Cryogenics Ltd., Helsinki, Finland)

**P1-ap.115\***

플라즈마 처리를 통한 PTFE 필름의 마찰전기 발전 특성의 효율 증대 / 김동영, 윤병길, 정종훈\*(인하대학교 물리학과)

**P1-ap.116\***

테플론 파우더를 이용한 마찰 전기 에너지 수확 장치 / 고영준, 송한성, 정종훈\*(인하대학교 물리학과)

**P1-ap.117\***

**Ferroelectric memristive properties of Pt/PZT/Pt thin film capacitor** / CHUN Min Chul, NA Sang-Chul, SHIN Hyejin, KWON Young-Sun, KANG Bo Soo\*(Department of Applied Physics Hanyang University)

**P1-ap.118\***

**Phototransistor based on polycrystalline MoS2 thin film with interdigital patterns** / SHIN Hyejin, NA Sang-Chul, CHUN Min Chul, KWON Young-Sun, KANG Bo Soo\*(Department of Applied Physics Hanyang University)

**P1-ap.119\***

**Switching Power Universality in Unipolar Resistive Switching Memories** / KIM Jongmin<sup>1</sup>, JO Yongcheol<sup>1</sup>, CHO Sangeun<sup>1</sup>, WOO Hyeonseok<sup>1</sup>, HAN Jaeseok<sup>1</sup>, LEE Seongwoo<sup>1</sup>, INAMDAR A. I.<sup>1</sup>, HONG Jinpyo<sup>2</sup>, LEE Jeon-Kook<sup>3</sup>, KIM Hyungsang<sup>1</sup>, IM Hyunsik\*<sup>1</sup>(<sup>1</sup>Division of Physics and Semiconductor Science, Dongguk University, <sup>2</sup>Department of Physics, Hanyang University, <sup>3</sup>Center for Opto-Electronic Materials and Devices, Korea Institute Science & Technology (KIST))

**P1-ap.120\***

**Effects of annealing temperature on dielectric properties in Y2O3 amorphous thin films** / KWON Young-Sun, NA Sang-Chul, CHUN Min Chul, SHIN Hyejin, KANG Bo Soo\*(Department of Applied Physics Hanyang University)

**P1-ap.121**

**Air-stable N-Type Black Phosphorus transistors Fabricated by Doping of Benzyl Viologen** / DEWU Yue, WON JONG Yoo\*(SKKU Advanced Institute of Nano-Technology (SAINT), Samsung-SKKU Graphene Center (SSGC), Department)

**P1-ap.122\***

**Study on Optical Properties of PtSi/Si by Spectroscopic Ellipsometry** / LE Long Van<sup>1</sup>, KIM Tae Jung<sup>1</sup>, KIM Hyoung Uk<sup>1</sup>, KIM Young Dong\*<sup>1</sup>, KIM Junsoo<sup>2</sup>, IM Solyee<sup>2</sup>, CHOI Won Chul<sup>2</sup>, MOON Seung Eon<sup>2</sup>, NAM Eun Soo<sup>2</sup>(<sup>1</sup>Department of Physics Kyung Hee University, <sup>2</sup>IT Components and Materials Industry Technology Research Department ETRI)



P1-ap.123

**Feasibility study for non-destructive inspection of cylindrical shell structure using resonance spectroscopy** / LIM Sa-hoe\* (Chonnam National University Hwasun Hospital)

P1-ap.124

**Fabrication of Sprayed CIGSe Solar Cells with Different Solvents** / KIM SeongYeon, KIM JunHo\* (Department of Physics, Incheon National University)

P1-ap.125

**Study of photovoltaic properties of CIGS solar cell with co-sputtered Zn(O,S) buffer layer** / RANA Tanka Raj, KIM JunHo\* (Department of Physics, Incheon National University)

P1-ap.126\*

**Controlled MoSe<sub>2</sub> surface hydrophobicity using remote O<sub>2</sub> plasma for integration of uniform high-k dielectrics** / JEONG Jae Hun<sup>1</sup>, CHOI Yoon Ho<sup>1</sup>, KIM Dae Kyoung<sup>1</sup>, CHO Mann-Ho\*<sup>1</sup>, AN Youngseo<sup>2</sup>, KIM Hyoungsub<sup>2</sup>, KWON Junyoung<sup>3</sup>, LEE Gwan-Hyoung<sup>3</sup> (<sup>1</sup>Institute of Physics and Applied Physics, Yonsei University, 50 Yonsei-ro, Seoul, 03722, Korea, <sup>2</sup>School of Advanced Materials Science and Engineering, Sungkyunkwan University, Suwon 440-746, Korea, <sup>3</sup>Department of Materials Science and Engineering, Yonsei University, Seoul 120-749, Korea)

P1-ap.127

**위그너 방정식에 의한 다중 층 원통형 나노선-FET의 양자 수송 연구** / 이준호, 신민철\*, 이재현 (한국과학기술원 전기 및 전자공학과)

P1-ap.128

**Hybrid characteristics of organic rubrene/MoS<sub>2</sub> and nano-optoelectronic applications** / 박철준<sup>1</sup>, 서창원<sup>2</sup>, 김정용<sup>2</sup>, 주진수\*<sup>1</sup> (<sup>1</sup>고려대학교 물리학과, <sup>2</sup>성균관대학교 에너지과학과)

P1-ap.129\*

**Photoresponsivity of field-effect transistors (FETs) using organic tetracene/MoS<sub>2</sub> hybrids** / 박현정<sup>1</sup>, 김민수<sup>2</sup>, 김정용<sup>3</sup>, 주진수\*<sup>1</sup> (<sup>1</sup>고려대학교 물리학과, <sup>2</sup>IBS 센터 나노구조 물리단, <sup>3</sup>성균관대학교 에너지과학과)

P1-ap.130

**Nanoscale luminescent characteristics of WSe<sub>2</sub>/Au-NPs hybrids** / 김준영<sup>1</sup>, 이용준<sup>2</sup>, 김정용<sup>2</sup>, 주진수\*<sup>1</sup> (<sup>1</sup>고려대학교 물리학과, <sup>2</sup>성균관대학교 에너지과학과)

## P1-ap.131\*

**Electronic Textiles Fabricated by Silk and Graphene Oxide /**  
전준우<sup>1</sup>, 조세연<sup>2</sup>, 한송이<sup>1</sup>, 진형준<sup>2</sup>, 김병훈\*<sup>1</sup>(<sup>1</sup>인천대학교 물리학과, <sup>2</sup>인하대학교  
고분자공학과)

## P1-ap.132\*

**Graphene balance for detecting the mass of dissociative adsorbed  
hydrogen molecules /** 신동석<sup>1</sup>, 김학성<sup>2</sup>, 신동훈<sup>2</sup>, 이상욱<sup>2</sup>, 김병훈\*<sup>1</sup>(<sup>1</sup>인천대  
학교 물리학과, <sup>2</sup>건국대학교 물리학과)

## P1-ap.133\*

**Resonance Raman studies of few-layer WS<sub>2</sub> /** YANG Jinho, KIM Kangwon,  
LEE Jae-Ung, CHEONG Hyeonsik\*(Department of Physics, Sogang University)

## P1-ap.134

**Al-induced crystallization of amorphous silicon-rich oxide films /**  
YOON Jonghwan\*(Department of Physics, Kangwon National University)

## P1-ap.135

**Tuning of electrical properties of MoS<sub>2</sub> induced by hydrogen  
treatment /** PARK Min<sup>1</sup>, HONG Sung Ju<sup>1</sup>, KIM Byung Hoon<sup>1</sup>, PARK Yung Woo\*<sup>1</sup>  
(<sup>1</sup>Graduate School of Convergence Science and Technology Seoul National University,  
<sup>2</sup>Department of Physics and Astronomy Seoul National University, <sup>3</sup>Department of  
Physics Incheon National University, <sup>4</sup>Department of Physics and Astronomy Seoul  
National University)

## P1-ap.136\*

**Raman spectroscopy of two-dimensional GaSe /** LIM Soo Yeon, LEE Jae-  
Ung, KIM Minjung, CHEONG Hyeonsik\*(Department of Physics Sogang University)

## P1-ap.137\*

**Urea 함량에 따른 탄소 나노입자의 발광 특성 연구 /** 김태근, 하나영\*(아주  
대학교 에너지시스템학과)

## P1-ap.138

**고체산화물 연료전지 전해질 SDC 10wt%-LiNaCO<sub>3</sub>의 열적, 구조적, 전기  
적 특성 /** 권오혁, 김맥, 양용식\*(부산대학교 나노융합기술학과)

## P1-ap.139

**나노구조 엑스선 회절격자 기술을 적용한 산업용 엑스선 연속검사장치  
의 실효에너지 측정 방법 /** 정승태\*<sup>1</sup>, 김인수<sup>1</sup>, 김은광<sup>1</sup>, 김승구<sup>1</sup>, 한범수<sup>1</sup>, 강창  
무<sup>2</sup>, 안치원<sup>3</sup>, 이세호<sup>4</sup>, 김영주<sup>4</sup>, 이승욱<sup>4</sup>(<sup>1</sup>이비테크(주), <sup>2</sup>한국과학기술정보연구원  
(ReSEAT), <sup>3</sup>나노융합기술원, <sup>4</sup>부산대학교 기계공학부)

P1-ap.140\*

**Photoluminescence and Raman spectroscopic study on few-layer WSe<sub>2</sub>**  
/ KIM Sanghun, LEE Jae-Ung, KIM Kangwon, CHEONG Hyeonsik\*(Department of Physics Sogang University)

P1-ap.141\*

**Hydrothermal Synthesis of Fe<sub>x</sub>O<sub>y</sub> Hollow Nanosphere for Supercapacitor Electrodes** / YAN Yaping<sup>1</sup>, KANG Dae Joon<sup>\*1,2</sup> (<sup>1</sup>Interdisciplinary Department of Physics and Chemistry, Sungkyunkwan University, <sup>2</sup>Department of Physics, Sungkyunkwan University)

P1-ap.142

**Biexciton Emission from Edges and Grain Boundaries of Triangular WS<sub>2</sub> Monolayers** / KIM Min Su<sup>\*1</sup>, YUN Seok Joon<sup>1,2</sup>, LEE Yongjun<sup>1,2</sup>, SEO Changwon<sup>1,2</sup>, KIM Jeongyong<sup>1,2</sup> (<sup>1</sup>Center for Integrated Nanostructure Physics, Institute for Basic Science, Sungkyunkwan University, <sup>2</sup>Department of Energy Science, Sungkyunkwan University)

P1-ap.143\*

**Graphene Converted from Amorphous SiC Thin Film by Electron Beam Irradiation** / JIN Hanbyul<sup>1</sup>, LEE Jung-Yong<sup>2</sup>, KIM Jun Hyoung<sup>1</sup>, PARK Kibog<sup>\*2</sup> (<sup>1</sup>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology, <sup>2</sup>Department of Physics, Ulsan National Institute of Science and Technology)

P1-ap.144

**암모니아 가스로 발생시킨 용량 결합 플라스마를 이용하여 환원된 산화 그래핀 박막의 특성 연구** / 이성엽, 김홍탁, 김찬, 이형락\*(경북대학교 물리학과)

P1-ap.145\*

**Role of Sulfur vacancies for n-type behavior in MoS<sub>2</sub>** / GU Minseon, JOO Beom Soo, PARK Youngju, JUNG Namsik, HAN Moon-sup\*(Department of Physics, University of Seoul)

P1-ap.146\*

**온도 변화에 대한 단분자 층 MoS<sub>2</sub> 전이점의 타원편광분석법 연구** / 유창현<sup>1</sup>, 김화섭<sup>1</sup>, 박한결<sup>1</sup>, Nguyen Hoang Tung<sup>1</sup>, 김영동<sup>\*1</sup>, 김용수<sup>2</sup>, 성맹제(<sup>1</sup>경희대학교 물리학과, <sup>2</sup>울산대학교 물리학과, <sup>3</sup>중앙대학교 물리학과)

P1-ap.147

**백금 나노입자에 의한 단일벽 탄소나노튜브 가스센서의 Cl<sub>2</sub> 감응 특성 (Chlorine sensing performance in single-walled carbon nanotube-based gas sensors by platinum nanoparticles)** / 최선우, 김재성, 김선호, 변영태\*(한국과학기술연구원 센서시스템연구센터)

## P1-ap.148\*

열처리 온도 변화에 따른 다결정  $\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3$  나노튜브 어레이의 압전특성 변화 연구 / 조삼연, 양선아, 김병훈, 김은영, 최기쁨, TRENT Johnson A., 부상돈\*(전북대학교 물리학과)

## P1-ap.149\*

High Power Generation of Zinc Oxide Piezoelectric Nanogenerator Based on Ti mesh Electrode / KIM Gyuhan, SHIN Dongmyeong, KIM Hyungkook\*, HWANG Yoonhwa\*(Department of Nanoenergy Engineering, & BK21 Plus Nanoconvergence Technology Division)

## P1-ap.150

Investigation of electronic structure related to phase transition for single layer  $\text{MoS}_2$  / Dongchul Sung, Suklyun Hong\*(Department of Physics, Sejong University)

## P1-ap.151

양성자빔을 이용한 금-은 나노복합체 생성 연구 / 정명환, 김계령\*(한국원자력연구원 양성자가속기연구센터)

## P1-ap.152\*

Hydrogenated graphene-based gas sensors / 박성진<sup>1</sup>, 박민지<sup>1</sup>, 손장엽<sup>2</sup>, 홍종일<sup>2</sup>, 유경화<sup>1</sup>\*(<sup>1</sup>연세대학교 물리학과, <sup>2</sup>연세대학교 신소재공학과)

## P1-ap.153\*

Plasmon enhanced graphene photodetector with various plasmonic structures / 김성현, 김주형, 유경화\*(연세대학교 물리학과)

## P1-ap.154

Parallel single-electron pumps on GaAs/AlGaAs 2DEG system / 안예환<sup>\*1,2</sup>, 홍창기<sup>1,3</sup>, 기영석<sup>1,4</sup>, 서민기<sup>3</sup>, 배명호<sup>1</sup>, 정윤철<sup>3</sup>, 김남<sup>1</sup>\*(<sup>1</sup>한국표준과학연구원, <sup>2</sup>고려대학교, <sup>3</sup>부산대학교, <sup>4</sup>전남대학교)

## P1-ap.155

LC 공진기를 이용한 저차원 전자계의 전자 상태 측정 / 기영석<sup>\*1,2</sup>, 안예환<sup>1,3</sup>, 홍창기<sup>1,4</sup>, 홍영표<sup>1</sup>, 이상길<sup>1</sup>, 정윤철<sup>4</sup>, 강기천<sup>2</sup>, 서준호<sup>1</sup>, 배명호<sup>1</sup>, 김남<sup>1</sup>\*(<sup>1</sup>한국표준과학연구원, <sup>2</sup>전남대학교 물리학과, <sup>3</sup>고려대학교 물리학과, <sup>4</sup>부산대학교 물리학과)

## P1-ap.156

Characterization of Contact Resistance between Graphene Channel and Graphite Electrodes / 정대성<sup>1</sup>, 이건희<sup>2,3</sup>, 윤혜주<sup>2</sup>, 심지니<sup>2</sup>, 이정오<sup>3</sup>, 안기석<sup>3</sup>, 박종윤<sup>\*2</sup>\*(<sup>1</sup>성균관대학교 에너지과학과, <sup>2</sup>성균관대학교 물리학과, <sup>3</sup>한국화학연구원 박막재료연구센터)

P1-ap.157

**Structural, electrical and optical properties of proton-bombarded ZnO Nanorods** / 박창인, 김정란, 황인희, 한상욱\* (전북대학교 과학교육학과)

P1-ap.158

**Black phosphorus transistor for logic circuit and OLED swithcing**  
/ KIM Jin Sung, LIM June Yeong, YU Sanghyuck, IM Seongil\* (Department of Physics Yonsei University)

P1-ap.159

**AMOLED device using two dimensional transition metal dichalcogenides channel FET** / YU Sanghyuck, IM Seongil\*, KIM Jin Sung, LIM June Yeong (Department of Physics Yonsei University)

P1-ap.160

**표면 공명 현상을 이용한 가시광선 영역에서의 이산화바나듐 나노 어레이 구조의 광학 특성 연구** / 송한성<sup>1</sup>, 천명현<sup>1</sup>, 이수옥<sup>2</sup>, 이재종<sup>2</sup>, Dae Joon Kang\*<sup>1</sup>  
(<sup>1</sup>성균관대학교 물리학과, <sup>2</sup>한국기계연구원)

게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소 : 포스터발표장

### P1-co.101\*

액정 콜로이드에서 액정의 짜그러짐에 따른 액정과 입자의 상호작용에 관한 연구 / 이범규, 김성조, 김종현\*(충남대학교 물리학과)

### P1-co.102\*

**Axonal mRNA Dynamics in Live Hippocampal Neurons** / LEE Byung Hun<sup>1</sup>, PARK Hyeyoon<sup>\*1</sup>, JEON Noo Li<sup>2</sup>, BANG Seokyoung<sup>2</sup>, LEE Seungryeul<sup>2</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, Seoul 08826, Korea, <sup>2</sup>Institute of Advanced Machinery and Design, Seoul National University, Seoul 08826, Korea)

### P1-co.103\*

**Single-molecule FRET based study on Mot1, the global repressor of transcription** / JUNGE Yongje, HOHNG Sungchul\*(Department of Physics and Astronomy, Seoul National University)

### P1-co.104

**Fork regression activity of yeast Rad5 protein** / SHIN Soochul<sup>1</sup>, HYUN Kwang-Beom<sup>2</sup>, KIM Jaehoon<sup>2</sup>, HOHNG Sungchul<sup>\*1</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Department of Biological Sciences, KAIST)

### P1-co.105\*

**smFRET Analysis of Nucleosome Translocation by CHD1** / KIRK Jaewon, HOHNG Sungchul\*(Department of Physics&Astronomy, Seoul National University)

### P1-co.106

**Reconstitution of Transcription and Co-transcriptional Effect on TPP Riboswitch** / 엄희수, 강우영, 홍성철\*(서울대학교 물리학과)

### P1-co.107

**NAP1L1 promotes dynamic CSB-DNA interactions and accelerates activation and translocation of CSB-mediated chromatin remodeling** / LEE Ju Yeon<sup>1</sup>, LAKE Robert J.<sup>2</sup>, BOHR Vilhelm A.<sup>3</sup>, FAN Hua-Ying<sup>\*2</sup>, HOHNG Sungchul<sup>\*1</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea, <sup>2</sup>Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA 19104, USA, <sup>3</sup>Laboratory of Molecular Gerontology, National Institute on Aging, National Institutes of Health, USA)

P1-co.108

**Super-resolution Imaging of Neuron in Mouse with Line-scan Confocal Microscope** / PARK Sangjun<sup>1</sup>, KANG Wooyoung<sup>1</sup>, SHIM Jaehoon<sup>2</sup>, KAANG Bong-Kiun<sup>2</sup>, HOHNG Sungchul\*<sup>1</sup>(<sup>1</sup>Department of Physics and Astronomy Seoul National University, <sup>2</sup>School of Biological Sciences Seoul National University)

P1-co.109

**smFRET analysis of tR2 terminator** / KANG Wooyoung<sup>1,3</sup>, UHM Heesoo<sup>1,3</sup>, HA Kooksun<sup>4</sup>, KANG Changwon<sup>4</sup>, HOHNG Sungchul\*<sup>1,2,3</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Department of Biophysics and Chemical Biology, Seoul National University, <sup>3</sup>National Center of Creative Research Initiatives, Seoul National University, <sup>4</sup>Department of Biological Science, Korea Advanced Institute of Science and Technology)

P1-co.110

**Single-molecule studies on maltose transport system with maltose binding protein** / LEE Jongjin<sup>1,2</sup>, HOHNG Sungchul\*<sup>1,2</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, Seoul, Korea, <sup>2</sup>National Center for Creative Research Initiatives, Seoul National University, Seoul, Korea)

P1-co.111\*

**Phosphorescence emission enhancement from metal-free organic material by surface plasmon resonance** / SEO Chagwon<sup>1</sup>, LEE Jubok<sup>1</sup>, LEE Dongwook<sup>2</sup>, KIM Jinsang<sup>2</sup>, KIM Min Su\*<sup>1</sup>(<sup>1</sup>Department of Energy Science Sungkyunkwan University, <sup>2</sup>Department of Materials Science and Engineering, University of Michigan)

P1-co.112

**Optical properties of single crystal TMTSF** / LEE I. J.\* , KWON Seonho, BAE Junwan(Department of Physics Chonbuk National University)

P1-co.113

**Diffusion analysis of PCNA interacting with p15PAF on DNA** / KIM Daehyung<sup>1</sup>, HAMDAN Samir\*<sup>2</sup>, BLANCO Francisco\*<sup>3</sup>, LEE Jong-Bong\*<sup>1,4</sup>(<sup>1</sup>Department of Physics, POSTECH, Pohang, Korea, <sup>2</sup>Division of Biological and Environmental Sciences and Engineering, King Abdullah University of Science&Technology, <sup>3</sup>Structural Biology Unit, CIC bioGUNE, Parque Tecnológico de Bizkaia Edificio 800, 48160 Derio, Spain, <sup>4</sup>School of Interdisciplinary Bioscience & Bioengineering, POSTECH, Pohang, Korea)

P1-co.114

**Unrestricted Adhesion of Drug-Resistant Breast Cancer Cells on Nanoscaffolds** / PARK Soyeun\*(College of Pharmacy, Keimyung University)

P1-co.115

**Single molecule studies of human exonuclease 1** / OH Jae Ho<sup>1</sup>, FISHEL

Richard<sup>2,3</sup>, LEE Jong-Bong<sup>\*1,4</sup>(<sup>1</sup>Department of Physics, POSTECH, Pohang, Korea, <sup>2</sup>Department of Molecular Virology, Immunology and Medical Genetics, The Ohio State University Medical, <sup>3</sup>Physics Department, The Ohio State University, Columbus, OH 43210, <sup>4</sup>Interdisciplinary Bioscience and Bioengineering, POSTECH, Pohang, Korea)

P1-co.116

**Single-Molecule Studies of UvrA-UvrB damage sensor during Nucleotide Excision DNA Repair in E.coli** / LEE Seung-Jae, LEE Ju-Yeon, HOHNG Sungchul<sup>\*</sup>(Department of Physics Seoul National University)

P1-co.117

**스틸빈, 리보플라빈 염료가 주입된 실크 나노구조체** / 김숙영<sup>1</sup>, 조민식<sup>1</sup>, 민예림<sup>2</sup>, 김성환<sup>\*1,2</sup>(<sup>1</sup>Department of Energy Systems Research, Ajou University, <sup>2</sup>Department of Physics)



게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소 : 포스터발표장

### P1-co.201\*

**Tuning the Schottky barrier of two-dimensional lateral heterostructure by strain engineering** / 황희현, 이재광\*(부산대학교 물리학과)

### P1-co.202\*

**Wedge energy bands of monolayer black phosphorus: A first-principles study** / 박민우, 이훈경\*, 배현후, 이승한, 양형모(건국대학교)

### P1-co.203

**Developing phonon dispersion code with acoustic sum rules for thermoelectric materials.** / LEE Yung Ting<sup>\*1</sup>, RYEE Siheon<sup>1</sup>, LEE Chi Cheng<sup>2</sup>, HAN Myung Joon<sup>1</sup>, OZAKI Taisuke<sup>2</sup>(<sup>1</sup>Korea Advanced Institute of Science and Technology, <sup>2</sup>The Institute for Solid State Physics, The University of Tokyo)

### P1-co.204\*

**Elastic properties of carbyne : quantum Monte Carlo study** / HONG luegyun<sup>1</sup>, AHN Jeonghwan<sup>1</sup>, SHIN Hyeondeok<sup>2</sup>, LEE Hoonkyung<sup>1</sup>, KWON Yongkyung<sup>\*1</sup>(<sup>1</sup>Department of Physics Konkuk University, <sup>2</sup>Leadership Computing Facility Argonne National Laboratory)

### P1-co.205\*

**Ab initio exploration of hydrogenation of graphene on metal (111) surfaces** / OKYAY Mahmut Sait<sup>1</sup>, YOUSAF Masood<sup>\*2</sup>, PARK Noejung<sup>\*1, 2</sup> (<sup>1</sup>Department of Physics and Applied Mathematics, Ulsan National Institute of Science and Technology, <sup>2</sup>Center for Multidimensional Carbon Material Center, Ulsan National Institute of Science and Technology)

### P1-co.206\*

**Length Scaling of Metal-Graphene Contact Resistance: An ab initio study** / SHIM Yoon Su, KO Kwan Ho, KIM Yong-Hoon\*(Graduate School of EEWS, Korea Advanced Institute of Science and Technology (KAIST))

### P1-co.207\*

**Development of a non-equilibrium electronic structure calculation method based on local constrained density functional theory: Applications to vertically-stacked 2D heterostructures** / KIM Han Seul, KIM Yong-Hoon\*(Graduate School of EEWS, KAIST)

P1-co.208

**Tuning of band gap in single- and few-layer  $\beta$ -ZrNCl by applying strain and electric field** / YUN Won Seok, LEE J.D.\* (Department of Emerging Materials Science, DGIST)

P1-co.209

**First-principles based computational study on nucleation and growth mechanisms of U on Mo(110) surface solvated in an eutectic LiCl-KCl molten salt** / KWON Choah, BYUNGCHAN Han\* (Department of Chemical and Biomolecular Engineering Yonsei University)

P1-co.210\*

**Thermopower in Semiconducting Carbon Nanotubes: A First-Principles Study** / LEE Jounghee, LEE Eui-Sup, KIM Yong-Hyun\* (Graduate School of Nanoscience and Technology, KAIST)

P1-co.211

**Atomic-Level Understanding toward a High-Capacity and High-Power Silicon Oxide (SiO) Material** / JUNG Sung Chul<sup>1</sup>, KIM Hyung-Jin<sup>1</sup>, KIM Jae-Hun<sup>2</sup>, HAN Young-Kyu\*<sup>1</sup> (<sup>1</sup>Department of Energy and Materials Engineering Dongguk University, <sup>2</sup>School of Advanced Materials Engineering Kookmin University)

P1-co.212\*

**First-Principles Study on Structural Phase Transition of Phase Change Material  $\text{GeSb}_4\text{Te}_7$**  / SONG Hosin, PARK Hanjin, KIM Cheol-Woon, KWON Young-Kyun\* (Department of physics and Research Institute for Basic Sciences, Kyung Hee University)

P1-co.213\*

**Ab Initio Studies of Structure, Electronic and Optical Properties of Sn-doped Hematite** / MIN Taewon, LEE Jaekwang\* (Department of Physics, Pusan National University, Busan 46241)

P1-co.214

**Electronic structure and magnetic property of  $\text{LaNiO}_3/\text{CaMnO}_3$  superlattice** / LEE Alex Taekyung<sup>1,2</sup>, JEONG Min Yong<sup>1</sup>, HAN Myung Joon\*<sup>1,3</sup> (<sup>1</sup>Department of Physics, KAIST, <sup>2</sup>Department of Applied Physics and Applied Mathematics, Columbia University, <sup>3</sup>KAIST institute for NanoCentury)

P1-co.215

**Magnetic force theorem within LCPAO basis method and its application to transition metal monoxides** / YOON Hongkee, KIM Taekjung, HAN Myungjoon\* (Department of Physics KAIST)

P1-co.216\*

**Gray-arsenic as a promising candidate for thermoelectric applications** / 강승훈, 이승준, 권영균\*(경희대학교 물리학과)

P1-co.217\*

**First principle study of the Ruddlesden-Popper series,  $(\text{Ca}, \text{Sr})_3\text{Ti}_2\text{O}_7$**  / 이해원, 김복기\*(부산대학교 물리학과)

P1-co.218

**A multi-level approach for the widths of the low-lying energy bands of the Mathieu equation** / SONG Dae-Yup\*(Department of Physics Education Sunchon National University,)

P1-co.219\*

**Tuning the schottky barrier height and carrier-type control of black phosphorene-metal contact** / LEE Su Yeong, YUN Won Seok, LEE J. D.\* (Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology (DGIST))

P1-co.220

**물체의 충돌시간이 지수함수에서 거듭제곱으로 바뀌는 원인** / 이종진\*, 장은지(경상대학교 물리학과)

P1-co.221

**일차원 헤르츠 체인에서의 충격파 연구** / 이종진\*, 박소연(경상대학교 물리학과)

P1-co.222\*

**Application of the machine learning algorithm to electronic structure calculations: A test case of B/N-doped graphene** / KIM Yong-Hoon\*, KIM Hu Sung(Graduate School of EEWS, Korea Advanced Institute for Science and Technology)

P1-co.223\*

**Effective models of 2D layered magnetic chalcogenides.** / LEE Dongkyu<sup>1</sup>, CHITTARI Bheema Lingam<sup>1, 2</sup>, GAO Xing<sup>2</sup>, HWANG Euyheon<sup>\*2</sup>, JUNG Jeil<sup>\*1</sup>(<sup>1</sup>Department of Physics, University of Seoul, Seoul 130-743, Korea, <sup>2</sup>SAINT, Sungkyunkwan University, Suwon, 16419, Korea)

P1-co.224

**Boltzmann transport calculation of thermoelectric properties in  $\text{Ag}_2\text{Se}_{1-x}\text{Te}_x$  ( $x = 0.0$  and  $0.5$ )** / YUN Jae Hyun<sup>\*1, 2</sup>, LEE Min-Ho<sup>2</sup>, KIM Jae Nyung<sup>3</sup>, SHIM Ji Hoon<sup>3</sup>, RHYEE Jong-Soo<sup>2</sup>(<sup>1</sup>Department of Chemistry and Nano Science, Ewha Womans University, Seoul 03760, <sup>2</sup>Department of Applied Physics and Institute of Natural Sciences, Kyung Hee University, Yongin 17104, <sup>3</sup>Department of Chemistry, Pohang University of Science and Technology, Pohang 37673)

게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소 : 포스터발표장

### P1-co.301

**Bi<sub>0.5</sub>Na<sub>0.5</sub>TiO<sub>3</sub>-SrTiO<sub>3</sub>-BiFeO<sub>3</sub> 삼성분계 세라믹스의 전계유기 변형특성 연구** / 이창현<sup>1</sup>, 강진규<sup>1</sup>, Thi Hinh Dinh<sup>1</sup>, 안창원<sup>2</sup>, 김일원<sup>2</sup>, 이재신<sup>1\*</sup>(<sup>1</sup>울산대학교 첨단소재공학부, <sup>2</sup>울산대학교 물리학과)

### P1-co.302\*

**Enhanced Ferroelectric and Piezoelectric Property of Bi<sub>0.86</sub>Sm<sub>0.14</sub>FeO<sub>3</sub> Ceramics by Water-quenching Method** / CHOI Haiin<sup>1,2</sup>, LEE Myang Hwan<sup>2</sup>, PARK Jin Su<sup>2</sup>, KIM Da Jeong<sup>2</sup>, HAN Sung Jin<sup>1</sup>, KIM Myong-Ho<sup>2</sup>, JANG Kiwan<sup>1</sup>, KIM Won-Jeong<sup>1</sup>, SONG Tae Kwon<sup>2\*</sup>(<sup>1</sup>Department of Physics, Changwon National University, <sup>2</sup>Department of Materials Science and Engineering, Changwon National University)

### P1-co.303\*

**Large piezoelectric properties of Na<sub>0.5</sub>Bi<sub>0.5</sub>TiO<sub>3</sub> templates based relaxor-ferroelectric composite ceramics at low driving field** / KHALIQ Abdul<sup>1</sup>, AHN Chang Won<sup>1</sup>, LEE Jae Shin<sup>2</sup>, KIM Ill Won<sup>1\*</sup>(<sup>1</sup>Department of Physics and Energy Harvest Storage Research Center, <sup>2</sup>School of Materials Science and Engineering, University of Ulsan)

### P1-co.304\*

**X-ray microdiffraction study of structural changes in (Bi<sub>0.5</sub>Na<sub>0.5</sub>)TiO<sub>3</sub>-xBaTiO<sub>3</sub>** / 박정현, 위상원, 정진석\*(숭실대학교 물리학과)

### P1-co.305\*

**Piezoelectric properties of lead-free K<sub>0.5</sub>Na<sub>0.5</sub>NbO<sub>3</sub>-based thick films measured by laser Doppler vibrometer** / SEOG Hae Jin, PARK Bong Chan, AHN Chang Won, KIM Ill Won\*(Department of Physics and EHSRC, University of Ulsan)

### P1-co.306\*

**Tuned ferroelectric and piezoelectric properties of BiAlO<sub>3</sub> modified Bi<sub>0.5</sub>(Na<sub>0.78</sub>K<sub>0.22</sub>)<sub>0.5</sub>TiO<sub>3</sub> Lead-free piezoelectric thin films** / SHEERAZ Muhammad, AHN Chang Won, KIM Ill Won\*(Department of Physics and Energy Harvest Storage Research Center,)

### P1-co.307

**비납계 유리계의 교류전도도와 복소 유전율의 온도의존성** / 박종호\*(진주교 육대학교 과학교육과)

P1-co.308

**Phase Extraction from Transmission Spectra via Kramers-Kronig Relations.** / JUNG Taek Sun, SIM Kyung Ik, KIM Jae Hoon\*(Department of Physics Yonsei University)

P1-co.309

**Insulator-to-semimetal transition of calcium fluoride induced by optical field** / KWON Ojoon<sup>1,2</sup>, KIM Dong Eon<sup>\*1,2</sup>(<sup>1</sup>Department of Physics, Pohang University of Science and Technology, <sup>2</sup>Max Planck Center for Attosecond Science, Max Planck POSTECH/KOREA Res. Init.)

P1-co.310\*

**Raman mapping analysis of pigment distribution of Korean cultural heritage** / 지정은<sup>1</sup>, 한기옥<sup>1</sup>, 강대일<sup>2</sup>, 이한형<sup>2</sup>, 양인상<sup>\*1</sup>(<sup>1</sup>이화여자대학교 물리학과, <sup>2</sup>한국전통문화대학교 보존과학과)

P1-co.311\*

**Thermal annealing effects on physical properties of (K<sub>0.5</sub>Na<sub>0.5</sub>)NbO<sub>3</sub> poly-crystals** / KIM Gowoon<sup>1</sup>, KIM Dongjin<sup>1</sup>, LEE Hosu<sup>1</sup>, JEEN Hyoungeon<sup>\*1</sup>, JIN Mijeon<sup>2</sup>, O Shangmin<sup>2</sup>(<sup>1</sup>Department of Physics Pusan National University, <sup>2</sup>Center for Research facilities Pusan National University)

P1-co.312\*

**Structural and electrical properties of La-doped BiFeO<sub>3</sub>-BaTiO<sub>3</sub> lead free ceramics** / HAN Sung Jin<sup>1</sup>, LEE Myang Hwan<sup>2</sup>, KIM Da jeong<sup>2</sup>, PARK Jin Su<sup>2</sup>, CHOI Haiin<sup>2</sup>, SONG Tae Kwon<sup>2</sup>, KIM Won-Jeong<sup>1</sup>, KIM Sang Soo<sup>\*1</sup>(<sup>1</sup>Department of Physics, Changwon National University, <sup>2</sup>Department of Materials Science and Engineering, Changwon National University)

P1-co.313

**Intergrowth 구조를 가지는 CaBi<sub>4</sub>Ti<sub>4</sub>O<sub>15</sub>-Bi<sub>4</sub>Ti<sub>3</sub>O<sub>12</sub> 세라믹스의 La, Nd 도핑에 따른 특성 변화** / 최기쁨, 조삼연, Darkhansai Khan Bolortsetseg, 부상돈\*(전북대학교 물리학과)

P1-co.314\*

**Orientation-dependent ferroelectric and piezoelectric properties in lead-free of (1-x)BiFeO<sub>3</sub>-xBaTiO<sub>3</sub> solid solution thin films grown by pulsed laser deposition** / PARK Jinsu<sup>1</sup>, LEE Myang Hwan<sup>1</sup>, CHOI Haiin<sup>1</sup>, KIM Da Jeong<sup>1</sup>, KIM Myong-ho<sup>1</sup>, HAN Sung Jin<sup>2</sup>, KIM Won-jeong<sup>2</sup>, KIM Sang Su<sup>2</sup>, DO Dalhyun<sup>3</sup>, SONG Tae Kwon<sup>\*1</sup>(<sup>1</sup>School of Materials Science and Eng., Changwon Nat'l Univ., 51140, Korea, <sup>2</sup>Department of Physics, Changwon Nat'l Univ., Gyeongnam 51140, Korea, <sup>3</sup>Department of Advanced Materials Engineering, Keimyung University, Daegu 42601, Korea)

P1-co.315

**Structural, electrical and ferroelectric properties of V-doped  $\text{CaBi}_4\text{Ti}_4\text{O}_{15}$  thin films** / KIM Sangsu\*, CHOI Jiya, RAGHAVAN Chinnambedu Murugesan, SONG Taekwon(Changwon National University)

P1-co.316

**강유전체  $\text{Bi}_4\text{Ti}_3\text{O}_{12}$  유리-세라믹의 상전이 및 전기적 특성** / 김맥<sup>1</sup>, 권오혁<sup>1</sup>, 최현우<sup>2</sup>, 백창규<sup>1</sup>, 임영훈<sup>3</sup>, 양용석<sup>\*1</sup>(<sup>1</sup>부산대학교 나노융합기술학과, <sup>2</sup>부산대학교 단결정은행연구소, <sup>3</sup>세명대학교 교양과정부)

P1-co.317\*

**P(VDF-TrFE)의 전자빔 조사를 통한 이완 강유전체 상전이 특성** / 김재웅, 이태권, 정종훈\*(인하대학교 물리학과)

P1-co.318

**분극 시간에 따른 복합 유전체  $\text{Li}_2\text{B}_4\text{O}_7\text{-SrTiO}_3$  계의 압전성 연구** / 최현우<sup>\*1</sup>, 백창규<sup>2</sup>, 김맥<sup>2</sup>, 임영훈<sup>3</sup>, 양용석<sup>2</sup>(<sup>1</sup>부산대학교 단결정 은행 연구소, <sup>2</sup>부산대학교 나노융합기술학과, <sup>3</sup>세명대학교 교양과정부)

P1-co.319

**Effects of Al-substitution in  $\text{BaFe}_{12-x}\text{Al}_x\text{O}_{19}$  studied by Raman spectroscopy** / HAN Kiok<sup>1</sup>, KIM Keehoon<sup>2</sup>, SHIN KwangWoo<sup>2</sup>, YANG In-Sang<sup>\*1</sup>(<sup>1</sup>Department of Physics Ewha Womans University, <sup>2</sup>Department of Physics Seoul National University)

P1-co.320

**Raman spectroscopy of the pigments on a Korean Buddha painting** / NAM Ji-Yeon<sup>1</sup>, HAN Kiok<sup>1</sup>, JI Jeong-Eun<sup>1</sup>, KIM Seung<sup>1</sup>, LEE Hanhyoung<sup>2</sup>, KANG Daiill<sup>2</sup>, YANG In-Sang<sup>\*1</sup>(<sup>1</sup>Department of Physics and Division of Nano-Sciences, Ewha Womans University, <sup>2</sup>Department of Conservation Science, Korea National University of Cultural Heritage)

게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소 : 포스터발표장

### P1-co.401\*

**Magnetization and Surface morphology of Co/Pt(111) / YOO Pilsun, YU Segi, LIU Chunli\***(Department of Physics Hankuk University of Foreign Studies)

### P1-co.402

**방사광을 이용한 3차원 위상절연체  $(\text{Bi}_{2-x}\text{Gd})_x\text{Te}_3$ 의 전자 구조 연구 / 이은숙<sup>1</sup>, 김대현<sup>1</sup>, 김현우<sup>1</sup>, 성승호<sup>1</sup>, 김진수<sup>2</sup>, 정명화<sup>2</sup>, 백재윤<sup>3</sup>, 신현준<sup>3</sup>, 강정수<sup>\*1</sup>**(<sup>1</sup>가톨릭대학교 물리학과, <sup>2</sup>서강대학교 물리학과, <sup>3</sup>포항공가속기 연구소)

### P1-co.403

**희토류 금속의 치환에 따른 이중 페로브스카이트  $\text{R}_2\text{FeVO}_6$  (R= La, Nd, Eu, Y)의 방사광 분광 연구 / 김현우<sup>1</sup>, 김대현<sup>1</sup>, 이은숙<sup>1</sup>, 성승호<sup>1</sup>, 강정수<sup>\*1</sup>, S. Kolesnik<sup>2</sup>, B. Dabrowski<sup>2</sup>, 고윤영<sup>3</sup>, 김재영<sup>3</sup>**(<sup>1</sup>가톨릭대학교 물리학과, <sup>2</sup>Northern Illinois University, <sup>3</sup>포항공가속기 연구소)

### P1-co.404

**반쪽 금속 호이슬러 화합물  $\text{Mn}_3\text{Ga}$ 의 방사광 분광 연구 / 성승호<sup>1</sup>, 김대현<sup>1</sup>, 이은숙<sup>1</sup>, 김현우<sup>1</sup>, M. Venkatesan<sup>2</sup>, J. M. D. Coey<sup>2</sup>, 고윤영<sup>3</sup>, 김재영<sup>3</sup>, 강정수<sup>\*1</sup>**(<sup>1</sup>가톨릭대학교 물리학과, <sup>2</sup>School of Physics and CRANN, Trinity College, <sup>3</sup>포항공가속기 연구소)

### P1-co.405\*

**Magnetocrystalline anisotropy of asymmetrically terminated FeRh(001) thin film / 제갈소영, 임성현, 홍순철\***(울산대학교 물리학과)

### P1-co.406\*

**First principles calculations on magnetism of bulk and thin film  $\text{CrPt}_3$  alloy / 정태성, 제갈소영, 홍순철\***(울산대학교 물리학과)

### P1-co.407\*

**Strain effect on magnetocrystalline anisotropy of heavy metal/Fe/MgO / TAIVANS AIKHAN Purev, RHIM S.H, HONG S.C\***(울산대학교 물리학과)

### P1-co.408\*

**Defect-induced magnetism of  $\text{Ag}_2\text{Se}$ : a first principles study\* / DO Duc Cuong, RHIM S.H, HONG S.C\***(울산대학교 물리학과)

P1-co.409

**Synthesis of  $\text{Co}_4\text{Ta}_2\text{O}_9$  single crystals** / OH D.G., CHOI H. Y., MOON J. Y., LEE N. \*, CHOI Y. J\*(Department of Physics, Yonsei University)

P1-co.410\*

**Multilayer  $\text{Fe}_{45}\text{Co}_{55}/\text{Au}_{30}\text{Cu}_{70}$  thin film and effect of carbon doping on magnetocrystalline anisotropy: Rare-earth free permanent magnet** / KHAN Imran, HONG Jisang\*(Department of Physics, Pukyong National University)

P1-co.411

**Giant exchange bias effect in  $\text{YCo}_{0.25}\text{Mn}_{0.75}\text{O}_3$**  / OH S. H. , MOON J. Y. , KIM M. K. , LEE N. \*, CHOI Y. J\*(Department of Physics and IPAP, Yonsei University, Seoul 120-749, Korea)

P1-co.412\*

**Magnetic and transport properties of epitaxial  $[\text{Fe}_3\text{O}_4/\text{MnFe}_2\text{O}_4]_{20}$  superlattice film on MgO (100) by molecular beam epitaxy** / DUONG Van Thiet, NGUYEN Van Quang, NGUYEN Thi Minh Hai, NGUYEN Anh Phuong, DUONG Anh Tuan, CHO Sunglae\*(Department of Physics and Energy Harvest Storage Research Center)

P1-co.413

**비 자성  $\text{Bi}^{3+}$  치환에 의한  $\text{BaTi}_{0.9}\text{Fe}_{0.1}\text{O}_3$ 의 결정구조 및 자기적 특성 변화 유도** / 김덕현, 이보화\*(한국외국어대학교 물리학과 & 산화물 연구센터)

P1-co.414\*

**Abnormal magnetoresistance in  $\text{Fe}_3\text{O}_4/\text{Pt}$  bilayers** / PHAM Kim Hang Thi<sup>1</sup>, GOOK Ji Hyun<sup>1</sup>, LEE Nyun Jong<sup>1</sup>, BAE Yu Jeong<sup>1</sup>, MICHEL Anny<sup>2</sup>, KIM Tae Hee<sup>\*1</sup>(<sup>1</sup>Department of Physics, Ewha Womans University, Seoul, Republic of Korea, <sup>2</sup>DJpartment de Physique et MIIcanique des MatIIriaux, CNRS-UniversitIJ de)

P1-co.415\*

**Ultrafast spin dynamics and switching via the spin transfer torques in antiferromagnet with added Dzyaloshinskii-Moriya interaction** / KIM Tae Heon<sup>1</sup>, GRUENBERG Peter<sup>2</sup>, CHO Beong Ki<sup>\*1,2</sup> (<sup>1</sup>School of Materials Science and Engineering, Gwangju Institute of Science and Technology, <sup>2</sup>Gruenberg Center for Magnetic Nanomaterials, Gwangju Institute of Science and Technology)

P1-co.416

**Revisiting the effects of spin-orbit interaction in antiferromagnetic  $\text{LaFeAsO}$**  / OH Sehoon, CHOI Hyoung Joon\*(Department of Physics and IPAP, Yonsei University)



P1-co.417

**Dynamics of Magnetic Bubblecade in the Creep Regime /** KIM Duck-Ho<sup>\*1</sup>, MOON Kyoung-Woong<sup>2</sup>, YOO Sang-Cheol<sup>1,3</sup>, KIM Dae-Yun<sup>1</sup>, MIN Byoung-Chul<sup>3</sup>, HWANG Chanyong<sup>2</sup>, CHOE Sug-Bong<sup>1</sup>(<sup>1</sup>Department of Physics and Institute of Applied Physics, Seoul National University, <sup>2</sup>Center for Nanometrology, Korea Research Institute of Standards and Science, <sup>3</sup>Spin Convergence Research Center, Korea Institute of Science and Technology)

P1-co.418\*

**Na을 미량 치환한 LiFePO<sub>4</sub>의 자기적 특성 연구 /** 고병욱<sup>1</sup>, 이영배<sup>2</sup>, 명보라<sup>1</sup>, 김삼진<sup>1</sup>, 김철성<sup>\*1</sup>(<sup>1</sup>국민대학교 물리학과, <sup>2</sup>한중대학교 교양학과)

P1-co.419\*

**Ba<sub>3</sub>Zn<sub>2</sub>Fe<sub>24</sub>O<sub>41</sub>의 결정학적 및 자기적 특성 연구 /** 임정태<sup>1</sup>, 서정철<sup>2</sup>, 심인보<sup>1</sup>, 김철성<sup>\*1</sup>(<sup>1</sup>국민대학교 물리학과, <sup>2</sup>원광대학교 반도체 디스플레이학부)

P1-co.420

**Co를 치환한 ZnO의 gate 전압에 따른 자기저항 /** 천미연<sup>1</sup>, 조용찬<sup>2</sup>, 박철홍<sup>3</sup>, 정세영<sup>\*4,5</sup>(<sup>1</sup>부산대학교 단결정은행연구소, <sup>2</sup>한국표준과학연구원, <sup>3</sup>부산대학교 물리교육과, <sup>4</sup>부산대학교 인지메카트로닉스공학과, <sup>5</sup>부산대학교 광메카트로닉스공학화)

P1-co.421\*

**Na, Li 이온이 결핍된 FeSO<sub>4</sub>F 물질의 결정구조에 따른 뢰스바우어 분광학 연구 /** 최현경<sup>1</sup>, 김문환<sup>2</sup>, 고태준<sup>1</sup>, 김성백<sup>3</sup>, 김철성<sup>\*1</sup>(<sup>1</sup>국민대학교 물리학과, <sup>2</sup>동진씨미켄 Co., Ltd, <sup>3</sup>건양대학교 기초교양학부)

P1-co.422\*

**LiFe<sub>0.9</sub>Mg<sub>0.1</sub>PO<sub>4</sub> 물질의 결정학적 및 자기적 특성 연구 /** 김민지<sup>1</sup>, 한은주<sup>2</sup>, 김삼진<sup>1</sup>, 김철성<sup>\*1</sup>(<sup>1</sup>국민대학교 물리학과, <sup>2</sup>수원대학교 물리학과)

P1-co.423

**Magnetic tunnel junctions based on ferromagnetism at LaAlO<sub>3</sub>/SrTiO<sub>3</sub> interface /** KIM Jinkyung<sup>1</sup>, SONG Jonghyun<sup>\*1</sup>, NGO Thach D.N.<sup>2</sup>, KIM Jinhee<sup>2</sup>(<sup>1</sup>Department of physics Chungnam National University, <sup>2</sup>Korea Research Institute of Standards and Science)

P1-co.424

**Verwey transition of nano-sized magnetite crystals investigated by <sup>57</sup>Fe NMR /** LIM SUMin<sup>1</sup>, CHOI Baek Soon<sup>1</sup>, LEE Soon Chil<sup>\*1</sup>, HONG JaeYoung<sup>2</sup>, LEE JiSoo<sup>2</sup>, HYEON TaeGhwan<sup>\*2</sup>, KIM TaeHun<sup>3</sup>, JEONG JaeHong<sup>3</sup>, PARK Je-Geun<sup>\*3</sup>(<sup>1</sup>Center for Correlated Electron Systems, Institute for Basic Science, <sup>2</sup>department of physics, KAIST, <sup>3</sup>Center for Nanoparticle Research, Institute for Basic Science (IBS), Seoul 151-742, Korea)

P1-co.425

**Cr<sup>3+</sup> NMR for Multiferroic Chromium spinel ZnCr<sub>2</sub>Se<sub>4</sub>** / PARK Sejun<sup>1</sup>, KWON Sangil<sup>2</sup>, LEE Soonchil<sup>\*1</sup>, KHIM Seunghyun<sup>3</sup>, BHOI Dilip Kumar<sup>3</sup>, KIM Kee Hoon<sup>\*3</sup>(<sup>1</sup>Department of Physics, KAIST, <sup>2</sup>Institute for Quantum Computing, University of Waterloo, <sup>3</sup>CENSCMR, Department of Physics and Astronomy, Seoul National University)

P1-co.426\*

**Pt/Ru(001)과 Pt/Ru(111)의 자성과 촉매 반응성에 대한 제일원리계산** / 이상희, 권오룡, 홍순철\*(울산대학교 물리학과)

P1-co.427\*

**First principles calculations on magnetism of Fe/Ni(001) thin films** / 이주은, 제갈소영, 홍순철\*(울산대학교 물리학과)

게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소 : 포스터발표장

### P1-co.501

**Identification of proton species introduced in ZnO single crystal by H<sup>+</sup> irradiation** / PARK Jun Kue\*, KWON Hyeok-Jung, KIM Han-Sung, KIM Dae-Il, SEO Dong-Hyuk, AHN Tae-Sung, HWANG Young Seok, KIM Kye-Ryung, CHO Yong Sub(Korea Multi-purpose Accelerator Complex (KOMAC), Korea Atomic Energy Research Institute (KAERI))

### P1-co.502\*

**Broken sublattice symmetry states in Bernal stacked multilayer graphene** / YOON Chiho<sup>1</sup>, JANG Yunsu<sup>1</sup>, MIN Hongki<sup>\*1</sup>, JUNG Jeil<sup>2</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Department of Physics, University of Seoul)

### P1-co.503

**Plasmons in three dimensional gapless Weyl systems with arbitrary band dispersion** / AHN Seongjin<sup>1</sup>, HWANG Euyheon<sup>\*2</sup>, MIN Hongki<sup>\*1</sup> (<sup>1</sup>Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University, <sup>2</sup>SKKU Advanced Institute of Nanotechnology and Department of Physics, Sungkyunkwan University)

### P1-co.504

**Field effect transistor in oxide heterostructure** / 곽용수<sup>1</sup>, 김진희<sup>2</sup>, 송중현<sup>\*1</sup>(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>한국표준과학연구원)

### P1-co.505\*

**Manipulation of n and p type dope black phosphorene layer: A first principles study** / SON Jicheol, HASHMI Arqum, HONG Jisang<sup>\*</sup>(Department of Physics, Pukyong National University)

### P1-co.506\*

**Observation of Short and Ballistic Josephson Coupling in Planar Graphene Junctions** / 박진호<sup>1</sup>, 이길호<sup>2</sup>, 이재형<sup>1</sup>, Kenji Watanabe<sup>3</sup>, Takashi Taniguchi<sup>3</sup>, 이후종<sup>\*1</sup>(<sup>1</sup>Department of Physics, Pohang University of Science and Technology, Pohang, Korea, <sup>2</sup>Harvard University, Cambridge, MA 02138, USA, <sup>3</sup>National Institute for Materials Science, Japan)

### P1-co.507\*

**Magneto-electric effects in ballistic graphene quantum point contacts** / 김민수<sup>1</sup>, Kenji Watanabe<sup>2</sup>, Takashi Taniguchi<sup>2</sup>, 이후종<sup>\*1</sup>(<sup>1</sup>POSTECH

**P1-co.508**

**Zero-line modes at stacking faulted domain walls in multilayer graphene nanoribbon** / LEE Changhee<sup>1</sup>, KIM Gunn<sup>2</sup>, JUNG Jeil<sup>3</sup>, MIN Hongki\*<sup>1</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, Seoul 08826, Korea, <sup>2</sup>Department of Physics and Graphene Research Institute, Sejong University, Seoul 143-747, Korea, <sup>3</sup> Department of Physics, University of Seoul, Seoul 130-742, Korea)

**P1-co.509\***

**Creation of exciton-polariton condensates in non-resonant and resonant pumping regime toward exploring quantum fluid** / OH B. -Y.<sup>1</sup>, KWON Min-Sik<sup>1</sup>, GONG Su-Hyun<sup>1</sup>, KIM Je-Hyung<sup>1</sup>, KANG Hang Kyu<sup>2</sup>, KANG Sooseok<sup>2</sup>, SONG Jin Dong<sup>2</sup>, CHOI Hyounghoon\*<sup>1</sup>, CHO Yong-Hoon\*<sup>1</sup>(<sup>1</sup>Department of Physics and KI for the NanoCentury, KAIST, Daejeon, Republic of Korea, <sup>2</sup>Center for Opto-Electronic Convergence Systems, KIST, Seoul, Republic of Korea)

**P1-co.510\***

**Andreev reflection via quantum Hall edge states in bilayer graphene** / PARK Geon-Hyoung<sup>1</sup>, KIM Minsoo<sup>1</sup>, TANIGUCHI Takashi<sup>2</sup>, WATANABE Kenji<sup>2</sup>, LEE Hu-Jong\*<sup>1</sup>(<sup>1</sup>Department of Physics, Pohang University of Science and Technology, Korea, <sup>2</sup>National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044, Japan)

**P1-co.511**

**CdSe 양자점의 표면 상태에 따른 광학적 특성연구** / 양호순\*<sup>1</sup>, 이민정<sup>1</sup>, 홍경수<sup>2</sup>(<sup>1</sup>부산대학교 물리학과, <sup>2</sup>한국기초과학지원연구원 부산센터)

게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소: 포스터발표장

## P1-co.601

**Ab initio study of graphene nanowrinkles on Ni(111) substrate**

/ Jinwoo Park, Suklyun Hong\* (Department of Physics and Graphene Research Institute, Sejong University, Seoul, Korea)

## P1-co.602

**Topologically confined 1D conducting channel in bilayer graphene**/ 이장희<sup>1</sup>, Kenji Watanabe<sup>2</sup>, Takashi Taniguchi<sup>2</sup>, 이후종\*<sup>1</sup> (포항공과대학교 물리학과, <sup>2</sup>Advanced Materials Laboratory, National Institute for Materials Science, Japan)

## P1-co.603

**Two-dimensional Networks of Brominated Y-shaped Molecules on****Au(111)** / JEON Un Seung<sup>1</sup>, CHANG Min Hui<sup>1</sup>, JANG Won-Jun<sup>1</sup>, LEE Soon-Hyung<sup>1</sup>, HAN Seungwu<sup>2</sup>, KAHNG Se-Jong\*<sup>1</sup> (<sup>1</sup>Department of Physics, Korea University, <sup>2</sup>Department of Materials Science and Engineering, Seoul National University)

## P1-co.604

**First-principles study of the edge passivation of MoS<sub>2</sub> nanoribbon****structures** / CHA Janghwan, HONG Suklyun\* (Department of Physics and Graphene Research Institute, Sejong University)

## P1-co.605

**First-principles study of subsurface defects in topological insulator****Bi<sub>2</sub>Se<sub>3</sub> including van der Waals interaction** / 최영우<sup>1,2</sup>, 박준서<sup>3</sup>, 최형준\*<sup>1,2</sup> (<sup>1</sup>Department of Physics and IPAP, Yonsei University, Seoul 03722, Republic of Korea, <sup>2</sup>Center for Computational Studies of Advanced Electronic Material Properties, Yonsei University, <sup>3</sup>Korea Institute of Science and Technology, Seoul 02792, Republic of Korea)

## P1-co.606

**Single crystal copper oxide growth using single crystal copper****thin film** / 김현우<sup>1</sup>, 안성준<sup>1</sup>, Krishna Bahadur Rai<sup>1</sup>, Se Young Jeong<sup>2</sup>, Jeong Real Ahn\*<sup>1</sup> (<sup>1</sup>성균관대학교 물리학과, <sup>2</sup>부산대학교 인지메카트로닉스공학과)

## P1-co.607

**First-principles studies on electronic band structures of potassium-****doped few-layer black phosphorus with GW approximation** /

김한규, 백승수, 최형준\*(Department of Physics and IPAP, Yonsei University, Seoul 120-749, Korea)

P1-co.608

**Anomalous structural disorder and distortion in metal-to-insulator-transition  $\text{Ti}_2\text{O}_3$**  / HWANG In-hui<sup>1</sup>, BINGZHI Jiang<sup>2</sup>, JIN Zhenlan<sup>1</sup>, PARK Chang-in<sup>1</sup>, HAN Sang-wook\*<sup>1</sup>(<sup>1</sup>Department of Physics Education and Institute of Fusion Science, Jeonbuk National University, <sup>2</sup>Department of Physics, Yanbian University, Yanji 133002, China)

P1-co.609

**Understanding the electronic structure of Pt-alloys for surface reactivity** / 정종근, 김창영\*(서울대학교 물리학과)

P1-co.610\*

**STM을 이용한 SnSe 표면구조 연구** / 김태훈<sup>1,2</sup>, Trinh Thi Ly<sup>1,2</sup>, Anh Tuan Duong<sup>1,2</sup>, Sunglae Cho<sup>1,2</sup>, Ganbat Duvjir<sup>1,2</sup>, S.H. Rhim<sup>1,2</sup>, Jungdae Kim\*<sup>1,2</sup> (<sup>1</sup>울산대학교 물리학과, 680-749, <sup>2</sup>울산대학교 대학중점연구소(EHSRC), 680-749)

P1-co.611\*

**Unidirectional growth of ZnO nanostructures during a hydrothermal process** / KIM So Jin, KANG Hyon Chol\*(Department of Materials Science and Engineering, Chosun University)

P1-co.612\*

**Band structure of single-crystal black phosphorus.** / RYU Sae Hee<sup>1,2</sup>, JUNG Sung Won<sup>1,2</sup>, KIM Jimin<sup>1,2</sup>, KIM Keun Su\*<sup>1,2</sup>(<sup>1</sup>Center for Artificial Low Dimensional Electronic Systems, Institute for Basic Science (IBS), Pohang, <sup>2</sup>Department of Physics, Pohang University of Science and Technology (POSTECH), Pohang)

P1-co.613\*

**First-Principles Study on Surface Chemistry of Halide-Amine Co-Passivated InP Colloidal Quantum Dots** / YOO Dongsuk<sup>1</sup>, CHOI Hyekyoung<sup>2,3</sup>, KIM Kyungnam<sup>2</sup>, TAMANG Sudarsan<sup>2</sup>, KO Jae-Hyeon<sup>1</sup>, KIM Sungwoo<sup>2</sup>, JEONG Sohee\*<sup>2,3</sup>, KIM Yong-Hyun\*<sup>1</sup>(<sup>1</sup>Graduate School of Nanoscience and Technology, KAIST, <sup>2</sup>Nanomechanical Systems Research Division, Korea Institute of Machinery and Materials, <sup>3</sup>Department of Nanomechatronics, Korea University of Science and Technology (UST))

P1-co.614\*

**Development of a fully automated growth system for high-quality epitaxial graphene** / SOHN Yeongsup<sup>1,2</sup>, KIM Keun Su\*<sup>1,2</sup>(<sup>1</sup>Center for Artificial Low Dimensional Electronic Systems, Institute for Basic Science, Pohang, <sup>2</sup>Department of Physics, Pohang University of Science and Technology, Pohang)

P1-co.615\*

**Understanding of Nanoscale Friction for Epitaxial Graphene on Silicon Carbide Substrate** / KO Jae-Hyeon<sup>1</sup>, KWON Sangku<sup>2</sup>, WOO Jinhee<sup>1</sup>, PARK Jeong Young<sup>2</sup>, KIM Yong-Hyun\*<sup>1</sup>(<sup>1</sup>Graduate School of Nanoscience and Technology, KAIST, <sup>2</sup>Graduate School of EEWS, KAIST)

P1-co.616\*

**STM study on the surface defects of SnSe semiconductor** / TRINH Ly Thi<sup>1, 2</sup>, KIM Taehoon<sup>1, 2</sup>, DUONG Tuan Anh<sup>1, 2</sup>, CHO Sunglae<sup>1, 2</sup>, DUVJIR Ganbat<sup>1, 2</sup>, RHIM S.H.<sup>1, 2</sup>, KIM Jungdae\*<sup>1, 2</sup>(<sup>1</sup>울산대학교 물리학과, 680-749, <sup>2</sup>울산대학교 대학중점연구소(EHSRC), 680-749)

P1-co.617\*

**Origin of Symmetric Dimer Images of Si(001) Observed by Low-Temperature Scanning Tunneling Microscopy** / REN Xiao-Yan<sup>1, 2</sup>, KIM Hyun-Jung<sup>3, 4</sup>, NIU Chun-Yao<sup>1, 5</sup>, JIA Yu\*<sup>1, 5</sup>, CHO Jun-Hyung\*<sup>1, 3, 6</sup>(<sup>1</sup>School of Physics and Engineering, Zhengzhou University, Zhengzhou 450001, China, <sup>2</sup>School of Mechanical and Electrical Engineering, Henan Institute of Science and Technology, China, <sup>3</sup>Department of Physics, Hanyang University, <sup>4</sup>Korea Institute for Advanced Study, 85 Hoegiro, Dongdaemun-gu, Seoul 130-722, Korea, <sup>5</sup>Center for Advanced Analysis and Computational Science, Zhengzhou University, Zhengzhou 45001, China, <sup>6</sup>University of Science and Technology of China, Hefei, Anhui 230026, China)

P1-co.618\*

**Characterization of individual ultra-long SnO<sub>2</sub> nanowires grown by vapor transport method** / JUNG Won, KANG Hyon Chol\*(Department of Materials Science and Engineering, Chosun University)

P1-co.619\*

**나노구조 산화막을 가진 지르코늄 합금의 공기중에서의 고온 산화거동 / 박양정\*, 김정우, 박지원, 조성오**(한국과학기술원 원자력및양자공학과)

P1-co.620\*

**X-ray Scattering Study on MIT Transition in Single-Crystalline VO<sub>2</sub> Nanowires** / FAIYAZ Mohd<sup>1</sup>, SEO Okkyun<sup>2</sup>, WON Choi Jung<sup>2</sup>, HA Sung Soo<sup>2</sup>, MIN Kim Sun<sup>1</sup>, KANG Hyon Chol<sup>3</sup>, NOH Do Young\*<sup>1</sup>(<sup>1</sup>Department of Physics and Photon science, School of Physics and Chemistry, GIST Gwangju Korea 500-712, <sup>2</sup>School of Materials Science and Engineering, GIST, Gwangju Korea 500-712, <sup>3</sup>Department of Advanced Materials Engineering, Chosun University, Gwangju Korea 501-759)

P1-co.621\*

**Growth mechanism of In-doped b-Ga<sub>2</sub>O<sub>3</sub> nanowires deposited by radio frequency powder sputtering** / CHA Su Yeon, KANG Hyon Chol\*(Department of Materials Science and Engineering, Chosun University)

P1-co.622\*

**Adhesion and friction properties of external and internal steps of graphite** / JEONG JinHyeok<sup>1, 2</sup>, LEE Hyunsoo<sup>1, 2</sup>, KIM Jonghoon<sup>1, 2</sup>, PARK Jeongyoung<sup>\*1, 2</sup>(<sup>1</sup>Center for Nanomaterials and Chemical Reactions, Institute for Basic Science (IBS), <sup>2</sup>Graduate School of EEWS, Korea Advanced Institute of Science and Technology (KAIST))

P1-co.623\*

**Ultrafast dynamics observation of bulk-to-surface carrier injection of Dirac-electron of surface state in the topological insulator,  $\text{Bi}_{1.5}\text{Sb}_{0.5}\text{Te}_{1.7}\text{Se}_{1.3}$ .** / 최영관, 이종석\*, 정찬준(광주과학기술원 물리광과학과)



게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소 : 포스터발표장

### P1-nu.001

**Anomalous chromomagnetic quark-gluon-pion interaction and its application** / LEE Hee-Jung\* (Department of Physics Education, Chungbuk National University)

### P1-nu.002

**Determination of trap parameters for TL glow peaks of red emission quartz** / 홍덕균<sup>\*1</sup>, 김명진<sup>2</sup>, 김동호<sup>1</sup>, 김영웅<sup>1</sup>, 윤세규<sup>1</sup> (<sup>1</sup>강원대학교 물리학과, <sup>2</sup>네오시스 코리아)

### P1-nu.003\*

**Development of interactive toolkit for multi electrode ionization chamber** / 김민주\* (성균관대학교 물리학과)

### P1-nu.004

**DSSD와 GAGG scintillator에 기반한 컴프턴 카메라의 최적화 시뮬레이션 연구** / 이종훈<sup>\*1</sup>, 조화연<sup>2</sup>, 이필수<sup>1</sup>, 이일맥<sup>1</sup>, 장택진<sup>1</sup>, 이춘식<sup>1</sup> (<sup>1</sup>중앙대학교 물리학과, <sup>2</sup>중앙대학교 신기능이미징연구소)

### P1-nu.005\*

**Optimization Method of X-ray Generation Tube Considering Space Charge Effect Using GEANT4** / SEO HyeonDeok\* (Department of Physics, Kyung Hee University)

### P1-nu.006

**CTOF PMT Installation and Performance Studies at JLab** / NI Andrey<sup>1</sup>, TAN Joshua Artem<sup>1</sup>, KIM Woo Young<sup>\*1</sup>, BURKERT Volker<sup>2</sup>, CARMAN Daniel<sup>2</sup>, ASRYAN Gegham<sup>2</sup> (<sup>1</sup>Kyungpook National University, <sup>2</sup>Jefferson Laboratory)

### P1-nu.007

**Growth and characterization of Cs<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub> crystal** / SON Jukyung, KIM Hongjoo\* (Department of Physics, Kyungpook National University)

### P1-nu.008

**컴프턴 카메라 구성 검출기의 반응 위치 결정을 위한 통계적 알고리즘 연구** / 조화연\*, 이춘식\* (중앙대학교 물리학과)

P1-nu.009\*

**Study on small light detectors for 1 cm<sup>3</sup> crystals** / KIM Hyelim<sup>1</sup>, KIM Yong-Hamb<sup>\*2</sup>, KIM Hong Joo<sup>\*1</sup>, JO Hyon-Suk<sup>2</sup>, KANG Chan Seok<sup>2</sup>, KIM Geon-Bo<sup>2</sup>, KIM Inwook<sup>3</sup>, KIM So-Ra<sup>2</sup>, LEE Chang<sup>2</sup>, LEE Hyejin<sup>2</sup>, OH Seung-Yoon<sup>4</sup>, SO jungho<sup>2</sup>(<sup>1</sup>Department of Physics, Kyungpook National University, <sup>2</sup>Center for Underground Physics Institute for Basic Science, <sup>3</sup>Department of Physics and Astronomy, Seoul National University, <sup>4</sup>Department of Physics, Sejong University)

P1-nu.010\*

**Growth and characterization of PbGa<sub>2</sub>Se<sub>4</sub> crystal** / PHAN Vuong Quoc, KIM HongJoo<sup>\*</sup>, PANDEY Indra Raj, SON Jukyung, JANG Jonghun(Department of Physics, Kyungpook National University)

P1-nu.011\*

**Simulations of external & internal backgrounds in the AMoRE-pilot experiment** / 하대훈<sup>1</sup>, 김홍주<sup>\*1</sup>, For the AMoRE Collaboration<sup>2</sup>(<sup>1</sup>경북대학교, <sup>2</sup>AMoRE)

P1-nu.012

**Monte Carlo design study of multi-layered neutron detectors based on B<sub>4</sub>C** / LEE Suhyun<sup>\*1</sup>, KIM Jongyul<sup>1</sup>, LIM Chang Hwuy<sup>2</sup>, MOON Myung Kook<sup>1</sup>(<sup>1</sup>Korea Atomic Energy Research Institute, <sup>2</sup>Korea Research Institute of Ship & Ocean Engineering)

P1-nu.013\*

**Synthesis of CaMoO<sub>4</sub> powder from purified (NH<sub>4</sub>)<sub>2</sub>MoO<sub>4</sub> and Ca(NO<sub>3</sub>)<sub>2</sub> Solutions** / KARKI Sujita<sup>1</sup>, ARYAL Pabitra<sup>1</sup>, PARK Hyang Kyu<sup>2</sup>, KIM HongJoo<sup>\*1</sup>(<sup>1</sup>Department of Physics, Kyungpook National University, <sup>2</sup>Institute of Basic Science)

P1-nu.014

**Status of the focal plane detector development for the KOBRA spectrometer** / KIM Eunhee<sup>\*</sup>, LEE Kwang Bok, AKERS Charles Anthony, PARK Jin Hyung, KIM Young Jin, LEE Hyo Sang, KWON Young Kwan(Rare Isotope Science Project, Institute for Basic Science)

P1-nu.015

**Development status of the beam line detector for the KOBRA Spectrometer at RAON** / KIM Eunhee<sup>\*</sup>, LEE Kwang Bok, AKERS Charles Anthony, PARK Jin Hyung, KIM Young Jin, LEE Hyo Sang, KWON Young Kwan(Institute for Basic Science)

P1-nu.016

**The study of the alanine Electron Paramagnetic Resonance(EPR) dosimetry system** / KIM Hyojin<sup>1,2</sup>, KANG Yeong-Rok<sup>\*1</sup>, RO Tae-Ik<sup>2</sup>, JEONG

Dong-Hyeok<sup>1</sup>, CHOI Chulwon<sup>1</sup>, YANG Kwangmo<sup>1</sup>, LEE Manwoo<sup>1</sup>(<sup>1</sup>Research center, Dongnam Inst. of Radiological & Medical Sciences, <sup>2</sup>Department of Physics, Dong-A University)

**P1-nu.017\***

**Feasibility study of cosmogenic activation of CaMoO<sub>4</sub> crystal** / JANG Jonghun<sup>1</sup>, KIM Hongjoo<sup>\*1</sup>, LEE Jooyoung<sup>1</sup>, JUNG Myeonghwan<sup>2</sup>, LEE Hae-young<sup>3</sup>(<sup>1</sup>Department of physics, Kyungpook National University, <sup>2</sup>Korea Atomic Energy Research Institute, <sup>3</sup>Radiation Science Research Institute, Kyungpook National University)

**P1-nu.018**

**Large size CaMoO<sub>4</sub> crystal growth and its scintillation properties** / RA Se Jin<sup>1,2</sup>, KIM Dae Yeon<sup>1</sup>, PARK H.K.<sup>1</sup>, KIM Y.D.<sup>1</sup>, LEE J.Y.<sup>2</sup>, KIM H.J.<sup>\*2</sup>(<sup>1</sup>Center for Underground Physics, Institute for Basic Science (IBS), <sup>2</sup>Department of Physics, Kyungpook National University)

**P1-nu.019\***

**X-선 검출기용 센서 성능 테스트** / 이승철, 강국현, 김보배, 김태훈, 박환배\*, 전해빈(경북대학교 물리학과)

**P1-nu.020**

**A data-based photonuclear reaction model for GEANT4** / 신재원\* (숭실대학교 물리학과)

**P1-nu.021**

**Relativistic analyses of the high lying excited states for <sup>24</sup>Mg(p,p')** / SHIM Sugie\*, KIM Moonwon(Department of physics, Kongju National University)

**P1-nu.022**

**Measurement of nuclear reaction cross sections of <sup>nat</sup>Pd(n,x)<sup>99</sup>Mo and <sup>nat</sup>Pd(n,x)<sup>99</sup>mTc reactions induced by high energy neutrons** / MUHAMMAD Nadeem, KIM Kwangsoo, KIM Guinyun\*, SHAKILUR Rahman Md., MUHAMMAD Zaman, HIEN Nguyen Thi(Department of Physics, Kyungpook National University, Daegu 41566, Korea)

**P1-nu.023**

**Thermal neutron capture and resonance integral cross section of <sup>187</sup>Re** / NGUYEN Hien Thi, KIM Guinyun\*, KIM Kwangsoo, MUHAMMAD Nadeem (Department of Physics, Kyungpook National University, Daegu 702-701, Korea)

**P1-nu.024**

**Measurement of neutron capture cross sections for <sup>161</sup>Dy and <sup>163</sup>Dy at MLF beam line of J-PARC** / SHIN Sung Gyun<sup>1</sup>, KYE Yong Uk<sup>1</sup>, WON Namkung<sup>2</sup>, CHO Moo Hyun<sup>1</sup>, KIM Guinyun<sup>\*3</sup>, KIM Kwangsoo<sup>3</sup>, LEE

Man Woo<sup>4</sup>, KANG Yeong-Rok<sup>4</sup>, RO Taeik<sup>5</sup>, LEE Ji Eun<sup>5</sup>(<sup>1</sup>Division of Advanced Nuclear Engineering, Pohang University of Science and Technology, <sup>2</sup>Pohang Accelerator Laboratory, <sup>3</sup>Department of Physics, Kyungpook National University, <sup>4</sup>Dongnam Institute of Radiological and Medical Science, <sup>5</sup>Department of Physics, Dong-A University)

#### P1-nu.025

**Measurement of Proton-induced relative cross-section for  $^{206}\text{Pb}(p,x)$  reactions by 100 MeV Proton Accelerator** / LEE Jieun<sup>1</sup>, JANG Heejin<sup>1</sup>, YOON Jungran<sup>1</sup>, RO Taeik<sup>1</sup>, LEE Samyol\*<sup>2</sup>(<sup>1</sup>Department of Physics Dong-A University, <sup>2</sup>Department of Radiological Science Dongseo University)

#### P1-nu.026

**Measurement of neutron capture cross-sections of  $^{162}\text{Dy}$ ,  $^{164}\text{Dy}$  at J-PARC/MLF/ANNRI** / LEE Jieun<sup>1</sup>, RO Taeik\*<sup>1</sup>, KIM Kwangsoo<sup>2</sup>, KIM Guinyun<sup>2</sup>, LEE Man Woo<sup>3</sup>, KANG Yeong-Rok<sup>3</sup>, SHIN Sung Gyun<sup>4</sup>, CHO Moo Hyun<sup>4</sup>(<sup>1</sup>Department of Physics, Dong-A University, <sup>2</sup>Department of Physics, Kyungpook National University, <sup>3</sup>Dongnam Institute of Radiological and Medical Science, <sup>4</sup>Division of Advanced Nuclear Engineering, POSTECH)

#### P1-nu.027

**TALYS 및 PHITS 전산모사를 이용한  $^{96}\text{Zr}(\alpha, n)^{99}\text{Mo}$  핵반응 단면적 계산** / 박상인<sup>1</sup>, 함철민<sup>1</sup>, 홍승우\*<sup>2</sup>, 박태선<sup>2</sup>(<sup>1</sup>성균관대학교 에너지과학과, <sup>2</sup>성균관대학교 물리학과)

#### P1-nu.028

**Low Pressure Spin-exchange Optical Pumping of  $^{129}\text{Xe}$**  / KAVTANYUK Vladimir, TAN Joshua Artem, NI And rey, STEPANYAN Samuel, PARK Sung Woo, ANDO Yu, SO Ji Eun, BAE Yeong Cheol, KIM Woo Young\*(Kyungpook National University)

#### P1-nu.029

**악티늄 계열  $^{224-234}\text{Th}$ 핵의 구조 연구** / 이수연\*, 이영준, 이종환(동의대학교 물리학과)

게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소: 포스터발표장

### P1-pa.001\*

**Search for a Charged Higgs Boson Decaying to a Pseudo-scalar Boson and a W Boson at 13 TeV using CMS Detector** / BHYUN Jihwan\*, YU Geumbong, YANG Un-ki(Department of Physics and Astronomy, Seoul National University)

### P1-pa.002\*

**Higgs to dimuon search with the CMS detector** / 김병준, 박인규\*, 이상훈\*(서울시립대학교 물리학과)

### P1-pa.003\*

**Search for the production of dark matter in association with top-quark pairs in the di-lepton final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV** / HEO Gunwoo, PARK Inkyu\*, LEE Jason\*, KO Byeonghak(Department of Physics, University of Seoul)

### P1-pa.004\*

**study using hadronic tagging method** / 김한진, 권영준\*(연세대학교 물리학과)

### P1-pa.005\*

**Search for the decay at the Belle experiment using hadronic tagging** / 육영민\*(연세대학교 물리학과)

### P1-pa.006\*

**테라헤르츠 자유전자레이저용 도파관 저손실 최적구조 해석** / 배상윤<sup>1, 2</sup>, 문정호<sup>1</sup>, 김현우<sup>1</sup>, 박선정<sup>1, 3</sup>, 박성희<sup>1</sup>, 이기태<sup>1</sup>, 장규하<sup>1</sup>, 전민용<sup>2</sup>, 정영욱\*, Nikolay Vinokurov<sup>1</sup>(<sup>1</sup>한국원자력연구원, <sup>2</sup>충남대학교, <sup>3</sup>경북대학교)

### P1-pa.007\*

**Asymmetry Realization for pC Scattering in Geant4** / JEONG Hoyong\*, PARK Seongtae<sup>2</sup>, PETRAKOU Eleni<sup>2</sup>, WON Eunil<sup>1</sup>(<sup>1</sup>Department of Physics, Korea University, <sup>2</sup>Center for Axion and Precision Physics Research, Institute for Basic Science)

### P1-pa.008\*

**Interplay of ATLAS 750 GeV diphoton excess and dark matter.** / KANG Youjin, LEE Hyun Min\*(Department of Physics, Chung-Ang University)

P1-pa.009\*

**The plastic scintillator cosmic-ray muon detector of the KIMS-Nal experiment** / PRIHTIADI Hafizh\* (Department of Physics, Bandung Institute of Technology, Indonesia)

P1-pa.010\*

**Construction of fast-neutron monitoring detector for KIMS-Nal experiment.** / ADHIKARI govinda\* (Sejong University)

P1-pa.011\*

**MMC characteristic measurement for AMoRE** / AMoRE Collaboration<sup>3</sup>, OH Seung-Yoon\*<sup>1, 2, 3</sup> (<sup>1</sup>Department of Physics, Sejong University, <sup>2</sup>Korea Institute of Standards and Science (KRISS), <sup>3</sup>Institute for Basic Science (IBS))

P1-pa.012\*

**Simulation study on optimization of cavity design for axion search experiments using COMSOL multiphysics** / JEONG Junu<sup>1, 2</sup>, YOUN SungWoo\*<sup>2</sup> (<sup>1</sup>Department of Physics, KAIST, <sup>2</sup>Center for Axion and Precision Physics Research, IBS)

P1-pa.013\*

**Quality factor measurements of microwave cavities for axion search experiments** / AHN Saebyeok<sup>1, 2</sup>, YOUN Sungwoo\*<sup>1</sup> (<sup>1</sup>Center for Axion and Precision Physics Research(CAPP), Institute for Basic Science(IBS), <sup>2</sup>Department of Physics, KAIST)

P1-pa.014\*

**Laser frequency stabilization for Cs atomic magnetometry system in a homogeneous magnetic field** / KIM Dongok\*<sup>1, 2</sup> (<sup>1</sup>Center for Axion and Precision Physics(CAPP)/Institute for Basic Science(IBS), <sup>2</sup>Korea Advanced Institute of Science and Technology(KAIST))

P1-pa.015\*

**<sup>3</sup>He polarization using optical pumping** / KIM Younggeun\*<sup>1, 2</sup> (<sup>1</sup>Department of Physics, KAIST, <sup>2</sup>Institute of Basic Science(IBS))

P1-pa.016\*

**Strong correlation and pseudogap in holography** / 송근호, 서윤석, 신상진\* (한양대학교 물리학과)

P1-pa.017

**펄스초 전자빔 펄스폭 측정용 고주파 힘 공동 개발** / 박선정<sup>1, 2</sup>, 정영욱\*, Nikolay A. Vinokurov<sup>2</sup>, 박성희<sup>2</sup>, 이기태<sup>2</sup>, 장규하<sup>2</sup>, 김은산<sup>3</sup>, 김홍주<sup>1</sup>, 문정호<sup>2, 4</sup>, 배상윤<sup>2, 4</sup>, 김현우<sup>2, 5</sup> (<sup>1</sup>경북대학교 물리학과, <sup>2</sup>한국원자력연구원 양자빔기반방사선연

구센터, <sup>3</sup>고려대학교 세종캠퍼스 가속기과학과, <sup>4</sup>충남대학교 물리학과, <sup>5</sup>과학기술연합대학원 대학교 가속기 및 핵융합물리공학과)

#### P1-pa.018

**경북대 CMS Tier-2 센터의 운영 현황 / 한대희\*, 송지환, 김귀년\*, 손동철\***  
(경북대학교 고에너지물리연구소)

#### P1-pa.019

**고주파 광전자총 기반 초고속 전자회절 빔라인 성능 측정 / 김현우<sup>1,2</sup>, 박선정<sup>1</sup>, 백인형<sup>1</sup>, 왕기영<sup>4</sup>, 배상윤<sup>1</sup>, 문정호<sup>1</sup>, S. Setiniyaz<sup>1</sup>, 장규하<sup>1,2</sup>, 이기태<sup>1,2</sup>, 박성희<sup>1,2</sup>, B. Gudkov<sup>1</sup>, S. V. Miginsky<sup>1,3</sup>, N. Vinokurov<sup>1,2,3</sup>, 정영욱<sup>\*1,2</sup>**(<sup>1</sup>한국원자력연구원, 양자빔기반 방사선 연구센터, 대전, 대한민국, <sup>2</sup>과학기술연합대학원대학교, 가속기 및 핵융합 물리공학, 대전, 대한민국, <sup>3</sup>부드커 핵물리 연구소, 노보시비르스크, 러시아, <sup>4</sup>한국과학기술원, IBS 나노물질 및 화학반응 연구단, 대전, 대한민국)

#### P1-pa.020

**Development of S-band accelerating components for PAL-XFEL / Hyeong Seok SEO , Sung Joo ROH , Do Yoon KIM \***(Physical accelerator division, VITZROTECH Co., Ltd., Ansan 425-833, Republic of Korea)

#### P1-pa.021

**DAQ works for Belle II experiment / KIM Kyungho\*, YOON Youngmin\*, KIM Hanjin\***(Department of Physics, Yonsei University)

#### P1-pa.022

**Introduction to an Experimental Dark Matter search in SHiP / WOO J. K. <sup>\*1</sup>, KO J. <sup>1</sup>, LIU D. <sup>1</sup>, YOON C. S. <sup>2</sup>, LEE K. Y. <sup>2</sup>, PARK B. D. <sup>2</sup>, KIM S. H. <sup>2</sup>, KIM Y. G. <sup>3</sup>, CHOI K. -Y. <sup>4</sup>**(<sup>1</sup>Jeju National University, <sup>2</sup>Gyeongsang National University, <sup>3</sup>Gwangju National University of Education, <sup>4</sup>Chonnam National University)

#### P1-pa.023

**소형 고출력 테라헤르츠 자유전자레이저를 위한 고성능 교번자장기 / 문정호<sup>1</sup>, 정영욱<sup>\*1</sup>, Nikolay Vinokurov<sup>1</sup>, 배상윤<sup>1,2</sup>, 이기태<sup>1</sup>, 박성희<sup>1</sup>, 장규하<sup>1</sup>, Sergey Miginsky<sup>1</sup>, 김현우<sup>1,4</sup>, 박선정<sup>1,3</sup>**(<sup>1</sup>한국원자력연구원, <sup>2</sup>충남대학교, <sup>3</sup>경북대학교, <sup>4</sup>과학기술연합대학원대학교)

#### P1-pa.024

**Kicker Eddy Current Simulation for the muon g-2 experiment at Fermilab / CHANG Seung Pyo<sup>1</sup>, KIM Young Im<sup>\*2</sup>**(<sup>1</sup>Department of Physics, Korea Advanced Institute of Science and Technology (KAIST), <sup>2</sup>Center for Axion and Precision Physics Research, Institute for Basic Science (IBS))

#### P1-pa.025

**A High Sensitivity Faraday Cup for Ultrafast Electron Beam / SAITINIYAZI Shadike\***(Korea Atomic Energy Research Institute)

P1-pa.026

**A High Sensitivity Faraday Cup for Ultrafast Electron Beam** / SAITINIYAZI Shadike\* (Korea Atomic Energy Research Institute)

P1-pa.027

**Time-periodic Solutions of Gravity-scalar System in AdS** / KIM Joonwoo\* (Department of Physics Kyung Hee University)

P1-pa.028

**Vibration test of a light detector used in AMoRE pilot** / LEE Hyejin\*, AMoRE collaboration (Institute for Basic Science)

P1-pa.029

**Pulse Shape Discrimination for NEOS Experiment** / OH Yoomin\*<sup>1</sup>, KIM Yeongduk<sup>1, 2</sup>, PARK Hyangkyu<sup>1</sup>, LEE Moo Hyun<sup>1</sup>, LEE Jaison<sup>1</sup>, JEON Eunju<sup>1</sup>, PARK Kang Soon<sup>1</sup>, JOO KyungKwang<sup>3</sup>, KIM Ba Ro<sup>3</sup>, SUN Gwang-min<sup>4</sup>, HAN Bo-Young<sup>4</sup>, KIM Hongjoo<sup>5</sup>, LEE Jooyoung<sup>5</sup>, KIM Hyunsoo<sup>2</sup>, MA Kyungju<sup>2</sup>, SIYEON Kim<sup>6</sup>, KO Youngju<sup>6</sup>, KIM Jinyu<sup>2</sup>, SEO Kyungmin<sup>2</sup> (<sup>1</sup>Center for Underground Physics, Institute for Basic Science, <sup>2</sup>Sejong University, <sup>3</sup>Chonnam National University, <sup>4</sup>Korea Atomic Energy Research Institute, <sup>5</sup>Kyungpook National University, <sup>6</sup>Chung-Ang University)

P1-pa.030

**Data Acquisition System Development for AMoRE-I** / YOON Young Soo\*, LEE Jaison (Center for Underground Physics, Institute for Basic Science)

P1-pa.031

**Status of AMoRE-pilot detector** / KIM Yong-Hamb\*, KANG Chan Seok (Center for Underground Physics, Institute for Basic Science)

P1-pa.032

**Monitoring of flashing PMT and reduction algorithm** / 현관 서<sup>1</sup>, 상용 김<sup>1</sup>, 수봉 김<sup>1</sup>, 선희 서<sup>1</sup>, 정열 양<sup>1</sup>, 동하 이<sup>1</sup>, 원국 최<sup>1</sup>, 우영 김<sup>2</sup>, 성우 박<sup>2</sup>, 인곤 박<sup>3</sup>, 지승 장<sup>4</sup>, 명렬 박<sup>5</sup>, 준호 최<sup>5</sup>, 한일 장<sup>6</sup>, 장희 양<sup>7</sup>, 인태 유<sup>7</sup>, 영일 최<sup>7</sup>, 영덕 김<sup>8</sup>, 현수 김<sup>8</sup>, 바로 김<sup>9</sup>, 승찬 김<sup>9</sup>, 재률 김<sup>9</sup>, 령균 박<sup>9</sup>, 창동 신<sup>9</sup>, 인성 여<sup>9</sup>, 인택 임<sup>9</sup>, 경광 주<sup>9</sup> (<sup>1</sup>Department of Physics and Astronomy, Seoul National University, <sup>2</sup>Department of Physics, Kyungpook National University, <sup>3</sup>Department of Physics, Gyeongsang National University, <sup>4</sup>GIST College, <sup>5</sup>Department of Radiology, Dongshin University, <sup>6</sup>Department of Fire Safety, Seoyeong University, <sup>7</sup>Department of Physics, Sungkyunkwan University, <sup>8</sup>Department of Physics and Astronomy, Sejong University, <sup>9</sup>Department of Physics, Chonnam National University)

P1-pa.033

**Updated Status of HPGe Detectors at Y2L** / HAHN Insik\*<sup>1</sup>, KIM Yeongduk<sup>2</sup>, KIM Gwoon<sup>1</sup>, LEONARD Douglas<sup>2</sup>, SALA Elena<sup>2</sup>, LEE MooHyun<sup>2</sup>, PARK Suyeun<sup>1</sup>, KANG WoonGu<sup>2</sup> (<sup>1</sup>Ewha Womans University, <sup>2</sup>Institute for Basic Science (IBS))



### P1-pa.034

**Measurement of liquid scintillator attenuation-length** / 신창동<sup>1</sup>, 주경광<sup>\*1</sup>, 김바로<sup>1</sup>, 김승찬<sup>1</sup>, 김재률<sup>1</sup>, 박령균<sup>1</sup>, 여인성<sup>1</sup>, 임인택<sup>1</sup>, 김우영<sup>2</sup>, 박성우<sup>2</sup>, 박인곤<sup>3</sup>, 장지승<sup>4</sup>, 박명렬<sup>5</sup>, 최준호<sup>5</sup>, 장한일<sup>6</sup>, 김상용<sup>7</sup>, 김수봉<sup>7</sup>, 서선희<sup>7</sup>, 서현관<sup>7</sup>, 양정열<sup>7</sup>, 이동하<sup>7</sup>, 최원국<sup>7</sup>, 양장희<sup>8</sup>, 유인태<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>9</sup>, 김현수<sup>9</sup>(<sup>1</sup>전남대학교, <sup>2</sup>경북대학교, <sup>3</sup>경상대학교, <sup>4</sup>광주과학기술원, <sup>5</sup>동신대학교, <sup>6</sup>서영대학교, <sup>7</sup>서울대학교, <sup>8</sup>성균관대학교, <sup>9</sup>세종대학교)

### P1-pa.035

**Stability of NEOS detector** / 김바로<sup>1</sup>, 주경광<sup>\*1</sup>, 김영덕<sup>2,3</sup>, 오유민<sup>2</sup>, 박향규<sup>2</sup>, 이무현<sup>2</sup>, 이재승<sup>2</sup>, 전은주<sup>2</sup>, 박강순<sup>2</sup>, 선평민<sup>4</sup>, 한보영<sup>4</sup>, 김홍주<sup>5</sup>, 이주영<sup>5</sup>, 김현수<sup>3</sup>, 마경주<sup>3</sup>, 김진유<sup>3</sup>, 서경민<sup>3</sup>, 김시연<sup>6</sup>, 고영주<sup>6</sup>(<sup>1</sup>전남대학교, <sup>2</sup>기초과학연구원, <sup>3</sup>세종대학교, <sup>4</sup>한국원자력연구원, <sup>5</sup>경북대학교, <sup>6</sup>중앙대학교)

### P1-pa.036

**Simulation for NEOS Experiment** / KO Youngju<sup>\*2</sup>, KIM Siyeon<sup>2</sup>, JOO Kyungkwang<sup>1</sup>, KIM Baro<sup>1</sup>, JEON Eunju<sup>3</sup>, KIM Yeongduk<sup>3</sup>, LEE Jaeson<sup>3</sup>, LEE Moohyun<sup>3</sup>, OH Yoomin<sup>3</sup>, PARK Hyangkyu<sup>3</sup>, PARK Kangsoon<sup>3</sup>, HAN Boyoung<sup>4</sup>, SUN Gwangmin<sup>4</sup>, KIM Hongjoo<sup>5</sup>, LEE Jooyoung<sup>5</sup>, KIM Hyangkyu<sup>6</sup>, KIM Jinyu<sup>6</sup>, SEO Kyungmin<sup>6</sup>(<sup>1</sup>Department of Physics, Chonnam National University, <sup>2</sup>Department of Physics, Chung-Ang University, <sup>3</sup>Center for Underground Physics, Institute of Basic Science, <sup>4</sup>Korea Atomic Energy Research Institute, <sup>5</sup>Department of Physics, Kyungpook National University, <sup>6</sup>Department of Physics, Sejong University)

### P1-pa.037

**Superconducting Cavity Development for Axion Search at CAPP/IBS** / LEE Jhinwhan<sup>\*1,2</sup>, JANG Won Jun<sup>1,2</sup>, LIM Joonsoo<sup>2</sup>, SEMERTZIDIS Yannis<sup>\*1,2</sup> (<sup>1</sup>Center for Axion and Precision Physics(CAPP) at Institute for Basic Science(IFS), <sup>2</sup>Korea Advanced Institute of Science and Technology(KAIST))

### P1-pa.038

**Development of a Readout Firmware for the GroundBIRD Telescope** / LEE Kyungmin<sup>\*1</sup>, WON Eunil<sup>1</sup>, CHOI Jihoon<sup>2</sup>, HAZUMI Masashi<sup>3</sup>, ISHITSUKA Hikaru<sup>3</sup>, KWAI Masanori<sup>3</sup>, KIBE Yoshiaki<sup>3</sup>, OGURI Shugo<sup>3</sup>, TAJIMA Osamu<sup>3</sup>, TOMITA Nozomu<sup>3</sup>, YOSHIDA Mitsuhiro<sup>3</sup>(<sup>1</sup>Korea University, <sup>2</sup>KEK, <sup>3</sup>Center for Axion and Precision Physics Research)

게시: 2016년 4월 20일 수요일 13:00 – 21일 목요일 12:00

발표: 2016년 4월 20일 수요일 18:00 – 19:30

장소: 포스터발표장

### P1-pl.001

물방울 변환(wavelet transform)을 이용한 진폭 변조(AM) 신호의 주파수 측정 알고리즘 / 서성현\*, 오동근(국가핵융합연구소)

### P1-pl.002

First measurement of bremsstrahlung signal by using hybrid type polychromator system / LEE Jong-ha\*, LEE Seung Hun<sup>1</sup>, KO Won Ha<sup>1</sup>, SEO Dong Cheol<sup>1</sup>, SON Soo hyun<sup>1</sup>, YAMADA Ichihiro<sup>2</sup>(<sup>1</sup>National Fusion Research Institute (NFRI), <sup>2</sup>National Institute for Fusion Science (NIFS))

### P1-pl.003\*

Density calibration using Rayleigh scattering for 2015 KSTAR Thomson system / OH Tae-suk<sup>1</sup>, KIM K.H.<sup>1</sup>, LEE J.H.<sup>2</sup>, LEE S.H.<sup>2</sup>, GHIM Y.-C.\*(<sup>1</sup>Department of Nuclear and Quantum Engineering, KAIST, Daejeon, Korea, <sup>2</sup>National Fusion Research Institute, Daejeon, Korea)

### P1-pl.004\*

Effect of magnetic field configuration on the characteristics of a-C:H thin film in an ECR chambers / SO Hyeon Seob<sup>1</sup>, PARK Sun-A<sup>1</sup>, LEE Hosun\*, SONG Jaemin<sup>2</sup>, KIM Gon-Ho<sup>2</sup>, HONG Suk-Ho<sup>3</sup>(<sup>1</sup>Department of Applied Physics, Kyung Hee University, <sup>2</sup>Department of Energy Systems Engineering, Seoul National University, <sup>3</sup>National Fusion Research Institute (NFRI))

### P1-pl.005\*

Identifying real-time plasma equilibrium from artificial neural network in KSTAR / JOUNG Semin, KWAK Sehyun, GHIM Y.-c.\*(Department of nuclear and quantum engineering, KAIST, Daejeon, Korea)

### P1-pl.006\*

Statistical studies for reliability of two points correlation length measurement / 김재욱<sup>1</sup>, 남용운<sup>2</sup>, Mate Lampert<sup>3</sup>, 김영철\*(<sup>1</sup>한국과학기술원, 원자력및양자공학과, <sup>2</sup>National Fusion Research Institute, <sup>3</sup>Wigner RCP, Euratom Association-HAS)

### P1-pl.007

Introduction to INFRA: The integrated tokamak simulator for K-DEMO / JUNG Laurent\*, KANG Jisung<sup>2</sup>, YEOM Junho<sup>1</sup>, KIM Hyeongchan<sup>1</sup>, HWANG Yongseok<sup>2</sup>(<sup>1</sup>National Fusion Research Institute, <sup>2</sup>Seoul National University)

P1-pl.008

**ITG 난류 에너지의 진동수 스펙트럼에 관한 연구** / 민병훈\*, 안찬용, 김창배  
(숭실대학교 물리학과)

P1-pl.009

**Initial operation of the multichord motional Stark effect diagnostic in KSTAR** / CHUNG Jinil\*<sup>1</sup>, KO Jinseok<sup>1</sup>, WI Hanmin<sup>1</sup>, MESSMER M.<sup>2</sup>, SCHENKELAARS S.<sup>2</sup>, SCHEFFER M.<sup>2</sup>, JASPERS R.J.E.<sup>2</sup>(<sup>1</sup>National Fusion Research Institute, <sup>2</sup>Eindhoven University of Technology)

P1-pl.010

**Measurements Results of Profile Diagnostics in KSTAR** / NAM Y.U.\*<sup>1</sup>, LEE J.H.<sup>1</sup>, LEE S.H.<sup>1</sup>, LEE K.D.<sup>1</sup>, KO W.H.<sup>1</sup>, LEE H.H.<sup>1</sup>, LEE K.C.<sup>1</sup>, JUHN J.W.<sup>1</sup>, ZOLETNIK S.<sup>2</sup>, LAMPERT M.<sup>2</sup>, WI H.M.<sup>1</sup>, KIM Y.S.<sup>1</sup>(<sup>1</sup>National Fusion Research Institute, <sup>2</sup>Wigner RCP)

P1-pl.011\*

**Effect of neoclassical viscosity on ITG Turbulence in reversed shear plasma** / CHO Youngwoo<sup>1</sup>, YAGI Masatoshi<sup>2</sup>, SETO Haruki<sup>2</sup>, HAHM Taiksoo\*<sup>1</sup>(<sup>1</sup>Seoul National University, Seoul, Korea, <sup>2</sup>Japan Atomic Energy Agency, Rokkasho, Aomori, Japan)

P1-pl.012\*

**Fast Ion Confinement and Slowing Down Model Considering Plasma Rotation** / SEO JeMin, KIM SangKyeun, LEE YoungHo, NA DongHyeon, NA YongSu\*(Department of Nuclear Engineering, Seoul National University)

P1-pl.013

**KSTAR 핵융합 플라즈마 가열용 헬리콘파 진행파형 고출력 안테나 설계** / 위현호\*, 왕선정, 김해진, 박수연, 곽종구(국가핵융합 연구소 KSTAR 연구센터)

P1-pl.014

**Performance improvement of IRTV Lens system and heat flux measurement in the Scrape-off layer(SOL)** / SEO Dongcheol\*<sup>1, 2</sup>, BAK Jun-Gyo<sup>1</sup>, LEE Hyungho<sup>1</sup>, HONG Suk Ho<sup>1, 2, 3</sup>(<sup>1</sup>National Fusion Research Institute, <sup>2</sup>Korea University of Science and Technology, <sup>3</sup>Department of Electrical Engineering, Hanyang University)

P1-pl.015

**Design and RF test of High Power Hybrid Combiner for Helicon Wave Current Drive in KSTAR Plasmas** / 박수연, 위현호, 왕선정, 곽종구, 김해진\*(국가핵융합 연구소 KSTAR 연구센터)

## P1-pl.016

**Gyro-kinetic Study of Rosenbluth-Hinton Residual Zonal Flow /**  
LEE Kyeong Pyo<sup>1</sup>, HAHM Taik Soo<sup>\*1</sup>, WATANABE Tomo-Hiko<sup>2</sup>(<sup>1</sup>Department of  
Nuclear Engineering, Seoul National University, <sup>2</sup>Department of Physics, Nagoya  
University)

## P1-pl.017

**Development of post analysis plan for nonlinear ELM simulation  
using the BOUT++ in KSTAR H-mode plasma /** KIM Minwoo<sup>1</sup>, LEE  
Jaehyun<sup>1</sup>, YUN Gunsu<sup>2</sup>, LEE Jieun<sup>2</sup>, PARK Hyeon K<sup>\*1,3</sup>(<sup>1</sup>Ulsan National Institute  
of Science and Technology, <sup>2</sup>Pohang University of Science and Technology,  
<sup>3</sup>National Fusion Research Institute)

## P1-pl.018

**기체전자증폭기(GEM) 핀홀 카메라 진단계를 이용한 KSTAR 플라스마  
의 접선방향 2차원 재구성 영상 /** 송인우<sup>1,2</sup>, 전태민<sup>1,2</sup>, 장주혁<sup>1,2</sup>, D.Pacella<sup>3</sup>,  
G.Claps<sup>3</sup>, 홍주환<sup>1,2</sup>, 이현용<sup>1,2</sup>, 박재선<sup>1,2</sup>, 최원호<sup>\*1,2</sup>(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>불  
순울 및 경계 플라스마 연구센터, <sup>3</sup>Associazione Euratom-ENEA sulla Fusione, C.R.  
Frascati 00044, Italy)

## P1-pl.019\*

**SOLPS-ITER를 활용한 KSTAR 디버터 열속 모델링 /** 박재선<sup>1</sup>, X. Bonnin<sup>2</sup>,  
R. A. Pitts<sup>2</sup>, 이형호<sup>3</sup>, 홍석호<sup>3</sup>, 김기민<sup>1</sup>, 이현용<sup>1</sup>, 홍주환<sup>1</sup>, 장주혁<sup>1</sup>, 전태민<sup>1</sup>, 송인  
우<sup>1</sup>, 최원호<sup>\*</sup>(<sup>1</sup>KAIST 물리학과, <sup>2</sup>ITER Organization, <sup>3</sup>국가핵융합연구소)

## P1-pl.020\*

**텅스텐에 대한 수소투과 실험(Hydrogen Permeation Experiments  
through Tungsten) /** 변우준<sup>\*1</sup>, 신해원<sup>1</sup>, 서희정<sup>1</sup>, 진영구<sup>2</sup>, 김동민<sup>2</sup>, 김희수<sup>1</sup>,  
노승정<sup>1</sup>(<sup>1</sup>단국대학교 응용물리학과, <sup>2</sup>홍익대학교 재료공학과)

## P1-pl.021

**Preliminary work for inner wall limiter SOL widths in the KSTAR  
tokamak /** BAK Jun-Gyo<sup>\*1</sup>, KIM Heung-Su<sup>1</sup>, PITTS R. A.<sup>2</sup>, SEO Dong-Cheol<sup>1</sup>,  
JUHN JunWoo<sup>1</sup>, LEE Hyung-Ho<sup>1</sup>, GARCIA O. E.<sup>3</sup>, KUBE R. A.<sup>3</sup>, JANG Ju-Hyeok<sup>4</sup>,  
CHOI Won-Ho<sup>4</sup>(<sup>1</sup>National Fusion Research Institute, <sup>2</sup>ITER Organization, <sup>3</sup>The Arctic  
University of Norway, <sup>4</sup>Korea Advanced Institute of Science and Technology)

## P1-pl.022

**Design study of high power RF component for 4MW KSTAR LHCD  
system /** KIM Jeehyun<sup>\*1</sup>, SEONG Taesik<sup>2</sup>, WANG Sonjong<sup>1</sup>, HAN Jongwon<sup>1</sup>,  
WI Hyunho<sup>1</sup>, DELPECH Lena<sup>3</sup>, HILLAIRET Julien<sup>3</sup>, CHO Moohyun<sup>2</sup>, NAMKUNG  
Won<sup>2</sup>(<sup>1</sup>National Fusion Research Institute, Yuseong-gu, Daejeon, <sup>2</sup>POSTECH,  
Pohang, Gyeongbuk, <sup>3</sup>CEA, IRFM, F-13108, Saint-Paul-lez-Durance, France)

P1-pl.023

**Transition of eigen mode number of edge localized modes in toroidal plasma** / LEE Jieun<sup>1</sup>, YUN Gunsu<sup>\*1</sup>, LEE Jaehyun<sup>2</sup>, KIM Minwoo<sup>2</sup>, PARK Hyeon K<sup>2</sup>, CHOI Minjun<sup>3</sup>(<sup>1</sup>Pohang University of Science and Technology, <sup>2</sup>Ulsan National Institute of Science and Technology, <sup>3</sup>National Fusion Research Institute)

P1-pl.024\*

**핵융합로 플라즈마 대면물질에 대한 DPA 전산모사 (DPA simulations for fusion reactor PFMs)** / 신해원<sup>1</sup>, 변우준<sup>\*1</sup>, 서희정<sup>1</sup>, 변재덕<sup>1</sup>, 현준원<sup>1</sup>, 김희수<sup>1</sup>, 노승정<sup>1</sup>, 이석관<sup>2</sup>, 김재용<sup>2</sup>(<sup>1</sup>단국대학교 응용물리학과, <sup>2</sup>한양대학교 물리학과)

P1-pl.025

**Control of edge localized mode crashes using a single toroidal row of large aperture magnetic perturbation coils in KSTAR** / KIM Jayhyun<sup>\*</sup> (National Fusion Research Institute)

P1-pl.026

**Analysis for prompt loss of neutral beam injection in terms of momentum phase space** / RHEE Tongnyeol<sup>\*1</sup>, KIM Jun Young<sup>2</sup>, KIM Junghee<sup>1</sup>, PARK Byungho<sup>1</sup>(<sup>1</sup>National Fusion Research Institute, Daejeon, Korea, <sup>2</sup>Korea University of Science and Technology, Daejeon, Korea)

P1-pl.027\*

**전자공명가열(ECH) 세기에 따른 KSTAR H-모드 플라즈마 내 알곤 불순물 이온 수송 변화 및 노심축적 완화** / 홍주환<sup>1, 2</sup>, S. Henderson<sup>3</sup>, 김기민<sup>1, 2</sup>, 선창래<sup>4</sup>, 송인우<sup>1, 2</sup>, 이현용<sup>1, 2</sup>, 장주혁<sup>1, 2</sup>, 박재선<sup>1, 2</sup>, 이상곤<sup>4</sup>, 유정원<sup>4</sup>, 이종하<sup>4</sup>, 이승현<sup>4</sup>, 정진현<sup>4</sup>, 최원호<sup>\*1, 2</sup>(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>불순물 및 경계 플라즈마 연구센터, <sup>3</sup>University of Strathclyde, <sup>4</sup>국가핵융합연구소)

P1-pl.028\*

**자기공명섭동(Resonant magnetic perturbation)을 이용한 KSTAR 플라즈마의 알곤 불순물 수송 실험** / 홍주환<sup>1, 2</sup>, 이현용<sup>1, 2</sup>, 장주혁<sup>1, 2</sup>, 박준교<sup>3</sup>, 김기민<sup>1, 2</sup>, 고원하<sup>3</sup>, 이종하<sup>3</sup>, 이승현<sup>3</sup>, 송인우<sup>1, 2</sup>, 김흥수<sup>3</sup>, 최원호<sup>\*1, 2</sup>(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>불순물 및 경계 플라즈마 연구센터, <sup>3</sup>국가핵융합연구소)

P1-pl.029

**Design of a collective scattering system for small scale turbulence study on KSTAR** / LEE D.J.<sup>1</sup>, LEE W.<sup>\*1</sup>, PARK H.K.<sup>\*1, 2</sup>, NAM Y.U.<sup>2</sup>, LEEM J.<sup>3</sup>, KIM T.G.<sup>4</sup>, PARK H.<sup>4</sup>(<sup>1</sup>Department of Physics, Ulsan National Institute of Science and Technology, <sup>2</sup>National Fusion Research Institute, <sup>3</sup>Pohang University of Science and Technology, <sup>4</sup>Kyungpook National university)

P1-pl.030

**Mode Converter for Efficiency Improvement of KSTAR LHCD**

**Transmission-line / SEONG Taesik<sup>\*1</sup>, NAMKUNG Won<sup>2</sup>, CHO Moohyun<sup>3</sup>**  
(<sup>1</sup>Department of physics, POSTECH, <sup>2</sup>Pohang Accelerator Laboratory, <sup>3</sup>Department of physics and Division of Advanced Nuclear Engineering, POSTECH)

#### P1-pl.031

**Development of W-band ECE radiometer for electron temperature profile measurement at KSTAR / LEE Kyu-Dong\*, KANG Chansoo, KIM Yongsun**(National Fusion Research Institute)

#### P1-pl.032

**Analysis on KSTAR vertical instability and extension of its controllability / HAHN Sang-hee\***(National Fusion Research Institute (NFRI))

#### P1-pl.033

**KSTAR 톨슨산란진단 신호분석 및 플라즈마 변수 측정 / 이승헌\*, 이종하, I. Yamada<sup>2</sup>, 이규동<sup>1</sup>, 이관철<sup>1</sup>, 전준우<sup>1</sup>**(<sup>1</sup>국가핵융합연구소, <sup>2</sup>National Institute for Fusion Science)

#### P1-pl.034

**Study of Quasi-Coherent Modes in KSTAR Ohmic Plasmas / LEE Jihun A<sup>1</sup>, LEE W<sup>2</sup>, LEEM J<sup>1</sup>, YUN G S<sup>\*1</sup>, PARK H K<sup>2</sup>, KIM T K<sup>3</sup>, PARK H<sup>3</sup>, KIM K W<sup>3</sup>, PARK Y S<sup>4</sup>, JO S H<sup>5</sup>, DOMIER C W<sup>6</sup>, LUHMANN N C<sup>6</sup>**(<sup>1</sup>Pohang University of Science and Technology, <sup>2</sup>Ulsan National Institute of Science and Technology, <sup>3</sup>Kyungpook National University, <sup>4</sup>Princeton Plasma Physics Laboratory, <sup>5</sup>National Fusion Research Institute, <sup>6</sup>University of California at Davis)

#### P1-pl.035\*

**Development of fusion plasma diagnostics by the optical emission spectroscopy (OES) and THz time-domain spectroscopy (THz-TDS) / KANG Keekon, JANG Dogeun, JANG Donggyu, SUK Hyyong\***(Department of Physics and Photon Science, Gwangju Institute of Science and Technology)

#### P1-pl.036

**Design of a combined charge exchange spectroscopy and beam emission spectroscopy system in VEST / KIM YooSung<sup>1</sup>, LEE Kihyun<sup>1</sup>, OH Soo-Ghee<sup>1, 2</sup>, SHI Yue-Jiang<sup>1</sup>, CHUNG Kyoung-Jae\*, HWANG Y.S.<sup>1</sup>**(<sup>1</sup>Department of Nuclear Engineering, Seoul National University, <sup>2</sup>Center for Advanced Research in Fusion Reactor Engineering, Seoul National University)

#### P1-pl.037

**Atomic data on photon emissivity and dielectronic recombination for tungsten ions / KWON D.-H.\*<sup>1</sup>, LEE W.<sup>1</sup>, HONG J.<sup>2, 3</sup>, LEE H. Y.<sup>2, 3</sup>, SONG I.<sup>2, 3</sup>, CHOE W.<sup>2, 3</sup>**(<sup>1</sup>Nuclear Data Center, KAERI, <sup>2</sup>Department of Physics, KAIST, <sup>3</sup>Impurity and Edge plasma Research Center, KAIST)

P1-pl.038

**Tokamak plasma response to external perturbed magnetic field with wall stabilization effect** / HAN Hyunsun<sup>\*1</sup>, JEON Young Mu<sup>1</sup>, KIM Jayhyun<sup>1</sup>, KWON Ohjin<sup>2</sup>(<sup>1</sup>National Fusion Research Institute, Daejeon, Korea, <sup>2</sup>Department of Physics, Daegu University, Gyeongbuk, Korea)

P1-pl.039\*

**Triton burnup measurement result in KSTAR deuterium plasmas** / JO Jungmin<sup>1</sup>, CHEON MunSeong<sup>2</sup>, KIM Jun Young<sup>2, 3</sup>, RHEE T. N.<sup>2</sup>, KIM Junghee<sup>2</sup>, ISOBE M.<sup>4, 5</sup>, OGAWA K.<sup>4, 5</sup>, CHUNG Kyoung-Jae<sup>\*1</sup>, HWANG Y. S.<sup>1</sup>(<sup>1</sup>Department of Energy System Engineering, Seoul National University, Seoul, Republic of Korea, <sup>2</sup>National Fusion Research Institute, Daejeon, Republic of Korea, <sup>3</sup>Korea University of Science and Technology, Daejeon, Republic of Korea, <sup>4</sup>National Institute for Fusion Science, Toki-shi, Japan, <sup>5</sup>SOKENDAI(The Graduate University for Advanced Studies), Toki-shi, Japan)

P1-pl.040\*

**Characteristics of global energy confinement in KSTAR H-mode plasma** / SEO Pooreun<sup>1</sup>, KIM Hyunseok<sup>2</sup>, YOON Siwoo<sup>2</sup>, JEON Youngmu<sup>\*2</sup>(<sup>1</sup>Department of Chemical and Biological Engineering, Gachon University, <sup>2</sup>National Fusion Research Institute(NFRI))

P1-pl.041

**ExB Shear and Precession Shear Induced Turbulence Suppression** / CHOI Gyung Jin, HAHM Taik Soo\*(Department of Nuclear Engineering, Seoul National University)

P1-pl.042

**Dynamic simulation of a supercritical helium circulator circuit for unexpected event** / LEE Hyunjung\*, OH S. J., OH D. K., KIM N. W., MOON K. M., AHN H. J., PARK K. R.(National Fusion Research Institute)

P1-pl.043\*

**Tangential reconstruction of 2-D total radiation profiles during impurity seeding in KSTAR** / JANG Juhyeok<sup>1, 2</sup>, PETERSON Byron Jay<sup>3</sup>, SEO Dongcheol<sup>4</sup>, SANO Ryuichi<sup>3</sup>, HONG Sukho<sup>4</sup>, MUKAI Kiyofumi<sup>3</sup>, HONG Joohwan<sup>1, 2</sup>, LEE Hyunyong<sup>1, 2</sup>, LEE Seunghun<sup>4</sup>, CHOE Wonho<sup>\*1, 2</sup>(<sup>1</sup>Korea Advanced Institute of Science and Technology (KAIST), <sup>2</sup>Impurity and Edge plasma Research Center, KAIST, <sup>3</sup>National Institute of Fusion Science, <sup>4</sup>National Fusion Research Institute)

P1-pl.044

**The low H-mode threshold power under non-axisymmetric magnetic fields in KSTAR** / KO Won-Ha<sup>\*1</sup>, KIM H.S.<sup>1</sup>, LEE J.H.<sup>1</sup>, IN Y.<sup>1</sup>, SEOL J.<sup>1</sup>, JEON Y.M.<sup>1</sup>, IDA K.<sup>2</sup>, YOON S.W.<sup>1</sup>(<sup>1</sup>National Fusion Research Institute,

**P1-pl.045**

**Design of diagnostic neutral beam injector for charge exchange spectroscopy in VEST** / LEE Kihyun<sup>1</sup>, PARK JongYoon<sup>1</sup>, JUNG Bongki<sup>2</sup>, CHUNG K.J.<sup>1</sup>, HWANG Y.S.\*<sup>1</sup>(<sup>1</sup>Department of Nuclear Engineering, Seoul National University, <sup>2</sup>Korea Atomic Energy Research Insitute)

**P1-pl.046\***

**Transition to supersonic plasma flows in magnetic nozzle geometries** / CHUNG Kyoungsoo, CHUNG Kyoung-Jae\*, HWANG Yongseok(Department of Nuclear Engineering, Seoul National University)

**P1-pl.047**

**High performance advanced plasma operations in KSTAR: Experimental conditions for the access** / JEON YoungMu\*<sup>1</sup>, KIM Hyunseok<sup>1</sup>, NA YongSu<sup>2</sup>, BAE YeoungSoon<sup>1</sup>, YOON Siwoo<sup>1</sup>, HAHN Sanghee<sup>1</sup>, HAN Hyunsun<sup>1</sup>(<sup>1</sup>National Fusion Research Institute, <sup>2</sup>Seoul National University)

**P1-pl.048**

**KSTAR 플라즈마에서 고속이온이 유발하는 알펜 고유 모드의 실험적 관찰** / 김정희\*<sup>1</sup>, 이동렬<sup>1</sup>, 김준영<sup>2</sup>, 김현석<sup>1</sup>, 우민호<sup>1</sup>, 변철식<sup>3</sup>, 나용수<sup>3</sup>, 박준교<sup>1</sup>, 김흥수<sup>1</sup>, K. Shinohara<sup>4</sup>, C. Z. Cheng<sup>5</sup>(<sup>1</sup>국가핵융합연구소 KSTAR연구센터, <sup>2</sup>과학기술연합대학 원대학교 가속기및핵융합물리공학 전공, <sup>3</sup>서울대학교 원자핵공학과, <sup>4</sup>Japan Atomic Energy Agency, <sup>5</sup>National Cheng Kung University)



게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소 : 포스터발표장

### P2-ap.101\*

**3d-금속 이온 치환된 스피넬  $\text{LiT}_x\text{Mn}_{2-x}\text{O}_4$  ( $T = \text{Fe, Co, Ni, Cu, Zn}$ ) 화합물 박막에서의 양이온 분포 및 구조적 변화 조사** / 박소연, 김광주\*(건국대학교 물리학과)

### P2-ap.102\*

**스피넬  $\text{Ni}_x\text{Co}_{3-x}\text{O}_4$  화합물의 플라론 전도 특성 및 응용성 탐구** / 고태영, 김광주\*(건국대학교 물리학과)

### P2-ap.103

**은점토 공여용 은분말의 소결거동 연구** / 정광휘<sup>1</sup>, 이창현<sup>1</sup>, 박영석<sup>1</sup>, 홍영환<sup>1</sup>, 진정호<sup>1</sup>, 마경희<sup>2</sup>, 이재신<sup>1</sup>\*(<sup>1</sup>울산대학교 첨단소재공학부, <sup>2</sup>위메이크산타)

### P2-ap.104

**MBE growth of various TMD films and characterizations** / 장영준<sup>1</sup>, 최병기<sup>1</sup>, 이인학<sup>1</sup>, 김혁진<sup>2</sup>, 양승준<sup>1</sup>\*(<sup>1</sup>서울시립대학교 물리학과, <sup>2</sup>서울시립대학교 에너지환경시스템공학과)

### P2-ap.105

**Graphene oxide composite membranes for forward osmosis** / KIM Hyun, YANG Bee Lyong\*(School of Advanced Materials and System Engineering, Kumoh National of Institute of Technology)

### P2-ap.106

**Fabrication of Cobalt oxide Nanoparticles Sensitized on  $\text{TiO}_2$  Nanorods/FTO for Photo-electrochemical Systems** / RAMAKRISHNAN Vivek, YANG Bee Lyong\*(School of Advanced Materials and System Engineering, Kumoh National of Institute of Technology)

### P2-ap.107

**$\text{TiO}_2/\text{ZnO}/\text{CuO}/\text{FTO}$  photocathode for improved photocatalytic activity** / KIM Hyun, YANG Bee Lyong\*(School of Advanced Materials and System Engineering, Kumoh National of Institute of Technology)

### P2-ap.108\*

**고상반응법을 통해 제작한 Sn이 첨가된 Hematite ( $\alpha\text{-Fe}_2\text{O}_3$ ) 분말의 전기적 특성 변화 연구** / 송세환<sup>1</sup>, 김지웅<sup>1</sup>, 이두용<sup>1</sup>, 배종성<sup>2</sup>, 박성균<sup>1</sup>\*(<sup>1</sup>부산대학교 물리학과, <sup>2</sup>한국기초과학지원연구원)

## P2-ap.109\*

**Synthesis of Two Dimensional VO<sub>2</sub> Nanosheet for Smart Window Application** / OH Su-Ar, KIM Ki-Chul\* (Department of Advanced Chemical Engineering, Mokwon University)

## P2-ap.110

**Sonochemical syntheses of BaTiO<sub>3</sub> nanoparticles** / MO Junyong, KANG Yeojin, CHO Chulhee, JUN Byeongeog\* (Korea Science Academy, Korea Advanced Institute of Science and Technology)

## P2-ap.111\*

**Synthesis of Ultra-thin Tellurium Nanoflakes on Textile for High Performance Flexible and Wearable Nanogenerators** / HE Wen<sup>2</sup>, NGOC Huynh Van<sup>1</sup>, KANG Dae Joon\*<sup>1,2</sup> (<sup>1</sup>Department of Physics, Sungkyunkwan University, <sup>2</sup>Interdisciplinary Department of Physics and Chemistry, Sungkyunkwan University)

## P2-ap.112\*

**Direct Growth of Large Area, High-Crystalline Graphene on Single-Layer Hexagonal Boron Nitride by Chemical Vapor Deposition** / QIAN Yongteng<sup>1</sup>, NGOC Huynh Van<sup>2</sup>, KANG Dae Joon\*<sup>1,2</sup> (<sup>1</sup>Interdisciplinary Department of Physics and Chemistry, Sungkyunkwan University, <sup>2</sup>Department of Physics, Sungkyunkwan University)

## P2-ap.113

**Optical investigation on the oxygen-deficient SrTiO films** / SEO Ilwan<sup>1</sup>, LEE Y. S.\*<sup>1</sup>, LEE Sang A<sup>2</sup>, CHOI W. S.<sup>2</sup> (<sup>1</sup>Department of Physics, Soongsil University, <sup>2</sup>Department of Physics, Sungkyunkwan University)

## P2-ap.114\*

**스퍼터링 방법으로 제작한 Indium Tin Oxide 박막의 엑시머 레이저 후처리 효과: 타원분광법 분석** / 노미루<sup>1</sup>, 서일완<sup>1</sup>, 이윤상\*<sup>1</sup>, 김혁진<sup>2</sup>, 장영준<sup>2</sup>, 박성균<sup>3</sup> (<sup>1</sup>숭실대학교 물리학과, <sup>2</sup>서울시립대학교 물리학과, <sup>3</sup>부산대학교 물리학과)

## P2-ap.115

**Reinterpreting the pathway of the red emission in  $\beta$ -NaYF<sub>4</sub>:Yb<sup>3+</sup>, Er<sup>3+</sup>** / OH Ju Hyun<sup>1</sup>, MOON Byung Kee<sup>1</sup>, JEONG Jung Hyun\*<sup>1</sup>, KIM Jung Hwan<sup>2</sup> (<sup>1</sup>Department of Physics Pukyong National University, <sup>2</sup>Department of Physics Dong-eui University)

## P2-ap.116

**Crystal structure, electronic structure and photoluminescence properties of SrLaMgTaO<sub>6</sub>:Er<sup>3+</sup>** / KIM Do Rim<sup>1</sup>, PARK Sung Wook<sup>1</sup>, JEONG Jung Hyun\*<sup>1</sup>, CHOI Haeyoung<sup>1</sup>, KIM Jung Hwan<sup>2</sup> (<sup>1</sup>Department of Physics, Pukyong National University, <sup>2</sup>Department of Physics, Dongeui University)

P2-ap.117

**Preparation and fluorescence properties of Eu<sup>2+</sup>-activated novel phosphosilicate apatite Sr<sub>3</sub>LaNa(PO<sub>4</sub>)<sub>2</sub>(SiO<sub>4</sub>)** / GUO Yue<sup>1</sup>, MOON Byung Kee<sup>1</sup>, CHOI Byung Chun<sup>1</sup>, JEONG Jung Hyun<sup>\*1</sup>, KIM Jung Hwan<sup>2</sup>(<sup>1</sup>Department of Physics, Pukyong National University, <sup>2</sup>Department of Physics, Dong-eui University )

P2-ap.118

**Synthesis and photoluminescence of Bi<sup>3+</sup>, Eu<sup>3+</sup> doped CdWO<sub>4</sub> phosphors – an application of energy level rules of Bi<sup>3+</sup> ions** / WANG Lili<sup>1</sup>, NOH Hyeon Mi<sup>1</sup>, MOON Byung Kee<sup>1</sup>, JEONG Jung Hyun<sup>\*1</sup>, KIM Jung Hwan<sup>2</sup>, SHI Jinsheng<sup>3</sup>(<sup>1</sup>Department of Physics, Pukyong National University, <sup>2</sup>Department of Physics, Dong-eui University, <sup>3</sup>Department of Chemistry and Pharmaceutical Science, Qingdao Agricultural University)

P2-ap.119

**Enhanced luminescence of SrNb<sub>2</sub>O<sub>6</sub>:Eu<sup>3+</sup> phosphors by efficient charge compensation** / XUE Junpeng<sup>1</sup>, MOON Byung Kee<sup>1</sup>, CHOI Byung Chun<sup>1</sup>, JEONG Jung Hyun<sup>\*1</sup>, KIM Jung Hwan<sup>2</sup>(<sup>1</sup>Department of Physics, Pukyong National University, <sup>2</sup>Department of Physics, Dong-eui University )

P2-ap.120\*

**Evolution of carrier dynamics in phase transition of Sb<sub>2</sub>Te<sub>3</sub> thin film as a function of the annealing temperature** / CHAE Jimin<sup>1</sup>, PARK Hanbum<sup>1</sup>, JEONG Kwangsik<sup>1</sup>, YANG Wonjun<sup>1</sup>, KIM Dasol<sup>1</sup>, CHO Mann-Ho<sup>\*1</sup>, CHOI Hyejin<sup>1</sup>, PARK Jaehun<sup>2</sup>(<sup>1</sup>Institute of Physics and Applied Physics, Yonsei University, <sup>2</sup>Pohang Accelerator Laboratory, POSTECH)

P2-ap.121

**Characterization of the trivalent samarium-doped strontium borates prepared by using the solvothermal method** / YANG Ho-Soon<sup>\*1</sup>, LEE Min Jung<sup>1</sup>, HONG Kyong-Soo<sup>2</sup>(<sup>1</sup>Department of Physics, Pusan National University, <sup>2</sup>Pusan Center, Korea Basic Science Institute)

P2-ap.122\*

**Morphological Evolution of Au and Co Nanoparticles After Nano-second Pulsed Laser Irradiation** / CHOI Jungwon<sup>1</sup>, SON Joon-Gon<sup>\*1</sup>, SEO Okkyun<sup>\*1</sup>, HA Sung Soo<sup>\*1</sup>, KANG HyonChol<sup>\*2</sup>, NOH Do Young<sup>\*1</sup>(<sup>1</sup>School of Materials Science and Engineering& Department of Physics and Photon Science, GIST, <sup>2</sup>Department of Advanced Materials Engineering, Chosun University)

P2-ap.123\*

**Growth of Large MoO<sub>3</sub> Single Crystal and its physical properties** / KONG Hyeonjun<sup>1</sup>, AHN Eunyoung<sup>1</sup>, RYU Sangkyun<sup>1</sup>, KIM Ji Woong<sup>1</sup>, CHO Jin-Hyung<sup>2</sup>, PARK Sungkyun<sup>1</sup>, KIM Dongjin<sup>1</sup>, JEEN Gwang-Soo<sup>1</sup>, LEE Inwon<sup>3</sup>, JEEN

Hyoungjeen\*<sup>1</sup>(<sup>1</sup>Department of Physics, Pusan National University, <sup>2</sup>Department of Physics education, Pusan National University, <sup>3</sup>Global Core Research Center for Ships and Offshore Plants, Pusan National University)

P2-ap.124\*

**Hydrothermally synthesized CuCo<sub>2</sub>S<sub>4</sub> nanorod electrodes for supercapacitor applications** / - Abu Talha A. A, CHAVAN H S, CHO Sangeun, JO Yongcheol, KIM Jongmin, LEE Seongwoo, HAN Jaeseok, INAMDAR A I, PAWAR S M, KIM Hyungsang, IM Hyunsik\* (Division of Physics and Semiconductor Science, Dongguk University)

P2-ap.125

**Computational thermodynamic analysis on the purification of AlN powder by thermal annealing** / Yura Kang<sup>1,2</sup>, Younghee Kim<sup>2</sup>, Seongmin Jeong\*<sup>2</sup>, Suklyun Hong\*<sup>1</sup>(<sup>1</sup>Department of Physics and Graphene Research Institute, Sejong University, Seoul 143-747, Korea, <sup>2</sup>Energy & Environmental Division, Korea Institute of Ceramic Engineering and Technology)

P2-ap.126\*

**FeRh 박막의 후열처리에 따른 물리적 특성변화** / 이지성<sup>1</sup>, 김지웅<sup>1</sup>, 이두용<sup>1</sup>, 이정수<sup>2</sup>, 박성균\*<sup>1</sup>(<sup>1</sup>부산대학교 물리학과, <sup>2</sup>한국원자력연구원 중성자장치부)

P2-ap.127

**Fabrication, temperature-dependent local structural and electrical properties of epitaxial VO<sub>2</sub> thin films** / 김정란, 황인희, 박창인, 한상욱\* (전북대학교 과학교육학과)

P2-ap.128

**Synthesis of Nanostructured ZnWO<sub>4</sub> thin films by RF sputtering method for electrochemical supercapacitor applications** / CHAVAN Harish\*, ANSARI A.A., CHO Sangeun, KIM Jongmin, JO Yongcheol, LEE Seongwoo, HAN Jayseok, PAWAR S.M., INAMDAR A.I., KIM Hyungsang, IM Hyunsik(Division of Physics and Semiconductor Science, Dongguk University)

P2-ap.129\*

**Spin orbit torque-induced magnetization switching behaviors in 5d metal (Hf, Ta, W) / CoFeB / MgO stacks** / PARK Haesoo<sup>1</sup>, AN Gwangguk<sup>1</sup>, YANG Seungmo<sup>1</sup>, CHUNG Wooseong<sup>2</sup>, YANG JungYup<sup>3</sup>, HONG Jinpyo\*<sup>1</sup>(<sup>1</sup>Department of Physics, Hanyang University, <sup>2</sup>Department of Electronics and Computer Engineering, Hanyang University, <sup>3</sup>Department of Physics, Kunsan national University)

P2-ap.130\*

**Atomic state-dependent spin orbit torque behaviors of W/CoFeB/MgO frames under thermal treatments** / YANG SeungMo<sup>1</sup>, AN

GwangGuk<sup>1</sup>, CHUNG WooSeong<sup>3</sup>, PARK HaeSoo<sup>1</sup>, HONG JinPyo<sup>\*1,2</sup>(<sup>1</sup>Department of Physics, Hanyang University, Seoul , <sup>2</sup>Division of Nano-Scale Semiconductor Engineering, Hanyang University, Seoul , <sup>3</sup>Department of Electronics and Computer Engineering, Hanyang University, Seoul)

P2-ap.131\*

**Investigation of the interfacial Dzyaloshinskii-Moriya interaction, surface anisotropy, and Gilbert damping at the Ir/Co interface /** KIM Nam-Hui<sup>1</sup>, JUNG Jinyong<sup>1</sup>, CHO Jaehun<sup>1</sup>, HAN Dong-Soo<sup>3</sup>, YIN Yuxiang<sup>3</sup>, KIM June-Seo<sup>\*3</sup>, SWAGTEN Henk J. M.<sup>3</sup>, YOU Chun-Yeol<sup>\*2</sup>(<sup>1</sup>Department of Physics, Inha University, <sup>2</sup>Department of Emerging Materials Science, DGIST, <sup>3</sup>Department of Applied Physics, Center for NanoMaterials, Eindhoven University of Technology)

P2-ap.132\*

**Decrease of the interfacial Dzyaloshinskii-Moriya interaction by annealing temperature in heavy metal/ferromagnetic layer by employing Brillouin light scattering /** KIM Nam-Hui<sup>1</sup>, JUNG Jinyong<sup>1</sup>, CHO Jaehun<sup>1</sup>, HAN Dong-Soo<sup>3</sup>, YIN Yuxiang<sup>3</sup>, KIM June-Seo<sup>\*3</sup>, SWAGTEN Henk J. M.<sup>3</sup>, YOU Chun-Yeol<sup>\*2</sup>(<sup>1</sup>Department of Physics, Inha University, <sup>2</sup>Department of Emerging Materials Science, DGIST, <sup>3</sup>Department of Applied Physics, Center for NanoMaterials, Eindhoven University of Technology)

P2-ap.133\*

**Improvement of Brillouin light scattering intensity by Anti-reflective coating of MgO in inversion symmetry broken system /** JUNG Jinyong<sup>1</sup>, KIM Nam-Hui<sup>1</sup>, PARK Kwonjin<sup>1</sup>, HWANG Hee-Kyeong<sup>1</sup>, YOU Chun-Yeol<sup>\*1,2</sup>(<sup>1</sup>Department of Physics, Inha University, Republic of Korea, <sup>2</sup>Department of Emerging Materials Science, DGIST, Republic of Korea)

P2-ap.134

**Reversible femtosecond time-resolved magneto-optic Kerr effect (TR-MOKE) /** SYED Akbar Ali<sup>1,2</sup>, SHIM Je-Ho<sup>1,2</sup>, JEONG Jong-Ryul<sup>4</sup>, KIM Dong-Hyun<sup>3</sup>, KIM Dong Eon<sup>\*1,2</sup>(<sup>1</sup>Max Planck center for Attosecond science, Max Planck POSTECH/Korea Res. Init. Pohang-37673, Republic , <sup>2</sup>Department of Physics, Center for Attosecond Science and Technology (CASTECH), POSTECH, Pohang, 376-, <sup>3</sup>Department of Physics, Chungbuk National University, Cheongju 361-763, South Korea, <sup>4</sup>Department of Material Science and Engineering and Graduate School of Energy Science and Technology,)

P2-ap.135\*

**Enhancement of antireflection property of silicon using nanostructured surface combined with a polymer deposition /** HA Jun Mok<sup>\*</sup>, CHO Sung Oh(Department of Nuclear and Quantum Engineering, Korea Advanced Institute of Science and Technology)

P2-ap.136\*

**Selective Growth of Differently Oriented GaN Domains on a Patterned m-plane Sapphire Substrate** / JUE Miyeon, KIM Cheol-woon, KANG Seoung-hun, YOON Hansub, JANG Dongsoo, KIM Donghoi, KWON Yong-kyun\*, KIM Chinkyo\* (Department of Physics, Kyung Hee University)

P2-ap.137\*

**In-plane Polarity Control of Nonpolar GaN Grown on an M-plane Sapphire Substrate** / KIM Donghoi, JUE Miyeon, JANG Dongsoo, KIM Chinkyo\* (Department of Physics, Kyung Hee University)

P2-ap.138\*

**Thermal energy assisted structural evolution of Cu films** / KIM Ji Woong<sup>1</sup>, LEE Dooyong<sup>1</sup>, SONG Sehwan<sup>1</sup>, JANG Yun Hyeong<sup>1</sup>, CHO Jin Hyoung<sup>2</sup>, BU Sang Don<sup>3</sup>, PARK Sungkyun\*<sup>1</sup> (<sup>1</sup>Department of Physics, Pusan National University, <sup>2</sup>Department of Physics Education, Pusan National University, <sup>3</sup>Department of Physics, Chonbuk National University)

P2-ap.139

**Effects of Oxygen Plasma Treatments on the Work Function of Indium Tin Oxide Studied by in-situ Photoelectron Spectroscopy** / PARK Yongsup\*, MAENG Min-Jae, KIM Ji-Hoon, HONG Jong-Am (Dept. of Physics, Kyung Hee University, Seoul, Korea)

P2-ap.140

**파워세기에 따른 SnO<sub>2</sub> 박막의 구조적 변화 특성** / 정진\*, 이봉주 (조선대학교)

P2-ap.141

**Infra Red 차폐를 위한 AZO film 기반 멀티단열필름의 광학적 특성 연구** / 이동훈\* (전자부품연구원 나노소재부품연구센터)

P2-ap.142\*

**A Flexible Supercapacitor electrode based RuO<sub>2</sub>/graphene with enhanced electrochemical stability and superior performance** / CHO Sangeun, KIM Jongmin, JO Yongcheol, WOO Hyeonseok, HAN Jaeseok, LEE Seongwoo, INAMDAR A. I., PAWAR S. M., KIM Hyungsang, IM Hyunsik\* (Division of Physics & Semiconductor Science, Dongguk University)

P2-ap.143\*

**Electrical properties of sub-1 nm EOT HfO<sub>2</sub> grown on InAs by atomic layer deposition** / BAIK Min<sup>1</sup>, CHO Mannho\*<sup>1</sup>, KANG Yuseon<sup>1</sup>, KANG Hangkyu<sup>1</sup>, JEONG Kwangsik<sup>1</sup>, KIM Daekyoung<sup>1</sup>, AN Youngseo<sup>2</sup>, KIM Hyoungsub<sup>2</sup>, SONG Jingdong<sup>3</sup> (<sup>1</sup>Institute of Physics and Applied Physics, Yonsei University, <sup>2</sup>School of Advanced Materials Science and Engineering, Sungkyunkwan University, <sup>3</sup>Center of Opto-electronic Materials, Korea Institute of Science and Technology)

P2-ap.144\*

**면상 발열시트용 ITO 필름의 발열특성 연구** / 황보현, 강만일, 김석원\*(울산대학교 물리학과 에너지 하비스트 스토리지 연구센터)

P2-ap.145

**Optical properties of Vanadium pentoxide prepared by Sol-gel and PLD method for light detector** / CHO Jin-cheol<sup>\*1, 2</sup>, KIM Hyun-Tak<sup>\*1</sup>(<sup>1</sup>MIT lab, ETRI, <sup>2</sup>Department of advanced device technology, UST)

P2-ap.146

**UV-Vis Spectroscopy of Zn<sub>0.9</sub>Mg<sub>0.1</sub>O:Ga Thin Films by Using the RF Magnetron Depositions** / LEE Hyemin, JUNG Inyoung, LEE Jongrim, JUN byeongeog\*(Korea Science Academy of Korea Advanced Institute of Science and Technology)

P2-ap.147\*

**Growth of high quality InGaN/GaN multiple quantum well for long wavelength emission by plasma-assisted molecular beam epitaxy** / WOO Hyeonseok<sup>1, 2</sup>, CHO Sangeun<sup>1</sup>, KIM Jongmin<sup>1</sup>, ROH Cheong Hyun<sup>2</sup>, LEE Jun Ho<sup>2</sup>, KIM Hyungsang<sup>1</sup>, HAHN Cheol-Koo<sup>2</sup>, IM Hyunsik<sup>\*1</sup>(<sup>1</sup>Division of Physics and Semiconductor Science, Dongguk University, <sup>2</sup>Display Convergences Research Center, Korea Electronics Technology Institute)

P2-ap.148

**Mg alloy에 대한 건식 표면처리 특성 연구** / Yu Jae In<sup>\*1</sup>, KIM Ki Hong<sup>\*2</sup>, YU Jae Yong<sup>3</sup>, KO Hun<sup>3</sup>, YUN Jae Gon<sup>1</sup>, 고다영<sup>2</sup>, 배연주<sup>2</sup>(<sup>1</sup>Yeungnam University, <sup>2</sup>Catholic University, <sup>3</sup>Techtrans company R&D)

P2-ap.149

**The study of photoreflectance characteristic in Si<sub>3</sub>N<sub>4</sub>/Al<sub>0.21</sub>Ga<sub>0.79</sub>As/GaAs samples** / IN YU JAE<sup>\*1</sup>, HONG KIM KI<sup>\*2</sup>, HUN KO<sup>3</sup>, GON YUN JAE<sup>1</sup>, CHUL KIM<sup>3</sup>, YONG YU JAE<sup>3</sup>(<sup>1</sup>Yeungnam University, <sup>2</sup>Catholic University, <sup>3</sup>Techtrans Company R&D)

게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소: 포스터발표장

### P2-ap.201\*

**Simultaneous observation of transcription of Arc mRNA and Ca<sup>2+</sup> spikes in live hippocampal neurons** / MOON Hyungseok C.<sup>1</sup>, SINGER Robert H.<sup>2, 3, 4</sup>, PARK Hye Yoon\*<sup>1</sup>(<sup>1</sup>Department of Physics and Astronomy, Seoul National University, Seoul, 08826, Korea, <sup>2</sup>Transcription Imaging Consortium, Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, <sup>3</sup>Department of Anatomy and Structural Biology, Albert Einstein College of Medicine, Bronx, NY 10461, <sup>4</sup>Gruss-Lipper Biophotonics Center, Albert Einstein College of Medicine, Bronx, NY 10461)

### P2-ap.202\*

**Dynamics of human telomeric DNA using photochemical properties of Tetramethylrhodamine dye by fluorescence correlation spectroscopy** / KIM Minjung<sup>1</sup>, LEE Dongkeun<sup>1</sup>, KIM Sok Won\*<sup>2</sup>, KIM Soo Yong\*<sup>1</sup>(<sup>1</sup>Department of Physics KAIST, <sup>2</sup>Department of Physics University of Ulsan)

### P2-ap.203\*

**MonteCarlo Simulation Based Persistence Length Measurement of Long Human Telomere by Fluorescence Correlation Spectroscopy** / JUNG Seokhyun<sup>1</sup>, KIM Soo Yong<sup>1</sup>, KIM Sok Won\*<sup>2</sup>(<sup>1</sup>Department of Physics KAIST, <sup>2</sup>Department of Physics University of Ulsan)

### P2-ap.204

**A Simulation Study for the Radiation Damage of Tumor Cell in Proton Boron Fusion Therapy** / LIU Dong<sup>1</sup>, WOO Jong-Kwan<sup>1</sup>, KO Jewou<sup>1</sup>, LEE Se Byeong<sup>2</sup>(<sup>1</sup>Medical Physics Laboratory, Department of Physics, Jeju National University, <sup>2</sup>Proton Therapy Center, National Cancer Center)

### P2-ap.205

**Geometric accuracy of stereotactic co-registered 11C-methionine PET imaging in Leksell Gamma Knife treatment planning** / LIM Sa-Hoe\*, JANG Woo-Youl, JUNG Tae-Young, KIM In-Young, MOON Kyung-Sub, JUNG Shin(Department of Neurosurgery, Chonnam National University Hwasun Hospital)

### P2-ap.206\*

**Real time monitoring of osteogenic differentiation using 3D capacitance cell sensor** / SONG Jun Ho<sup>1</sup>, LEE Sun-Mi<sup>2</sup>, BAE Yong Hee<sup>1</sup>, JO NamGyeong<sup>1</sup>, YOO Kyung-Hwa\*<sup>1, 2</sup>(<sup>1</sup>Department of Physics, Yonsei University,



P2-ap.207\*

**Nonlocal Photoluminescence of Organic Hybrid of Rubrene Microrods and Gold Nanoparticles: Applications Remote Bio-sensing**  
/ 황형석<sup>1</sup>, 이주복<sup>2</sup>, 김정용<sup>2</sup>, 주진수\*<sup>1</sup>(<sup>1</sup>고려대학교 물리학과, <sup>2</sup>성균관대학교 에너지과학과)

P2-ap.208

**Morphological Evolution of Organic Micro/Nanostructures for Light-Emitting Devices** / KWAK Dong Wook<sup>1</sup>, LEE Dong Jin<sup>2</sup>, KIM Byeong Guk<sup>3</sup>, KWON Sang Woo<sup>4</sup>, CHO San Eun<sup>5</sup>, CHO Hoon Young\*<sup>6</sup>(<sup>1</sup>Anthracene Gesellschaft, <sup>2</sup>Anthracene Gesellschaft, <sup>3</sup>Anthracene Gesellschaft, <sup>4</sup>Department of Physics Dongguk University, <sup>5</sup>Department of Physics Dongguk University, <sup>6</sup>Department of Physics Dongguk University)

P2-ap.209\*

**Optical Properties on Thin Films Blended with poly[2-methoxy-5-(2'-ethylhexy)-p-phenylenevinylene] for Fluorescent Devices**  
/ KWON Sangwoo, CHO Sang Eun, LEE Dongwha, CHO Hoon Young\* (Department of Physics, Dongguk University)

P2-ap.210\*

**Fundamental and Intrinsic Properties of Perovskite CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> and CH<sub>3</sub>NH<sub>3</sub>PbBr<sub>3</sub> Single Crystals** / WOO Won Seok<sup>1</sup>, AHN Chang Won<sup>1</sup>, KOO Tae-Yeong<sup>2</sup>, SHIN Hong kee<sup>3</sup>, CHO Shinuk<sup>1</sup>, KIM Ill Won\*<sup>1</sup>(<sup>1</sup>Department of Physics and EHSRC, University of Ulsan, <sup>2</sup>Pohang Accelerator Laboratory, <sup>3</sup>Department of Physics, Daejin University)

P2-ap.211

**정공 주입층 MoO<sub>3</sub>가 유기 발광 소자의 전기 발광 특성에 미치는 효과** / 오정은<sup>1</sup>, 서지동<sup>1</sup>, 조호근<sup>1</sup>, 김혜림<sup>1</sup>, 송민중<sup>2</sup>, 김태완\*<sup>1</sup>(<sup>1</sup>홍익대학교 정보디스플레이 공학과, <sup>2</sup>광주보건대학교 의료정보공학과)

P2-ap.212\*

**The electrical properties of methylbenzenethiol versus benzenedithiol with PEDOT:PSS interlayer-electrode molecular devices** / JEONG Inho<sup>1</sup>, HWANG Wang-Taek<sup>2</sup>, JANG Yeonsik<sup>2</sup>, JEONG Hyunhak<sup>2</sup>, KIM Dongku<sup>2</sup>, LEE Takhee<sup>2</sup>, SONG Hyunwook\*<sup>1</sup>(<sup>1</sup>Department of Applied Physics, Kyung Hee University, <sup>2</sup>Department of Physics and Astronomy, Seoul National University)

P2-ap.213

**엘립소메터를 이용한 비등방성 물질 (B4PyMPM) 의 분자 배열과 광학적 특성에 관한 연구** / 조호근<sup>1</sup>, 서지동<sup>1</sup>, 오정은<sup>1</sup>, 김혜림<sup>1</sup>, 이원재<sup>2</sup>, 김태완\*<sup>1</sup>(<sup>1</sup>홍익

**P2-ap.214\***

**Enhanced thermoelectric performance of glassy carbon thin films by e-beam irradiation.** / OH Inseon<sup>1</sup>, JO Junhyeon<sup>1</sup>, PARK Jungmin<sup>1</sup>, JIN Mi-Jin<sup>1</sup>, LEE Jongmin<sup>2</sup>, SHIN Heungjoo<sup>2</sup>, YOO Jung-Woo\*<sup>1</sup>(<sup>1</sup>School of Materials Science and Engineering UNIST, <sup>2</sup>School of Mechanical Engineering UNIST)

**P2-ap.215**

**Correlation between structural and thermoelectric performance crossover in conducting polymer** / JO Junhyeon, OH Inseon, JIN Mi-Jin, YOO Jung-Woo\* (Ulsan National Institute of Science and Technology (UNIST))

**P2-ap.216\***

**유기 발광 소자에서 F-SAM 박막의 정공 주입 영향과 발광 효율 특성** / 김혜림<sup>1</sup>, 서지동<sup>1</sup>, 오정은<sup>1</sup>, 조호근<sup>1</sup>, 홍진웅<sup>2</sup>, 김태완\*<sup>1</sup>(<sup>1</sup>홍익대학교 정보디스플레이공학과, <sup>2</sup>광운대학교 전기공학과)

**P2-ap.217\***

**The nanostructure evolution of ZnPc thin films during thermal process under the C60 & C70** / KEUM Hee-Sung<sup>1</sup>, LEE Si Woo<sup>1</sup>, CHOI Min-Soo<sup>2</sup>, KIM Jang-Joo<sup>2</sup>, LEE Hyun Hwi\*<sup>3</sup>, KIM Hyo Jung\*<sup>1</sup>(<sup>1</sup>Department of Organic Material Science and Engineering, Pusan National University, <sup>2</sup>Department of Materials Science and Engineering and the Center for OLED, Seoul National University, <sup>3</sup>Pohang Accelerator Laboratory, POSTECH)

**P2-ap.218\***

**Development of Microbial Battery on Carbon Nanomaterials** / 안성진, 임은주\*(단국대학교 창의융합제조공학과)

**P2-ap.219**

**Investigation of the highly sensitive critical mode in Ulam spiral photonic structure** / 지민정, 노희소\*(국민대학교 물리학과)

**P2-ap.220**

**Effects of atomic hydrogen exposure on light emission of Si nanocrystals** / YOON Jisang, JANG Sunjong, YOON Jonghwan\*(Department of Physics, Kangwon National University)

**P2-ap.221\***

**Switchable Photovoltaic Effects in Hexagonal Manganite Thin Films Having Narrow Optical Band Gaps** / HAN Hyeon, SONG Seung-Woo, LEE June Ho, JANG Hyun Myung\*(Department of Materials Science and Engineering, and Division of Advanced Materials Science, POSTECH)

P2-ap.222\*

주기적인 나노구조를 적용한 페로브스카이트 태양전지 제작 및 구동 특성 연구 / 박태준, 여정환, 이순일, 하나영\*(아주대학교 에너지시스템학과)

P2-ap.223

**Comparative study of luminescence properties on  $\text{Li}^+$  doped  $\text{GdSr}_2\text{AlO}_5:\text{Ce}^{3+}$  phosphor synthesized by high energy ball milling and sol-gel met** / YANG Hyun Kyoung\*, HONG Woo Tae, JOO Jung Sik, JANG Hyeong Il(Department of LED Convergence Engineering, Pukyong National University)

P2-ap.224

**Template-and surfactant-free solvothermal reaction of  $\text{TiO}_2:\text{Eu}^{3+}$  spheres** / YANG Hyun Kyoung\*, PARK Sung Jun, LEE Joo Hyun, MUN Ju Young, PARK Jin Young(Department of LED Convergence Engineering, Pukyong National University)

P2-ap.225

**Optical magnetic mirror using metallic structure** / 허민성<sup>1</sup>, 서일성<sup>2</sup>, 신종화<sup>\*</sup>(<sup>1</sup>한국과학기술원 신소재공학과, <sup>2</sup>국방과학연구소 제4기술연구본부 4부)

P2-ap.226

**Origin of negative permittivity** / LEE Sam Hyeon\*(Institute of Physics and Applied Physics, Yonsei University)

게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소: 포스터발표장

### P2-as.001\*

국제우주정거장에서의 고에너지 우주선 관측을 위한 실리콘 전하검출기의 pedestal 값과 온도의 함수를 통한 데이터 처리 / 박일흥\*, 이직\*, 이해영, 전진아, 최광호(성균관대학교 물리학과)

### P2-as.002\*

Field Test of UFFO-p/SMT-ICCD with the recently embedded its flight model software / PARK Il H. \*, JEONG Soomin\*, GAIKOV Georgii, KIM Minbin, PARK Woochan, JEONG Hyomin(Department of Physics, Sungkyunkwan University)

### P2-as.003\*

Enhanced PMT Photon Traps for Hyper-K / IN Seongjin\*, ROTT Carsten<sup>1</sup>, RETIERE Fabrice<sup>2</sup>, GUMPLINGER Peter<sup>2</sup>(<sup>1</sup>Department of Physics, SungKyunKwan University, Korea, <sup>2</sup>TRIUMF, Canada)

### P2-as.004\*

Camera System for Antarctic Ice Property Studies for IceCube Upgrades / KIM JongHyun\*(Department of Physics, SungKyunKwan University)

### P2-as.005

updates on data analysis pipeline for the UFFO-pathfinder / JEONG Soomin\*, PARK Il H. \*, PARK Woochan, GAYKOV Georgy, JEONG Hyomin (Department of Physics Sungkyunkwan University)

### P2-as.006

Development and test of Langmuir Probes for the CubeSat LINK for the QB50 project / NA Go Woon\*<sup>1</sup>, SEON Jongho<sup>1</sup>, YANG Jongmann<sup>2</sup>, MIN Kyoung Wook<sup>3</sup>(<sup>1</sup>School of Space Research, Kyung Hee University, <sup>2</sup>Department of Physics, Ewha Womans University, <sup>3</sup>Department of Physics, Korea Advanced Institute of Science and Technology)

게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소 : 포스터발표장

### P2-at,001

**Cross-phase modulation based on a double- $\Lambda$  system with a few photon probe pulses.** / KIM Bongjune<sup>1</sup>, KIM Hoo-Sung<sup>2</sup>, KANG Hoonsoo\*<sup>1</sup>(<sup>1</sup>APRI, GIST, <sup>2</sup>Electrical Engineering, Chosun University)

### P2-at,002

**전자에 의한 DNA-Cu ion 결합체 손상** / 노형아<sup>1</sup>, 박연수<sup>2</sup>, 조혁\*<sup>1</sup>(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>국가핵융합연구소)

### P2-at,003

**Analytical study of absorption and dispersion for Doppler-broadened two-level atoms** / NOH Heung-Ryoul\*(Department of Physics, Chonnam National University)

### P2-at,004\*

**Polarization dependence of ultra-narrow EIA spectra of  $^{85}\text{Rb}$  atom in degenerate two level system** / MOHSIN QURESHI Muhammad<sup>1</sup>, UR REHMAN Hafeez<sup>1</sup>, KIM Jin-Tae\*<sup>1</sup>, NOH Heung-Ryoul<sup>2</sup>(<sup>1</sup>Department of Photonic Engineering, Chosun University, <sup>2</sup>Department of Physics, Chonnam National University)

### P2-at,005\*

**Experimental and theoretical study of V-type electromagnetically induced transparency for  $^{87}\text{Rb}$  atoms** / 강현중, 노흥렬\*(전남대학교 물리학과)

### P2-at,006\*

**Polarization-rotation for the  $D_2$  lines of Rb atoms** / 양승철, 노흥렬\*(전남대학교 물리학과)

### P2-at,007

**FIRST TEST OF HIGHLY CHARGED ION BEAMS USING AN ELECTRON BEAM ION SOURCE** / 이승현\*, 김한성, 권혁중, 조용섭(경주 양성자가속기연구센터, 원자력연구원)

### P2-at,008\*

**Dispersive broadening of entangled biphoton wavepackets generated via type-I and type-II spontaneous parametric down-conversion** / HONG Kang-Hee\*(Department of Physics, POSTECH)

P2-at.009

**Time dependent B-Spline R-matrix method without R-matrix / 이  
민호<sup>\*1</sup>, 변창우<sup>1</sup>, 최낙렬<sup>1</sup>, 김대성<sup>2</sup>(<sup>1</sup>금오공과대학교 교양교직부, <sup>2</sup>경기과학기술대학  
공동교육학과)**

P2-at.010\*

**About geometric optimal conditions for minimax problem of  
minimum error discrimination / 김지환, 하동훈, 권영현\*(한양대학교 응용  
물리학과)**

P2-at.011

**The fate of dynamical localization for two interacting quantum  
kicked rotors / QIN Pinquan, ANDREANOV Alexei, PARK Hee Chul, FLACH  
Sergej\*(Center for Theoretical Physics of Complex Systems, IBS)**

P2-at.012

**가우시안 파속을 사용하는 위상공간에서의 준고전적 방법에 필요한  
Matching Pursuit / 변창우<sup>1</sup>, 이민호<sup>1</sup>, 최낙렬<sup>\*1</sup>, 김대성<sup>2</sup>(<sup>1</sup>금오공과대학교,  
<sup>2</sup>경기기술과학대학교)**

P2-at.013\*

**Development of an Electron-Ion Velocity Map Imaging Spectrometer  
/ SAXENA Arvind Kumar<sup>1, 2</sup>, HYUNKOOK Kim<sup>2, 3</sup>, TAE KYU Kim<sup>3</sup>, DONG EON  
Kim<sup>\*1, 2</sup>(<sup>1</sup>Department of physics, Center for Attosecond Science and Technology,  
Postech, <sup>2</sup>Max Plank Center for Attosecond Science, Max Plank POSTECH/KOREA,  
Pohang, 790-784, <sup>3</sup>Department of Chemistry, Pusan National University, Busan,  
Korea)**

P2-at.014\*

**Full-quantum analysis of the enhanced spontaneous emission  
near an exceptional point in a deformed microcavity laser / SHIN  
Younghoon, MOON Songky, AN Kyungwon\*(Department of Physics and  
Astronomy, Seoul National University)**

P2-at.015\*

**Atomic dynamics in a moving optical lattice and its rate equation  
analysis / KIM Jung-Ryul, CHONG Kyeongock, KIM Jinuk, HWANG Myounggyu,  
AN Kyungwon\*(Department of Physics & Astronomy, Seoul National University)**

P2-at.016\*

**Generation of a Schrödinger-cat-like state in a cavity by injecting  
atoms in opposite-phase superposition states / YANG Daeho<sup>1</sup>, KIM  
Junki<sup>1</sup>, LEE Moonjoo<sup>2</sup>, CHOUGH Young-Tak<sup>3</sup>, AN Kyungwon<sup>\*1</sup>(<sup>1</sup>Department of  
Physics & Astronomy, Seoul National University, Seoul 08826, Korea, <sup>2</sup>Institut für  
Experimentalphysik, Universität Innsbruck, Technikerstraße 25, 6020 Innsbruck,**

Austria, <sup>3</sup>Department of Medical Technology, Gwangju University, Gwangju 61743, Korea)

게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소: 포스터발표장

### P2-co.101

**Development of FPGA-based LabVIEW control Software for Atomic Force Microscopy** / ULLAH Naveed, ALUNDA Bernard Ouma, LEE Yong Joong\* (School of Mechanical Engineering Kyungpook National University)

### P2-co.102\*

**UHV & Low temperature Atomic Force Microscope system to image organic molecules with atomic resolution and observation of self-assembly of L-Leucine** / LEE Jhinwhan<sup>\*1, 2</sup>, SON Donghyeon<sup>1</sup>, JANG Wonjun<sup>1, 2</sup>, AHN Danho<sup>1</sup> (<sup>1</sup>Department of Physics, Korea Advanced Institute of Science and Technology (KAIST), <sup>2</sup>Center for Axion and Precision Physics Research of the Institute for Basic Science (IBS))

### P2-co.103\*

**단결정 유기-무기 할라이드 페로브스카이트  $\text{CH}_3\text{NH}_3\text{PbX}_3$  ( $\text{X}=\text{Br}$  and  $\text{I}$ )의 광학적 성질 분석** / 임준휘<sup>1</sup>, 김진민<sup>1</sup>, 이윤상<sup>\*1</sup>, 우원석<sup>2</sup>, 김일원<sup>2</sup> (송실대학교 물리학과, <sup>2</sup>울산대학교 물리학과)

### P2-co.104\*

**A flexure-based high speed nano-positioner for Atomic Force Microscopy** / ALUNDA Bernard Ouma, LEE Yong Joong\* (School of Mechanical Engineering Kyungpook National University)

### P2-co.105\*

**Size Dependence of Strain Field Development in Nanoparticles during Catalytic Reaction by Coherent X-ray Diffraction Imaging** / CHUNG Myungwoo<sup>1</sup>, KIM Dongjin<sup>1</sup>, KIM Sungwon<sup>1</sup>, CARNIS Jerome<sup>1</sup>, KANG Jinback<sup>1</sup>, YOON Kyusuk<sup>1</sup>, KIM Jaeseung<sup>1</sup>, CHA Wonsuk<sup>2</sup>, MAXEY Evan<sup>3</sup>, HARDER Ross<sup>3</sup>, ZOZULYA Alexey<sup>4</sup>, SPRUNG Michael<sup>4</sup>, KIM Hyunjung<sup>\*1</sup> (<sup>1</sup>Department of Physics Sogang University, Korea., <sup>2</sup>Materials Science Division, Argonne National Laboratory, USA., <sup>3</sup>Advanced Photon Source, Argonne National Laboratory, USA., <sup>4</sup>PETRA III, Deutsches Elektronen-Synchrotron, Germany.)



게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소 : 포스터발표장

### P2-co.201

**저노이즈 측정용 저역통과 금속분말 필터의 제작 및 감쇄특성 연구** / 이성훈, 이순걸\*(고려대학교 세종캠퍼스)

### P2-co.202

**A comparative study of hysteresis loops and hysteresis losses for HTSC films** / KIM Mu-yong, PARK Hee-yeon, KIM Chan, PARK Sang-kook, RI Hyeong-cheol\*(Department of Physics, Kyungpook National University, Daegu, Korea)

### P2-co.203

**In-situ Synthesis of High- $T_c$  Superconducting  $Ba_{1-x}K_xBiO_3$  Films by Pulsed Laser Deposition** / 이호동\*, Oleksandr B. Korneta, Gideok Kim, Minu Kim, Seung Chul Chae, Tae Won Noh(IBS-CCES, Seoul National University)

### P2-co.204

**The local magnetization of the GdBCO coated conductors** / RI Hyeong-Cheol\*, PARK Heeyeon, KIM Muyong, KIM Chan, PARK Sangkook(Department of Physics, Kyungpook National University)

### P2-co.205\*

**Is PdTe a strong electron-phonon coupling mediated superconductor?** / 정명철<sup>1</sup>, 이관우<sup>\*1, 2</sup>(<sup>1</sup>고려대학교 대학원 응용물리학과, <sup>2</sup>고려대학교 세종캠퍼스 디스플레이-반도체 물리학과)

### P2-co.206\*

**Optical properties of doping and temperature dependence  $Ba_{1-x}K_xFe_2As_2$**  / LEE Seokbae<sup>1</sup>, SONG Dongjoon<sup>2</sup>, LEE Myoung-hoon<sup>1</sup>, PARK Sangheon<sup>1</sup>, JUNG Eilho<sup>1</sup>, EISAKI Hiroshi<sup>2</sup>, HWANG Jungseek<sup>\*1</sup>(<sup>1</sup>Department of Physics Sungkyunkwan University, <sup>2</sup>National Institute of Advanced Industrial Science and Technology Japan)

### P2-co.207

**Reduced fluctuation-induced magneto-conductivity in proton irradiated superconducting  $FeSe_{1-x}Te_x$  thin film** / AHMAD Dawood<sup>1</sup>, CHOI W.J.<sup>1</sup>, SEO Y.I.<sup>1</sup>, SEO S.H.<sup>2</sup>, LEE S.H.<sup>2</sup>, MOSQUEIRA J.<sup>3</sup>, KWON Y.S.<sup>\*1</sup>(<sup>1</sup>Department of Emerging Materials Science, DGIST, Daegu, <sup>2</sup>Department of Materials Science & Engineering, GIST, Gwangju, <sup>3</sup>LBTS, Faculdade de Fisica, Universidade de Santiago de Compostela, E-15782 Santiago de Compostela, S)

P2-co.208

**Comparing in situ growth and ex situ growth in BSCCO sample / KIM Duri, SONG Jonghyun\***(Department of Physics Chungnam National University)

P2-co.209

**Pressure effects on the 1-D iron based compound  $\text{BaFe}_{2-x}\text{Se}_3$  / SHIN Soohyeon, JANG Harim, SEO Soonbeom, JUNG Soon-Gil, PARK Tuson\***(Department of Physics, Sungkyunkwan University, Suwon 440-746, South Korea)

P2-co.210

**라만 분광법을 이용한 제2세대 고온 초전도 선재의 특성 분석 / 김그라시아<sup>\*1</sup>, 이재훈<sup>2</sup>, 문승현<sup>2</sup>, 황영진<sup>1</sup>, 장재영<sup>1</sup>, 이지호<sup>1</sup>, 김동락<sup>3</sup>, 이상갑<sup>\*1</sup>**(<sup>1</sup>한국기초과학지원연구원, 스펙트럼물리연구팀, <sup>2</sup>(주)서남, <sup>3</sup>한국기초과학지원연구원, 연구장비개발사업단)

P2-co.211

**A Systematic Numerical Study of High-Tc Superconductivity Phase Diagrams Based on the SU(2) Slave-Boson Approach to the t-J Hamiltonian / 안설아<sup>\*1</sup>, 조혜영<sup>1</sup>, 석성호<sup>2</sup>**(<sup>1</sup>Korea Institute of Science and Technology Information, <sup>2</sup>Pohang University of Science and Technology)

P2-co.212

**Orbital anisotropy in iron based superconductors observed by X-ray absorption spectroscopy / 고윤영<sup>1</sup>, 허순상<sup>2</sup>, 서정진<sup>2</sup>, 김용관<sup>3</sup>, 김재영<sup>1</sup>, 김창영<sup>\*2</sup>**(<sup>1</sup>포항가속기연구소, <sup>2</sup>서울대학교, <sup>3</sup>Advanced Light Source)

게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소 : 포스터발표장

### P2-co.301\*

**A quantum criticality in the coupled spin ladder  $\text{Ba}_2\text{CuTeO}_6$**  / CHOI Kwang-Yong\*, CHOI Y.S., DO S.-H., GLAMAZDA A., LEE S. (Department of Physics Chung-Ang University)

### P2-co.302\*

**Modulation of metal-insulator transitions by electric-field-induced strain in  $\text{NdNiO}_3/\text{SrTiO}_3/\text{PMN-PT}$  (001) heterostructures** / HEO Seungyang<sup>1</sup>, OH Chadol<sup>1</sup>, EOM Man Jin<sup>2</sup>, KIM Jun Sung<sup>2</sup>, RYU Jungho<sup>3</sup>, SON Junwoo<sup>\*1</sup>, JANG Hyun Myung<sup>\*1</sup> (<sup>1</sup>Department of Materials Science and Engineering, and Division of Advanced Materials Science, POSTECH, <sup>2</sup>Department of Physics, Pohang University of Science and Technology (POSTECH), <sup>3</sup>Functional Ceramics Group, Korea Institute of Materials Science (KIMS))

### P2-co.303

**Spectroscopic ellipsometry on metal-insulator transition of  $\text{VO}_2$  thin films grown on sapphire substrates** / KANG Tae Dong<sup>1,2</sup>, JUNG Dae Ho<sup>3</sup>, SO Hyeon Seob<sup>3</sup>, LEE Hosun<sup>\*3</sup> (<sup>1</sup>Center for Correlated Electron Systems, Institute for Basic Science (IBS), <sup>2</sup>Department of Physics and Astronomy, Seoul National University, <sup>3</sup>Department of Applied Physics, Kyung Hee University)

### P2-co.304

**Adsorption of  $^4\text{He}$  atoms on  $\text{H}_2$ -plated graphite: path-integral Monte Carlo study** / PARK Sungjin, KWON Yongkyung\* (Department of Physics, Konkuk University)

### P2-co.305\*

**Ultrafast Switching and Unique Phase Transition in Vanadium Dioxides Thin films Triggered by Infrared Laser Irradiation and Electric Field** / BAE Garam<sup>1</sup>, YANG Hyoung Woo<sup>1</sup>, LEE Yongwook<sup>2</sup>, KANG Dae Joon<sup>\*1</sup> (<sup>1</sup>Department of Physics, Sungkyunkwan University, <sup>2</sup>School of Electrical Engineering, Pukyong National University)

### P2-co.306\*

**Synthesis of 2-dimensional  $\text{V}_2\text{O}_5$  Nanosheets and Study of Their Unique Surface Metal Insulator Transition Behaviors.** / CHOI Minwook, KANG Dae Joon\* (Department of Physics, Sungkyunkwan University)

P2-co.307

**Optical spectroscopic study of the electronic structure of La-doped  $\text{Sr}_2\text{IrO}_4$**  / SEO J. H.<sup>1</sup>, AHN G. H.<sup>1</sup>, SONG S. J.<sup>1</sup>, HOGAN T.<sup>2</sup>, WILSON S. D.<sup>2</sup>, MOON S. J.\*<sup>1</sup>(<sup>1</sup>Department of Physics Hanyang University, <sup>2</sup>Department of Materials California University)

P2-co.308\*

**THz spectroscopy of a  $\text{Ba}_{0.6}\text{K}_{0.4}\text{BiO}_3$  superconducting thin film** / KWAK Inho<sup>1,2</sup>, LEE Min-Cheol<sup>1,2</sup>, SEO Choongwon<sup>3</sup>, LEE YeongSeon<sup>3</sup>, LEE Hodong<sup>1,2</sup>, KIM Minu<sup>1,2</sup>, NOH Tae Won\*<sup>1,2</sup>, KIM Kyungwan\*<sup>3</sup>(<sup>1</sup>Center for Correlated Systems, Institute for Basic Science (IBS), Seoul 151-747, Republic of Korea, <sup>2</sup>Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Republic of Korea, <sup>3</sup>Department of Physics, Chungbuk National University, Cheongju 561-756, Republic of Korea)

P2-co.309\*

**Facile Synthesis of Ultra-long and Horizontally Aligned Single Crystalline Vanadium Dioxide Nanowires and Understanding of Their Electrical and Optical Properties** / HWANG Jae Seok<sup>1</sup>, KANG Dae Joon\*<sup>1,2</sup>(<sup>1</sup>Department of Energy Science, Sungkyunkwan University, <sup>2</sup>Department of Physics, Sungkyunkwan University)

P2-co.310\*

**Ab initio studies of Insulator-Metal Transition in  $\text{BaCrO}_3/\text{SrTiO}_3$  superlattices** / 진효선<sup>1</sup>, 이관우\*<sup>1,2</sup>(<sup>1</sup>고려대학교 대학원 응용물리학과, <sup>2</sup>고려대학교 세종캠퍼스 디스플레이-반도체 물리학과)

P2-co.311

**First-principles calculation of  $\text{Sr}_2\text{RuO}_4$ ,  $\text{SrRuO}_3$ , and  $\text{SrRuO}_3/\text{Sr}_2\text{RuO}_4$  interface.** / RYEE Siheon<sup>1</sup>, JANG Seung Woo<sup>1</sup>, KINO Hiori<sup>2</sup>, KOTANI Takao<sup>3</sup>, HAN Myung Joon\*<sup>1,4</sup>(<sup>1</sup>Department of Physics, KAIST, <sup>2</sup>National Institute for Materials Science, <sup>3</sup>Department of Applied Mathematics and Physics, Tottori University, <sup>4</sup>KAIST Institute for the NanoCentury, Korea Advanced Institute of Science and Technology)

P2-co.312

**Large Lattice Constant and Large Band Gap Cubic Perovskite:  $\text{BaZrO}_3$  Single Crystal** / OH Yoon Seok\*<sup>1,2</sup>, BAEK G. L.<sup>1</sup>, SONG S.<sup>2</sup>(<sup>1</sup>Department of Physics and Applied Mathematics, UNIST, Ulsan 44919, South Korea, <sup>2</sup>School of Natural Science, UNIST, Ulsan 44919, South Korea)

P2-co.313\*

**Nature of Transition of the Chern to Mott Insulating States in 2D Ising Ferromagnetic  $\text{BaFe}_2(\text{PO}_4)_2$**  / 송영준<sup>1</sup>, 안교훈<sup>1</sup>, W. E. Pickett<sup>3</sup>, 이관우\*<sup>1,2</sup>(<sup>1</sup>고려대학교 대학원 응용물리학과, <sup>2</sup>고려대학교 세종캠퍼스 디스플레이-

P2-co.314

**Direct theoretical evidence for weaker correlations in electron-doped and Hg-based hole-doped cuprates** / JANG Seung Woo<sup>1</sup>, SAKAKIBARA Hirofumi<sup>2</sup>, KINO Hiori<sup>3</sup>, KOTANI Takao<sup>2</sup>, KUROKI Kazuhiko<sup>4</sup>, HAN Myung Joon\*<sup>1</sup>(<sup>1</sup>Department of Physics, Korea Advanced Institute of Science and Technology, Korea, <sup>2</sup>Department of Applied Mathematics and Physics, Tottori University, Japan, <sup>3</sup>National Institute for Materials Science, Japan, <sup>4</sup>Department of Physics, Osaka University, Japan)

P2-co.315\*

**Abnormal electrical transport properties and small bipolaron condensation in Indium doped  $\text{Pb}_{0.7}\text{Sn}_{0.3}\text{Te}$  single crystal** / KIM Ka-Ryeong<sup>1</sup>, SHON WonHyuk<sup>1,2</sup>, RHYEE Jong-Soo\*<sup>1</sup>(<sup>1</sup>Department of Physics, Kyung-Hee University, <sup>2</sup>Department of Chemistry and Nano Science, Ewha Womans University)

P2-co.316

**Exotic anisotropic magnetoresistance in bulk single crystal  $\text{LaSb}$**  / SHON WonHyuk<sup>1,2</sup>, KIM Sung-Jin<sup>2</sup>, KIM Heon-Jung<sup>3</sup>, KWON Yong Seung<sup>4</sup>, RHYEE Jong-Soo\*<sup>1</sup>(<sup>1</sup>Department of Applied Physics, KyungHee University, <sup>2</sup>Department of Chemistry and Nano Science, Ewha Womans University, <sup>3</sup>Department of Physics, Daegu University, <sup>4</sup>Department of Emerging Materials Science, DGIST)

P2-co.317

**Optical properties of topological insulator  $\text{Bi}_2\text{Te}_3$  single crystals** / KIM Jong Hyeon<sup>1</sup>, PARK Byung Cheol<sup>2</sup>, JO Nahyun<sup>3</sup>, SIM Kyung Ik<sup>1</sup>, LEE Kyu Joon<sup>3</sup>, JUNG Myung-Hwa<sup>3</sup>, KIM Jae Hoon\*<sup>1</sup>(<sup>1</sup>Department of Physics and Institute of Physics and Applied Physics, Yonsei University, <sup>2</sup>Department of Molecular Spectroscopy, Max Planck Institute for Polymer Research, <sup>3</sup>Department of Physics, Sogang University)

P2-co.318

**Band gap measurement of transition metal dichalcogenides** / KIM Jangwon, CHOI H. Y., HA Taewoo, SIM Kyung Ik, CHOI Y. J., KIM Jae Hoon\* (Department of Physics Yonsei University)

P2-co.319

**XMCD and XMLD study on ferromagnetic insulator  $\text{Cr}_2\text{Ge}_2\text{Te}_6$**  / KIM Donghwan<sup>1,2</sup>, PARK Jaehoon\*<sup>1,2</sup>, KIM Jaeyoung<sup>3</sup>, CHEONG Sangwook<sup>4,5</sup> (<sup>1</sup>Department of Physics, Pohang University of Science and Technology, Pohang 790-784, Korea, <sup>2</sup>Max Plank POSTECH Center for Complex Phase Materials, Pohang University of Science and Technology, P, New Jersey, Pohang University of Science and Technology, <sup>3</sup>Department of Physics and Pohang Accelerator Laboratory, POSTECH,

<sup>4</sup>Rutgers Center for Emergent Materials and Department of Physics and Astronomy, Piscataway, New Jersey, <sup>5</sup>Laboratory for Pohang Emergent Materials and Department of Physics, Pohang University of Science and Technology

## P2-co.320

**Terahertz spectroscopic study of topological insulator  $\text{Bi}_2\text{Se}_3$  thin films** / LEE Howon<sup>1</sup>, SIM Kyung Ik<sup>1</sup>, JEONG Kwang Sik<sup>1</sup>, PARK Byung Cheol<sup>2</sup>, KIM Jong Hyeon<sup>1</sup>, CHO Mann-Ho<sup>\*1</sup>, KIM Jae Hoon<sup>\*1</sup>(<sup>1</sup>Department of Physics and Institute of Physics and Applied Physics, Yonsei University, <sup>2</sup>Department of Molecular Spectroscopy, Max Planck Institute for Polymer Research)

## P2-co.321

**Estimation of effective mass in transparent conductive oxide  $\text{Ba}_{1-x}\text{La}_x\text{SnO}_3$  via Burstein-Moss analyses** / JO YoungChan<sup>1</sup>, HA Taewoo<sup>1</sup>, KIM Useong<sup>2</sup>, SIM Kyung Ik<sup>1</sup>, PARK C. K.<sup>2</sup>, CHAR Kookrin<sup>2</sup>, KIM Jae Hoon<sup>\*1</sup>(<sup>1</sup>Department of Physics, Yonsei University 50 Yonsei-Ro, Seodaemun-Gu, Seoul 03722, Republic of Korea, <sup>2</sup>Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Republic of Korea)

## P2-co.322\*

**Optical investigation of structural evolution of  $\text{SrFeO}_{3-x}$**  / ROH Seulki, SEO Yu-Seong, PARK A. H., KHARE Amit, CHOI Woo Seok, HWANG Jungseek\*(Department of Physics Sungkyunkwan University)

## P2-co.323

**Observation of coherent oscillations in optimally doped  $\text{Bi}_{2.1}\text{Sr}_{1.9}\text{CaCu}_2\text{O}_{8+\delta}$  via time-resolved optical reflectivity** / SEO Choongwon<sup>1, 2</sup>, LEE Min-Cheol<sup>2, 3</sup>, KWAK InHo<sup>2, 3</sup>, LEE Young-Seon<sup>1, 2</sup>, KIM SeongJun<sup>1, 2</sup>, KIM Kyungwan<sup>\*1</sup>(<sup>1</sup>Department of Physics, Chungbuk National University, Cheongju, Chungbuk 28644, Republic of Korea., <sup>2</sup>Center for Correlated Electron Systems, IBS, Seoul 08826, Republic of Korea, <sup>3</sup>Department of Physics and Astronomy, Seoul National University (SNU), Seoul 08826, Republic of Korea)

## P2-co.324

**Carrier Dynamics of Transparent Conducting Oxide  $\text{Ba}_{1-x}\text{La}_x\text{SnO}_3$  Probed by Terahertz and Infrared Spectroscopy** / 하태우<sup>1</sup>, 김우성<sup>2</sup>, 박철권<sup>2</sup>, 심경익<sup>1</sup>, 차국린<sup>2</sup>, 김재훈<sup>\*1</sup>(<sup>1</sup>연세대학교 물리학과, <sup>2</sup>서울대학교 물리천문학과)

## P2-co.325

**Gapped Topological Surface states of  $\text{Bi}_{2-x}\text{Gd}_x\text{Te}_3$**  / LEE Hwangho<sup>1, 2</sup>, KO Kyung-Tae<sup>2</sup>, LEE Seungsuk<sup>2, 3</sup>, PARK Jae-Hoon<sup>\*2, 3</sup>, KIM Jinsu<sup>4</sup>, JUNG Myung-Hwa<sup>4</sup>(<sup>1</sup>Department of physics, Pohang University of Science and Technology, <sup>2</sup>Max Plank POSTECH Center for Complex Phase Materials, Pohang University of Science and Technology, <sup>3</sup>Division of Advanced Materials Science, Pohang University of Science and Technology, <sup>4</sup>Department of physics, Sogang University)

P2-co.326

**High pressure synthesis of orthorhombic  $\text{YCo}_{0.15}\text{Mn}_{0.85}\text{O}_3$  ceramic**  
/ CHOI H.Y.\*, MOON J.Y., OH S.H., LEE N.\*, CHOI Y.J.\* (Department of Physics  
and IPAP, Yonsei University, Seoul 120-749, Korea)

P2-co.327

**Rotating magnetocaloric effect in  $\text{Tb}_2\text{CoMnO}_6$**  / KIM J.H., MOON  
J.Y., KIM M.K., LEE N.\*, CHOI Y.J.\* (Department of Physics and IPAP, Yonsei  
University)

P2-co.328

**Magnetic exchange bias effect near room temperature in perovskite  
 $\text{YFe}_{0.6}\text{Mn}_{0.4}\text{O}_3$**  / KIM M. K., MOON J. Y., OH S. H., LEE N. \*, CHOI Y. J. \*(Department  
of Physics and IPAP, Yonsei University, Seoul 120-749, Korea)

P2-co.329

**Attosecond Beam-line equipped with Angle Resolved Time of  
Flight (ARTOF)** / LEE Yeon<sup>1, 2</sup>, XIAOTAO Geng<sup>1, 2</sup>, KIM Seungchul<sup>1, 2</sup>, KIM  
DeongEon<sup>\*1, 2</sup>(<sup>1</sup>Department of Physics & Center for Attosecond Science and  
Technology, POSTECH, Pohang, South Korea, <sup>2</sup>Max Planck Center for Attosecond  
Science, Max Planck POSTECH/KOREA Res. Init., Pohang, South Korea)

P2-co.330

**Transport properties of the heteroepitaxial  $\text{SrRuO}_3/\text{SrTiO}_3$  thin  
film with brief film growth analysis** / KIM Yohann<sup>1</sup>, KO KyungTae<sup>2</sup>,  
PARK JaeHoon<sup>\*1, 2</sup>(<sup>1</sup>Division of Advanced Materials Science POSTECH, <sup>2</sup>Max  
Planck POSTECH Center for Complex Phase Materials)

개시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소: 포스터발표장

### P2-op.001

**Flat-type LED 조명에서 입광면 형태에 따른 도광판의 광학적 특성 /** 신용진\*, 박소희(조선대학교 물리학과)

### P2-op.002

**Color-tunable calcium silicate based phosphors: A new focus on the aging of silicate source /** WOO Hyun-Joo<sup>1</sup>, CHO Kyung Mi<sup>1</sup>, SHIN Dong-Soo<sup>2</sup>, YI Seoung Soo<sup>3</sup>, JEONG Jung Hyun<sup>4</sup>, JANG Kiwan\*<sup>1</sup>(<sup>1</sup>Department of Physics Changwon National University, <sup>2</sup>Department of Chemistry Changwon National University, <sup>3</sup>Department of Electronic Materials Engineering Silla University, <sup>4</sup>Department of Physics Pukyong National University)

### P2-op.003

**POF 광원장치의 가공방식에 따른 LGP성능 분석 /** 박소희\*, 신용진(조선대학교 물리학과)

### P2-op.004

**Interferogram 과 Quadrature Transform을 이용한 단차측정 연구 /** 유영훈\*, 나실인(제주대학교 물리학과)

### P2-op.005\*

**초고속 전자회절 장치의 시간 정밀도를 위한 재생증폭된 레이저 펄스의 위상 안정화 /** 한병헌<sup>1,2</sup>, 양희원<sup>3</sup>, 백인형<sup>1</sup>, 김정원<sup>3</sup>, 조재흥<sup>2</sup>, 정영욱\*<sup>1</sup>(<sup>1</sup>한국원자력연구원 양자빔기반방사선연구센터, <sup>2</sup>한남대학교 물리학과, <sup>3</sup>한국과학기술원 기계공학과)

### P2-op.006\*

**Sub-10 nm chromium nanogap arrays for photomask applications /** PARK Woongkyu<sup>1,2</sup>, RHIE Jiyeah<sup>1,2</sup>, KIM Na Yeon<sup>1,2</sup>, HONG Seunghun<sup>2,3,4</sup>, KIM Dai-Sik\*<sup>1,2</sup>(<sup>1</sup>Center for Atom Scale Electromagnetism, Seoul National University, Seoul 151-747, Korea, <sup>2</sup>Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea, <sup>3</sup>Department of Biophysics and Chemical Biology, Seoul National University, Seoul 151-747, Korea, <sup>4</sup>Institute of Applied Physics, Seoul National University, Seoul 151-747, Korea)

### P2-op.007\*

**파장 가변형 이터븀 광섬유 레이저의 편광 발진 특성 /** 이서경, 김성기, 류지욱, 김용기\*(공주대학교 물리학과)



**P2-op.008**

나선형 박막증착을 이용한 최외층 저굴절 무반사 코팅의 제작 / 김원영, 김태영, 설주환, 김서영, 황보창권\*(인하대학교 물리학과)

**P2-op.009\***

두 개의 파장을 이용한 흡 노면 상태의 광학적 구분 / 객대훈, 김성기, 류지욱, 김용기\*(공주대학교 물리학과)

**P2-op.010\***

은폐에 필요한 렌즈 구성과 배열 특성 연구 / 객대훈, 김용기\*(공주대학교 물리학과)

**P2-op.011\***

$\text{Li}_2\text{Sr}_{(0.995-x)}\text{SiO}_4:0.005\text{Eu}^{2+}x\text{La}$  형광체의 합성과 광학적 특성 연구 / 조경미<sup>1</sup>, 장기완<sup>\*1</sup>, 우현주<sup>2</sup>, 신동수<sup>3</sup>, 이호섭<sup>1</sup>(<sup>1</sup>창원대학교 물리학과, <sup>2</sup>창원대학교 기초과학연구소, <sup>3</sup>창원대학교 화학과)

**P2-op.012**

**Tandem Configuration of Nonlinear Organic Crystals for Plugging Self-absorption gap in THz regime** / 김원태<sup>1</sup>, 강봉주<sup>1</sup>, 이승한<sup>2</sup>, 권오필<sup>2</sup>, 이상민<sup>\*1</sup>(<sup>1</sup>아주대학교 물리학과/에너지시스템학부, <sup>2</sup>아주대학교 분자과학기술학과)

**P2-op.013\***

**Tunable and Broadband Epsilon-Near-Zero Perfect Absorption of ITO Thin Films in the Near-Infrared** / YOON Junho<sup>1</sup>, KIM Tae Young<sup>1</sup>, KIM Wonyoung<sup>1</sup>, JUN Young Chul<sup>2</sup>, HWANGBO Chang Kwon<sup>\*1</sup>(<sup>1</sup>Department of Physics Inha University, <sup>2</sup>School of Materials Science and Engineering UNIST)

**P2-op.014\***

**Broadband coherent perfect absorption of epsilon-near-zero tunable indium tin oxide thin films in the near infrared** / KIM Tae Young<sup>1</sup>, YOON Junho<sup>1</sup>, LEE Seon Young<sup>1</sup>, KIM Wonyoung<sup>1</sup>, JUN Young Chul<sup>2</sup>, HWANGBO Chang Kwon<sup>\*1</sup>(<sup>1</sup>Department of Physics Inha University, <sup>2</sup>School of Materials Science and Engineering UNIST)

**P2-op.015**

**80 MHz로 모드 잠금 된 티타늄 사파이어 오실레이터의 특성 연구** / 이신영<sup>1,2</sup>, 김경남<sup>\*1</sup>, 이기태<sup>\*1</sup>, 박성희<sup>\*1</sup>, 김하나<sup>\*1,3</sup>, 류우제<sup>\*1,4</sup>, 김정태<sup>\*1,2</sup>, Manoj Kumar<sup>\*1</sup>, 정영욱<sup>\*1</sup>, Nikolay Vinokurov<sup>\*1</sup>(<sup>1</sup>한국원자력연구원 양자빔기반방사선연구센터, <sup>2</sup>과학기술연합대학원대학교 가속기 및 핵융합 물리공학과, <sup>3</sup>충남대학교 물리학과, <sup>4</sup>한남대학교 물리학과)

**P2-op.016\***

메타표면 금 구멍 배열 박막의 Extraordinary Transmission 연구 / 함원

규<sup>1</sup>, 김태영<sup>1</sup>, 김원영<sup>1</sup>, 이선영<sup>1</sup>, 이건준<sup>2</sup>, 황보 창권<sup>\*1</sup>(<sup>1</sup>인하대학교 물리학과, <sup>2</sup>광운대학교 전자바이오효리학과)

## P2-op.017

**Understanding the origin of a time-varying diamagnetic angular momentum of an electron in a uniform magnetic field** / 최태승<sup>\*1</sup>, 한영덕<sup>2</sup>(<sup>1</sup>Department of Food Science and Technology, Seoul Women's University, <sup>2</sup>Department of Computer Science and Engineering, Woosuk University)

## P2-op.018\*

**표면플라즈몬 레이징 중 주입되는 캐리어에 의한 레이징 소멸 및 재생성 / 이향록<sup>1</sup>, 김승현<sup>1</sup>, 정태영<sup>1</sup>, 안광준<sup>2</sup>, 이기주<sup>\*1</sup>**(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>아주대학교 에너지시스템학과)

## P2-op.019\*

**552 MHz 탄소나노튜브 모드잠금 펄스초 Cr:YAG 고체 레이저** / 김준완<sup>1</sup>, 최선영<sup>1</sup>, 정환성<sup>1</sup>, 조원배<sup>2</sup>, 안광준<sup>1</sup>, 염동일<sup>1</sup>, 이상민<sup>\*1</sup>(<sup>1</sup>아주대학교 물리학과/에너지시스템학과, <sup>2</sup>한국전자통신연구원 바이오메드연구실)

## P2-op.020

**Photoinduced Birefringence in Disperse Orange 3 Doped Polymer** / WU Yang<sup>1</sup>, KIM Sun Il<sup>\*1</sup>, SHIM Hyun Kwan<sup>2</sup>(<sup>1</sup>Department of Physics, Pukyong National University, <sup>2</sup>Department of Chemistry, Pukyong National University)

## P2-op.021\*

**탄소 나노 콜로이드의 입자 농도에 따른 비선형 광학적 특성** / 김이새, 이재란, 김석원<sup>\*</sup>(울산대학교 물리학과)

## P2-op.022\*

**Background correction of IR spectra for the analysis of lanthanides and biophotonics materials** / PAULSON Bjorn<sup>1</sup>, SAUER Gregor<sup>2</sup>, OH Kyunghwan<sup>\*1</sup>(<sup>1</sup>Department of Physics, Yonsei University, <sup>2</sup>Faculty of Physics and Astronomy, Friedrich-Schiller Universitat Jena)

## P2-op.023\*

**공초점 현미경과 PCS를 사용한 콜로이드 결정 표면 특성 분석** / 김현기, 이재란, 강만일, 김석원<sup>\*</sup>(울산대학교 물리학과 에너지 하비스트 스토리지 연구센터)

## P2-op.024\*

**Broadband optical nonlinearity of silk protein** / 이병직, 권현수, 안상옥, 김성환<sup>\*</sup>, 이상민<sup>\*</sup>(아주대학교 물리학과/에너지시스템학과)

## P2-op.025

**Active tailoring of nanoantenna plasmonic fields using few cycle**

**laser pulses** / CHOI SungHo<sup>1, 2</sup>, CIAPPINA M.F.<sup>3</sup>, HERNANDEZ J.A Perez<sup>4</sup>, LANDSMAN A. S.<sup>1, 5</sup>, KIM Y.-J.<sup>6</sup>, KIM SeungChul<sup>1, 2</sup>, KIM DonEon<sup>\*1, 2</sup>(<sup>1</sup>Department of Physics, Center for Attosecond Science and Technology, <sup>2</sup>Max Planck Center for Attosecond Science, Max Planck POSTECH/KOREA Res. init, <sup>3</sup>Max-Planck Institute for quantum optics, <sup>4</sup>Centro de laseres pulsados (CLPU), <sup>5</sup>Max-Planck Institute for Physics complex System, <sup>6</sup>School of Mechanical and Aerospace Engineering, Nanyang Technological University)

#### **P2-op.026**

**광학적 거울피크 제거기법을 이용한 광계측에서의 응용 / 최은서\*, 이승석, 김주하(조선대학교 자연과학대학 물리학과)**

#### **P2-op.027**

**진동자 기반 도플러 편이 제어를 통한 광학 영상 깊이 향상 / 최은서\*, 이승석, 김주하(조선대학교 자연과학대학 물리학과)**

게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소: 포스터발표장

### P2-pl.001

**4결정 채널컷 분광기의 성능 정상화 / 길계환\*, 최효진(포항가속기연구소)**

### P2-pl.002

**Magnetic Measurement Results of PAL-XFEL Magnets / SUH HyungSuck\*, LEE Sang-Bong, OH Bongi, JUNG Young-Gyu, JEONG Seong Hun, LEE Hong-Gi, KIM Dong Eon, PARK Ki-Hyeon, KANG Heung-Sik, KO In Soo(Pohang Accelerator Laboratory)**

### P2-pl.003

**Source-term Analysis in Carbon-ion Synchrotron Facilities / MIN Sunhong\*, CHO Ilsung, HEO Seung-Uk, AN Su Kyoung, JUNG Haijo, JI Young-Hoon, JUNG Won-Gyun(Korea Heavy Ion Medical Accelerator Project, Korea Institute of Radiological & Medical Science)**

### P2-pl.004

**laser 편광 효과를 포함한 ponderomotive 힘 계산 / 송형선, 허민섭\*(울산과학기술원 물리학과)**

### P2-pl.005\*

**저전력 원통형 플라즈마 추력기의 이온 빔 및 성능 특성 연구 / 김호락<sup>1</sup>, 이승훈<sup>1,2</sup>, 임유봉<sup>1</sup>, 김준범<sup>1</sup>, 최원호\*(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>재료연구소 표면기술연구본부)**

### P2-pl.006

**Beam dynamics simulations with the proton at the RAON accelerator / JIN Hyunchang\*, JANG Ji-Ho, JEON Dong-O, HYUN Myung Ook(Institute for Basic Science)**

### P2-pl.007

**Development of PAL-XFEL Magnet Power Supply / PARK Ki-HYeon\*, JEONG Seong-Hun, JUNG Young-Gyu, KIM Dong-Eon, SUH Hyung-Suck, LEE Hong-Gi, LEE Sang-Bong, OH bong-Gi(PAL)**

### P2-pl.008

**거대과학장치의 지반 및 건물 변화의 지속적 측정 / 최효진, 서광원, 이상봉, 이흥기, 길계환, 김승환, 강흥식\*(포항가속기연구소)**

P2-pl.009

**Operational Software Tools for the Injection Efficiency Improvement in the PLS-II** / KIM Mun Gyung\*, HWANG Ilmoon, LEE Tae Yeon, CHOI Jea Young(Pohang Accelerator Laboratory)

P2-pl.010

**Commissioning of PAL-XFEL magnet power supplies** / JEONG Seong Hun\*, PARK Ki-Hyeon, SUH Hyung Suck, LEE Sangbong, OH Bonggi, JUNG Young-Gyu, LEE Hong-Gi, KIM Dong Eon, KANG Heong-Sik, KO In Soo(Pohang Accelerator Laboratory)

P2-pl.011\*

**High order approximation for relativistic transparency of thin foil plasma** / 강태연<sup>1</sup>, 김영국<sup>2</sup>, 허민섭\*<sup>1</sup>(<sup>1</sup>울산과학기술원 물리학과, <sup>2</sup>울산과학기술원 전기전자컴퓨터공학부)

P2-pl.012

**CMOS 이미지 센서를 사용한 레이저-플라즈마 가속 양성자빔의 실시간 에너지 측정** / 김하나<sup>1,2</sup>, 김경남<sup>2</sup>, 류우제<sup>2,3</sup>, 김정태<sup>2,4</sup>, 이신영<sup>2,4</sup>, 이기태\*<sup>2</sup>, 박성희<sup>2</sup>, 전민용<sup>1</sup>, 정영욱<sup>2</sup>, Nikolay A. Vinokurov<sup>2</sup>(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>한국원자력연구원 양자빔기반방사선연구센터, <sup>3</sup>한남대학교 물리학과, <sup>4</sup>과학기술연합대학원대학교 가속기 및 핵융합 물리공학과)

P2-pl.013

**레이저 편광에 따른 electrostatic shock 연구** / 김영국<sup>1</sup>, 강태연<sup>2</sup>, 허민섭\*<sup>2</sup>(<sup>1</sup>전기전자컴퓨터공학과, <sup>2</sup>울산과학기술원, <sup>2</sup>물리학과, <sup>2</sup>울산과학기술원)

P2-pl.014

**KOMAC Proton Linac 빔에너지 및 빔프로파일 측정** / 김한성\*, 권혁중, 윤상필, 이석근, 조용섭(한국원자력연구원 양성자가속기연구센터)

P2-pl.015

**KOMAC 저선량 빔라인 팔극 전자석 설계** / 권혁중\*, 김한성, 윤상필, 이석근, 이승현, 조용섭(한국원자력연구원 양성자가속기연구센터)

P2-pl.016\*

**PLS-II 빔 전송라인 BPM 분해능 측정 연구** / 정호영\*<sup>1</sup>, 김은산\*<sup>2</sup>, 장시원<sup>2</sup>(<sup>1</sup>경북대학교 물리학과, <sup>2</sup>고려대학교 가속기학과)

P2-pl.017\*

**Stability analysis of C-band klystron with Extended-Interaction cavity** / HWANG Jihyun\*<sup>1</sup>, PARK Sungju<sup>2</sup>, NAMKUNG Won<sup>2</sup>, CHO Moohyun<sup>3</sup>(<sup>1</sup>Department of Physics, POSTECH, <sup>2</sup>Pohang Accelerator Laboratory, <sup>3</sup>Department of Division of Advanced Nuclear Engineering, POSTECH)

## P2-pl.018\*

**Generation of a laser-produced plasma waveguide by using a cryogenically-cooled gas-cluster jet** / JANG Donggyu<sup>1</sup>, KIM Ki-yong<sup>2</sup>, SUK Hyyong\*<sup>1</sup>(<sup>1</sup>Department of Physics and Photon Science, Gwangju Institute of Science and Technology, Gwangju, <sup>2</sup>IREAP, University of Maryland at College Park, Maryland, USA)

## P2-pl.019

**Beam Optics of 180-degree Bending Section in DYNAC code** / JANG Ji-Ho\*, JIN Hyunchang, JEON Dong-o(Rare Isotope Science Project, Institute of Basic Science)

## P2-pl.020

**Design Study of a Self-Driving G-band Folded Waveguide Traveling Wave Tube with an Integrated High Input Power** / LEE Ingeun<sup>1</sup>, SAWANT Ashwini<sup>1</sup>, SO JoonHo<sup>2</sup>, HONG Yongjun<sup>2</sup>, CHOI EunMi\*<sup>3</sup>(<sup>1</sup>Department of Electrical and Computer Engineering, UNIST, <sup>2</sup>Agency of Defense Development, <sup>3</sup>Department of Physics and Applied mathematics, UNIST)

## P2-pl.021\*

**Design Study of a Sine Waveguide Circuit for G-band Traveling-Wave Tube** / CHOI Wonjin<sup>1</sup>, CHOI EunMi\*<sup>1</sup>, HONG Yongjun<sup>2</sup>(<sup>1</sup>Agency of Defense Development, <sup>2</sup>Department of Physics and Applied Mathematics, Ulsan National Institute of Science and Technology)

## P2-pl.022\*

**Study of the DTL (drift tube linac) for an accelerator-based BNCT (boron neutron capture therapy) facility** / LEE Yumi, KIM Eun-San\* (Department of Accelerator Science Korea University)

## P2-pl.023

**양성자가속기 연구센터 기체이온빔장치 질량분리전자석 설치 및 업그레이드** / 김범석\*, 강종현, 김한성, 권혁중, 김계령, 조용섭(한국원자력연구원 양성자가속기연구센터)

## P2-pl.024

**소형 페러데이컵을 이용한 실시간 이온빔 진단** / 강종현\*, 김범석, 김계령(한국원자력연구원 양성자가속기연구센터)

## P2-pl.025

**초음속 플라즈마 열유동 특성 측정을 위한 이중 엔탈피 탐침 해석** / 김동욱, 양인목<sup>2</sup>, 윤정환<sup>2</sup>, 장진욱<sup>1</sup>, 서준호\*(<sup>1</sup>전북대학교 양자시스템공학과, <sup>2</sup>전북대학교 기계공학과)

P2-pl.026

**Tokamak Plasma Equilibrium Reconstruction from Experimental Data** / YEOM Jun Ho\*, CHOI Insik, NAM Yong Un, TERZOLO Laurent, KIM Hyoung Chan(National Fusion Research Institute)

P2-pl.027\*

**Interferometric analysis of optical breakdown dynamics in bulk of transparent dielectrics induced by sub-nanosecond laser pulse** / NGUYEN Vinh Huu, SUK Hyyong\*, JANULEWICZ Karol Adam\*(Department of Physics, Gwangju Institute of Science and Technology)

P2-pl.028

**Structural and Photoluminescence for Al-doped CdO Thin Films** / 이봉주\*, 정진(조선대학교)

P2-pl.029

**Feasibility of fast neutron activation analysis using a DD neutron generator and a BGO detector** / 박승일\*, 김성봉, 윤정우, 유석재(국가핵융합연구소 플라즈마기술연구센터)

P2-pl.030

**Combined Treatment of Rice Seeds with Ozone, Ultrasonic wave or Arc Discharge Plasma** / KANG Min Ho<sup>1</sup>, CHOI Kyung Hoon<sup>2</sup>, SONG Seung Ah<sup>1</sup>, CHOI Eun Ha<sup>1, 2</sup>, UHM Han Sup<sup>1, 2</sup>, PARK Gyungsoon\*<sup>1, 2</sup>(<sup>1</sup>Department of Electrical and Biological Physics, Kwangwoon University, <sup>2</sup>Plasma Bioscience Research Center, Kwangwoon University)

P2-pl.031

**Analysis of solutions treated by using plasma generated nitric oxide (PGNO) and application to plant development** / JEON Seong Sil<sup>1</sup>, KANG Min Ho<sup>1</sup>, SHIN Somin<sup>2</sup>, LEE Jinseon<sup>2</sup>, SHIN Jae Ho<sup>2</sup>, CHOI Eun Ha<sup>1</sup>, UHM Han Sup<sup>1</sup>, PARK Gyungsoon\*<sup>1</sup>(<sup>1</sup>Plasma Bioscience Research Center, Kwangwoon University, <sup>2</sup>Department of Chemistry, Kwangwoon University)

P2-pl.032

**Influence of Plasma Generated Ions in Water on the Glow-to-abnormal Transition in a Spokes like Pins-to-water Discharge Device** / 윤성영\*, 변용성, 홍은정, 유승열, 유승민, 김성봉, 유석재(Plasma Technology Research Center, National Fusion Research Institute)

P2-pl.033\*

**플라즈마에서의 stimulated Raman backscattering에 가해진 외부자기장의 효과 (Effects of external magnetic field on stimulated Raman backscattering in plasma.)** / 라옥주, 허민섭\*(울산과학기술원 물리학과)

## P2-pl.034

**The study of trigger unit enhancing electric field for a triggered vacuum switch** / PARK Wung-Hoa, KIM Moo\_Sang\*, SON Yoon-Kyoo\*, LEE Byung-Joon\*(Pohang Accelerator Laboratory)

## P2-pl.035\*

**Desorption Behavior of Deuterium from Plasma Structure Materials: SS316LN and CuCrZr** / Lan Anh Thi Nguyen<sup>1</sup>, Sang-hwa Lee<sup>1</sup>, S. K. Lee<sup>2</sup>, Junho Kim<sup>1</sup>, H. W. Shin<sup>3</sup>, H. S. Kim<sup>3</sup>, S. J. Noh<sup>3</sup>, Jaeyong Kim\*<sup>1</sup>(<sup>1</sup>Department of Physics, Hanyang University, <sup>2</sup>Nuclear Fusion Engineering Development Division, Korea Atomic Energy Research Institute, <sup>3</sup>Department of Applied Physics, Dankook University)

## P2-pl.036\*

**물 플라즈마 젯을 이용한 라디칼 미스트 발생장치 개발 및 살균효과** / 허진영<sup>1,2</sup>, 마숙환<sup>1,3</sup>, 김강일<sup>1</sup>, 최은하<sup>2</sup>, 홍용철\*<sup>1,4</sup>(<sup>1</sup>국가핵융합연구소, <sup>2</sup>광운대학교 전자바이오물리학과, <sup>3</sup>전북대학교 플라즈마응용공학과, <sup>4</sup>(주)엔팩)

## P2-pl.037

**홀 추력기 플라즈마의 자기장 구조에 따른 추력 및 빔 특성 연구** / 이승훈<sup>1,2</sup>, 김호락<sup>1</sup>, 김준범<sup>1</sup>, 임유봉<sup>1</sup>, 최원호\*<sup>1</sup>(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>재료연구소 표면기술연구본부)

## P2-pl.038\*

**대기압 플라즈마 처리를 통한 박테리아 비활성화 기작 연구** / 김기중<sup>1</sup>, 박진성<sup>2</sup>, 한제현<sup>2</sup>, 권보미<sup>3</sup>, 고웅현<sup>2</sup>, 신현정\*<sup>1</sup>, 최원호\*<sup>1</sup>(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>한국과학기술원 기계공학과, <sup>3</sup>한양대학교 생체공학과)

## P2-pl.039\*

**대기압 플라즈마의 화학적 분석 및 바이오필름 제거 효과** / 박주영, 박상후, 김기중, 최원호\*(한국과학기술원 물리학과)

## P2-pl.040

**헬륨 대기압 유전체 격벽 방전기 내의 음극 강하 영역 전기장 분포 해석 (Analysis of Electric Field Distribution in Cathode Fall Region of Helium Atmospheric Pressure Dielectric Barrier Discharge)** / 배병준, 김곤호\*(서울대학교 에너지시스템공학부)

## P2-pl.041\*

**Intense and Frequency Selective THz Radiation with Spatial Coherence from Collision of Two laser Pulses in a Tapered Plasma** / KWON Kyubin, HUR Minsup\*(Department of Physics UNIST Ulsan Natur)



P2-pl,042

홀 플라즈마 추력기용 할로우 캐소드의 설계 연구 / 김준범<sup>1</sup>, 김호락<sup>1</sup>, 이승훈<sup>1, 2</sup>, 임유봉<sup>1</sup>, 최원호\*<sup>1</sup>(<sup>1</sup>한국과학기술원 물리학과, <sup>2</sup>경상남도 창원시 성산구 창원대로 797 재료연구소)

P2-pl,043

915/2450 MHz 대역 고출력 워터로드 설계 및 rf 실험 결과 / 김해진\*<sup>1</sup>, 선상원<sup>1</sup>, 위현호<sup>1</sup>, 박수연<sup>1</sup>, 김재남<sup>2</sup>(<sup>1</sup>국가핵융합연구소, <sup>2</sup>케이알에프)

P2-pl,044

Atmospheric pressure plasma source design and polymer synthesis / YU In-Keun\*, EOM Sangheum, YOON Sungyoung(Plasma Technology Research Center, National Fusion Research Institute)

게시: 2016년 4월 21일 목요일 13:00 - 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 - 19:30

장소: 포스터발표장

### P2-se.001

고출력 청색 레이저 다이오드를 이용한 비정질 실리콘의 결정화 연구 / 최영환, 류근환, 류한열\*(인하대학교 물리학과)

### P2-se.002

태양전지용 실리콘 웨이퍼의 결정성, 두께 및 강도 특성 평가 / 최민혁<sup>1, 2</sup>, 정인영<sup>1</sup>, 전현구<sup>1, 2</sup>, 김종안<sup>1</sup>, 홍성구<sup>1</sup>, 김창수\*(<sup>1</sup>한국표준과학연구원, <sup>2</sup>충남대학교)

### P2-se.003\*

Effect of Annealing Temperature on Deposition of GaAs on Nanotextured Si Surface by E-beam Evaporation / PALEI SRIKANTA, PARIDA BHASKAR, KIM KEUNJOO\*(Department of Mechanical Engineering, Chonbuk National University)

### P2-se.004\*

Circular photon drag effect in bulk GaAs probed by terahertz emission spectroscopy / 함선영, 박순희, 이종석\*(광주과학기술원 물리광학과)

### P2-se.005\*

Temperature-dependent carrier dynamics in lightly-doped InAs investigated by terahertz time-domain spectroscopy / 한정우<sup>1</sup>, 이종석<sup>1</sup>, 송명석<sup>2</sup>, 강보연<sup>2</sup>, 조병기<sup>2</sup>(<sup>1</sup>광주과학기술원 물리광학과, <sup>2</sup>광주과학기술원 신소재공학부)

### P2-se.006

AlGaIn/InGaIn 초격자 양자장벽 두께 비율에 따른 양자우물 내 압전 전기장 변화 연구 / 황지원<sup>1</sup>, 오의영<sup>1</sup>, 박병권<sup>1</sup>, 김문덕<sup>1</sup>, 김송강<sup>2</sup>(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>중부대학교 정보통신학과)

### P2-se.007\*

Fe 도핑에 따른 GaN 박막 내 누설전류 연구 / 오의영<sup>1</sup>, 이상태<sup>1</sup>, 황지원<sup>1</sup>, 김문덕<sup>1</sup>, 오재웅<sup>2</sup>, 노영균<sup>3</sup>(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>한양대학교 전기전자제어계측공학과, <sup>3</sup>IV Works Co., Ltd.)

### P2-se.008\*

Tin oxide 촉매를 이용해 성장된 CdS 나노선의 결정구조 및 광학적 특성 분석 / 송만석\*, 김용(동아대학교 물리학과)

P2-se,009

**Bismuth를 촉매로 한 ZnTe 나노선의 광학적 특성 연구** / 최선빈\*, 송만석, 김용(동아대학교 물리학과)

P2-se,010

**Electrical properties of n-ZnO/p-Si heterojunction photovoltaic devices with AlO<sub>x</sub> barrier layer** / KANG Jihoon, LEE Kyoungsu, KIM Eunky\*(Department of Physics Hanyang University)

P2-se,011

**증착 온도에 따른 AZO 박막의 특성 분석** / 김재석<sup>1</sup>, 우시관<sup>2</sup>, 오병성\*(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>(주)브이티에스)

P2-se,012\*

**II-VI족 화합물 반도체인 CdMnTe 단결정의 다양한 특성** / 엄영호\*, 신현도, 안희진, 이동찬(울산대학교 물리학과)

P2-se,013

**Growth and optical properties of CoIn<sub>2</sub>S<sub>4</sub> thin films by spray pyrolysis method** / KIM Chang Dae\*(Department of Physics, Mokpo National University)

P2-se,014\*

**Photocatalytic activities of oriented ZnO nanostructures by chemical bath deposition** / MAN Minh Tan, LEE Hong Seok\*(Department of Physics Chonbuk National University)

P2-se,015

**Manganese-oxide 이온이 흡착된 그래핀의 상온 강자성 반도체 특성** / 박창수<sup>1</sup>, 손윤<sup>2</sup>, 김은규\*(<sup>1</sup>한양대학교 물리학과, <sup>2</sup>동국대학교 양자기능반도체 연구센터)

P2-se,016

**Lead Sulfide 나노선의 광특성 및 광검출기 제작** / 김종동<sup>1</sup>, Dong Yu<sup>2</sup>, Yiming Yang<sup>2</sup>, 김상혁<sup>3</sup>, 최원준<sup>3</sup>, 박재관<sup>3</sup>, 임주희<sup>3</sup>, 오은순\*(<sup>1</sup>충남대학교 물리학과, <sup>2</sup>Department of Physics, University of California, <sup>3</sup>한국과학기술연구원)

P2-se,017\*

**Graphene-silver nanowire decorated structure as highly stable and transparent conductive electrode for light emitting diodes** / MIN Kyung Hyun<sup>1, 2</sup>, SEO Tae Hoon<sup>1</sup>, LEE Seula<sup>1</sup>, CHANDRAMOHAN S.<sup>2</sup>, PARK Ah hyun<sup>2</sup>, LEE Gun Hee<sup>2</sup>, YEO Dong Kyu<sup>1, 2</sup>, KIM Hee su<sup>2</sup>, KIM Myung Jong<sup>1</sup>, SUH Eun-Kyung\*<sup>2</sup>(<sup>1</sup>Soft Innovative Materials Research Center, Korea Institute of Science and Technology, <sup>2</sup>School of Semiconductor and Chemical Engineering, Chonbuk National University)

P2-se.018

**The study on optical properties of CNT sheet for the polarizing flim application** / SON Sanghyuk, JANG Chulsoo, JUNG Moonyoung, AHN Seung-eon\* (Nano-Optical Engineering Korea Polytechnic University)

P2-se.019\*

**Optical phonons in GaN/AlN nanostructures** / 이태건<sup>1</sup>, 노희석<sup>\*1</sup>, 박재관<sup>2</sup>(<sup>1</sup>전북대학교 물리학과, <sup>2</sup>한국과학기술연구원)

P2-se.020\*

**Temperature-dependent Raman spectroscopy of single-crystal antimony telluride nanowires** / CHO Leo<sup>1</sup>, PARK Dambi<sup>1</sup>, KANG Hang-Kyu<sup>1, 2</sup>, CHOI Yoonho<sup>1</sup>, CHO M.-H.\*(<sup>1</sup>Institute of Physics and Applied Physics, Yonsei University, Seoul 120-749, Korea, <sup>2</sup>Center of opto-electronic materials, Korea institute of Science and Technology, Seoul 136-791, Korea)

P2-se.021

**An ARPES invsetigaion of band evolution for MoS<sub>2</sub> with the hydrogen treatment.** / 김창영<sup>\*2, 3</sup>, 조수현<sup>1, 3</sup>, 박승룡<sup>4</sup>, 김병훈<sup>4</sup>(<sup>1</sup>연세대학교 물리학과, <sup>2</sup>서울대학교 물리학과, <sup>3</sup>강산관계 물질 연구단, 기초과학 연구원, <sup>4</sup>인천대학교 물리학과)

P2-se.022

**그래핀/실리콘 양자점 터널 다이오드에서 빛에 의한 음의 미분 저항 특성** / 김성, 장찬욱, 김종민, 김주환, 김정현, 서상우, 이하승, 신동희, 최석호\*(경희대 응용물리학과)

P2-se.023\*

**선택적인 DNA-DNA hybridization의 검출이 가능한 그래핀/실리콘 나노선 바이오 센서의 제작 및 특성** / 김종민, 김정길, 김주환, 이하승, 김성, 최석호\*(경희대 응용물리학과)

P2-se.024\*

**As 이온이 주입된 Cu 기판에 화학기상증착법으로 직접 성장하여 도핑한 그래핀의 구조적 및 전기적 특성 연구** / 장찬욱<sup>1</sup>, 이대훈<sup>1</sup>, 김정현<sup>1</sup>, 강수석<sup>1</sup>, 서상우<sup>1</sup>, 김성<sup>1</sup>, 최석호<sup>\*1</sup>, R. G. Elliman<sup>2</sup>(<sup>1</sup>경희대 응용물리학과, <sup>2</sup>호주국립대학 전자재료공학과)

P2-se.025

**Optical and electrical Properties of Amorphous and Crystalline ZnSnO Alloys and Zn<sub>2</sub>SnO<sub>4</sub> Thin Films: Annealing effect on subgap states** / KO KunHee, SO HyeonSeob, JUNG DaeHo, HWANG SangBin, PARK JunWoo, LEE HoSun\*(Department of Applied Physics, Kyung Hee University, Yong-In, Korea)

P2-se.026

**Study of Metal-insulator Transitions of low-temperature-grown VO<sub>2</sub> thin films on TiO<sub>2</sub>-buffered SiO<sub>2</sub>/Si substrates using RF magnetron sputtering deposition** / 정대호, 소현섭, 고건희, 이호선\*(경희대학교 물리학과)

P2-se.027

**Thin film transistors with zinc tin oxide channel layer deposited by ultra high vacuum RF magnetron sputtering** / HONG Seunghwan, OH Gyu-jin, KIM Eun Kyu\*(Department of Physics Hanyang University)

P2-se.028

**Investigation of the characteristics of AlGaIn/GaN heterostructure implanted by nitrogen ions** / KIM Dong-Seok<sup>\*1</sup>, KANG Jong Hyun<sup>1</sup>, KIM Kye-Ryung<sup>1</sup>, LEE Jung-Hee<sup>2(1</sup>Multi-purpose Accelerator Complex, Korea Atomic Energy Research Institute, <sup>2</sup>School of Electronics Engineering, College of IT Engineering, Kyungpook National University)

P2-se.029

**P-type Ba<sub>1-x</sub>Na<sub>x</sub>SnO<sub>3</sub> thin film system** / SHIN Sangwon, KWON Hyukwoo, CHAR Kookrin\*(Institute of Applied Physics, Department of Physics and Astronomy, Seoul National University)

P2-se.030\*

**반응성 DC 마그네트론 스퍼터로 제작된 주석 산화물 박막의 특성에 관한 연구** / 이하훈, 김영모, 문효식, 차국린\*(서울대학교 물리천문학부)

P2-se.031\*

**DNA-base small molecules as charge injection layer and channel passivation in organic heptazole field effect transistors** / LIM June Yeong, KIM Jin Sung, YU Sanghyuck, IM Seongil\*(Department of Physics Yonsei University)

P2-se.032\*

**Dependence of resistive switching behaviors on nitrogen content and structure of the Pt/Ta<sub>2</sub>O<sub>5-x</sub>/Ta(N) matrix** / KIM Tae yoon<sup>1</sup>, LEE Ah Rahm<sup>2</sup>, BAEK Gwang Ho<sup>2</sup>, HONG Jin Pyo<sup>\*1, 2, 3</sup>(<sup>1</sup>Novel Functional Material and Devices Lab., Department of Physics, Hanyang University, <sup>2</sup>Division of Nano-Scale Semiconductor Engineering, Hanyang University, <sup>3</sup>The Research Institute for Natural Sciences, Department of Physics, Hanyang University)

P2-se.033

**Magnetoconductance of Various Quantum Ring Structures** / KIM Namme<sup>e</sup>\*, KIM Heesang, PARK Dae-Han(Dept. of Physics, Soongsil University)

P2-se.034\*

**Stability enhancement of thin TaO<sub>x</sub> buffer layer-assisted InGaZnO:Ta thin film transistors** / KANG Taesung<sup>1</sup>, KWON Sejun<sup>2</sup>, YANG Jungyup<sup>3</sup>, HONG Jinpyo<sup>\*1, 2</sup>(<sup>1</sup>Department of Physics, Hanyang University, Seoul 133-791, South Korea, <sup>2</sup>Division of Nano-Scale Semiconductor Engineering, Hanyang University, Seoul 133-791, South Korea, <sup>3</sup>Department of physics, Kunsan national University, 54150 South Korea)

P2-se.035

**Electrical properties of MOS structure with large area MoS<sub>2</sub> grown by chemical vapor deposition** / PARK SungJae, QIU Dongri, LEE SeungKyo, SONG DaYe, KIM EunKyu<sup>\*</sup>(Quantum-Function Research Laboratory and Department of Physics, Hanyang University)

P2-se.036

**Investigation of the light soaking behaviors in two-step sputter and selenization Cu(In,Ga)(Se,S)<sub>2</sub> solar cells with different sulfur ratios** / YANG JungYup<sup>1</sup>, NAM Junggyu<sup>2</sup>, LEE Dongho<sup>2</sup>, HONG JinPyo<sup>\*3</sup>(<sup>1</sup>Department of Physics, Kunsan National University, 54150, South Korea, <sup>2</sup>Photovoltaic Development Team, Energy Storage Business Division, Samsung SDI, <sup>3</sup>New Functional materials and device lab. Department of Physics, Hanyang University)

P2-se.037\*

**Detection of breast cancer cells by InGaZnO thin film transistor integrated with metal dot arrays** / KWON Sejun<sup>1</sup>, KANG Taesung<sup>2</sup>, HONG JinPyo<sup>\*1, 2</sup>(<sup>1</sup>Division of Nano-Scale Semiconductor Engineering Hanyang University, <sup>2</sup>Department of Physics Hanyang University)

P2-se.038\*

**Influence of oxygen concentration variation on tantalum oxide-based resistive switching behaviors** / BAEK Gwangho<sup>2</sup>, LEE Ahrahm<sup>2</sup>, KIM Taeyoon<sup>1</sup>, HONG Jinpyo<sup>\*1, 2</sup>(<sup>1</sup>Novel Functional Material and Devices Lab, Department of Physics, Hanyang University, <sup>2</sup>Division of Nano-Scale Semiconductor Engineering, Hanyang University)

P2-se.039\*

**Effective N-type surface charge transfer doping of TMDC materials** / 장영대, 이대영, 유원종<sup>\*</sup>(성균관대학교 SAINT)

P2-se.040

**다채널 실리콘광증배관 소자용 신호처리장치의 개발, 제작 및 성능** / 이 직<sup>\*</sup>, 김민빈, 이혜영, 전진아, 박일홍(성균관대학교 물리학과)

P2-se.041

**Temperature dependent current transport mechanism in InP based**

**Schottky diodes** / LEE Da Hye, MYUNG Hye Seon, KIM Hogyoung\* (Department of Visual Optics, Seoul National University of Science and Technology)

P2-se.042\*

**The Effect of Impurities on the Thermoelectric Properties of GaTe Single Crystals** / VU Hoa Thi, PHAM Tuan Anh, NGUYEN Thanh Huong Thi, CHO Sunglae\* (Department of Physics and Energy Harvest Storage Research Center, University of Ulsan, Ulsan 680-7)

P2-se.043\*

**Thermoelectric transport properties of  $\text{In}_2\text{Se}_3$  single crystal** / NGUYEN Thi Huong<sup>1</sup>, NGUYEN Van Quang<sup>1</sup>, DUONG Anh Tuan<sup>1</sup>, CHO Sunglae<sup>\*1</sup>, SONG Jae Yong<sup>2</sup>, PARK Hyun-Min<sup>2</sup> (<sup>1</sup>Department of Physics and Energy Harvest Storage Research Center, University of Ulsan, <sup>2</sup>Materials Genome Center, Korea Research Institute of Standards and Science)

P2-se.044\*

**New crystal structure and thermoelectric properties at low temperature range of n and p-type  $\text{AgBiTe}_2$**  / NGUYEN Van Quang, RHIM Sonny H., DUONG Anh Tuan, CHO Sunglae\* (Department of Physics and Energy Harvest Storage Research Center, University of Ulsan)

P2-se.045

**Growth and transport properties of  $\text{SnS}$  and  $\text{SnSe}_{1-x}\text{S}_x$  ( $0 < x < 1$ ) single crystals** / NGUYEN Minh Hai Thi, DUONG Tuan Anh, NGUYEN Quang Van, NGUYEN Thiet Van, CHO Sunglae\* (Department of Physics and Energy Harvest Storage Research Center, University of Ulsan, Ulsan 680-749)

P2-se.046

**Thermoelectric properties of n-type  $\text{SnSe}_2$  single crystals** / PHAM Tuan Anh, VU Hoa Thi, NGUYEN Quang Van, CHO Sunglae\* (Department of Physics and Energy Harvest Storage Research Center, University of Ulsan)

게시: 2016년 4월 21일 목요일 13:00 – 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 – 19:30

장소: 포스터발표장

### P2-st.001\*

**Volatile/Non-volatile properties of memory in neural networks can be toggled by spike-timing-dependent-plasticity rules** / PARK Youngjin<sup>1</sup>, CHOI Woochul<sup>1, 2</sup>, PAIK Se-Bum<sup>\*1, 2</sup>(<sup>1</sup>Department of Bio and Brain engineering, KAIST, <sup>2</sup>Program of Brain and Cognitive Engineering, KAIST)

### P2-st.002\*

**Topography of Functional Maps in Visual Cortex is destined by Feedforward Convergence Connectome** / LEE Changju<sup>1</sup>, JANG Jaeson<sup>1</sup>, PAIK Se-Bum<sup>\*1, 2</sup>(<sup>1</sup>Department of Bio and Brain Engineering, KAIST, <sup>2</sup>Program of Brain and Cognitive Engineering, KAIST)

### P2-st.003\*

**Shared mechanism of Perceptual decision making and Bistable perception** / CHOI Woochul<sup>1, 2</sup>, PAIK Se-Bum<sup>\*1, 2</sup>(<sup>1</sup>Department of Bio and Brain Engineering, KAIST, <sup>2</sup>Program of Brain and Cognitive Engineering, KAIST)

### P2-st.004\*

**Computational Classification of Neural Network Activity Patterns for Imaging Data** / SONG Min<sup>1, 2</sup>, LEE Hyeonsu<sup>1</sup>, PAIK Se-Bum<sup>\*1, 2</sup>(<sup>1</sup>Department of Bio and Brain Engineering, KAIST, <sup>2</sup>Program of Brain and Cognitive Engineering, KAIST)

### P2-st.005\*

**Repulsive interaction between two lattice mosaics can develop consistent spatial organization of functional maps in brain** / JANG Jaeson<sup>1</sup>, PAIK Se-Bum<sup>\*1, 2</sup>(<sup>1</sup>Department of Bio and Brain Engineering, KAIST, <sup>2</sup>Program of Brain and Cognitive Engineering, KAIST)

### P2-st.006

**Noise-induced hearing enhancement** / 이우석, 안강현\*(충남대학교 물리학과)

### P2-st.007

**Role of Liquid for Traveling Wave in Cochlea** / 유재연, 안강현\*(충남대학교 물리학과)



P2-st.008

**체장 속 랑게르한스섬의 복잡계 모델 연구** / 송태근<sup>1</sup>, Danh-Tai Hoang<sup>1</sup>, 박동호<sup>1</sup>, Jin Xu<sup>1,2</sup>, 조정효<sup>\*1</sup>(<sup>1</sup>아시아 태평양 이론 물리 연구소, <sup>2</sup>포항공대 물리학과)

P2-st.009\*

**Insight into the gating mechanism of nicotinic acetylcholine receptor** / PHAN Thi Hong Tham<sup>1,2</sup>, YI Myunggi<sup>\*1,2,3</sup>(<sup>1</sup>Interdisciplinary Program of Biomedical, Electrical & Mechanical Engineering, PKNU, <sup>2</sup>Center of Marine-Integrated Biomedical Technology (BK21+), PKNU, <sup>3</sup>Department of Medical Bioengineering, PKNU)

P2-st.010\*

**Interactions between chitosan and different lipid bilayers in various pH conditions studied by molecular dynamics simulations** / TRUONG Gia Khuong<sup>1,2</sup>, YI Myunggi<sup>\*1,2,3</sup>(<sup>1</sup>Interdisciplinary Program of Biomedical, Electrical & Mechanical Engineering, PKNU, <sup>2</sup>Center of Marine-integrated Biomedical Technology (BK21+), PKNU, <sup>3</sup>Department of Biomedical Engineering, PKNU)

P2-st.011

**Application of predicted relative solvent accessibility to the development of surface area (SA) energy function** / HEO Seungryong, JOO keehyoung, LEE Jooyoung<sup>\*</sup>(Korea Institute for Advanced Study)

P2-st.012

**Conformational change of LAO-binding protein by molecular dynamic simulation** / CHOI Wooyong, CHENG Qianyi, JOO Keehyoung, LEE Jooyoung<sup>\*</sup>(Korea Institute for Advanced Study, Korea)

P2-st.013

**Template based protein structure prediction by dynamic fragment assembly:revisited** / HONG Seung Hwan<sup>1,2</sup>, JOUNG InSuk<sup>1,2</sup>, LEE Sun Young<sup>1</sup>, HEO Seungryong<sup>1</sup>, JOO Keehyoung<sup>1,3</sup>, LEE Jooyoung<sup>\*1,2,3</sup>(<sup>1</sup>Center for In Silico Protein Science, Korea Institute for Advanced Study, <sup>2</sup>School of Computational Sciences, Korea Institute for Advanced Stud, <sup>3</sup>Center for advanced computation, Korea Institute for Advanced Study)

P2-st.014\*

**Minimal size of network for supervised deep learning** / 박마루찬, 안강현<sup>\*</sup>(충남대학교 물리학과)

P2-st.015

**Structure of Tonks-Takahashi fluids with core-softened interaction under gravity** / KIM Soon-Chul<sup>\*</sup>(Department of Physics Andong National University)

P2-st.016

**Dynamical analyses in four financial stock markets / 김경식\***  
(Department of Physics Pukyong National University)

P2-st.017\*

**Monte-Carlo Simulation of Acid Diffusivity Effect on Line Edge Roughness in Resist Pattern / JEONG Seon-Young, KIM Youngjin, LEE Sung-Gyu, OH Hye-Keun, SON Seung-Woo\***(Department of Applied Physics Hanyang University)

P2-st.018\*

**단어 사이의 네트워크로 살펴본 역대 대통령 연설문 분석 / 박영재, 김영빈, 정선영, 손승우\***(한양대학교 응용물리학과)

P2-st.019

**Effects of dimensionality and heterogeneity on the fluctuations in complex networks / YOO Hyung-Ha, LEE Deok-Sun\***(Department of Physics Inha University)

P2-st.020\*

**Structure of player-interaction networks on iterated prisoners' dilemma game with mobility / KIM Young Jin, JEONG Seon-Young, PARK Young-Jae, SON Seung-Woo\***(Department of Applied Physics, Hanyang University)

P2-st.021\*

**The influence of heterogeneous threshold in opinion dynamics / LEE Eun\***(Department of Energy Science Sungkyunkwan University)

P2-st.022\*

**Uncovering urban street structure from driving routes in urban area. / LEE Minjin\***(Department of EnergyScience Sungkyunkwan University)

P2-st.023\*

**Popularity and preference of memes for trends in social media / 박석종\*, 육순형, 김엽**(경희대학교 물리학과)

P2-st.024\*

**Distribution of Power Difference in Power-Grid System / LEE Mi Jin\*, KIM Beom Jun\***(Department of Physics, Sungkyunkwan University, Suwon 16419, Korea)

P2-st.025

**도서관 이용자들의 연결 네트워크 분석 / 이재우\*, 이태호, 정남, 레안광, 맹성**

P2-st.026

**Long-range prisoner's dilemma game on lattice populations /**  
JEONG Hyeon-Chai\*(Department of Physics, Sejong University)

P2-st.027

**Triangular-Lattice Ising Antiferromagnet with Free Boundary**  
**Conditions /** KIM Seung-Yeon\*(Korea National University of Transportation)

P2-st.028

**Modification Factor of Wang-Landau Monte Carlo Method /** KIM  
Seung-Yeon\*(Korea National University of Transportation)

P2-st.029\*

**Revisiting transfer-matrix calculations in the two-dimensional**  
**Blume-Capel model /** JUNG Moonjung, KIM Dong-Hee\*(Department of  
Physics and Photon Science, Gwangju Institute of Science and Technology)

P2-st.030

**Measurement of Transition Temperature of Polymers on a Square**  
**Lattice via Geometric Analysis /** LEE Jae Hwan<sup>1</sup>, LEE Julian<sup>1</sup>, KIM Seung-  
Yeon\*<sup>2</sup>(<sup>1</sup>School of Systems Biomedical Science, Soongsil University, <sup>2</sup>School of  
Liberal Arts and Sciences, Korea National University of Transportation)

P2-st.031

**Percolation of the generalized 2-strategy spatial evolutionary**  
**game theories /** CHOI Woosik\*, YOON Soon-Hyung, KIM Yup(Department of  
Physics Kyung Hee University)

P2-st.032\*

**Axelrod model on random network with rewiring and imitation /**  
이진혁\*, 육순형, 김엽(경희대학교 물리학과)

P2-st.033\*

**Passive Tracer Dynamics on Growing 1D Interfaces with a Columnar**  
**Defect /** SOH Hyungjoon<sup>1</sup>, HA Meesoon\*<sup>2</sup>, JEONG Hawoong<sup>1</sup>(<sup>1</sup>Department of  
Physics KAIST, <sup>2</sup>Department of Physics Education Chosun University)

게시: 2016년 4월 21일 목요일 13:00 - 22일 금요일 12:00

발표: 2016년 4월 21일 목요일 18:00 - 19:30

장소: 포스터발표장

### P2-te.001

과학에 대한 정의적 영역과 사이코그래픽스의 관계 / 박종호\*(진주교육대학교 과학교육과)

### P2-te.002\*

2009 개정 과학교과서의 창의성 요소에 대한 교사와 학생들의 인식 조사 연구 / 차상현, 류광수\*(한국교원대 물리교육)

### P2-te.003

Equation for Calculating Mass at Power Point in Lever / KIM Taekyu\*  
(Department of Science Education Jeonju National University of Education)

### P2-te.004

A Case Study from Free Semester in Middle School Applying STEAM Using High-Tech Display Products / LEE Kyung Mee\*(STEAM EDUCATION CENTER, KAIST)

### P2-te.005

FCI를 활용한 과학영재들의 역학 기초개념 조사 / 이인숙\*(한국과학기술원 부설 한국과학영재학교 물리지구과학부)

### P2-te.006\*

콘덴서 마이크를 이용한 음파 위상 측정장치의 개발 / 김나경, 함성길, 한성범, 김영유, 이기원\*(공주대학교 물리학과)



*The Korean Physical Society*

# 발표자 색인

Presenter index

※ 초록제출시 입력 오류로 인해 성/이름의 순서가 바뀐 경우가 있을 수 있는 점 양해해주시요

# 가

강국현 P1-nu.019  
강궁원 H11.07  
강기천 C13.06  
강기천 P1-ap.155  
강대일 P1-co.310  
강만일 P2-op.023  
강만일 P2-ap.144  
강민호 G1.01  
강보연 P2-se.005  
강봉주 P2-op.012  
강봉주 G12.05  
강세종 G8.09  
강세종 H8.02  
강세지 D13.04  
강소현 A3.07  
강수석 P2-se.024  
강승훈 A6.05  
강승훈 P1-co.216  
강신욱 H4.02  
강우영 P1-co.106  
강정수 G8.07, P1-co.403,  
P1-co.404  
강정수 P1-co.402  
강종현 P2-pl.023, P2-pl.024  
강진규 P1-co.301  
강창무 P1-ap.139  
강태연 P2-pl.013  
강태연 P2-pl.011  
강필구 E3.04  
강해용 H6.08  
강현종 P2-at.005  
강흥식 P2-pl.008  
경광주 B13.01, P1-pa.032  
고민재 G2.03  
고윤영 P2-co.212  
고건희 P2-se.026  
고병욱 P1-co.418  
고영주 P1-pa.035  
고영준 P1-ap.116  
고웅현 P2-pl.038  
고원하 P1-pl.028  
고원희 B7.05

고윤영 G8.07, P1-co.403,  
P1-co.404  
고윤영 H5.05  
고정환 G13.06  
고태영 P2-ap.102  
고태준 P1-co.421  
곽대훈 P2-op.009, P2-op.010  
곽보근 H11.03  
곽상규 E3.07  
곽용수 P1-co.504  
곽종구 P1-pl.013, P1-pl.015  
구자용 G8.09, H8.02  
국양 G8.09  
국양 H8.02  
권영일 G1.02  
권민정 C1.06  
권보미 P2-pl.038  
권영관 H1.02  
권영균 A6.05  
권영균 B6.07, P1-co.216  
권영일 F13.03  
권영준 P1-pa.004  
권영현 P2-at.010  
권오갑 A14.03  
권오룡 P1-co.426  
권오필 P2-op.012  
권오혁 P1-ap.138, P1-co.316  
권오형 F12.08  
권우진 D13.06  
권지연 C1.05  
권철안 A4.06  
권혁신 B7.05  
권혁중 P2-pl.014, P2-pl.015  
권혁중 P2-pl.023  
권혁중 P2-at.007  
권현수 P2-op.024  
기영석 P1-ap.155  
기영석 P1-ap.154  
길계환 P2-pl.001, P2-pl.008  
김강원 B3.04  
김강일 P2-pl.036  
김건보 E13.04  
김경규 A14.06  
김경남 P2-op.015



김경남 P2-pl.012  
 김경식 P2-st.016  
 김경주 H12.04  
 김계령 P2-pl.023, P2-pl.024  
 김계령 P1-ap.151  
 김곤호 P2-pl.040  
 김관표 F6.03  
 김광우 F12.04  
 김광주 P2-ap.102  
 김광주 P2-ap.101  
 김광희 G8.06  
 김귀년 G13.03  
 김귀년 P1-pa.018  
 김규형 A7.06  
 김그라시아 P2-co.210  
 김근수 A7.05  
 김기민 P1-pl.027  
 김기민 P1-pl.028  
 김기민 P1-pl.019  
 김기엽 C8.02  
 김기중 P2-pl.039  
 김기중 P2-pl.038  
 김기훈 F2.07  
 김기훈 H5.04  
 김기훈 H8.05  
 김나경 P1-ap.112, P2-te.006  
 김남 P1-ap.155  
 김남 P1-ap.154  
 김대성 P2-at.012  
 김대성 C13.01  
 김대성 P2-at.009  
 김대성 G8.07, P1-co.403,  
 김대현 P1-co.404  
 김대현 P1-co.402  
 김덕영 B6.01  
 김덕현 P1-co.413  
 김도현 C4.03  
 김동구 E3.03  
 김동락 P2-co.210  
 김동민 T3.03  
 김동민 P1-pl.020  
 김동영 P1-ap.115  
 김동우 D4.04  
 김동욱 P2-pl.025

김동호 P1-nu.002  
 김동훈 G5.06  
 김맥 P1-ap.138, P1-co.316,  
 P1-co.318  
 김명종 F2.03  
 김명진 P1-nu.002  
 김문덕 P2-se.006  
 김문덕 P2-se.007  
 김문환 P1-co.421  
 김미영 D3.07  
 김미혜 F12.03  
 김민빈 P2-se.040  
 김민수 P1-co.507  
 김민수 P1-ap.129  
 김민주 P1-nu.003  
 김민지 P1-co.422  
 김바로 B13.07  
 김바로 B13.06, P1-pa.034  
 김바로 P1-pa.035  
 김범서 H5.05  
 김범석 P2-pl.023, P2-pl.024  
 김범영 H5.05  
 김병준 P1-pa.002  
 김병훈 P2-se.021  
 김병훈 P1-ap.148  
 김병훈 P1-ap.131, P1-ap.132  
 김보배 P1-nu.019  
 김복기 P1-co.217  
 김복기 A6.06  
 김삼진 P1-co.422  
 김삼진 P1-co.418  
 김상용 B13.06, B13.07,  
 P1-pa.034  
 김상윤 C4.01  
 김상혁 P2-se.016  
 김서영 P2-op.008  
 김석원 P2-op.023  
 김석원 P2-op.021  
 김석원 P2-ap.144  
 김석원 G12.08  
 김선호 P1-ap.147  
 김성 P2-se.023  
 김성 P2-se.022, P2-se.024  
 김성기 P2-op.009

김성기 P2-op.007  
 김성백 P1-co.421  
 김성봉 P2-pl.029  
 김성봉 P2-pl.032  
 김성수 D3.07  
 김성조 P1-co.101  
 김성조 D8.05  
 김성준 A12.10  
 김성준 A12.09  
 김성현 P1-ap.153  
 김성현 B1.05  
 김성환 P2-op.024  
 김성환 P1-co.117  
 김송강 P2-se.006  
 김수남 F12.04  
 김수봉 B13.06, B13.07,  
 P1-pa.034  
 김숙영 P1-co.117  
 김송구 P1-ap.139  
 김승찬 B13.07  
 김승찬 B13.06, P1-pa.034  
 김승현 P2-op.018  
 김승환 P2-pl.008  
 김시연 P1-pa.035  
 김엽 P2-st.032  
 김엽 P2-st.023  
 김영국 P2-pl.011  
 김영국 P2-pl.013  
 김영덕 B13.06, B13.07,  
 P1-pa.034  
 김영덕 P1-pa.035  
 김영동 P1-ap.146  
 김영모 P2-se.030  
 김영민 F2.02  
 김영빈 P2-st.018  
 김영웅 P1-nu.002  
 김영유 P1-ap.112, P2-te.006  
 김영주 P1-ap.139  
 김영진 H1.02  
 김영철 P1-pl.006  
 김영호 B4.07  
 김영호 D4.04  
 김예슬 D8.08  
 김용 P2-se.008, P2-se.009

김용관 H5.05  
 김용관 P2-co.212  
 김용기 P2-op.009, P2-op.010  
 김용기 P2-op.007  
 김용수 P1-ap.146  
 김용운 B4.03, B4.05  
 김용운 E4.02  
 김우성 P2-co.324  
 김우영 B13.06, B13.07,  
 P1-pa.034  
 김원영 P2-op.016  
 김원영 P2-op.008  
 김원태 P2-op.012  
 김원태 G12.05  
 김윤배 A14.03  
 김은광 P1-ap.139  
 김은규 A2.01, F2.08,  
 P2-se.015  
 김은규 H2.01  
 김은산 P2-pl.016  
 김은산 A12.10  
 김은산 P1-pa.017  
 김은영 P1-ap.148  
 김은영 F12.07  
 김은영 H12.07  
 김은주 F13.01  
 김은희 H1.02  
 김이새 P2-op.021  
 김이영 C13.05  
 김인수 P1-ap.139  
 김일원 P1-co.301, P2-co.103  
 김재남 P2-pl.043  
 김재률 B13.07  
 김재률 B13.06, P1-pa.034  
 김재석 P2-se.011  
 김재성 P1-ap.147  
 김재성 H13.04  
 김재순 F12.07, H12.07  
 김재순 F12.08  
 김재순 H12.04  
 김재순 H12.05  
 김재영 G8.07, P1-co.403,  
 P1-co.404  
 김재영 P2-co.212

김재완 F12.07  
 김재용 P1-pl.024  
 김재욱 P1-pl.006  
 김재웅 P1-co.317  
 김재훈 P2-co.324  
 김정길 P2-se.023  
 김정란 P1-ap.157  
 김정란 P2-ap.127  
 김정용 P1-ap.128, P1-ap.130,  
 P2-ap.207  
 김정용 F3.06  
 김정용 P1-ap.129  
 김정우 P1-co.619  
 김정원 P2-op.005  
 김정태 P2-op.015  
 김정태 P2-pl.012  
 김정현 P2-se.022, P2-se.024  
 김정호 P1-ap.101  
 김정희 P1-pl.048  
 김제완 H12.03  
 김종민 P2-se.023  
 김종민 P2-se.022  
 김종수 A12.06  
 김종안 P2-se.002  
 김종현 P1-co.101  
 김종현 D8.05  
 김주진 H6.01  
 김주하 P2-op.027  
 김주하 P2-op.026  
 김주형 P1-ap.153  
 김주환 P2-se.023  
 김주환 P2-se.022  
 김준범 C12.10, P2-pl.005,  
 P2-pl.042  
 김준범 P2-pl.037  
 김준성 G8.09, H5.02, H5.05  
 김준성 B7.05, H8.02  
 김준성 H8.01  
 김준성 F5.07  
 김준영 P1-ap.130  
 김준영 P1-pl.048  
 김준완 P2-op.019  
 김준우 E3.03  
 김준이 F13.01

김준현 D8.08  
 김준현 D13.04  
 김준현 D13.06  
 김준호 G13.07  
 김중동 P2-se.016  
 김지민 A7.05  
 김지웅 P2-ap.126  
 김지웅 P2-ap.108  
 김지환 P2-at.010  
 김지훈 E3.04  
 김지희 A2.03  
 김진민 P2-co.103  
 김진상 F3.06  
 김진수 P1-co.402  
 김진영 E3.07  
 김진유 P1-pa.035  
 김진혁 F2.07  
 김진희 P1-co.504  
 김진희 T3.03  
 김찬 P1-ap.144  
 김찬희 H5.04  
 김창배 A12.04, P1-pl.008  
 김창수 P2-se.002  
 김창식 B3.07  
 김창영 P1-co.609  
 김창영 H5.05  
 김창영 P2-se.021  
 김창영 P2-co.212  
 김철성 P1-co.419, P1-co.421,  
 P1-co.422  
 김철성 P1-co.418  
 김철운 B6.07  
 김태근 P1-ap.137  
 김태영 P2-op.016  
 김태영 P2-op.008  
 김태완 P2-ap.213  
 김태완 P2-ap.211, P2-ap.216  
 김태훈 P1-nu.019  
 김태훈 F2.07  
 김태훈 P1-co.610  
 김하나 P2-op.015  
 김하나 P2-pl.012  
 김학성 P1-ap.132  
 김한규 P1-co.607

김한성 P2-pl.014, P2-pl.015  
 김한성 P2-pl.023  
 김한성 P2-at.007  
 김한진 P1-pa.004  
 김해진 P2-pl.043  
 김해진 P1-pl.013, P1-pl.015  
 김혁진 P2-ap.114  
 김혁진 P2-ap.104  
 김현기 P2-op.023  
 김현석 P1-pl.048  
 김현수 B13.06, B13.07,  
 P1-pa.034  
 김현수 P1-pa.035  
 김현우 G8.07, P1-co.403,  
 P1-co.404  
 김현우 P1-co.606  
 김현우 P1-pa.023  
 김현우 P1-co.402  
 김현우 P1-pa.017  
 김현우 P1-pa.019  
 김현우 P1-pa.006  
 김현철 A1.06  
 김형도 E14.06  
 김형준 F2.07  
 김형찬 D11.04  
 김혜림 P2-ap.213  
 김혜림 P2-ap.216  
 김혜림 P2-ap.211  
 김호락 C12.10, P2-pl.005,  
 P2-pl.042  
 김호락 P2-pl.037  
 김홍주 P1-nu.011  
 김홍주 P1-pa.017  
 김홍주 P1-pa.035  
 김홍탁 P1-ap.144  
 김화섭 P1-ap.146  
 김효원 B7.05  
 김흥수 P1-pl.048  
 김흥수 P1-pl.028  
 김희수 F2.03  
 김희수 P1-pl.020  
 김희수 P1-pl.024

## 나

나실인 P2-op.004  
 나용수 P1-pl.048  
 남경욱 G13.08  
 남다현 B3.04  
 남승걸 B3.07  
 남용운 P1-pl.006  
 남우현 H5.04  
 노대호 H11.04  
 노미루 P2-ap.114  
 노승정 P1-pl.020  
 노승정 P1-pl.024  
 노승한 E4.02  
 노연정 G13.06  
 노영균 P2-se.007  
 노재동 A4.06  
 노태완 C13.03  
 노형아 P2-at.002  
 노흥렬 P2-at.006  
 노흥렬 P2-at.005  
 노희석 P2-se.019  
 노희소 P2-ap.219

## 다

다구찌다이 E3.06  
 동하 이 B13.01, P1-pa.032

## 라

라욱주 P2-pl.033  
 레안광 P2-st.025  
 령균 박 B13.01, P1-pa.032  
 류광수 P2-te.002  
 류근환 P2-se.001  
 류우제 P2-op.015  
 류우제 P2-pl.012  
 류지욱 P2-op.009  
 류지욱 P2-op.007  
 류한열 P2-se.001

## 마

마경주 P1-pa.035  
 마경희 P2-ap.103  
 마숙활 P2-pl.036

맹민재 E3.04  
 맹성은 P2-st.025  
 명렬 박 B13.01, P1-pa.032  
 명보라 P1-co.418  
 모성관 H5.05  
 문승현 P2-co.210  
 문인용 B3.07  
 문정호 P1-pa.017  
 문정호 P1-pa.019  
 문정호 P1-pa.006, P1-pa.023  
 문태봉 C1.04  
 문효식 P2-se.030  
 민경현 F2.03  
 민병훈 H5.04  
 민병훈 A12.04, P1-pl.008  
 민예림 P1-co.117

## 바

바로 김 B13.01, P1-pa.032  
 박정식 E13.01  
 박강순 P1-pa.035  
 박관열 C13.03  
 박규원 H12.03  
 박기현 P1-ap.101  
 박나희 H6.08  
 박노원 A3.07  
 박동호 P2-st.008  
 박령균 B13.07  
 박령균 B13.06, P1-pa.034  
 박마루찬 P2-st.014  
 박명렬 B13.06, B13.07,  
 P1-pa.034  
 박민우 P1-co.202  
 박민지 P1-ap.152  
 박병권 P2-se.006  
 박상인 P1-nu.027  
 박상일 G13.03  
 박상후 P2-pl.039  
 박석종 P2-st.023  
 박선정 P1-pa.023  
 박선정 P1-pa.017  
 박선정 P1-pa.019  
 박선정 P1-pa.006  
 박성균 P2-ap.114, P2-ap.126

박성균 P2-ap.108  
 박성근 G1.01  
 박성우 B13.06, B13.07,  
 P1-pa.034  
 박성우 E14.04  
 박성재 A2.01  
 박성준 B3.07  
 박성진 D3.04, P1-ap.152  
 박성희 P1-pa.017, P2-op.015  
 박성희 P1-pa.019  
 박성희 P2-pl.012  
 박성희 P1-pa.006, P1-pa.023  
 박세준 D3.08  
 박소연 P1-co.221  
 박소연 P2-ap.101  
 박소희 P2-op.003  
 박소희 P2-op.001  
 박수연 P2-pl.043  
 박수연 P1-pl.013, P1-pl.015  
 박수진 E3.07  
 박순희 P2-se.004  
 박승룡 P2-se.021  
 박승일 P2-pl.029  
 박아현 F2.03  
 박양정 P1-co.619  
 박연수 P2-at.002  
 박영석 P2-ap.103  
 박영재 P2-st.018  
 박완서 F2.07  
 박용근 H12.06  
 박용섭 E3.04  
 박윤배 I11.05  
 박인곤 B13.06, B13.07,  
 P1-pa.034  
 박인규 G13.06  
 박인규 P1-pa.002  
 박일흥 P2-se.040  
 박일흥 E13.03  
 박일흥 G1.06  
 박일흥 P2-as.001  
 박재관 P2-se.016  
 박재관 P2-se.019  
 박재구 F12.04  
 박재균 G13.07

박재선 P1-pl.027  
 박재선 P1-pl.018  
 박재선 P1-pl.019  
 박정원 F6.03  
 박정현 P1-co.304  
 박정환 E14.04  
 박정훈 H12.06  
 박제준 A6.05  
 박종윤 P1-ap.156  
 박종한 C1.06  
 박종호 P1-co.307, P2-te.001  
 박주영 F2.07  
 박주영 P2-pl.039  
 박준교 P1-pl.048  
 박준교 P1-pl.028  
 박준범 B7.05  
 박준서 P1-co.605  
 박준일 I11.04  
 박준하 B3.01, D3.01  
 박지용 D3.08  
 박지원 P1-co.619  
 박지호 H12.06  
 박진성 P2-pl.038  
 박진용 A12.10  
 박진용 A12.09  
 박진형 H1.02  
 박진호 P1-co.506  
 박찬 H11.07  
 박찬종 P1-ap.101  
 박창수 P2-se.015  
 박창인 P1-ap.157  
 박창인 P2-ap.127  
 박철 I11.01  
 박철권 P2-co.324  
 박철준 P1-ap.128  
 박철홍 P1-co.420  
 박태선 P1-nu.027  
 박태준 P2-ap.222  
 박태현 A3.07  
 박한결 P1-ap.146  
 박한진 B6.07  
 박향규 P1-pa.035  
 박현서 E13.06  
 박현정 P1-ap.129

박형규 A4.06  
 박혜민 P1-ap.101  
 박흥기 B3.01  
 박흥기 D3.01  
 박환배 P1-nu.019  
 방정배 A12.10  
 방정배 A12.09  
 방혜선 C1.03  
 배명호 H6.01  
 배명호 P1-ap.155  
 배명호 P1-ap.154  
 배병준 P2-pl.040  
 배상윤 P1-pa.017  
 배상윤 P1-pa.019  
 배상윤 P1-pa.006, P1-pa.023  
 배승환 H3.08  
 배종성 P2-ap.108  
 배준한 A12.06  
 배현후 B6.03  
 배현후 P1-co.202  
 백승수 P1-co.607  
 백용주 B4.07  
 백인형 P2-op.005  
 백인형 P1-pa.019  
 백재윤 P1-co.402  
 백창규 P1-co.316, P1-co.318  
 변용성 P2-pl.032  
 변영태 P1-ap.147  
 변우준 P1-pl.020  
 변우준 P1-pl.024  
 변재덕 P1-pl.024  
 변창우 P2-at.012  
 변창우 C13.01  
 변창우 P2-at.009  
 변철식 P1-pl.048  
 복문정 E3.06  
 부상돈 H4.02, P1-ap.148,  
 P1-co.313

## 사

사공정훈 E3.04  
 상용 김 B13.01, P1-pa.032  
 서명석 G2.03  
 서정진 P2-co.212

서경민 P1-pa.035  
 서광원 P2-pl.008  
 서동석 H6.08  
 서민기 P1-ap.154  
 서민철 E3.04  
 서상우 P2-se.022, P2-se.024  
 서상원 D13.04  
 서선희 B13.06, B13.07,  
 P1-pa.034  
 서선희 H13.04  
 서성현 P1-pl.001  
 서윤석 P1-pa.016  
 서은경 F2.03  
 서일성 P2-ap.225  
 서일완 P2-ap.114  
 서정진 H5.05  
 서정철 P1-co.419  
 서준호 P1-ap.155  
 서준호 P2-pl.025  
 서지동 P2-ap.213  
 서지동 P2-ap.216  
 서지동 P2-ap.211  
 서창원 P1-ap.128  
 서태훈 F2.03  
 서현관 B13.06, B13.07,  
 P1-pa.034  
 서혜원 F2.01  
 서환수 B7.05  
 서환수 H5.02  
 서환수 H8.01  
 서환수 F5.07  
 서희정 P1-pl.020  
 서희정 P1-pl.024  
 석성호 P2-co.211  
 석창원 I11.04  
 선광민 P1-pa.035  
 선상원 P2-pl.043  
 선창래 P1-pl.027  
 선희 서 B13.01, P1-pa.032  
 설주환 P2-op.008  
 성맹제 P1-ap.146  
 성승호 G8.07, P1-co.403,  
 P1-co.404  
 성승호 P1-co.402

성우 박 B13.01, P1-pa.032  
 성하준 A6.07  
 소현섭 P2-se.026  
 손병혁 G2.03  
 손해정 G2.03  
 손동철 G13.03  
 손동철 P1-pa.018  
 손동현 H5.02  
 손동현 H8.01  
 손동현 F5.07  
 손병혁 D3.07  
 손승우 P2-st.018  
 손영우 B6.01  
 손영우 E6.03  
 손우식 C4.05  
 손윤 P2-se.015  
 손이곤 F2.07  
 손장엽 P1-ap.152  
 손현동 A1.06  
 송근호 P1-pa.016  
 송나영 A6.06  
 송다예 A2.01  
 송만석 P2-se.008, P2-se.009  
 송명석 P2-se.005  
 송민종 P2-ap.211  
 송세영 E3.07  
 송세환 P2-ap.108  
 송영준 P2-co.313  
 송영준 D5.03  
 송운 C13.03  
 송인우 P1-pl.027  
 송인우 P1-pl.018, P1-pl.028  
 송인우 P1-pl.019  
 송종현 P1-co.504  
 송종현 C8.02  
 송지혜 C1.02  
 송지환 P1-pa.018  
 송태근 P2-st.008  
 송한성 P1-ap.160  
 송한성 P1-ap.116  
 송형선 P2-pl.004  
 송호신 B6.07  
 수봉 김 B13.01, P1-pa.032  
 승찬 김 B13.01, P1-pa.032

신동석 P1-ap.132  
 신동수 P2-op.011  
 신동헌 E3.04  
 신동훈 P1-ap.132  
 신동희 P2-se.022  
 신민철 P1-ap.127  
 신민철 P1-ap.105  
 신상진 P1-pa.016  
 신용일 D13.04, D13.06  
 신용진 P2-op.003  
 신용진 P2-op.001  
 신우종 A7.05  
 신재원 D1.02, P1-nu.020  
 신종화 P2-ap.225  
 신창동 B13.07  
 신창동 B13.06, P1-pa.034  
 신해원 P1-pl.020  
 신해원 P1-pl.024  
 신현도 P2-se.012  
 신현정 P2-pl.038  
 신현준 P1-co.402  
 신현진 B3.07  
 심경익 P2-co.324  
 심영출 F2.02  
 심인보 P1-co.419  
 심재훈 D5.04  
 심지니 P1-ap.156

## 아

안강헌 P2-st.006, P2-st.007,  
 P2-st.014  
 안광준 P2-op.019  
 안광준 P2-op.018  
 안교훈 D5.02, P2-co.313  
 안교훈 D5.03  
 안기석 P1-ap.156  
 안병준 A14.06  
 안상옥 P2-op.024  
 안설아 P2-co.211  
 안성준 P1-co.606  
 안성진 P2-ap.218  
 안영환 D3.08  
 안영환 D7.02  
 안예환 P1-ap.155

안예환 P1-ap.154  
 안재영 A3.07  
 안정근 F13.01  
 안찬용 A12.04, P1-pl.008  
 안창원 P1-co.301  
 안치원 P1-ap.139  
 안희진 P2-se.012  
 양선아 P1-ap.148  
 양성배 A1.04  
 양성배 H13.07  
 양승준 P2-ap.104  
 양승철 P2-at.006  
 양용석 P1-ap.138, P1-co.316,  
 P1-co.318  
 양운기 G13.07  
 양운기 H13.04  
 양인목 P2-pl.025  
 양인상 P1-co.310  
 양인석 T3.02  
 양장희 B13.06, B13.07,  
 P1-pa.034  
 양정열 B13.06, B13.07,  
 P1-pa.034  
 양찬호 C8.02  
 양한모 F12.07, H12.07  
 양한모 H12.05  
 양형모 P1-co.202  
 양호순 P1-co.511  
 양희원 P2-op.005  
 엄영호 P2-se.012  
 엄재곤 A4.06  
 엄희수 P1-co.106  
 여동규 F2.03  
 여인성 B13.07  
 여인성 B13.06, P1-pa.034  
 여정한 P2-ap.222  
 여환섭 F2.02  
 염동일 P2-op.019  
 염혜림 E3.07  
 영고다 P2-ap.148  
 영덕 김 B13.01, P1-pa.032  
 영일 최 B13.01, P1-pa.032  
 오규진 F2.08  
 오규진 H2.01



오동건 D3.04  
 오동근 P1-pl.001  
 오병성 P2-se.011  
 오성빈 H13.04  
 오승철 H12.04  
 오승철 H12.05  
 오승철 F12.08  
 오영택 B7.05  
 오유민 P1-pa.035  
 오윤탁 H6.03  
 오은순 P2-se.016  
 오의영 P2-se.006  
 오의영 P2-se.007  
 오재응 P2-se.007  
 오정은 P2-ap.213  
 오정은 P2-ap.216  
 오정은 P2-ap.211  
 오지영 F12.07, H12.07  
 오지영 H12.04  
 오홍석 D3.07  
 옥정우 A12.10  
 옥정우 A12.09  
 옥종목 G8.09, H5.02, H5.05  
 옥종목 H8.02  
 옥종목 H8.01  
 옥종목 F5.07  
 왕기영 P1-pa.019  
 왕선정 P1-pl.013, P1-pl.015  
 우민호 P1-pl.048  
 우병철 T3.03  
 우시관 P2-se.011  
 우영 김 B13.01, P1-pa.032  
 우원석 P2-co.103  
 우종관 F13.01  
 우창수 C8.02  
 우현주 P2-op.011  
 워커 브라이트 E3.07  
 원국 최 B13.01, P1-pa.032  
 원미숙 A12.10  
 원미숙 A12.09  
 원병목 D8.08  
 위관재 H12.07  
 위광재 F12.07

위상원 P1-co.304  
 위현호 P2-pl.043  
 위현호 P1-pl.013, P1-pl.015  
 유경화 P1-ap.153  
 유경화 D3.04, P1-ap.152  
 유금봉 G13.07  
 유금봉 H13.04  
 유석재 P2-pl.029  
 유석재 P2-pl.032  
 유승민 P2-pl.032  
 유승열 P2-pl.032  
 유영훈 P2-op.004  
 유원종 P2-se.039  
 유원종 B3.07  
 유인권 C1.02  
 유인태 B13.06, B13.07,  
 P1-pa.034  
 유재연 P2-st.007  
 유정우 E3.02  
 유정원 P1-pl.027  
 유창현 P1-ap.146  
 유취동 G13.08  
 육순형 P2-st.032  
 육순형 P2-st.023  
 육영민 P1-pa.005  
 윤성영 P2-pl.032  
 윤병길 P1-ap.115  
 윤보람 E14.04  
 윤상필 P2-pl.014, P2-pl.015  
 윤석준 A2.03  
 윤성민 H12.07  
 윤성민 H12.05  
 윤세규 P1-nu.002  
 윤순길 A3.07  
 윤신희 C8.02  
 윤은정 I11.05  
 윤장희 A12.10  
 윤장희 A12.09  
 윤정우 P2-pl.029  
 윤정현 P2-pl.025  
 윤혜경 I11.03  
 윤혜주 P1-ap.156  
 윤호상 D3.07  
 이강호 C13.06

이건준 P2-op.016  
 이건희 P1-ap.156  
 이건희 F2.03  
 이겨레 H12.06  
 이경세 G1.01  
 이경수 F2.08  
 이경필 G13.08  
 이관우 D5.02, P2-co.205,  
 P2-co.313  
 이관우 D5.03, P2-co.310  
 이관철 P1-pl.033  
 이광걸 G12.07  
 이광복 H1.02  
 이광철 T3.03  
 이규동 P1-pl.033  
 이규철 D3.07  
 이기원 P1-ap.112, P2-te.006  
 이기주 A2.03, P2-op.018  
 이기주 G12.06  
 이기태 P1-pa.017, P2-op.015  
 이기태 P1-pa.019  
 이기태 P2-pl.012  
 이기태 P1-pa.006, P1-pa.023  
 이길호 P1-co.506  
 이대영 P2-se.039  
 이대훈 P2-se.024  
 이동렬 P1-pl.048  
 이동찬 P2-se.012  
 이동하 B13.06, B13.07,  
 P1-pa.034  
 이동훈 P2-ap.141  
 이두용 P2-ap.126  
 이두용 P2-ap.108  
 이명재 F12.05  
 이명재 H3.08  
 이무현 P1-pa.035  
 이민정 P1-co.511  
 이민호 P2-at.012  
 이민호 C13.01  
 이민호 P2-at.009  
 이범규 P1-co.101  
 이범훈 H11.03  
 이범훈 H11.04  
 이병섭 A12.09, A12.10

이병직 P2-op.024  
 이병휘 D4.04  
 이보화 P1-co.413  
 이봉주 P2-ap.140, P2-pl.028  
 이상갑 P2-co.210  
 이상곤 P1-pl.027  
 이상권 A3.07  
 이상길 P1-ap.155  
 이상민 P2-op.019, P2-op.024  
 이상민 P2-op.012  
 이상민 F12.03  
 이상민 G12.05  
 이상봉 P2-pl.008  
 이상욱 P1-ap.132  
 이상은 G13.03  
 이상철 F12.08  
 이상태 P2-se.007  
 이상훈 G13.06  
 이상훈 P1-pa.002  
 이상희 P1-co.426  
 이서경 P2-op.007  
 이석관 P1-pl.024  
 이석근 P2-pl.014, P2-pl.015  
 이선영 P2-op.016  
 이섬균 D3.04  
 이성민 E4.04  
 이성연 A2.03  
 이성엽 P1-ap.144  
 이성훈 P2-co.201  
 이세호 P1-ap.139  
 이수아 I11.04  
 이수연 P1-nu.029  
 이수연 B5.02  
 이수옥 P1-ap.160  
 이수용 C13.07  
 이순걸 P2-co.201  
 이순걸 C13.03  
 이순일 P2-ap.222  
 이순일 D3.08  
 이승교 A2.01  
 이승미 H6.01  
 이승석 P2-op.027  
 이승석 P2-op.026  
 이승욱 P1-ap.139

이승준	A6.05
이승준	P1-co.216
이승철	P1-nu.019
이승한	P1-co.202
이승현	P1-pl.027 , P1-pl.033
이승현	P2-op.012
이승현	P1-pl.028
이승현	P2-pl.015
이승현	P2-at.007
이승훈	P2-pl.042
이승훈	C12.10 , P2-pl.005
이승훈	P2-pl.037
이신영	P2-op.015
이신영	P2-pl.012
이영배	P1-co.418
이영준	P1-nu.029
이와모토 미쯔마사	
	E3.06
이용준	P1-ap.130
이우석	P2-st.006
이웅재	F2.07
이원우	H11.04
이원재	P2-ap.213
이원종	E14.04
이원철	F6.03
이윤상	P2-ap.114
이윤상	P2-co.103
이윤정	I11.04
이은숙	G8.07, P1-co.403,
	P1-co.404
이은숙	P1-co.402
이인숙	P2-te.005
이인학	P2-ap.104
이일맥	P1-nu.004
이장희	P1-co.602
이재광	P1-co.201
이재광	E6.02
이재동	G5.06
이재란	P2-op.023
이재란	P2-op.021
이재란	G12.08
이재승	P1-pa.035
이재신	P2-ap.103
이재신	P1-co.301

이재영	F12.07
이재용	H12.05
이재우	P2-st.025
이재웅	B3.04
이재원	D11.04
이재종	P1-ap.160
이재준	P1-ap.112
이재현	P1-ap.127
이재형	P1-co.506
이재훈	P2-co.210
이정수	P2-ap.126
이정오	P1-ap.156
이정오	H6.01
이정재	D11.04
이종석	P2-se.004
이종석	P2-se.005
이종석	P1-co.623
이종원	F13.01
이종진	P1-co.220
이종진	P1-co.221
이종하	P1-pl.027, P1-pl.033
이종하	P1-pl.028
이종환	P1-nu.029
이종훈	P1-nu.004
이주련	A4.04
이주복	P2-ap.207
이주연	B4.03 , B4.05
이주연	E4.02
이주영	P1-pa.035
이주은	P1-co.427
이주호	F3.04
이준성	H12.06
이준호	P1-ap.105
이준호	P1-ap.127
이중성	G12.07
이지성	P2-ap.126
이지호	P2-co.210
이직	E13.03
이직	G1.06
이직	P2-as.001
이직	P2-se.040
이진혁	P2-st.032
이진형	G12.07
이진홍	C8.02

이진환 G8.09  
 이진환 H5.02  
 이진환 H8.02  
 이진환 H8.01  
 이진환 F5.07  
 이창목 D3.05  
 이창헌 P2-ap.103  
 이창헌 P1-co.301  
 이춘식 P1-nu.008  
 이춘식 P1-nu.004  
 이충기 D5.01  
 이택희 F2.07  
 이택희 E3.03  
 이태건 P2-se.019  
 이태경 H5.02  
 이태경 E3.07  
 이태경 F5.07  
 이태권 P1-co.317  
 이태호 P2-st.025  
 이필수 P1-nu.004  
 이하승 P2-se.023  
 이하승 P2-se.022  
 이하훈 P2-se.030  
 이한얼 H13.04  
 이한형 P1-co.310  
 이향록 P2-op.018  
 이현용 C5.01  
 이현용 P1-pl.027  
 이현용 P1-pl.018, P1-pl.028  
 이현용 P1-pl.019  
 이현우 H4.05  
 이현정 G8.09, H5.02  
 이현정 H8.02  
 이현정 F5.07  
 이형락 P1-ap.144  
 이형호 P1-pl.019  
 이해영 P2-se.040  
 이해영 E13.03  
 이해영 G1.06  
 이해영 P2-as.001  
 이해원 P1-co.217  
 이호동 P2-co.203  
 이호선 P2-se.026  
 이호섭 P2-op.011

이호성 T3.01  
 이호식 A6.01  
 이흥기 P2-pl.008  
 이효상 H1.02  
 이후종 P1-co.602  
 이후종 P1-co.506  
 이후종 P1-co.507  
 이훈경 B6.03  
 이훈경 F6.03  
 이훈경 P1-co.202  
 이훈표 D5.04  
 인곤 박 B13.01, P1-pa.032  
 인성 여 B13.01, P1-pa.032  
 인태 유 B13.01, P1-pa.032  
 인택 임 B13.01, P1-pa.032  
 임계엽 F13.01  
 임성현 G8.01, P1-co.405  
 임승일 F12.07  
 임승일 H12.05  
 임승혁 F2.02  
 임영훈 P1-co.316, P1-co.318  
 임우창 C4.01  
 임웅빈 D3.08  
 임유봉 C12.10, P2-pl.005,

P2-pl.042  
 임유봉 P2-pl.037  
 임은주 P2-ap.218  
 임은주 E3.06  
 임은주 F3.04  
 임인택 B13.07  
 임인택 B13.06, P1-pa.034  
 임재훈 E14.04  
 임정태 P1-co.419  
 임주희 P2-se.016  
 임준 D8.08  
 임준휘 P2-co.103  
 임지혜 I11.04

## 자

장규하 P1-pa.017  
 장규하 P1-pa.019  
 장규하 P1-pa.006, P1-pa.023  
 장기완 P2-op.011  
 장기주 A6.03

장기주 A6.07  
 장동민 A14.03  
 장동현 H5.04  
 장동현 H8.05  
 장성록 A12.06  
 장성호 B5.03  
 장승훈 H6.01  
 장시원 P2-pl.016  
 장연식 E3.03  
 장영대 P2-se.039  
 장영준 P2-ap.114  
 장영준 P2-ap.104  
 장원준 G8.09  
 장원준 H5.02  
 장원준 H8.02  
 장원준 H8.01  
 장원준 F5.07  
 장은지 P1-co.220  
 장재영 P2-co.210  
 장주혁 P1-pl.027  
 장주혁 P1-pl.018 , P1-pl.028  
 장주혁 P1-pl.019  
 장지승 B13.06, B13.07,  
 P1-pa.034  
 장진욱 P2-pl.025  
 장찬욱 P2-se.022 , P2-se.024  
 장택진 P1-nu.004  
 장한일 B13.06, B13.07,  
 P1-pa.034  
 장현주 H6.01  
 장희 양 B13.01, P1-pa.032  
 재를 김 B13.01, P1-pa.032  
 전다정 G13.06  
 전민용 P2-pl.012  
 전민용 P1-pa.006  
 전시현 H13.04  
 전은주 P1-pa.035  
 전의진 B4.05  
 전인수 B7.05  
 전재형 D8.01  
 전준우 P1-pl.033  
 전준우 P1-ap.131  
 전진아 P2-se.040  
 전진아 E13.03

전진아 G1.06  
 전진아 P2-as.001  
 전태민 P1-pl.018  
 전태민 P1-pl.019  
 전현수 F12.05  
 전현수 H3.08  
 전현구 P2-se.002  
 전해빈 P1-nu.019  
 정갑균 H12.03  
 정광휘 P2-ap.103  
 정기홍 B4.07  
 정남 P2-st.025  
 정대성 P1-ap.156  
 정대호 P2-se.026  
 정동원 F14.08  
 정두원 H6.01  
 정명철 P2-co.205  
 정명화 P1-co.402  
 정명환 P1-ap.151  
 정문석 T1.01  
 정상욱 G8.09  
 정상욱 H8.02  
 정석민 A7.06  
 정선영 P2-st.018  
 정성원 A7.05  
 정성윤 C8.02  
 정세영 P1-co.420  
 정수용 G12.06  
 정승태 P1-ap.139  
 정연욱 C13.03  
 정열 양 B13.01 , P1-pa.032  
 정영욱 P1-pa.017  
 정영욱 P2-op.005, P2-op.015  
 정영욱 P1-pa.019  
 정영욱 P2-pl.012  
 정영욱 P1-pa.006, P1-pa.023  
 정용욱 I11.06  
 정우성 H12.05  
 정윤철 P1-ap.155  
 정윤철 P1-ap.154  
 정은식 I11.04  
 정인영 P2-se.002  
 정종근 H5.05  
 정종근 P1-co.609

정종훈 P1-ap.115, P1-ap.116,  
 P1-co.317  
 정진 P2-pl.028  
 정진 P2-ap.140  
 정진석 P1-co.304  
 정진오 H5.02  
 정진오 H8.01  
 정진오 F5.07  
 정진현 P1-pl.027  
 정찬준 P1-co.623  
 정철우 E14.04  
 정태성 P1-co.406  
 정태영 A2.03, P2-op.018  
 정태영 G12.06  
 정태현 E14.06  
 정하웅 B4.07  
 정하웅 D4.04  
 정현식 B3.04  
 정현학 F2.07  
 정현학 E3.03  
 정호영 P2-pl.016  
 정환성 P2-op.019  
 정환철 E14.04  
 정훈영 F6.03  
 정희성 D3.08  
 제갈소영 P1-co.406  
 제갈소영 G8.01, P1-co.405,  
 P1-co.427  
 조제웅 G2.03  
 조건 D8.08  
 조경미 P2-op.011  
 조광희 I11.03  
 조길영 C5.04  
 조명원 D4.02  
 조민식 P1-co.117  
 조범석 C13.05  
 조병기 P2-se.005  
 조삼연 H4.02, P1-ap.148,  
 P1-co.313  
 조성기 F3.06  
 조성오 P1-co.619  
 조세연 P1-ap.131  
 조수현 P2-se.021  
 조연주 B3.07

조예람 E3.04  
 조용섭 P2-pl.014, P2-pl.015  
 조용섭 P2-pl.023  
 조용섭 P2-at.007  
 조용찬 P1-co.420  
 조용훈 F2.02  
 조원배 P2-op.019  
 조은길 F12.07, H12.07  
 조은길 H12.04  
 조은길 F12.08  
 조장현 D3.07  
 조재흥 P2-op.005  
 조정효 P2-st.008  
 조종희 F2.02  
 조한국 I11.03  
 조한국 I11.07  
 조혁 P2-at.002  
 조혜영 P2-co.211  
 조호근 P2-ap.213  
 조호근 P2-ap.216  
 조호근 P2-ap.211  
 조화연 P1-nu.008  
 조화연 P1-nu.004  
 주배연 P2-ap.148  
 주강현 C8.02  
 주경광 B13.07  
 주경광 B13.06, P1-pa.034  
 주경광 P1-pa.035  
 주관식 P1-ap.101  
 주승용 F12.08  
 주시은 I11.04  
 주진수 F3.06, P1-ap.128,  
 P1-ap.130, P2-ap.207  
 주진수 P1-ap.129  
 주한울 E13.06  
 준호 최 B13.01, P1-pa.032  
 지민정 P2-ap.219  
 지승 장 B13.01, P1-pa.032  
 지영래 I11.08  
 지정은 P1-co.310  
 진영구 P1-pl.020  
 진정호 P2-ap.103  
 진형준 P1-ap.131  
 진효선 P2-co.310

## 차

차국린 P2-se.030  
 차국린 P2-co.324  
 차민령 B4.03  
 차상현 P2-te.002  
 차수미 D1.01  
 차형래 H3.08  
 찬칭킷 H6.03  
 창동 신 B13.01, P1-pa.032  
 채경육 D1.01  
 채기성 B6.01  
 천명기 D1.02, D1.03  
 천명기 B1.05  
 천명현 P1-ap.160  
 천미연 P1-co.420  
 천수익 H4.05  
 최태승 P2-op.017  
 최광호 P2-as.001  
 최기쁨 H4.02, P1-ap.148,  
 P1-co.313  
 최기영 F2.07  
 최낙렬 P2-at.012  
 최낙렬 C13.01  
 최낙렬 P2-at.009  
 최덕현 A6.07  
 최동진 E14.06  
 최동환 H6.01  
 최무영 D4.02  
 최민석 C8.03  
 최민혁 P2-se.002  
 최민호 H12.02  
 최병기 P2-ap.104  
 최석호 P2-se.023  
 최석호 P2-se.022, P2-se.024  
 최석환 G8.09, H5.02  
 최석환 H8.02  
 최석환 H8.01  
 최석환 F5.07  
 최선명 B6.01  
 최선빈 P2-se.009  
 최선영 P2-op.019  
 최선영 F12.03  
 최선우 P1-ap.147

최세용 A12.10  
 최세용 A12.09  
 최수용 G13.06  
 최순철 D1.03  
 최시영 C8.02  
 최영관 P1-co.623  
 최영빈 D3.07  
 최영우 P1-co.605  
 최영일 B13.06, B13.07,  
 P1-pa.034  
 최영재 D3.04  
 최영환 P2-se.001  
 최우석 I11.06  
 최원국 B13.06, B13.07,  
 P1-pa.034  
 최원석 I11.04  
 최원준 P2-se.016  
 최원호 C12.10, P2-pl.005,  
 P2-pl.039, P2-pl.042  
 P1-pl.027  
 최원호 P2-pl.037, P2-pl.038  
 최원호 P1-pl.018, P1-pl.028  
 최원호 P1-pl.019  
 최은서 P2-op.027  
 최은서 P2-op.026  
 최은하 P2-pl.036  
 최재돈 E14.04  
 최재우 B3.01, D3.05, H12.02  
 최재우 D3.01  
 최재준 F12.07, H12.07  
 최재준 H12.05  
 최준호 B13.06, B13.07,  
 P1-pa.034  
 최준호 G13.07  
 최현경 P1-co.421  
 최현우 P1-co.318  
 최현우 P1-co.316  
 최현우 G8.09, H5.02  
 최현우 H8.02  
 최현우 H8.01  
 최현우 F5.07  
 최형준 D5.01  
 최형준 P1-co.605  
 최형준 P1-co.607

최효진 P2-pl.001, P2-pl.008  
추동일 A2.01  
추승룡 H12.04

## 카

카김잔 부타노브  
G13.03

## 하

하나영 P1-ap.137, P2-ap.222  
하대훈 P1-nu.011  
하동광 C13.03  
하동한 H6.01  
하동훈 P2-at.010  
하미드 유수포브

G13.03  
하미순 B4.07  
하은자 B1.05  
하태우 P2-co.324  
하태현 A12.06  
한기옥 P1-co.310  
한대희 P1-pa.018  
한만천 D5.01  
한명준 D5.04  
한범수 P1-ap.139  
한병헌 P2-op.005  
한보영 P1-pa.035  
한상욱 P1-ap.157  
한상욱 P2-ap.127  
한성범 P1-ap.112, P2-te.006  
한성태 A12.06  
한송이 P1-ap.131  
한영덕 P2-op.017  
한우준 H12.04  
한우현 A6.03  
한은주 P1-co.422  
한일 장 B13.01, P1-pa.032  
한정우 P2-se.005  
한정훈 H6.03  
한제현 P2-pl.038  
함선영 P2-se.004  
함성길 P2-te.006  
함원규 P2-op.016  
함철민 P1-nu.027

P2-pl.013  
허민섭 P2-pl.011  
허민섭 P2-pl.004  
허민섭 P2-pl.033  
허민성 P2-ap.225  
허순상 P2-co.212  
허정우 E3.07  
허진영 P2-pl.036  
현관 서 B13.01, P1-pa.032  
현수 김 B13.01, P1-pa.032  
현준원 P1-pl.024  
홍경수 P1-co.511  
홍덕균 P1-nu.002  
홍석인 I11.01  
홍석호 P1-pl.019  
홍성구 P2-se.002  
홍성철 P1-co.106  
홍성혁 G12.07  
홍순철 P1-co.406  
홍순철 G8.01, P1-co.405,  
P1-co.426, P1-co.427  
홍승우 P1-nu.027  
홍은정 P2-pl.032  
홍영표 P1-ap.155  
홍영환 P2-ap.103  
홍용철 P2-pl.036  
홍종기 A12.10  
홍종기 A12.09  
홍종암 E3.04  
홍종일 P1-ap.152  
홍주환 P1-pl.027  
홍주환 P1-pl.018, P1-pl.028  
홍주환 P1-pl.019  
홍진웅 P2-ap.216  
홍창기 P1-ap.155  
홍창기 P1-ap.154  
황보창권 P2-op.016  
황보창권 P2-op.008  
황보현 P2-ap.144  
황성우 B7.05  
황영진 P2-co.210  
황왕택 E3.03  
황인희 P1-ap.157  
황인희 P2-ap.127



황지원 P2-se.006  
 황지원 P2-se.007  
 황형석 P2-ap.207  
 황희현 P1-co.201  
 히가시요이치  
 H6.03

## A-Z

A. Kim D1.01  
 A. M. Shirokov B1.03  
 A. Ratkiewicz D1.01  
 ABBAS Kaleem P1-ap.108  
 ABU ZEID Shima'a G13.01  
 Abu Talha A. A P2-ap.124  
 ACHARYA Susant Kumar  
 C3.08  
 ADACHI Shin-ichi H7.01  
 ADHIKARI govinda P1-pa.010  
 ADHIKARI Pushparaj B13.09  
 AHMAD Dawood P2-co.207  
 AHN Chang Won P1-co.305,  
 P2-ap.210  
 AHN Chang Won P1-co.303  
 AHN Chang Won P1-co.306  
 AHN Chiwon B3.02  
 AHN Danho P2-co.102  
 AHN EunYoung F5.06  
 AHN Eunyong P2-ap.123  
 AHN G. H. P2-co.307  
 AHN H. J. P1-pl.042  
 AHN Hanyeol C3.06  
 AHN Hyun-Jai B3.06  
 AHN Jaewook F12.06  
 AHN Jeonghwan B6.06  
 AHN Jeonghwan P1-co.204  
 AHN Kwangwon C4.06  
 AHN Saebyeok P1-pa.013  
 AHN Seongjin P1-co.503  
 AHN Seung-eon P2-se.018  
 AHN Sun Woo F3.03  
 AHN Tae-Sung P1-co.501  
 AHN Yong-Yeol D4.03

AKERS Charles Anthony  
 P1-nu.015  
 AKERS Charles Anthony  
 P1-nu.014  
 AKERS Charles Anthony  
 H1.03  
 ALI Ahmed I. D3.02  
 ALMOND John H13.01  
 ALMOND John Leslie H13.05  
 ALTISSIMO Matteo G7.01  
 ALUNDA Bernard Ouma  
 P2-co.101  
 ALUNDA Bernard Ouma  
 P2-co.104  
 AMASHA S. H6.06  
 AMoRE Collaboration  
 P1-nu.011  
 AMoRE Collaboration  
 P1-pa.011  
 AMoRE collaboration  
 P1-pa.028  
 AN Gukil C8.08  
 AN Gwang-Guk H4.03  
 AN Gwangguk P2-ap.129  
 AN GwangGuk P2-ap.130  
 AN Kunsik F3.07  
 AN Kyungwon P2-at.015  
 AN Kyungwon P2-at.016  
 AN Kyungwon P2-at.014  
 AN Kyungwon H12.01  
 AN Su Kyoung P2-pl.003  
 AN Youngseo P2-ap.143  
 AN Youngseo P1-ap.126  
 Anatoly Yasukevich F12.03  
 ANDO Masaki F11.02  
 ANDO Yu P1-nu.028  
 ANDREA Jeremy G13.01  
 ANDREANOV Alexei H8.06  
 ANDREANOV Alexei P2-at.011  
 Anh Tuan Duong P1-co.610  
 ANSARI A.A. P2-ap.128  
 ARDAVAN Arzhang F9.03  
 ARITOMO Yoshihiro B1.01  
 ARYAL Pabitra P1-nu.013

ASRYAN Gegham P1-nu.006  
 ATTACALITE Claudio G9.01  
 B. D. Park F14.07  
 B. Dabrowski G8.07,  
 P1-co.403  
 B. Gudkov P1-pa.019  
 B. Manning D1.01  
 BAC Seul-Ki G8.03,  
 G8.05  
 BAC Seul-Ki G8.02  
 BAC Seul-Ki G8.04  
 BAE Arram D4.03  
 BAE Garam P2-co.305  
 BAE Jong seung A3.06  
 BAE Junwan P1-co.112  
 BAE Leejin C12.04  
 BAE Sung Chul F4.01  
 BAE Yeong Cheol P1-nu.028  
 BAE YeoungSoon P1-pl.047  
 BAE Yong Hee P2-ap.206  
 BAE Yu Jeong H8.08,  
 P1-co.414  
 BAEK G. L. P2-co.312  
 BAEK Gwang Ho H2.03  
 BAEK Gwang Ho P2-se.032  
 BAEK Gwangho P2-se.038  
 BAEK Hyeonjun H3.09  
 BAEK In Hyung G12.01  
 BAEK Seung Ki B4.01  
 BAEK Seung-Hyub H4.04  
 BAEFFERT Carole G3.04  
 BAHK Young-Mi G12.02  
 BAIK Jaeyoon G7.01  
 BAIK Jeong Min C3.01  
 BAIK Min P2-ap.143  
 BAILEY Jon A. E14.01  
 BAK Jun-Gyo P1-pl.021  
 BAK Jun-Gyo P1-pl.014  
 BANG Junhyeok G9.03  
 BANG Seokyoung P1-co.102  
 BASSETT Lee C C6.01  
 BASSO Lorenzo G13.01  
 BAUMANN Susanne E9.03

BEDOLLA Diana E. G7.01  
 BEHERA Nirbhay Kumar C1.07  
 BENETATOS Panayotis B4.02  
 BERG Georg Peter G1.04  
 BHOI Dilip Kumar P1-co.425  
 BHOI Dilip Kumar G5.05  
 BHYUN Jihwan P1-pa.001  
 BINGZHI Jiang P1-co.608  
 BLAAUWGEERS Rob P1-ap.114  
 BLANCO Francisco P1-co.113  
 BODYFELT Joshua B4.04  
 BOHR Vilhelm A. P1-co.107  
 BOK Jin Mo A9.03  
 BOSE Sukanta F11.01  
 BOWCOCK Themis H14.01  
 BROHOLM C F5.05  
 BU Sang Don P2-ap.138  
 BURKERT Volker P1-nu.006  
 BYUN HeeSu P1-ap.114  
 BYUN HeeSu G5.04  
 BYUN Kyung Min B2.05  
 BYUNGCHAN Han P1-co.209  
 Byung-Gu Jeon H8.03  
 C. S. Yoon F14.07  
 C. Z. Cheng P1-pl.048  
 CARMAN Daniel P1-nu.006  
 CARNIS Jerome P2-co.105  
 CARNIS Jerome C8.08  
 CARNIS Jerome C8.06  
 CASTRO NETO A H B7.04  
 CASTRO-TIRADO Alberto J. G11.03  
 CASTRO-TIRADO Alberto J E11.05  
 CHA Janghwan P1-co.604  
 CHA Minkwon D8.02  
 CHA Myoung Joo F3.01  
 CHA Myoung Joo F3.02  
 CHA Su Yeon P1-co.621  
 CHA Wonsuk C8.06  
 CHA Wonsuk P2-co.105  
 CHAE Hyunwoo G1.04

CHAE Jimin	P2-ap.120
CHAE Keunhwa	A3.08
CHAE Kyungyuk	G1.05
CHANDRAMOHAN S.	P2-se.017
CHANG Choong-Seock	D12.03
CHANG Kee Joo	E6.01
CHANG Kee Joo	B6.02, C7.05
CHANG Min Hui	C7.03
CHANG Min Hui	P1-co.603
CHANG Seung Pyo	P1-pa.024
CHANG Yun Hee	C7.03
CHAR Kookrin	P2-se.029
CHAR Kookrin	P2-co.321
Charles Anthony Akers	H1.02
CHAVAN H S	P2-ap.124
CHAVAN Harish	P2-ap.128
CHENG Austin Kcon	A2.07
CHENG Chio Zong	B12.02
CHENG Qianyi	E4.05
CHENG Qianyi	E4.07
CHENG Qianyi	P2-st.012
CHEON MunSeong	P1-pl.039
CHEONG Hyeonsik	P1-ap.136, P1-ap.140
CHEONG Hyeonsik	A7.04, E7.03, P1-ap.133
CHEONG Sangwook	P2-co.319
CHEOUN Myung-Ki	B1.06
CHEOUN Myung-Ki	D1.04
CHEUNG Kingman	D14.01
CHITTARI Bheema Lingam	H9.04
CHITTARI Bheema Lingam	H9.02
CHITTARI Bheema Lingam	P1-co.223
CHO B.I.	C12.01
CHO Beong Ki	P1-co.415
CHO Beongki	F5.03
CHO Byeongseong	C12.02

CHO Byoung-ick	C12.04
CHO Byungjin	A2.04
CHO Chulhee	P2-ap.110
CHO Gil Young	E7.01
CHO Heung-Yeol	D3.02
CHO Hoon Young	P2-ap.208, P2-ap.209
CHO Ilsung	C12.05
CHO Ilsung	P2-pl.003
CHO Jaehun	P2-ap.131, P2-ap.132
CHO Jin Hyoung	P2-ap.138
CHO Jin-cheol	P2-ap.145
CHO Jin-Cheol	D5.06
CHO JinHyung	F5.06
CHO Jin-Hyung	A3.04
CHO Jin-Hyung	P2-ap.123
CHO Jong-Hoi	F2.04
CHO Jongweon	D7.01
CHO Jun-Hyung	C7.04
CHO Jun-Hyung	C7.02
CHO Jun-Hyung	P1-co.617
CHO Kihyeon	F13.06
CHO Kyuman	E11.04
CHO Kyung Mi	P2-op.002
CHO Kyungjune	F3.05
CHO Leo	P2-se.020
CHO M.-H.	P2-se.020
CHO Mannho	P2-ap.143
CHO Mann-Ho	P2-co.320
CHO Mann-Ho	P2-ap.120
CHO Mann-Ho	P1-ap.126
CHO Min Sang	C12.01
CHO Minsang	C12.04
CHO Moo Hyun	P1-nu.026
CHO Moo Hyun	P1-nu.024
CHO Moohyun	P2-pl.017
CHO Moohyun	P1-pl.030
CHO Moohyun	P1-pl.022
CHO Moo-Hyun	B1.04
CHO MyungHoon	C12.07
CHO San Eun	P2-ap.208
CHO Sang Eun	P2-ap.209
CHO Sang Wan	F3.03

CHO Sangeun	P2-ap.142	CHOI Chulwon	P1-nu.016
CHO Sangeun	P1-ap.119,	CHOI DaSong	A2.06
	P2-ap.124,	CHOI Eun Ha	P2-pl.030
	P2-ap.128,	CHOI Eun Ha	P2-pl.031
	P2-ap.147	CHOI EunMi	P2-pl.020
CHO Shinuk	F3.02	CHOI EunMi	G12.04
CHO Shinuk	P2-ap.210	CHOI Eunmi	G12.03
CHO Sung Oh	P2-ap.135	CHOI EunMi	P2-pl.021
CHO Sunglae	H4.01,	CHOI Gwangho	G11.01
	P1-co.412	CHOI Gyung Jin	P1-pl.041
CHO Sunglae	P2-se.044,	CHOI H.	P1-ap.114
	P2-se.046	CHOI H. Y.	P2-co.318
CHO Sunglae	A2.05,	CHOI H. Y.	P1-co.409
	P2-se.042	CHOI H.Y.	P2-co.326
CHO Sunglae	P2-se.045	CHOI Haeyoung	P2-ap.116
CHO Sunglae	P1-co.616	CHOI Haiin	P1-co.302
CHO Sunglae	P2-se.043	CHOI Haiin	P1-co.312
CHO Sunglae	H8.07	CHOI Haiin	P1-co.314
CHO Sungtae	C1.01	CHOI Hee Cheul	D5.07
CHO Sungwoong	F13.02	CHOI Hong Chul	D5.05
CHO Suyeon	F6.04	CHOI Hyejin	P2-ap.120
CHO Won Sang	B14.01	CHOI Hyekyoung	H2.04
CHO Yong Sub	P1-co.501	CHOI Hyekyoung	P1-co.613
CHO Yong-Hoon	F2.05,	CHOI Hyoung Joon	P1-co.416
	P1-co.509	CHOI Hyoungsoon	G5.04,
CHO Yong-Hoon	F2.04		H6.02
CHO Yong-Hoon	D3.06	CHOI Hyoungsoon	P1-co.509
CHO Youngwoo	P1-pl.011	CHOI Hyunhee	D8.03
CHO Yuna	A2.04	CHOI Insik	P2-pl.026
CHO Yuna	C3.04	CHOI Jaewon	E5.04
CHO Yuna	F2.06	CHOI Jea Young	P2-pl.009
CHOE Duk-Hyun	E6.01	CHOI Jihoon	P1-pa.038
CHOE Mun Seok	G12.04	CHOI Jiil	E6.04
CHOE Sug-Bong	P1-co.417	CHOI Jin-Ho	C7.04
CHOE W.	P1-pl.037	CHOI Jiya	P1-co.315
CHOE Wonho	P1-pl.043	CHOI Juneho	B13.03
CHOE Wonho	A12.05	CHOI Juneho	B13.04
CHOE Wonho	C12.03	CHOI Jungsu	C12.02
CHOI BAEK SOON	P1-co.424	CHOI Jungwon	P2-ap.122
CHOI Benjamin Jaedon	E14.03	CHOI K. -Y.	P1-pa.022
		CHOI K.-Y.	H13.03
CHOI Byung Chun	P2-ap.117,	CHOI Kiwoon	G14.02
	P2-ap.119	CHOI Ki-Young	D11.02
CHOI Byungsan	D8.02	CHOI Kwang-Yong	P2-co.301

CHOI Kyu Jeong	B13.02
CHOI Kyung Hoon	P2-pl.030
CHOI Kyung-Jae	C3.05
CHOI M.Y.	B4.06
CHOI Min Sup	A2.02
CHOI Minjun	P1-pl.023
CHOI Min-Soo	P2-ap.217
CHOI Minwook	P2-co.306
CHOI Moonkang	P1-ap.106
CHOI MooYoung	C4.06, C5.07
CHOI Myung Chul	E4.01
CHOI Sanghoon	G8.05
CHOI Seong Soo	C7.06
CHOI Seonghoon	G8.02
CHOI Seonghoon	G8.03
CHOI Seonghoon	G8.04, G8.08
CHOI Seonho	G1.04
CHOI Sookyung	H13.08
CHOI Soomin	E14.07
CHOI SungHo	P2-op.025
CHOI Suyong	G13.02
CHOI Suyong	F13.02
CHOI W. S.	P2-ap.113
CHOI W.J	P2-co.207
CHOI W.J.	H5.03
CHOI Won Chul	P1-ap.122
CHOI Won-Ho	P1-pl.021
CHOI Wonjin	P2-pl.021
CHOI Won-Qook	B13.04
CHOI Won-Qook	B13.03
CHOI Woo Seok	P2-co.322
CHOI Woochul	P2-st.003
CHOI Woochul	P2-st.001
CHOI Woosik	P2-st.031
CHOI Wooyong	P2-st.012
CHOI Y. J.	A8.01
CHOI Y. J	P1-co.411
CHOI Y. J	P1-co.409
CHOI Y. J.	P2-co.328
CHOI Y. J.	P2-co.318
CHOI Y.J.	P2-co.327
CHOI Y.J.	P2-co.326

CHOI Y.S.	P2-co.301
CHOI Yoon Ho	P1-ap.126
CHOI Yoonho	P2-se.020
CHOI Youngil	B13.04
CHOI Youngil	B13.03
CHOI YoungJai	F5.04
CHON Tae-Soo	D4.01
CHONG Kyeongock	P2-at.015
Choongman Lee	G3.05
CHOUGH Young-Tak	D13.02
CHOUGH Young-Tak	P2-at.016
CHUANG Tien-Ming	B9.01
CHUL KIM	P2-ap.149
CHUN Min Chul	P1-ap.117
CHUN Min Chul	P1-ap.118, P1-ap.120
CHUNG H.-K.	C12.01
CHUNG Hyun-Jong	C2.06
CHUNG Jinil	P1-pl.009
CHUNG Jin-Seok	C8.01
CHUNG K.J.	P1-pl.045
CHUNG Kookchae	G5.03
CHUNG Kunook	H3.09
CHUNG Kyoung-Jae	P1-pl.039
CHUNG Kyoung-Jae	A12.07
CHUNG Kyoung-Jae	P1-pl.036, P1-pl.046
CHUNG Kyoungsoo	P1-pl.046
CHUNG Minhuk	B1.01
CHUNG Myungwoo	P2-co.105
CHUNG Myungwoo	C8.08
CHUNG Myungwoo	C8.06
CHUNG Seogchul	C12.02
CHUNG Suk Bum	C5.06
CHUNG Wooseong	P2-ap.129
CHUNG WooSeong	P2-ap.130
CHUNG Woo-Seong	H4.03
CIAPPINA M.F.	P2-op.025
CLARK Jesse	C8.08
COLLARD Caroline	G13.01
CONTE Eric	G13.01
COORAY Asantha	C11.02
CRUMLIN Ethan	A3.06
CYBART Shane	A B7.04

CYNN Hyunchae	C9.01
D. Liu	F14.07
D. W. Bardayan	D1.01
D.Pacella	P1-pl.018
D'ALE'O Anthony	G3.04
Dae Joon Kang	P1-ap.160
Danh-Tai Hoang	P2-st.008
DANIELI Carlo	B4.04
Darkhansaikhon Bolortsetseg	P1-co.313
DAVOUDIASL Hooman	G14.03
DE ARQUER F. Pelayo Garcia	P1-ap.102
Declan Scullion	B3.03
Deepak Rajaram Patil	H8.03
DELPECH Lena	P1-pl.022
DEROOVER Kevin	G13.01
Dever P Norman	F2.01
DEWU Yue	P1-ap.121
DHONDT Jorgen	G13.01
Dilipkumar Bhoi	H5.04
DING H	E10.03
DING T	E10.03
DO Dalhyun	P1-co.314
DO Duc Cuong	P1-co.408
DO Eui Hwan	H6.04
DO S.-H.	P2-co.301
Do Yoon KIM	P1-pa.020
DOMIER C W	P1-pl.034
DONG EON Kim	P2-at.013
Dong Yu	P2-se.016
Dongchul Sung	P1-ap.150
DongHee Kim	G13.04
Driba D. Tolla	A14.03
DU Peng	H3.05
DUGERJAV Otgonbayar	A7.02
DUONG Anh Tuan	H4.01, P1-co.412
DUONG Anh Tuan	P2-se.043, P2-se.044
DUONG Anh Tuan	H8.07
DUONG Tuan Anh	P1-co.616

DUONG Tuan Anh	A2.05
DUONG Tuan Anh	P2-se.045
DUONG Van Thiet	H4.01, P1-co.412
DUTTA Sandipan	B4.02
DUVJIR Ganbat	A7.02
DUVJIR Ganbat	P1-co.616
DYNES R	C B7.04
E. J. Lee	D1.01
EFETOV Dmitri K.	G5.02
EISAKI Hiroshi	P2-co.206
Elton J. G. Santos	B3.03
EOM Man Jin	P2-co.302
EOM Sangheum	P2-pl.044
EUNE Myungseok	A14.08
Eunice Eunkyeong Kim	G3.05
Eunsongyi Lee	H3.06
FAGES Frédéric	G3.04
FAIYAZ Mohd	P1-co.620
FAN Fengjia	P1-ap.102
FAN Hua-Ying	P1-co.107
FAROOQ Muhammad Umar	A7.03
FAROOQ Muhammad Umar	B7.03
FEDOROV A V	B7.04
FELOUAT Abdellah	G3.04
FERNANDEZ-ROSSIER Joaquin	E9.02
Filiz Keles	F2.01
FISHEL Richard	P1-co.115
FLACH Sergej	P2-at.011
FLACH Sergej	B4.04
FORTIN Jean-Yves	B4.06
FU Deyi	C7.07
FUKS Benjamin	G13.01
FURDYNA J. K.	G8.02
FURDYNA J. K.	G8.05
FURDYNA J. K.	G8.03
FURDYNA J. K.	G8.04, G8.08
G.Claps	P1-pl.018
GAIKOV Georgii	G11.06

GAIKOV Georgii	P2-as.002
GALAZKA Zbigniew	C2.05
Ganbat Duvjir	P1-co.610
GAO Liang	A12.08
GAO Xing	P1-co.223
GARCIA O. E.	P1-pl.021
GAYKOV Georgii	G11.05
GAYKOV Georgy	P2-as.005
GENSCH Michael	A8.03
GHIM Y.-c.	P1-pl.003
GHIM Y.-c.	P1-pl.005
GIANONCELLI Alessandra	
	G7.01
Gideok Kim	P2-co.203
GIM Yongwan	A14.08
GINTING Dianta	H4.08
GINTING Dianta	H4.07
GIORGI Michel	G3.04
GLAMAZDA A.	P2-co.301
GO Yeonju	F13.02
GOH Segun	B4.06
GOLDHABER-GORDON D.	
	H6.06
GOLUB Robert	E1.02
GON YUN JAE	P2-ap.148,
	P2-ap.149
GONG Jinnouk	C11.03
GONG Su-Hyun	P1-co.509
GONG Su-Hyun	F2.04
GOOK Ji Hyun	P1-co.414
GREBER Thomas	F9.01
GRUENBERG Peter	P1-co.415
GU Minseon	P1-ap.145
GU Minseon	C3.06,
	C3.07
GUENNIC Boris Le	G3.04
GUINYUN KIM	P1-nu.022
GUMPLINGER Peter	P2-as.003
GUO Yue	P2-ap.117
H. S. Kim	P2-pl.035
H. W. Shin	P2-pl.035
HA Bae-Yeun	F4.02
HA Chang Hyon	H1.04
HA Eunja	B1.06

HA Jun Mok	P2-ap.135
HA Kooksun	P1-co.109
HA Meesoon	P2-st.033
HA Sung Soo	P1-co.620
HA Sung Soo	P2-ap.122
HA Taewoo	P2-co.318
HA Taewoo	P2-co.321
HA Taewoo	A8.01
HACIOMEROGLU Selcuk	
	H14.03
HAHM Myung Gwan	A2.04
HAHM Taik Soo	P1-pl.041
HAHM Taik Soo	D12.02
HAHM Taik Soo	P1-pl.016
HAHM Taiksoo	P1-pl.011
HAHN Cheol-Koo	P2-ap.147
HAHN Insik	P1-pa.033
HAHN Sang-hee	P1-pl.032
HAHN Sanghee	P1-pl.047
HALLER E E	B7.04
HAMDAN Samir	P1-co.113
HAMMAD Gregory	G13.01
HAN Boyoung	B13.08,
	P1-pa.036
HAN Bo-Young	P1-pa.029
HAN Cheolhee	H6.07
HAN Chul Hee	C7.06
HAN Dong Yoon	B1.02
HAN Dong-Soo	P2-ap.131,
	P2-ap.132
HAN Garam	D5.08
HAN Hyeon	P2-ap.221
HAN Hyunsun	P1-pl.047
HAN Hyunsun	P1-pl.038
HAN Jaeseok	P2-ap.142
HAN Jaeseok	P1-ap.119,
	P2-ap.124
HAN Jayseok	P2-ap.128
HAN Jongwon	P1-pl.022
HAN Jung Hoon	B8.03
HAN Jung Hoon	C5.02
HAN Jung Hoon	C5.03
HAN Kiok	P1-co.319
HAN Kiok	P1-co.320

HAN Monnsup	C3.06	HOHNG Sungchul	P1-co.103,
HAN Moonsup	C3.07		P1-co.104
HAN Moonsup	P1-ap.145	HOHNG Sungchul	P1-co.109
HAN Moonsup	H9.02	HOHNG Sungchul	P1-co.107
HAN Myung Joon	P2-co.311	HOHNG Sungchul	P1-co.110
HAN Myung Joon	P1-co.214	HOHNG Sungchul	P1-co.116
HAN Myung Joon	P2-co.314	HOHNG Sungchul	P1-co.105
HAN Myung Joon	P1-co.203	HONG Byungsik	F13.02
HAN Myungjoon	P1-co.215	HONG Deog Ki	F14.01
HAN SangEun	E7.01	HONG luegyun	P1-co.204
HAN Sang-wook	P1-co.608	HONG J.	P1-pl.037
HAN Sang-Wook	C6.03	HONG JAEYOUNG	P1-co.424
HAN Seungwu	P1-co.603	HONG Jin Pyo	H2.03
HAN Sung Jin	P1-co.312	HONG Jin Pyo	P2-se.032
HAN Sung Jin	P1-co.314	HONG Jinpyo	P2-ap.129
HAN Sung Jin	P1-co.302	HONG JinPyo	P2-ap.130
HAN X	E10.03	HONG Jinpyo	P2-se.034
HAN Young-Kyu	P1-co.211	HONG JinPyo	P2-se.037
HARDER Ross	C8.08	HONG JinPyo	H2.02,
HARDER Ross	C8.06		P2-se.036
HARDER Ross	P2-co.105	HONG Jinpyo	P2-se.038
HARNCHANA Viyada	P1-ap.111	HONG JinPyo	A2.06
HART Sean	G5.02	HONG Jin-Pyo	H4.03
HASHIMOTO Takahashi	G1.04	HONG Jinpyo	P1-ap.119
		HONG Jisang	A7.03,
HASHMI Arqum	B7.03		B7.03,
HASHMI Arqum	A7.03,		P1-co.410,
	P1-co.505		P1-co.505
HATAMI Hani	B4.04	HONG Jong-Am	P2-ap.139
HAZUMI Masashi	P1-pa.038	HONG Joohwan	P1-pl.043
HE Wen	P2-ap.111	HONG Kang-Hee	P2-at.008
HEINRICH Andreas	E9.01	HONG Kang-Hee	C13.02
HEO Gunwoo	P1-pa.003	HONG Ki-Ha	E2.03
HEO Seungryong	P2-st.011	HONG KIM KI	P2-ap.149
HEO Seungryong	P2-st.013	HONG KIM KI	P2-ap.148
HEO Seung-Uk	P2-pl.003	HONG Kyong-Soo	P2-ap.121
HEO Seungyang	P2-co.302	HONG S.C	P1-co.407,
HERNANDEZ J.A Perez	P2-op.025		P1-co.408
HIEN Nguyen Thi	B1.04	HONG Seok-In	I11.02
HILLAIRET Julien	P1-pl.022	HONG Seung Hwan	P2-st.013
HIRAYAMA Yoshikazu	H1.01	HONG Seunghun	P2-op.006
HOGAN T.	P2-co.307	HONG Seunghwan	P2-se.027
HOHNG Sungchul	P1-co.108	HONG Suk Ho	P1-pl.014
		HONG Suk-Ho	P1-pl.004



HONG Sukho	P1-pl.043
HONG Suk-Ho	A12.08
HONG Suklyun	P1-co.604
HONG Sung Ju	P1-ap.135
HONG Woo Tae	P2-ap.223
HONG Yongjun	P2-pl.021
HONG Yongjun	P2-pl.020
HOOGLAND Sjoerd	P1-ap.102
HOSHINO Masahiro	E12.01
Hu Young Jeong	B3.03
HUANG Ko-Fan	G5.02
HUN KO	P2-ap.148
HUN KO	P2-ap.149
HUR Minsup	P2-pl.041
HWANG Chanyong	P1-co.417
HWANG Chanyong	A7.02
HWANG Choongyu	B7.04
HWANG Dong-Uk	D4.06
HWANG Euyheon	P1-co.223
HWANG Euyheon	H9.04
HWANG Euyheon	P1-co.503
HWANG Euyheon	H9.02
HWANG Hee-Kyeong	P2-ap.133
HWANG Ilmoon	P2-pl.009
HWANG In Gyu	D8.07
HWANG In-hui	P1-co.608
HWANG Jae Seok	P2-co.309
HWANG Ji Sub	H3.03
HWANG Ji Sub	P1-ap.103,
	P1-ap.104
HWANG Jihyun	P2-pl.017
HWANG jungseek	B9.03
HWANG Jungseek	P2-co.206,
	P2-co.322
HWANG Myounggyu	P2-at.015
HWANG SangBin	P2-se.025
HWANG Sungmin	P1-ap.107
HWANG Wan Sik	C2.05
HWANG Wang-Taek	F3.05,
	P2-ap.212
HWANG Y. S.	P1-pl.039
HWANG Y.S.	P1-pl.036,
	P1-pl.045
HWANG Yongseok	P1-pl.046

HWANG Yongseok	P1-pl.007
HWANG Yong-Seok	A12.07
HWANG Yoonhwa	P1-ap.149
HWANG Young Seok	P1-co.501
HWANG Yun Jeong	A3.08
HWANGBO Chang Kwon	
	P2-op.013
HWNAG Y.S.	G11.02
HWNAGBO Chang Kwon	
	P2-op.014
HWU Yeukuang	G7.02
HYEON TAEGHWAN	P1-co.424
Hyeong Il Kim	B1.03
Hyeong Seok SEO	P1-pa.020
HYUN Chang Ho	F1.04
HYUN H.J.	G11.02
HYUN Kwang-Beom	P1-co.104
HYUN Myung Ook	P2-pl.006
HYUN Seungjoon	A14.07
HYUNKOOK Kim	P2-at.013
I. Yamada	P1-pl.033
IDA K.	P1-pl.044
IHN Yong Sup	D13.05
Ik Jae Shin	B1.03
IKEGAMI Hiroki	H6.02
IM Hyunsik	P2-ap.142
IM Hyunsik	P1-ap.119,
	P2-ap.124,
	P2-ap.128,
	P2-ap.147
IM Seongil	P1-ap.158,
	P2-se.031
IM Seongil	P1-ap.159
IM Solyee	P1-ap.122
IM Yeong Ji	F3.03
IN Seongjin	P2-as.003
IN Y.	P1-pl.044
IN YU JAE	P2-ap.148,
	P2-ap.149
INAMDAR A I	P2-ap.124
INAMDAR A. I.	P2-ap.142
INAMDAR A. I.	P1-ap.119
INAMDAR A.I.	P2-ap.128
INOMOTO Michiaki	B12.02

IP Alexander H.	P1-ap.102	JANG Kiwan	P2-op.002
ISHIDA Syunsuke	B12.02	JANG Kiwan	P1-co.302
ISHITSUKA Hikaru	P1-pa.038	JANG Min-Ho	D3.06
ISHKHANOV B. S.	B1.02	JANG Se-Hoon	G5.03
ISOBE M.	P1-pl.039	JANG Seung Woo	P2-co.311
J. A. Cizewski	D1.01	JANG Seung Woo	P2-co.314
J. D. Denlinger	H5.05	JANG Seunghun	C3.07
J. K. Woo	F14.07	JANG Sunjong	P2-ap.220
J. Ko	F14.07	JANG Won Jun	P1-pa.037
J. M. D. Coey	P1-co.404	JANG Wonjun	P2-co.102
J. P. Vary	B1.03	JANG Won-Jun	P1-co.603
JACQUEMIN Denis	G3.04	JANG Woo-Youl	P2-ap.205
Jaeyong Kim	P2-pl.035	JANG Yeonsik	P2-ap.212
Jan Seidel	C8.02	JANG Yong-Chull	E14.01
JANG Chulsoo	P2-se.018	JANG Yun Hyeong	P2-ap.138
JANG Dogeun	P1-pl.035	JANG Yun Hyeong	A3.04,
JANG Dong Hyun	D9.03		A3.05
JANG Donggyu	P2-pl.018	JANG Yunsu	P1-co.502
JANG Donggyu	P1-pl.035	JANULEWICZ Karol Adam	P2-pl.027
JANG Dongsoo	A3.01	JASPERS R.J.E.	P1-pl.009
JANG Dongsoo	P2-ap.136,	JE Jung Ho	D8.04
	P2-ap.137	JEE Michael Shincheon	A3.08
JANG Dukjae	D1.04		
JANG Hanil	B13.04	JEEN Gwang-Soo	P2-ap.123
JANG Hanil	B13.03	JEEN Hyoungjeen	P2-ap.123
JANG Harim	P2-co.209	JEEN Hyoungjeen	F5.06
JANG Heejin	P1-nu.025	JEEN Hyoungjeen	P1-co.311
JANG Heejun	B3.02	JENA Debdeep	C2.05
JANG Hyeong Il	P2-ap.223	JENG Young Gun	F13.04
JANG Hyun Myung	P2-co.302	JEON Byung-Gu	G5.05
JANG Hyun Myung	P2-ap.221	JEON Byung-Gu	D9.03
JANG Jaeson	P2-st.005	JEON C.	F4.02
JANG Jaeson	P2-st.002	JEON Dong-O	C12.09
JANG Jae-Young	A12.07	JEON Dong-o	P2-pl.019
JANG Jeeseung	B13.03	JEON Dong-O	P2-pl.006
JANG Jeeseung	B13.04	JEON Eunju	P1-pa.029
JANG Ji-Ho	P2-pl.019	JEON Eunju	B13.08,
JANG Ji-Ho	P2-pl.006		P1-pa.036
JANG Ji-Ho	C12.09	JEON Gun Sang	C5.07
JANG Jingon	F3.05	JEON H.B.	G11.02
JANG Jonghun	P1-nu.010	JEON Hyeon	E9.04
JANG Jonghun	P1-nu.017	JEON Hyebin	F13.07
JANG Juhyeok	P1-pl.043	JEON Hyeongtag	G12.02
JANG Ju-Hyeok	P1-pl.021		

JEON Hyo Sang	A3.08
JEON Jin-A	G11.01
JEON Noo Li	P1-co.102
JEON Seong Hyeok	P1-ap.114
JEON Seong Sil	P2-pl.031
JEON Si Hyun	H13.01
JEON Un Seung	P1-co.603
JEON Y.M.	P1-pl.044
JEON Young Mu	P1-pl.038
JEON Youngmu	P1-pl.040
JEON YoungMu	P1-pl.047
JEONG Dong-Hyeok	P1-nu.016
JEONG H.	F4.02
JEONG Hawoong	P2-st.033
JEONG Hoyong	P1-pa.007
JEONG Hwancheol	E14.05
JEONG Hwancheol	E14.02
JEONG Hyeong-Chai	P2-st.026
JEONG Hyomin	P2-as.005
JEONG Hyomin	P2-as.002
JEONG Hyomin	G11.05
JEONG Hyunhak	F3.05,
	P2-ap.212
JEONG Inho	P2-ap.212
JEONG Jae Hun	P1-ap.126
JEONG JAEHONG	P1-co.424
JEONG Jaehong	H8.04
JEONG Jae-Seung	C5.06
JEONG Jinhoon	G5.04
JEONG Jinhoon	P1-ap.114
JEONG JinHyeok	P1-co.622
JEONG Jong-Ryul	P2-ap.134
JEONG Junckyeong	E3.05
JEONG Jung Hyun	P2-ap.115
JEONG Jung Hyun	P2-ap.116,
	P2-ap.117,
	P2-ap.118,
	P2-ap.119,
	P2-op.002
JEONG Junu	P1-pa.012
JEONG Kwang Sik	P2-co.320
JEONG Kwangsik	P2-ap.143
JEONG Kwangsik	P2-ap.120
JEONG Min Yong	P1-co.214

JEONG S.Y.	A12.03
JEONG Seong Hun	P2-pl.010
JEONG Seong Hun	P2-pl.002
JEONG Seong-Hun	P2-pl.007
JEONG Seon-Young	P2-st.017
JEONG Seon-Young	P2-st.020
JEONG Sohee	H2.04
JEONG Sohee	P1-co.613
JEONG Soomin	P2-as.005
JEONG Soomin	G11.03
JEONG Soomin	G11.04
JEONG Soomin	E11.05
JEONG Soomin	G11.05
JEONG Soomin	P2-as.002
JEONG Sun-Chan	G1.04
JEONG Yoon Hee	D5.07
JEONG Youn-Chang	C13.02
JEONG Young Uk	G12.01
JESCHKE H O	F5.05
JEWARIYA Mukesh	G12.01
JHANG Hogun	E12.02
JHO Jin-Cheol	D5.07
JHO Yong Seok	B4.02
JHO YongSeok	F4.05
JI Byungdo	F6.04
JI Dong Hyun	F3.03
JI Jeong-Eun	P1-co.320
JI Young-Hoon	P2-pl.003
JIA Yu	P1-co.617
Jiang Li	F12.03
JIN ByungGwun	D13.07
JIN Hanbyul	P1-ap.143
JIN Hye-Jin	E2.02
JIN Hyunchang	P2-pl.006
JIN Hyunchang	C12.09
JIN Hyunchang	P2-pl.019
JIN Kyoungsuk	F5.08
JIN Mijeon	P1-co.311
JIN Mi-Jin	H4.04
JIN Mi-Jin	P2-ap.214
JIN Mi-Jin	C3.01
JIN Mi-Jin	P2-ap.215
Jin Xu	P2-st.008
JIN Zhenlan	P1-co.608

JINNOUCHI Osamu C14.01  
 Jinwoo Cheon H8.03  
 Jinwoo Park H6.05  
 Jinwoo Park P1-co.601  
 JO Hang-Hyun C4.02  
 JO Hyon-Suk A1.05,  
 E13.07  
 JO Hyon-Suk P1-nu.009  
 JO Janghyun H3.09  
 JO Janghyun A2.07  
 JO Jungmin P1-pl.039  
 JO Junhyeon P2-ap.215  
 JO Junhyeon H4.04  
 JO Junhyeon P2-ap.214  
 JO Junhyeon C3.01  
 JO Nahyun P2-co.317  
 JO NamGyeong P2-ap.206  
 JO S H P1-pl.034  
 JO William E2.02  
 JO William H2.02  
 JO Yongcheol P2-ap.142  
 JO Yongcheol P1-ap.119,  
 P2-ap.124,  
 P2-ap.128  
 JO Young Chan A8.01  
 JO YoungChan P2-co.321  
 John Almond G13.07  
 John Almond H13.04  
 Johnson A. Trent P1-ap.148  
 JOO Beom Soo C3.07  
 JOO Beom Soo C3.06  
 JOO Beom Soo P1-ap.145  
 Joo Hyoung Kim G3.05  
 JOO Jung Sik P2-ap.223  
 JOO Keehyoung E4.07  
 JOO Keehyoung P2-st.013  
 JOO keehyoung P2-st.011  
 JOO Keehyoung P2-st.012  
 JOO Kyung Kwang B13.02  
 JOO Kyungkwang B13.04  
 JOO KyungKwang P1-pa.029  
 JOO Kyungkwang B13.03 ,  
 B13.08,  
 P1-pa.036

JOUNG InSuk C4.07  
 JOUNG InSuk P2-st.013  
 JOUNG InSuk E4.07  
 JOUNG InSuk E4.05  
 Joung Real Ahn P1-co.606  
 JOUNG Semin P 1-pl.005  
 JOZWIAK C B7.04  
 JUE Miyeon P2-ap.136  
 JUE Miyeon A3.01,  
 P2-ap.137  
 JUHN J.W. P1-pl.010  
 JUHN JunWoo P1-pl.021  
 JUN Byeongeog P2-ap.110  
 JUN byeongeog P2-ap.146  
 JUN S. F4.02  
 JUN Young Chul P2-op.013,  
 P2-op.014  
 JUNG Bongki P1-pl.045  
 JUNG Byeom-Kyun A3.06  
 JUNG Chang Uk C3.08  
 JUNG Dae Ho P2-co.303  
 JUNG DaeHo P2-se.025  
 JUNG Eilho P2-co.206  
 JUNG Haijo P2-pl.003  
 JUNG Heeyoung H8.08  
 JUNG Hye-Ri E2.02  
 JUNG Hyo Soon H1.01  
 JUNG Hyun Suk G2.04  
 JUNG Inyoung P2-ap.146  
 JUNG Jeil P1-co.502  
 JUNG Jeil H9.02,  
 P1-co.223  
 JUNG Jeil H9.04  
 JUNG Jeil P1-co.508  
 JUNG Jinyong P2-ap.133  
 JUNG Jinyong P2-ap.131,  
 P2-ap.132  
 JUNG Laurent P1-pl.007  
 JUNG Moonjung P2-st.029  
 JUNG Moonyoung P2-se.018  
 JUNG Myeonghwan P1-nu.017  
 JUNG Myung-Hwa P2-co.325  
 JUNG Myung-Hwa P2-co.317  
 JUNG Myung-Wha A7.02

JUNG Namsik	P1-ap.145
JUNG Seokhyun	P2-ap.203
JUNG Shin	P2-ap.205
JUNG Soon-Gil	P2-co.209
JUNG Sung Chul	P1-co.211
JUNG Sung Won	P1-co.612
JUNG Suyong	A5.03
JUNG Suyong	F10.01
JUNG Taek Sun	P1-co.308
JUNG Tae-Young	P2-ap.205
JUNG Won	P1-co.618
JUNG Won-Gyun	P2-pl.003
JUNG Won-Gyun	C12.05
JUNG Y.	F4.02
JUNG Young-Gyu	P2-pl.007
JUNG Young-Gyu	P2-pl.002, P2-pl.010
JUNG YoungMee	F5.03
Jungdae Kim	P1-co.610
JUNGE Yongje	P1-co.103
Jung-tak Jang	H8.03
Junho Kim	P2-pl.035
Jun-Yeong Yoon	B3.03
JWA Yeon-jae	H13.05
K. A. Chipps	D1.01
K. Shinohara	P1-pl.048
K. Y. Lee	F14.07
K.-Y. Choi	F14.07
KAANG Bong-Kiun	P1-co.108
KAEWJAENG S.	H3.04
KAEWKHAO J.	H3.04
KAHNG Se-Jong	C7.03, P1-co.603
KAKIGUCHI Yutaka	H1.01
KANG Bo Soo	P1-ap.117, P1-ap.118, P1-ap.120
KANG Bong Joo	G12.02
KANG Boyoun	F5.03
KANG Chan Seok	P1-pa.031
KANG Chan Seok	P1-nu.009
KANG Changwon	P1-co.109
KANG Chansoo	P1-pl.031
KANG Dae Joon	P1-ap.108,

	P1-ap.109, P2-co.309
KANG Dae Joon	P1-ap.111, P2-co.306
KANG Dae Joon	P1-ap.110, P2-ap.111
KANG Dae Joon	P2-co.305
KANG Dae Joon	P1-ap.141, P2-ap.112
KANG Daiill	P1-co.320
KANG Donghee	E3.05
KANG Gungwon	E11.01
KANG Hang Kyu	P1-co.509
KANG Hangkyu	P2-ap.143
KANG Hang-Kyu	P2-se.020
KANG Hanhim	D5.05
KANG Heong-Sik	P2-pl.010
KANG Heung-Sik	P2-pl.002
KANG Hoonsoo	P2-at.001
KANG Hyon Chol	P1-co.620
KANG Hyon Chol	P1-co.611, P1-co.618, P1-co.621
KANG HyonChol	P2-ap.122
KANG Il-suk	B3.02
KANG Jihoon	P2-se.010
KANG Jinback	C8.08
KANG Jinback	P2-co.105
KANG Jinback	C8.06
KANG Jisung	P1-pl.007
KANG Jong Hyun	P2-se.028
KANG Keekon	P1-pl.035
KANG Kookhyun	F13.07
KANG Min Ho	P2-pl.030
KANG Min Ho	P2-pl.031
KANG Seong Jun	F3.01
KANG Seong-Hoon	G5.03
KANG Seoung-Hun	F5.08
KANG Seoung-hun	P2-ap.136
KANG Shin-Won	C3.05
KANG Sooseok	P1-co.509
KANG Tae Dong	P2-co.303
KANG Taesung	P2-se.034
KANG Taesung	P2-se.037

KANG WoonGu	P1-pa.033
KANG Wooyoung	P1-co.109
KANG Wooyoung	P1-co.108
KANG Yeojin	P2-ap.110
KANG Yeong-Rok	B1.04, P1-nu.024, P1-nu.026
KANG Yeong-Rok	P1-nu.016
KANG Youjin	P1-pa.008
KANG Yuseon	P2-ap.143
KANJANABOOS Pongsakorn	P1-ap.102
KANKI Teruo	C3.02
KARAPETYAN Artak	G3.04
KARKI Sujita	P1-nu.013
KATINE J. A.	H6.06
KATO Seigo	G1.04
Katsuhiko Miyamoto	G12.05
KATSURA Hosho	C5.02
KAVTANYUK Vladimir	P1-nu.028
KAWANAMI Masashi	B12.02
Kee Hoon Kim	H8.03
KELLER A. J.	H6.06
Kenji Watanabe	P1-co.602
Kenji Watanabe	P1-co.507
Kenji Watanabe	P1-co.506
KESAVULU C.R.	H3.04
KEUM Hee-Sung	P2-ap.217
KHAJA HUSSAIN SK.	C3.03
KHALIQ Abdul	P1-co.303
KHAN Imran	P1-co.410
KHARE Amit	P2-co.322
KHIM Seunghyun	P1-co.425
KHIM Seunghyun	G5.05
KHIMPHUN Sunly	H11.02
KIBE Yoshiaki	P1-pa.038
KIM Ba Ro	P1-pa.029
KIM Baro	B13.04
KIM Baro	B13.03, B13.08, P1-pa.036
KIM Beom Jun	P2-st.024
KIM Beom Jun	D4.01
KIM Bong-Jun	D5.06

KIM Bongjune	P2-at.001
KIM Bumjin	E2.04
KIM Byeong Guk	P2-ap.208
KIM Byung Hoon	P1-ap.135
KIM Byungwhan	A12.01
KIM Chan	C8.07
KIM Chan	P2-co.204
KIM Chan	P2-co.202
KIM Chang Dae	P2-se.013
KIM Changyoung	D5.08
KIM Chanhee	G5.05
KIM Chansoo	C4.06
KIM Cheol-Woon	P1-co.212
KIM Cheol-woon	P2-ap.136
KIM Chinkyoo	A3.01, P2-ap.136, P2-ap.137
KIM Chul Min	C12.08
KIM Chunglee	E11.03
KIM Da Jeong	P1-co.302
KIM Da jeong	P1-co.312
KIM Da Jeong	P1-co.314
KIM Dae Kyoung	P1-ap.126
KIM Dae Yeon	P1-nu.018
KIM Daehyung	P1-co.113
KIM Dae-Il	P1-co.501
KIM Daekyoung	P2-ap.143
KIM Dae-Yun	P1-co.417
KIM Dai-Sik	P2-op.006
KIM Dai-Sik	G12.02
KIM Daniel S.	C4.06
KIM Dasol	P2-ap.120
KIM DeongEon	P2-co.329
KIM Do Rim	P2-ap.116
KIM DonEon	P2-op.025
KIM Dong Eon	P1-co.309
KIM Dong Eon	P2-ap.134
KIM Dong Eon	P2-pl.002, P2-pl.010
KIM Dong Lak	F10.05
KIM Dong-Eon	P2-pl.007
KIM DongHee	H13.02
KIM Dong-Hee	D13.03 , P2-st.029

KIM Dong-Ho	A2.04
KIM Donghoi	P2-ap.137
KIM Donghoi	A3.01,
	P2-ap.136
KIM Dong-Hoon	H11.05
KIM Donghwan	P2-co.319
KIM Donghyun	B2.01
KIM Dong-Hyun	P2-ap.134
KIM Dongjin	C8.06
KIM Dongjin	P1-co.311
KIM Dongjin	P2-co.105
KIM Dongjin	P2-ap.123
KIM Dongjin	C8.08
KIM Dongku	P2-ap.212
KIM Dongok	P1-pa.014
KIM Dong-Seok	P2-se.028
KIM Dongsung	G12.03
KIM Dong-Wook	C3.04
KIM Dong-Wook	F2.06
KIM Dong-Wook	A2.04,
	C3.02
KIM Doojin	F14.06
KIM Doojin	B14.01
KIM Du Hwan	F14.01
KIM Duck-Ho	P1-co.417
KIM Duri	P2-co.208
KIM Eun Hee	H1.03,
	P1-nu.015
KIM Eun Kyu	P2-se.027
KIM Eunah	C3.04
KIM Eun-Ah	A9.01
KIM Eunhee	P1-nu.014
KIM Eun-Kyeong	C4.02
KIM Eunkyu	P2-se.010
KIM Eunkyu	P2-se.035
KIM Eun-San	P2-pl.022
KIM Eunseong	E5.04
KIM Eunsun	G3.04
KIM Gee Yeong	E2.02
KIM GeeYeong	H2.02
KIM Geon-Bo	P1-nu.009
KIM Gi-Hwan	P1-ap.102
KIM Gon-Ho	P1-pl.004
KIM Gowoon	P1-co.311

KIM Gowoon	P1-pa.033
KIM Guinyun	P1-nu.026
KIM Guinyun	B1.04,
	P1-nu.024
KIM Guinyun	P1-nu.023
KIM Gunn	P1-co.508
KIM Gyuhan	P1-ap.149
KIM H.J.	P1-nu.018
KIM H.J.	H3.04
KIM H.S.	P1-pl.044
KIM Haeri	A3.08
KIM Hakseong	B3.05
KIM Hakseong	P1-ap.113
KIM Han Seul	P1-co.207
KIM Hanjin	P1-pa.021
KIM Han-Sung	P1-co.501
KIM Hee Il	H11.06
KIM Hee su	P2-se.017
KIM Heesang	P2-se.033
KIM Heon-Jung	P2-co.316
KIM Heung-Su	P1-pl.021
KIM Hogyoung	P2-se.041
KIM Hong Joo	P1-nu.009
KIM HongJoo	G1.03,
	P1-nu.013
KIM Hongjoo	P1-nu.007
KIM Hongjoo	F13.07
KIM HongJoo	P1-nu.010
KIM Hongjoo	P1-nu.017
KIM Hongjoo	B13.08,
	P1-pa.036
KIM Hongjoo	G11.02,
	P1-pa.029
KIM Hoon	D5.07
KIM Hoo-Sung	P2-at.001
KIM Howon	C7.03
KIM Hu Sung	P1-co.222
KIM Hyangkyu	P1-pa.036
KIM Hyegyeong	A3.04
KIM Hyegyeong	A3.05
KIM Hyelim	P1-nu.009
KIM Hyeok	F3.07
KIM Hyeong-Chan	H11.01
KIM Hyeongchan	P1-pl.007

KIM Hyo Jung	P2-ap.217	KIM J.H.	P2-co.327
KIM Hyo Seok	B6.05	KIM Jae Hoon	P2-co.317,
KIM Hyo Won	F9.02		P2-co.320
KIM Hyo Won	F6.04	KIM Jae Hoon	P1-co.308,
KIM HyoJin	P1-nu.016		P2-co.318
KIM Hyoung Chan	P2-pl.026	KIM Jae Hoon	P2-co.321
KIM Hyoung Uk	P1-ap.122	KIM Jae Hoon	A8.01
KIM Hyounsub	P2-ap.143	KIM Jae Nyeong	D5.05
KIM Hyounsub	P1-ap.126	KIM Jae Nyung	P1-co.224
KIM Hyuk Joon	B3.09	KIM Jae Sung	H13.01
KIM Hyun	P2-ap.105,	KIM Jaehoon	P1-co.104
	P2-ap.107	KIM Jae-Hun	P1-co.211
KIM Hyun-Chul	A1.01,	KIM Jaeseung	P2-co.105
	A1.07	KIM Jaeseung	C8.06
KIM Hyung Taek	C12.06	KIM Jaeup	F4.03
KIM Hyung-Jin	P1-co.211	KIM Jaeyong	C9.01
KIM Hyungkook	P1-ap.149	KIM Jaeyool	B13.04
KIM Hyungsang	P2-ap.142	KIM Jaeyool	B13.03
KIM Hyungsang	P1-ap.119,	KIM Jaeyoung	P2-co.319
	P2-ap.124,	KIM Jangho	E14.03,
	P2-ap.128,		E14.05
	P2-ap.147	KIM Jang-Joo	P2-ap.217
KIM Hyunjung	P2-co.105	KIM Jangwon	P2-co.318
KIM Hyunjung	C8.08	KIM Jangwon	A8.01
KIM Hyunjung	C8.06	KIM Jayhyun	P1-pl.025
KIM Hyun-Jung	P1-co.617	KIM Jayhyun	P1-pl.038
KIM Hyunseok	P1-pl.040	KIM Jeehoon	D5.07
KIM Hyunseok	P1-pl.047	KIM Jeehyun	P1-pl.022
KIM Hyunsoo	B13.04	KIM Je-Hyung	P1-co.509
KIM Hyunsoo	B13.03	KIM Jeongyong	P1-ap.142
KIM Hyunsoo	B13.08	KIM Jeongyong	C3.01
KIM Hyunsoo	P1-pa.029	KIM Ji Hyun	G13.05
KIM Hyun-Tak	D5.06	KIM Ji Woong	P2-ap.138
KIM Hyun-Tak	P2-ap.145	KIM Ji Woong	A3.05
KIM Hyun-Tak	D5.07	KIM Ji Woong	P2-ap.123
KIM ILDOO	F4.04	KIM Ji Woong	A3.06
KIM Ill Won	P1-co.305,	KIM Jichul	D8.06
	P2-ap.210	KIM Ji-Hoon	P2-ap.139
KIM Ill Won	P1-co.303	KIM Jihwan	B5.01
KIM Ill Won	P1-co.306	KIM Jihye	G3.01
KIM Inwook	B13.05	KIM Jihye	G3.02
KIM Inwook	P1-nu.009	KIM Ji-Hyun	C3.01
KIM In-Young	P2-ap.205	KIM Jimin	P1-co.612
KIM J.	F4.02	KIM Jin Hee	H4.06



KIM Jin Sung	P1-ap.158
KIM Jin Sung	P1-ap.159, P2-se.031
KIM Jin Young	P1-ap.102
KIM Jin Young	D8.07
KIM Jinhee	P1-co.423
KIM Jinkyung	P1-co.423
KIM Jinsang	P1-co.111
KIM Jinsu	P2-co.325
KIM Jinsu	A7.02
KIM Jin-Tae	P2-at.004
KIM Jinuk	P2-at.015
KIM Jinyu	B13.08, P1-pa.036
KIM Jinyu	P1-pa.029
KIM Jong Hoon	F3.03
KIM Jong Hun	C7.07
KIM Jong Hyeon	P2-co.317
KIM Jong Hyeon	P2-co.320
KIM Jong Hyeon	A8.01
KIM Jonghoon	P1-co.622
KIM JongHyun	P2-as.004
KIM Jonghyun	G3.03
KIM Jongmin	P1-ap.119
KIM Jongmin	P2-ap.142
KIM Jongmin	P2-ap.124, P2-ap.128, P2-ap.147
KIM Jongyul	P1-nu.012
KIM Joonwoo	P1-pa.027
KIM Joon-Yeon	G12.02
KIM Juhyung	E12.02
KIM Jun Young	P1-pl.026
KIM Jun Hyoung	P1-ap.143
KIM Jun Sung	F10.03
KIM Jun Sung	P2-co.302
KIM Jun Young	F3.07
KIM Jun Young	P1-pl.039
KIM June-Seo	P2-ap.131, P2-ap.132
KIM Jung Hwan	P2-ap.115
KIM Jung Hwan	P2-ap.117, P2-ap.119
KIM Jung Hwan	P2-ap.116

KIM Jung Hwan	P2-ap.118
KIM Jung Sung	F10.01
KIM Jungdae	P1-co.616
KIM Junghee	P1-pl.026
KIM Junghee	P1-pl.039
KIM Jung-Ryul	P2-at.015
KIM JunHo	P1-ap.124, P1-ap.125
KIM Junki	P2-at.016
KIM Junsoo	P1-ap.122
KIM Juran	E2.02
KIM Ju-Seong	C3.05
KIM K W	P1-pl.034
KIM K.H.	P1-pl.003
KIM Kangwon	P1-ap.140
KIM Kangwon	E7.03, P1-ap.133
KIM Ka-Ryeong	P2-co.315
KIM Kee Hoon	E10.02
KIM Kee Hoon	P1-co.425
KIM Kee Hoon	G5.05
KIM Kee Hoon	D9.03
KIM Kee Hoon	H5.01
KIM Keehoon	P1-co.319
KIM Keun Su	P1-co.612
KIM Keun Su	P1-co.614
KIM KEUNJOO	P2-se.003
KIM Keun-Young	A14.05
KIM KeunYoung	A14.02
KIM Keun-Young	A14.04
KIM Ki Kang	C2.02
KIM Ki Won	P1-ap.103, P1-ap.104
KIM Ki Won	H3.03
KIM Kibeom	G3.06
KIM Ki-Chul	P2-ap.109
KIM Kimin	A12.05
KIM Kitak	H6.02
KIM Kitak	P1-ap.114
KIM Ki-yong	P2-pl.018
KIM Kuntae	F5.08
KIM Kwangsoo	P1-nu.026
KIM Kwangsoo	B1.04, P1-nu.024

KIM Kwangsoo	P1-nu.023
KIM Kye-Ryung	P1-co.501
KIM Kye-Ryung	P2-se.028
KIM Kyoo	B7.04
KIM Kyung Kiu	A14.05
KIM Kyung Kiu	A14.04
KIM Kyunggho	P1-pa.021
KIM KyungKyu	A14.02
KIM Kyungnam	P1-co.613
KIM Kyungtae	F12.06
KIM Kyungwan	A8.02, B9.02
KIM Kyungwan	P2-co.308
KIM Kyungwan	P2-co.323
KIM LeeYeong	D13.07
KIM M. K.	P2-co.328
KIM M. K.	P1-co.411
KIM M.J.	C12.01
KIM M.K.	P2-co.327
KIM Maengsuk	A6.02
KIM MiKyung	F5.04
KIM Min Jae	H4.06
KIM Min Su	P1-ap.142
KIM Min Su	P1-co.111
KIM Minbin	G11.05
KIM Minbin	P2-as.002
KIM Min-Gon	B2.02
KIM Minjin	B5.01
KIM Minju	C12.04
KIM Minjung	P2-ap.202
KIM Minjung	P1-ap.136
KIM Min-Seok	C13.04
KIM Min-Seok	F12.06
KIM Minsoo	P1-co.510
KIM Minu	P2-co.308
KIM Minwoo	P1-pl.017
KIM Minwoo	P1-pl.023
KIM Miyoung	H3.09
KIM Miyoung	F5.08
KIM Miyoung	A2.07
KIM Moo_Sang	P2-pl.034
KIM Moonwon	P1-nu.021
KIM Mun Gyung	P2-pl.009
KIM Mu-yong	P2-co.202

KIM Muyong	P2-co.204
KIM Myong-Ho	P1-co.302
KIM Myong-ho	P1-co.314
KIM Myung Jong	P2-se.017
KIM N. W.	P1-pl.042
KIM Na Yeon	P2-op.006
KIM Namdong	G7.01
KIM Nam-Hui	P2-ap.131, P2-ap.132
KIM Nam-Hui	P2-ap.133
KIM Nam-Jung	D3.03
KIM Nammee	P2-se.033
KIM Ok-Sik	C3.05
KIM Panjin	C5.02
KIM Philip	G5.02
KIM Philip	A2.07
KIM S. H.	P1-pa.022
KIM S. H.	H13.03
KIM Sae-Wan	C3.05
KIM Sang Goon	G5.04
KIM Sang Soo	P1-co.312
KIM Sang Soo	C8.07
KIM Sang Su	P1-co.314
KIM Sang Wook	D4.06
KIM Sang Yong	B13.02
KIM Sanghun	P1-ap.140
KIM Sang-Hyup	C3.05
KIM SangKyeun	P1-pl.012
KIM Sangsu	P1-co.315
KIM Sangyong	B13.04
KIM Sangyong	B13.03
KIM Sejeong	F2.04
KIM Seong-Chol	A12.07
KIM SeongJun	P2-co.323
KIM SeongYeon	P1-ap.124
KIM Seoyoung	P1-ap.107
KIM Seung	P1-co.320
KIM Seung Chan	B13.02
KIM Seungchan	B13.04
KIM Seungchan	B13.03
KIM Seungchul	F12.01
KIM Seungchul	P2-co.329
KIM SeungChul	P2-op.025
KIM Seung-Yeon	P2-st.027,

	P2-st.028
KIM Seung-Yeon	P2-st.030
KIM Seyong	F14.02
KIM Siyeon	B13.08,
	P1-pa.036
KIM So Jin	P1-co.611
KIM Sok Won	P2-ap.203
KIM Sok Won	P2-ap.202
KIM Soo Bong	B13.02
KIM Soo Yong	P2-ap.202
KIM Soo Yong	P2-ap.203
KIM Soo-Bong	B13.04
KIM Soo-Bong	B13.03
KIM Soon-Chul	P2-st.015
KIM Sooran	B7.04
KIM So-Ra	P1-nu.009
KIM Soyun	H12.01
KIM Sujung	F2.06
KIM Sujung	A2.04
KIM Sun Il	P2-op.020
KIM Sung Man	F3.01
KIM Sung Wng	F6.04
KIM Sunghwan	A3.03
KIM Sunghyun	B6.02
KIM Sunghyun	C7.05
KIM Sungjin	C12.02
KIM Sung-Jin	P2-co.316
KIM Sungmin	E9.04
KIM Sungmin	H5.01
KIM SungWng	B7.02
KIM Sungwon	P2-co.105
KIM Sungwon	C8.06
KIM Sungwoo	P1-co.613
KIM Sunkee	H13.08
KIM Sunkook	C2.01
KIM Sun-Woo	C7.02
KIM T K	P1-pl.034
KIM T.G.	P1-pl.029
KIM Tae Hee	H8.08,
	P1-co.414
KIM Tae Heon	P1-co.415
KIM Tae Jeong	G13.01
KIM Tae Jung	P1-ap.122
KIM Tae yoon	P2-se.032

KIM Tae Yoon	H2.03
KIM Tae Young	P2-op.014
KIM Tae Young	P2-op.013
KIM Taeheon	A8.03
KIM Taehoon	P1-co.616
KIM TAEHUN	P1-co.424
KIM Tae-Hwan	F9.04
KIM Taekjung	P1-co.215
KIM Taekyu	P2-te.003
KIM Tae-Wook	F3.05
KIM Taeyoon	P2-se.038
KIM Useong	P2-co.321
KIM Won Tae	G12.02
KIM Won-jeong	P1-co.314
KIM Won-Jeong	P1-co.302,
	P1-co.312
KIM Wontae	A14.08
KIM Wonyoung	P2-op.013,
	P2-op.014
KIM Woo Young	P1-nu.028
KIM Woo Young	P1-nu.006
KIM Wooyoung	B13.04
KIM Wooyoung	B13.03
KIM Y. G.	P1-pa.022
KIM Y. G.	H13.03
KIM Y.D.	P1-nu.018
KIM Y.-J.	P2-op.025
KIM Y.M.	F2.04
KIM Y.S.	P1-pl.010
KIM Yeongduk	P1-pa.029
KIM Yeongduk	B13.08,
	P1-pa.036
KIM Yeongduk	B13.04
KIM Yeongduk	P1-pa.033
KIM Yohann	P2-co.330
KIM Yong Soo	D3.02
KIM Yong Soo	B3.06
KIM Yong Sung	A7.02
KIM Yong-Hamb	P1-pa.031
KIM Yong-Hamb	P1-nu.009
KIM Yong-Hoon	E6.04
KIM Yong-Hoon	P1-co.207
KIM Yong-Hoon	P1-co.222
KIM Yong-Hoon	P1-co.206

KIM Yong-Hoon	B6.05	KINDO Koichi	F10.02
KIM Yong-Hoon	G9.04	KINO Hiori	P2-co.311
KIM Yong-Hyun	F6.02,	KINO Hiori	P2-co.314
	P1-co.210,	KIRK Jaewon	P1-co.105
	P1-co.613,	KO Byeonghak	P1-pa.003
	P1-co.615	KO In Soo	P2-pl.002,
			P2-pl.010
KIM Yong-Hyun	C7.03	KO J.	H13.03,
KIM Yong-kyun	G1.04		P1-pa.022
KIM Yongmin	F10.04	KO Jae-Hyeon	P1-co.615
KIM Yong-Su	C6.03	KO Jae-Hyeon	P1-co.613
KIM Yongsun	P1-pl.031	KO Jewou	P2-ap.204
KIM Yoon Min	H4.06	KO Jinseok	P1-pl.009
KIM Yoonhee	C8.07	KO KunHee	P2-se.025
KIM Yoon-Ho	D13.05	KO Kwan Ho	P1-co.206
KIM Yoon-Ho	C13.02,	KO Kyung=Tae	P2-co.325
	D13.02	KO KyungTae	P2-co.330
KIM YooSung	P1-pl.036	KO Min Jae	G2.01
KIM Yosep	D13.05	KO W.H.	P1-pl.010
KIM Young Chan	G12.01	KO Won Ha	P1-pl.002
KIM Young Dong	P1-ap.122	KO WonBae	A2.06
KIM Young Hoon	C12.04	KO Won-Ha	P1-pl.044
KIM Young Im	P1-pa.024	KO Youngju	B13.08,
KIM Young Jin	P2-st.020		P1-pa.036
KIM Young Jin	H1.03	KO Youngju	P1-pa.029
KIM Young Jin	P1-nu.015	KOEPKE Mark	B12.01
KIM Young Jin	P1-nu.014	KOH Jai Hyun	A3.08
KIM Young Ju	P1-ap.103	KOHAMA Yoshimitsu	F10.02
KIM Young Ju	P1-ap.104	KONG Hyeonjun	P2-ap.123
KIM Young Ju	H3.03	KONG Kyoungchul	B14.01
KIM Youngchan	C2.03	KONO Kimitoshi	E5.01
KIM Youngdeug	B13.03	KONO Kimitoshi	H6.02
KIM Younggeun	P1-pa.015	Konstantin S. Novoselov	H3.06
KIM Young-lm	H14.04	Konstantin Yumashev	F12.03
KIM Youngjae	A7.01	KOO Hyun Cheol	A5.02
KIM Youngjin	P2-st.017	KOO Tae-Yeong	P2-ap.210
KIM Youngman	B1.01	KOTANI Takao	P2-co.311
KIM Youngman	F1.02	KOTANI Takao	P2-co.314
KIM Youngrok	F3.05	KOTHAN S.	H3.04
KIM Youngwook	F10.01	KOUROUSIAS George	G7.01
KIM Yunseok	D7.03	KOVALEV Sergey	A8.03
KIM Yup	P2-st.031	Krishna Bahadur Rai	P1-co.606
KIMURA Kokoro	B12.02	KUBE R. A.	P1-pl.021
KIMURA S.	H5.03		
KIMURA Sota	H1.01		

KUBONO Shigeru	G1.04
KUK Young	E9.04
KUK Young	H5.01
KUROKI Kazuhiko	P2-co.314
KUSAKABE Motohiko	D1.04
KUWAJIMA Kunihiro	E4.05
KUZNETSOV A. A.	B1.02
KWAI Masanori	P1-pa.038
KWAK Dong Wook	P2-ap.208
KWAK Ho Jae	F4.06
KWAK Inho	P2-co.308
KWAK InHo	P2-co.323
KWAK Sehyun	P1-pl.005
KWANGSOO KIM	P1-nu.022
Kwanpyo Kim	B3.03
KWEON Minjung	C1.07
KWON Choah	P1-co.209
KWON D.-H.	P1-pl.037
KWON Hyeok-Jung	P1-co.501
KWON Hyukwoo	P2-se.029
KWON Jin-Beom	C3.05
KWON Junyoung	P1-ap.126
KWON Kyubin	P2-pl.041
KWON Ohjin	P1-pl.038
KWON Ojoon	P1-co.309
KWON Sang Woo	P2-ap.208
KWON Sangil	P1-co.425
KWON Sangku	P1-co.615
KWON Sangwoo	P2-ap.209
KWON Sejun	P2-se.037
KWON Sejun	P2-se.034
KWON Seonho	P1-co.112
KWON Y.S.	H5.03, P2-co.207
KWON Yong Seung	P2-co.316
KWON Yong-kyun	P2-ap.136
KWON Yongkyung	B6.06, E5.03, P1-co.204
KWON Yongkyung	P2-co.304
KWON Young Kwan	P1-nu.014
KWON Young Kwan	H1.03, P1-nu.015
KWON Youngkwan	G1.04

KWON Young-Kyun	F5.08
KWON Young-Kyun	P1-co.212
KWON Young-Sun	P1-ap.120
KWON Young-Sun	P1-ap.117, P1-ap.118
KWON† Min-Sik	P1-co.509
KYE Yong Uk	P1-nu.024
Kyeongjae Cho	H6.05
Kyongjun Yoo	H8.03
Kyo-Seok Lee	G3.05
Kyung-Ah Min	H6.05
Kyung-Hwa Yoo	G3.05
LAINE Mikko	F14.02
LAKE Robert J.	P1-co.107
LAMJED Debbichi	G9.04
LAMPERT M.	P1-pl.010
Lan Anh Thi Nguyen	P2-pl.035
LAN Xinzhen	P1-ap.102
LANDSMAN A S	P2-op.025
LANZARA Alessandra	B7.04
LE Chinh Tam	B3.06
LE Chinh Tam	D3.02
LE Long Van	P1-ap.122
LE Manh Duc	H8.04
LEE Seung Joo	B3.08
LEE Ah Rahm	H2.03
LEE Ah Rahm	P2-se.032
LEE Ahrahm	P2-se.038
LEE Alex Taekyung	P1-co.214
LEE Bum-Hoon	H11.02
LEE Bum-hoon	A14.09
LEE Bumsung	G5.05
LEE Byung Hun	P1-co.102
LEE Byung-Joon	P2-pl.034
LEE Chang	P1-nu.009
LEE Changgu	C2.03
LEE Changhee	P1-co.508
LEE Changhee	F3.07
LEE Changhee	H8.08
LEE Changhwan	H2.04
LEE Changju	P2-st.002
LEE Chi Cheng	P1-co.203
LEE ChoongHyun	A2.06
LEE Chul-ho	H3.09

LEE D -H	B7.04
LEE D.J.	P1-pl.029
LEE Da Hye	P2-se.041
LEE Deok-Sun	P2-st.019
LEE Dong Jin	P2-ap.208
LEE Dong Su	F10.01
LEE Dong yun	A4.02
LEE Dongha	B13.04
LEE Dongha	B13.03
LEE Dongho	H2.02, P2-se.036
LEE Donghun	D6.02
LEE Dongkeun	P2-ap.202
LEE Dongkyu	P1-co.223
LEE Dongkyu	H9.02
LEE Dongkyu	H9.04
LEE Dongwha	P2-ap.209
LEE Dongwook	P1-co.111
LEE Dooyong	A3.05
LEE Dooyong	P2-ap.138
LEE Dooyong	A3.04
LEE Eui-Sup	P1-co.210
LEE Eun	P2-st.021
LEE Gil-Ho	G5.02
LEE Gil-Ho	A2.07
LEE Gun Hee	P2-se.017
LEE Gwan-Hyoung	P1-ap.126
LEE Gwan-Hyoung	E7.02
LEE H. Y.	P1-pl.037
LEE H.H.	P1-pl.010
LEE Hae-young	P1-nu.017
LEE Hakjoon	G8.04, G8.08
LEE Haneol	H13.01
LEE Hanho	H5.01
LEE Hanho	E9.04
LEE Hanhyoung	P1-co.320
LEE Hee-Jung	P1-nu.001
LEE Hodong	P2-co.308
LEE Hong Seok	P2-se.014
LEE Hong-Gi	P2-pl.007
LEE Hong-Gi	P2-pl.002, P2-pl.010
LEE Hoonkyung	P1-co.204

LEE Hosu	P1-co.311
LEE Hosun	P2-co.303
LEE HoSun	P2-se.025
LEE Hosun	P1-pl.004
LEE Howon	P2-co.320
LEE Howon	A8.01
LEE Hu-Jong	P1-co.510
LEE Hu-Jong	A5.01
LEE Hunpyo	C7.04
LEE Hwangho	P2-co.325
LEE Hye Jin	B2.03
LEE Hye Young	G11.01
LEE Hyejin	P1-pa.028
LEE Hyejin	P1-nu.009
LEE Hyemin	P2-ap.146
LEE Hyeong Jun	C5.07
LEE Hyeonsu	P2-st.004
LEE Hyo Sang	P1-nu.015
LEE Hyo Sang	H1.03
LEE Hyo Sang	P1-nu.014
LEE Hyun Hwi	P2-ap.217
LEE Hyun Min	F14.05
LEE Hyun Min	E14.07, P1-pa.008
LEE Hyunbok	E3.05
LEE Hyung Mok	H11.06
LEE Hyungho	P1-pl.014
LEE Hyung-Ho	P1-pl.021
LEE Hyunjung	P1-pl.042
LEE Hyun-Seong	A7.02
LEE Hyunsoo	P1-co.622
LEE Hunyong	P1-pl.043
LEE I. J.	P1-co.112
LEE Ingeun	P2-pl.020
LEE In-Ho	B6.02
LEE Inwon	P2-ap.123
LEE Inwon	F5.06
LEE J. D.	P1-co.219
LEE J. D.	A7.01
LEE J.D.	P1-co.208
LEE J.H.	P1-pl.010, P1-pl.044
LEE J.H.	P1-pl.003
LEE J.K.	A12.03

LEE J.Y.	P1-nu.018	LEE Jongjin	P1-co.110
LEE Jae Hwan	P2-st.030	LEE Jongmin	P2-ap.214
LEE Jae Hoon	C13.04, F12.06	LEE Jongrim	P2-ap.146
LEE Jae Shin	P1-co.303	LEE Jongseok	A8.03
LEE Jae Sik	B14.03	LEE Jongseok	T4.01
LEE Jaehyun	P1-pl.017	LEE Jong-Soo	E2.04
LEE Jaehyun	P1-pl.023	LEE Jong-won	C12.04
LEE Jaekeum	H13.08	LEE Joo Hyun	P2-ap.224
LEE Jaekwang	P1-co.213	LEE Jooyoung	P2-st.013
LEE Jae-Sung	C3.05	LEE Jooyoung	E4.07
LEE Jae-Ung	A7.04, E7.03	LEE Jooyoung	E4.06
LEE Jae-Ung	P1-ap.136, P1-ap.140	LEE Jooyoung	B13.08
LEE Jae-Ung	P1-ap.133	LEE Jooyoung	E4.05, P2-st.011
LEE Jaison	P1-pa.030	LEE Jooyoung	P2-st.012
LEE Jaison	P1-pa.029	LEE Jooyoung	C4.07
LEE Jaison	B13.08, P1-pa.036	LEE Jooyoung	B6.02
LEE Jason	F13.05	LEE Jooyoung	P1-nu.017
LEE Jason	F13.04	LEE Jooyoung	P1-pa.036
LEE Jason	P1-pa.003	LEE Jooyoung	P1-pa.029
LEE Jeongwon	C13.04	LEE Jouhahn	A3.05
LEE Jeongwon	A12.07	LEE Joungee	P1-co.210
LEE Jeon-Kook	P1-ap.119	LEE Ju Yeon	P1-co.107
LEE Jhinwan	P1-pa.037	LEE Jubok	P1-co.111
LEE Jhinwan	A9.02	LEE Juhee	D13.03
LEE Jhinwan	P2-co.102	LEE Julian	P2-st.030
LEE Ji Eun	P1-nu.024	LEE Jun Hee	A6.02
LEE Ji San	D8.04	LEE Jun Ho	P2-ap.147
LEE Jieun	P1-nu.025	LEE June Ho	P2-ap.221
LEE Jieun	P1-nu.026	LEE Jung-Hee	P2-se.028
LEE Jieun	P1-pl.023	LEE Jung-Yong	G2.02
LEE Jieun	P1-pl.017	LEE Jung-Yong	P1-ap.143
LEE Jihun A	P1-pl.034	LEE Jun-Ho	F6.04
LEE Jik	G11.01	LEE Jun-Woo	C3.05
LEE Jik	G11.05	LEE Ju-Yeon	P1-co.116
LEE Jinhwan	C2.03	LEE K. Y.	P1-pa.022
LEE Jinseon	P2-pl.031	LEE K. Y.	H13.03
LEE JISOO	P1-co.424	LEE K.C.	P1-pl.010
LEE Jong-Bong	P1-co.113	LEE K.D.	P1-pl.010
LEE Jong-Bong	P1-co.115	LEE Ki Hoon	C5.06
LEE Jong-Chan	D13.02	LEE Kihyun	P1-pl.045
LEE Jong-ha	P1-pl.002	LEE Kihyun	P1-pl.036
		LEE Kwan Chul	A12.02
		LEE Kwang Bok	P1-nu.015

LEE Kwang Bok	H1.03
LEE Kwang Bok	P1-nu.014
LEE Kyeong Pyo	P1-pl.016
LEE Kyeongpil	H13.06
LEE Kyong Sei	F13.02
LEE Kyoungsu	P2-se.010
LEE Kyu Joon	P2-co.317
LEE Kyu-Dong	P1-pl.031
LEE Kyung Mee	P2-te.004
LEE Kyungjae	G8.05
LEE Kyungmin	P1-pa.038
LEE Kyu-Sup	G12.04
LEE M.U.	A12.03
LEE Man Woo	B1.04
LEE Man Woo	P1-nu.024,
	P1-nu.026
LEE Manwoo	P1-nu.016
LEE Mi Jin	P2-st.024
LEE Min Ho	H4.07
LEE Min Jung	P2-ap.121
LEE Minbaek	P1-ap.106
LEE Minbaek	P1-ap.107
LEE Min-Cheol	F5.02
LEE Min-Cheol	P2-co.323
LEE Min-Cheol	P2-co.308
LEE Min-Ho	P1-co.224
LEE Minjin	P2-st.022
LEE Minjun	E9.04
LEE Minkyung	D5.07
LEE Min-Sang	E2.04
LEE Moo Hyun	P1-pa.029
LEE Moohyun	B13.08,
	P1-pa.036
LEE MooHyun	P1-pa.033
LEE Moonjoo	P2-at.016
LEE Myang Hwan	P1-co.302
LEE Myang Hwan	P1-co.312
LEE Myang Hwan	P1-co.314
LEE Myoung-hoon	P2-co.206
LEE N.	P2-co.327
LEE N.	P1-co.411,
	P2-co.326,
	P2-co.328
LEE N.	P1-co.409

LEE Nara	F5.04
LEE Nyun Jong	H8.08
LEE Nyun Jong	P1-co.414
LEE S.	P2-co.301
LEE S.H.	P2-co.207
LEE S.H.	P1-pl.010
LEE S.H.	P1-pl.003
LEE Sam Hyeon	H3.01,
	H3.02,
	P2-ap.226
LEE Samyol	P1-nu.025
LEE Sang A	P2-ap.113
LEE Sang Hoon	A4.05
LEE Sang Wook	F3.08
LEE Sang Wook	B3.05,
	P1-ap.113
LEE Sangbong	P2-pl.010
LEE Sang-Bong	P2-pl.007
LEE Sang-Bong	P2-pl.002
LEE Sanghoon	G8.03,
	G8.05
LEE Sanghoon	G8.02
LEE Sanghoon	G8.04,
	G8.08
LEE Sangwha	C9.01
LEE Sang-Won	C3.05
LEE Sangyeop	G8.03
LEE Sangyeop	G8.04
LEE Sangyoep	G8.05
LEE Sangyoep	G8.02
LEE Se Byeong	P2-ap.204
LEE Seokbae	P2-co.206
LEE Seokcheon	D11.03
LEE Seon Young	P2-op.014
LEE Seongwoo	P2-ap.142
LEE Seongwoo	P1-ap.119,
	P2-ap.124 ,
	P2-ap.128
LEE Seula	P2-se.017
LEE Seung Hun	P1-pl.002
LEE Seung-Ho	E2.04
LEE Seunghun	P1-pl.043
LEE Seung-Jae	P1-co.116
LEE SeungKyo	P2-se.035



LEE Seungryeul	P1-co.102
LEE Seungsuk	P2-co.325
LEE Seung-Sup	C5.05
LEE Seung-Sup	G5.01
LEE Si Woo	P2-ap.217
LEE SOON CHIL	P1-co.424
LEE Soonchil	P1-co.425
LEE Soon-Hyeong	C7.03
LEE Soon-Hyung	P1-co.603
LEE Soo-Young	D4.06
LEE Su Houg	A1.02, A1.03
LEE Su Houg	C1.01
LEE Su Yeong	P1-co.219
LEE Suhyun	P1-nu.012
LEE Sun Young	P2-st.013
LEE Sung Jong	E4.07
LEE Sung Keun	D9.01
LEE SungBin	C5.08
LEE Sung-Gyu	P2-st.017
LEE Sung-Hoon	B7.01
LEE Sungmin	A7.04
LEE Sun-Mi	P2-ap.206
LEE Tae Yeon	P2-pl.009
LEE Taejin	A14.01
LEE Takhee	F3.05
LEE Takhee	P2-ap.212
LEE W	P1-pl.034
LEE W.	P1-pl.029
LEE W.	P1-pl.037
LEE Weonjong	E14.02
LEE Weonjong	E14.01
LEE Weonjong	E14.03, E14.05
LEE Wonhee	G3.02
LEE Wonhee	G3.03
LEE Wonhee	B3.02
LEE Wonhee	G3.01, G3.06
LEE Wonwoo	H11.02
LEE Woocheol	F3.05
LEE Y. S.	P2-ap.113
LEE Y.U.	C3.04
LEE Yeon	P2-co.329

LEE YeongSeon	P2-co.308
LEE Yong Joong	P2-co.101, P2-co.104
LEE Yongjae	C9.02
LEE Yongjae	C9.01
LEE YongJin	F4.05
LEE Yongjun	P1-ap.142
LEE Yongwook	P2-co.305
LEE Young Hee	F6.04
LEE Young Keun	H2.04
LEE YoungHo	P1-pl.012
LEE YoungPak	P1-ap.103, P1-ap.104
LEE YoungPak	H3.03
LEE Young-Seon	P2-co.323
LEE Yumi	P2-pl.022
LEE Yung Ting	P1-co.203
LEEM J	P1-pl.034
LEEM J.	P1-pl.029
LEEM Jaehoon	E14.01
LEINER Jonathan	C. H8.04
LEINER Jonathan Carl	F5.05
LENNE Pierre-François	G3.04
LEONARD Douglas	P1-pa.033
LI Liang	E10.03
LIANG Liangbo	G9.03
LIEW Timothy H.C.	H3.07
LIM Chang Hwy	P1-nu.012
LIM Chang-hyun	A3.04
LIM Da-Hye	E2.04
LIM Ho-Joon	A3.06
LIM Intaek	B13.04
LIM Intaek	B13.03
LIM Jaehoon	F13.02
LIM JiSoo	A3.02
LIM Jong Soo	H6.06
LIM Joonsoo	P1-pa.037
LIM June Yeong	P1-ap.159, P2-se.031
LIM June Yeong	P1-ap.158
LIM Sa-hoe	P1-ap.123
LIM Sa-Hoe	P2-ap.205
LIM Seung-Hyuk	F2.05

LIM Seung-Hyuk	F2.04
LIM Soo Yeon	P1-ap.136
LIM SUMIN	P1-co.424
LIM Sung Hak	B14.01
LIM Yeunhwan	F1.02
LIM Yeunhwan Lim	F1.04
LIM Yong-Sik	F12.02
LIM Youbong	C12.03
LIN Chan-Chieh	H4.07
LIN Chan-Chieh	H4.08
LIN Yingdong	C4.06
LIU Chunli	P1-co.401
LIU D.	H13.03, P1-pa.022
LIU Dong	P2-ap.204
LIU Mengxia	P1-ap.102
LIU X.	G8.05
LIU X.	G8.03
LIU X.	G8.02
LIU X.	G8.04, G8.08
LIU Yehua	C5.03
LOPEZ Rosa	H6.06
LU Y	E10.03
LUHMANN N C	P1-pl.034
LUO Guang-Nan	A12.08
LYDIA R.	H4.07
M. E. Howard	D1.01
M. Matos	D1.01
M. S. Kwag	D1.01
M. S. Smith	D1.01
M. Venkatesan	P1-co.404
MA Kyungju	P1-pa.029
MACDONALD Allan H.	H9.02
MAENG Min-Jae	P2-ap.139
MAN Minh Tan	P2-se.014
MANAVALAN Balachandran	E4.06
MANDRE Shreyas	F4.04
Manoj Kumar	P2-op.015
MANSKE Dirk	B8.01
MATCHEV Konstantin T.	B14.01

Mate Lampert	P1-pl.006
MATTHEWS Cédric	G3.04
MAXEY Evan	C8.06
MAXEY Evan	P2-co.105
MCALLISTER Kirstie	B3.05
MCALLISTER Kirstie Elizabeth	P1-ap.113
MCCLARTY Paul	H8.06
MENG Jie	F1.02
MENY Christian	H8.07
MEROLLE Lucia	G7.01
MESSMER M.	P1-pl.009
MEUNIER Vincent	G9.03
MICHEL Anny	P1-co.414
MIN B I	B7.04
MIN Byeong Hun	G5.05
MIN ByeongHun	D9.03
MIN Byong Koun	A3.08
MIN Byoung-Chul	P1-co.417
MIN Hongki	P1-co.503
MIN Hongki	P1-co.508
MIN Hongki	P1-co.502
MIN Honki	C5.06
MIN Kim Sun	P1-co.620
MIN Kyoung Wook	P2-as.006
MIN Kyung Hyun	P2-se.017
MIN Kyungtaek	A3.03
MIN Semi	C4.04
MIN Sunhong	P2-pl.003
MIN Taewon	P1-co.213
MINNHAGEN Petter	D4.01
Minu Kim	P2-co.203
MIYATAKE Hiroari	H1.01
MO Junyong	P2-ap.110
MO S -K	B7.04
MODEPALLI Vijayakumar	C3.01
MODEPALLI Vijayakumar	H4.04
MOHSIN QURESHI Muhammad	P2-at.004
MOON Byung Kee	P2-ap.115
MOON Byung Kee	P2-ap.117, P2-ap.118 ,

	P2-ap.119
MOON Eun-Gook	E7.01
MOON Hyungseok C.	P2-ap.201
MOON J. Y.	P1-co.411,
	P2-co.328
MOON J. Y.	P1-co.409
MOON J.Y.	P2-co.327
MOON J.Y.	P2-co.326
MOON Jaeyoung	F5.04
MOON K. M.	P1-pl.042
MOON Kyoung-Woong	
	P1-co.417
MOON Kyung-Sub	P2-ap.205
MOON Myung Kook	P1-nu.012
MOON S. J.	P2-co.307
MOON Seon Young	H4.04
MOON Seung Eon	P1-ap.122
MOON Songky	H12.01
MOON Songky	P2-at.014
MOON Sung	C6.03
MOSQUEIRA J.	P2-co.207
MUHAMMAD Nadeem	
	P1-nu.023
MUKAI Kiyofumi	P1-pl.043
MUKAI Momo	H1.01
MUN Bongjin Simon	A3.06
MUN Bongjin Simon	H7.04
MUN Jongchul	C13.04
MUN Jongchul	F12.06
MUN Ju Young	P2-ap.224
MURATA Keizo	D9.03
Myeong-Hwan Mun	B1.03
MYOUNG Nojoon	B3.08
MYUNG Hye Seon	P2-se.041
N. Vinokurov	P1-pa.019
NA DongHyeon	P1-pl.012
NA Go Woon	P2-as.006
NA Sang-Chul	P1-ap.117,
	P1-ap.118,
	P1-ap.120
NA YongSu	P1-pl.012
NA YongSu	P1-pl.047
NADEEM Muhammad	
	P1-nu.022

NADEEM Muhammad	
	B1.04
NAKAI Ryoma	B12.02
NAKAJIMA Kajuhisa	C12.06
NAM Chang Hee	C12.06
NAM Chang Hee	C12.08
NAM Daewoong	C8.07
NAM Eun Soo	P1-ap.122
NAM Ji-Yeon	P1-co.320
NAM Junggyu	H2.02,
	P2-se.036
NAM Ki Tae	F5.08
NAM Kyungwook	H13.06
NAM Siyoung	A14.09
NAM Soo-hyeon	F14.04
NAM Sung Min	G3.06
NAM Sung Min	G3.01
NAM Woohyun	G5.05
NAM Woohyun	H5.01
NAM Y.U.	P1-pl.010
NAM Y.U.	P1-pl.029
NAM Yong Un	P2-pl.026
NAMKUNG Won	P1-pl.022
NAMKUNG Won	P1-pl.030,
	P2-pl.017
NASIR Alviu Rey	G8.04
NASIR Alviu Rey	G8.03,
	G8.05
NGO Thach D.N.	P1-co.423
NGOC Huynh Van	P2-ap.111,
	P2-ap.112
NGOC Huynh Van	P1-ap.110
NGUYEN Anh Phuong	
	P1-co.412
NGUYEN Bich Phuong	
	E2.02
NGUYEN Hien Thi	P1-nu.023
Nguyen Hoang Tung	P1-ap.146
NGUYEN Minh Hai Thi	
	H8.07
NGUYEN Minh Hai Thi	
	P2-se.045
NGUYEN Phuong Anh	
	A2.05

NGUYEN Quang Van P2-se.046  
 NGUYEN Quang Van A2.05  
 NGUYEN Quang Van P2-se.045  
 NGUYEN Thanh Huong Thi  
 P2-se.042  
 NGUYEN Thanh Huong Thi  
 A2.05  
 NGUYEN THI Hien P1-nu.022  
 NGUYEN Thi Huong P2-se.043  
 NGUYEN Thi Huyen F5.03  
 NGUYEN Thi Minh Hai  
 P1-co.412  
 NGUYEN Thi Minh Hien  
 F5.03  
 NGUYEN Thiet Van P2-se.045  
 NGUYEN Van Quang P2-se.044  
 NGUYEN Van Quang H8.07  
 NGUYEN Van Quang H4.01,  
 P1-co.412  
 NGUYEN Van Quang P2-se.043  
 NGUYEN Vinh Huu P2-pl.027  
 NI Andrey P1-nu.006  
 NI Andrey P1-nu.028  
 Nikolay A. Vinokurov P1-pa.017  
 Nikolay A. Vinokurov P2-pl.012  
 Nikolay Vinokurov P2-op.015  
 Nikolay Vinokurov P1-pa.006,  
 P1-pa.023  
 NIU Chun-Yao P1-co.617  
 NOH Do Young P1-co.620  
 NOH Do Young C8.07  
 NOH Do Young P2-ap.122  
 NOH Heung-Ryoul P2-at.003,  
 P2-at.004  
 NOH Hyeon Mi P2-ap.118  
 NOH Jae Dong D4.05  
 NOH Jae Dong D4.01  
 NOH Jun Hong E2.05  
 NOH Tae Won P2-co.308  
 NOJIRI Hiroyuki E10.01  
 NOJIRI Mihoko C14.03  
 NURSANTO Eduardus Budi  
 A3.08  
 O Shangmin P1-co.311

OGAWA K. P1-pl.039  
 OGURI Shugo P1-pa.038  
 OH B.-Y. P1-ap.114  
 OH bong-Gi P2-pl.007  
 OH Bonggi P2-pl.010  
 OH Bongji P2-pl.002  
 OH Chadol P2-co.302  
 OH D. K. P1-pl.042  
 OH D.G. P1-co.409  
 OH Gyujin P2-se.027  
 OH Hye-Keun P2-st.017  
 OH Inseon P2-ap.214  
 OH Inseon P2-ap.215  
 OH Jae Ho P1-co.115  
 OH Ji Seop F5.01  
 OH Joosung H8.04  
 OH Ju Hyun P2-ap.115  
 OH Kyunghwan P2-op.022  
 OH Myungchul E9.04  
 OH S. H. P1-co.411  
 OH S. H. P2-co.328  
 OH S. H. A8.01  
 OH S. J. P1-pl.042  
 OH S.H. P2-co.326  
 OH Sang Hoon E11.02  
 OH Sehoon P1-co.416  
 OH Se-Joung C7.06  
 OH Seung-Yoon P1-nu.009  
 OH Seung-Yoon P1-pa.011  
 OH Simgeon P1-ap.109  
 OH Soo-Ghee P1-pl.036  
 OH Su-Ar P2-ap.109  
 OH Suekyung H4.06  
 OH Sungbin H13.01  
 OH Tae-suk P1-pl.003  
 OH Yoomin P1-pa.029  
 OH Yoomin B13.08,  
 P1-pa.036  
 OH Yoon Seok P2-co.312  
 OH Young Jun B6.02  
 OH Youngdo H13.02  
 OH Young-Seok G5.03  
 OH† B. -Y. P1-co.509  
 OKYAY Mahmut Sait P1-co.205

Oleksandr B. Korneta	P2-co.203
OLSEN Stephen Lars	H13.08
ONO Yasushi	B12.02
OYAIKU Michihiro	H1.01
OZAKI Taisuke	P1-co.203
P. D. O'Malley	D1.01
PAC Myoung Youl	B13.04
PAC Myoung Youl	B13.03
PAE Ki Hong	C12.08
PAIK Ho Jung	F11.03
PAIK Se-Bum	P2-st.001
PAIK Se-Bum	P2-st.002, P2-st.003, P2-st.004, P2-st.005
PAK Hyuk Kyu	A4.02
PAK Jeonghwan	E14.05
PALEI SRIKANTA	P2-se.003
PAN Y	E10.03
PANAGIOTA Papakonstantinou	F1.01
PANDEY Indra Raj	P1-nu.010
PANDEY Indra Raj	G1.03
PANERU Govind	A4.02
Pankaj Sharma	C8.02
PAPAKONSTANTINOU Panagiota	F1.04
PARIDA BHASKAR	P2-se.003
PARK A. H.	P2-co.322
PARK Aaron	A1.02
PARK Aaron	A1.03
PARK Ah hyun	P2-se.017
PARK B. D.	P1-pa.022
PARK B. D.	H13.03
PARK Bong Chan	P1-co.305
PARK Byung Cheol	P2-co.317, P2-co.320
PARK Byungcho	P1-pl.026
PARK C. K.	P2-co.321
PARK Chang-in	P1-co.608
PARK Chanyong	A14.09
PARK Cheol-Hwan	G9.02
PARK Dae-Han	P2-se.033
PARK Dambi	P2-se.020

PARK Doheum	D4.03
PARK Geon-Hyoung	P1-co.510
PARK Gyungsoon	P2-pl.030
PARK Gyungsoon	P2-pl.031
PARK H	P1-pl.034
PARK H K	P1-pl.034
PARK H.	P1-pl.029
PARK H.	G11.02
PARK H.K.	P1-nu.018
PARK H.K.	P1-pl.029
PARK Haesoo	P2-ap.129
PARK HaeSoo	P2-ap.130
PARK Hae-Soo	H4.03
PARK Hanbum	P2-ap.120
PARK Hanjin	P1-co.212
PARK Hee Chul	B3.08
PARK Hee Chul	P2-at.011
PARK Heeyeon	P2-co.204
PARK Hee-yeon	P2-co.202
PARK Ho Seok	C2.04
PARK Hwanbae	F13.07
PARK Hyang Kyu	P1-nu.013
PARK Hyangkyu	P1-pa.029
PARK Hyangkyu	B13.08, P1-pa.036
PARK Hye Yoon	P2-ap.201
PARK Hyeon K	P1-pl.023
PARK Hyeon K	P1-pl.017
PARK Hyeon K.	E12.03
PARK Hyeyoon	P1-co.102
PARK Hyunggyu	A4.05
PARK Hyun-Min	P2-se.043
PARK Hyun-Min	A2.05
PARK Il H.	G11.03
PARK Il H.	P2-as.005
PARK Il H.	G11.05
PARK Il H.	G11.04
PARK Il H.	P2-as.002
PARK Il H	E11.05
PARK Il Hung	G11.01
PARK Ilhung	G11.06
PARK Ingon	B13.03, B13.04
PARK Inkyu	F13.05

PARK Inkyu G13.05,  
 P1-pa.003  
 PARK Inkyu F13.04  
 PARK JaeHoon P2-co.330  
 PARK Jaehoon P2-co.319  
 PARK Jae-Hoon P2-co.325  
 PARK Jaehun H7.02  
 PARK Jaehun P2-ap.120  
 PARK JE-GEUN P1-co.424  
 PARK Je-Geun H8.04  
 PARK Je-Geun A7.04  
 PARK Jeong Young H2.04  
 PARK Jeong Young C7.07  
 PARK Jeong Young P1-co.615  
 PARK Jeongmin G11.02  
 PARK Jeongyoung P1-co.622  
 PARK Ji-Ho B2.04  
 PARK Jin Hyung H1.03,  
 P1-nu.015  
 PARK Jin Hyung P1-nu.014  
 PARK Jin Su P1-co.302  
 PARK Jin Su P1-co.312  
 PARK Jin Young P2-ap.224  
 PARK Jinsu P1-co.314  
 PARK Jong-Chul F14.06  
 PARK Jong-Chul B14.01  
 PARK Jongwoo D3.03  
 PARK JongYoon P1-pl.045  
 PARK Joohyun G12.02  
 PARK Joon Young A2.07  
 PARK Jooyoung C12.03  
 PARK Jun Beom D3.03  
 PARK Jun Kue P1-co.501  
 PARK Junbeom H3.09  
 PARK Junesic G1.04  
 PARK Jung Hyun C8.01  
 PARK Jungmin H4.04  
 PARK Jungmin P2-ap.214  
 PARK Jungmin C3.01  
 PARK JunWoo P2-se.025  
 PARK Juyong C4.04,  
 D4.03  
 PARK K. R. P1-pl.042  
 PARK Kang Soon P1-pa.029

PARK Kangsoon B13.08,  
 P1-pa.036  
 PARK Kibog P1-ap.143  
 PARK Ki-HYeon P2-pl.007  
 PARK Ki-Hyeon P2-pl.002,  
 P2-pl.010  
 PARK Kisoo H8.04  
 PARK Kwang-Kyoon D13.02  
 PARK Kwang-Kyoon D13.05  
 PARK Kwon B8.02,  
 T2.01  
 PARK Kwonjin P2-ap.133  
 PARK Min P1-ap.135  
 PARK Myeonghun F14.05  
 PARK Myeonghun B14.01  
 PARK Myoung Jin C7.06  
 PARK Nam Kyou C7.06  
 PARK Noejung A6.04  
 PARK Noejung P1-co.205  
 PARK Noejung F6.01,  
 H9.03  
 PARK Noejung A6.02  
 PARK Ryeonggoon B13.04  
 PARK Ryeonggoon B13.03  
 PARK Sang Yoon B3.09  
 PARK Sang Yoon H3.03  
 PARK Sang Yoon P1-ap.103  
 PARK Sang-A A14.07  
 PARK Sangheon P2-co.206  
 PARK Sangjun P1-co.108  
 PARK Sangkook P2-co.204  
 PARK Sang-kook P2-co.202  
 PARK Seeun G5.05  
 PARK Sejun P1-co.425  
 PARK Seongtae P1-pa.007  
 PARK Seongwoo B13.04  
 PARK Seongwoo B13.03  
 PARK Sojung F4.03  
 PARK Soohyung E3.05  
 PARK Soyeun P1-co.114  
 PARK Su Ji F4.06  
 PARK Su-Chan A4.03  
 PARK Su-Dong H4.06  
 PARK Sun Joo E4.03

PARK Sun-A	P1-pl.004
PARK Sung Jun	P2-ap.224
PARK Sung Keun	F13.02
PARK Sung kyun	A3.06
PARK Sung Woo	P1-nu.028
PARK Sung Wook	P2-ap.116
PARK SungJae	P2-se.035
PARK Sungjin	P2-co.304
PARK Sungju	P2-pl.017
PARK Sungkyun	A3.05
PARK Sungkyun	A3.04,
	P2-ap.138
PARK Sungkyun	P2-ap.123
PARK Sungwoo	E14.01
PARK Sungwoo	E14.03
PARK Suyeun	P1-pa.033
PARK Tae-Sun	F1.04
PARK Taiho	E2.01
PARK Tuson	D9.02
PARK Tuson	P2-co.209
PARK Woochan	P2-as.005
PARK Woochan	G11.05
PARK Woochan	P2-as.002
PARK Wook	G3.06
PARK Woongkyu	P2-op.006
PARK Woosung	A1.03
PARK Woosung	A1.02
PARK Wung-Hoa	P2-pl.034
PARK Y S	P1-pl.034
PARK YEJE	G5.01
PARK Yeonju	F5.03
PARK Yongsup	P2-ap.139
PARK Young-Jae	P2-st.020
PARK Youngjin	P2-st.001
PARK Youngju	C3.07
PARK Youngju	P1-ap.145
PARK Youngju	H9.02
PARK Yu Jung	F3.02
PARK Yung Woo	D10.01
PARK Yung Woo	P1-ap.135
PATHAK Vishwa Bandhu	C12.06
	P2-op.022
PAULSON Bjorn	F12.03
Pavel Loiko	

PAWAR S M	P2-ap.124
PAWAR S. M.	P2-ap.142
PAWAR S.M.	P2-ap.128
PELLICCIONE Matthew	D6.01
	E10.03
PENG T	P1-pl.043
PETERSON Byron Jay	P1-pa.007
PETRAKOU Eleni	P1-co.414
PHAM Kim Hang Thi	P2-se.042
PHAM Tuan Anh	P2-se.046
PHAM Tung Chao Thanh	C8.08
PHAN Thi Hong Tham	P2-st.009
PHAN Vuong Quoc	P1-nu.010
PITTS R. A.	P1-pl.021
PONCE-VARGAS Miguel	G3.04
PRATIDHINA Elisabeth	C7.05
	P1-pa.009
PRIHTIADI Hafizh	P2-ap.112
QIAN Yongteng	P1-ap.110
QIAN Yongteng	P2-at.011
QIN Pinquan	P2-se.035
QIU Dongri	P1-pl.019
R. A. Pitts	P2-se.024
R. G. Elliman	D1.01
R. L. Kozub	A2.02
RA Chang Ho	P1-nu.018
RA Se Jin	E14.06
Radovan Dermisek	RAGHAVAN Chinnambedu
	Murugesan
	P1-co.315
RAHMAN Md. Shakilur	B1.04
RAHMAN Md. Shakilur	P1-nu.022
RAMAKRISHNAN Vivek	P2-ap.106
	E2.04
RAMASAMY Parthiban	P1-ap.125
RANA Tanka Raj	G5.03
RANOT Mahipal	B7.04
RAPPOPORT T G	

RAVEENDRA Nallagatla Venkata C3.08  
REN Xiao-Yan P1-co.617  
RETIERE Fabrice P2-as.003  
RHEE Joo Yull B3.09  
RHEE Joo Yull P1-ap.103,  
P1-ap.104  
RHEE Joo Yull H3.03  
RHEE T. N. P1-pl.039  
RHEE Tongnyeol P1-pl.026  
RHIE Jiyeah P2-op.006  
RHIE Jiyeah G12.02  
RHIM S.H P1-co.407,  
P1-co.408  
RHIM S.H. P1-co.616  
RHIM Sonny H. P2-se.044  
RHIM Sonny H. H8.07  
RHYEE Jong-Soo H4.06,  
H4.07,  
H4.08  
RHYEE Jong-Soo P1-co.224  
RHYEE Jong-Soo P2-co.316  
RHYEE Jong-Soo P2-co.315  
RI Hyeong-Cheol P2-co.204  
RI Hyeong-cheol P2-co.202  
RIBIERRE Jean-Charles G3.04  
RO Taeik P1-nu.025  
RO Taeik P1-nu.026  
RO Taeik P1-nu.024  
RO Tae-Ik P1-nu.016  
ROBERT Aymeric C8.08  
Robert M. Wallace H6.05  
ROBINSON Ian K. C8.08  
ROH Cheong Hyun P2-ap.147  
ROH Seulki P2-co.322  
ROH Youn Jung G13.02  
ROTERMUND Fabian G12.02  
ROTT Carsten P2-as.003  
Ruijun Lan F12.03  
RULE Kirrily H8.04  
RYEE Siheon P2-co.311  
RYEE Siheon P1-co.203  
RYU Bo Kyung F3.03

RYU Dongsu B12.03  
RYU Geonmo G13.05  
RYU Jungho P2-co.302  
RYU Jung-Wan D4.06  
RYU Min Sang F13.04  
RYU Sae Hee P1-co.612  
RYU Sangkyun P2-ap.123  
RYU Sim Hee F3.03  
S. Chandramohan F2.03  
S. D. Pain D1.01  
S. H. Ahn D1.01  
S. H. Kim F14.07  
S. Henderson P1-pl.027  
S. J. Noh P2-pl.035  
S. K. Lee P2-pl.035  
S. Kolesnik G8.07,  
P1-co.403  
S. Setiniyaz P1-pa.019  
S. Strauss D1.01  
S. T. Pittman D1.01  
S. V. Miginsky P1-pa.019  
S.H. Rhim P1-co.610  
Sae Hwan Chun H8.03  
SAITINIYAZI Shadike P1-pa.025 ,  
P1-pa.026  
SAKAKIBARA Hirofumi P2-co.314  
SAKATA Osami H7.03  
SALA Elena P1-pa.033  
SAMAD Abdus A6.08  
Samir M. Hamad F2.01  
SANCHEZ David H6.06  
Sang-hwa Lee P2-pl.035  
SANO Ryuichi P1-pl.043  
SANZ Veronica D14.02  
SARGENT Edward H. P1-ap.102  
SATO Daisuke H6.02  
SATOU Yoshiteru G1.04  
SAUER Gregor P2-op.022  
SAUL Andres H9.01  
SAVENKO Ivan H3.07  
SAWADA Kei G7.04  
SAWANT Ashwini G12.04  
SAWANT Ashwini P2-pl.020



SAWANT Ashwini	G12.03
SAXENA Arvind Kumar	P2-at.013
SCHAEFFER M.	P1-pl.009
SCHENKELAARS S.	P1-pl.009
SCHOELLKOPF Wieland	D13.07
SCHURY Peter	H1.01
Se Young Jeong	P1-co.606
SEMERTZIDIS Yannis	P1-pa.037
SEMERTZIDIS Yannis K	G14.01
SENATORE Sébastien	G3.04
SENTHILKUMAR V	B3.06
SEO Chagwon	P1-co.111
SEO Changwon	P1-ap.142
SEO Changwon	C3.01
SEO Choongwon	P2-co.323
SEO Choongwon	P2-co.308
SEO Dong Cheol	P1-pl.002
SEO Dongcheol	P1-pl.014
SEO Dongcheol	P1-pl.043
SEO Dong-Cheol	P1-pl.021
SEO Dong-Hyuk	P1-co.501
SEO HYEONDEOK	P1-nu.005
SEO Hyun Kwan	B13.02
SEO Hyunkwan	B13.04
SEO Hyunkwan	B13.03
SEO Ilwan	P2-ap.113
SEO J. H.	P2-co.307
SEO JeMin	P1-pl.012
SEO Jung Hwa	E3.01, F3.02
SEO Jung Hwa	F3.01
SEO Kyungmin	P1-pa.036
SEO Kyungmin	P1-pa.029
SEO Kyungmin	B13.08
SEO Okkyun	P2-ap.122
SEO Okkyun	P1-co.620
SEO Pil-Neyo	E1.03
SEO Pooreun	P1-pl.040
SEO S.H.	P2-co.207
SEO Seon-Hee	B13.04
SEO Seon-Hee	B13.02
SEO Seon-Hee	B13.03,

SEO Soonbeom	H13.01
SEO Sumin	P2-co.209
SEO Tae Hoon	G3.02
SEO Tae Hoon	P2-se.017
SEO Y.I.	P2-co.207
SEO Yuil	H5.03
SEO Yunseok	A14.04
SEO Yunseok	A14.02
SEO Yunseok	A14.05
SEO Yu-Seong	P2-co.322
SEOG Hae Jin	P1-co.305
SEOK Jinbong	F6.04
SEOL J.	P1-pl.044
SEON Jongho	P2-as.006
SEONG Maeng-Je	B3.06
SEONG Taesik	P1-pl.030
SEONG Taesik	P1-pl.022
Seongmin Jeong	P2-ap.125
Sergey Miginsky	P1-pa.023
SETO Haruki	P1-pl.011
Seung Chul Chae	P2-co.203
Seung-hyun Noh	H8.03
SHAFIELOO Arman	D11.01
SHAFIQUE Aamir	B6.04
SHEERAZ Muhammad	P1-co.306
SHI Jinsheng	P2-ap.118
SHI Yue-Jiang	P1-pl.036
SHIM Hyun Kwan	P2-op.020
SHIM Jaehoon	P1-co.108
SHIM Je-Ho	P2-ap.134
SHIM Jeong Min	C5.05
SHIM Ji Hoon	P1-co.224
SHIM Ji-Hoon	D5.05
SHIM Pyoung-Seop	D4.05
SHIM Sang-In	A1.01
SHIM Seung-Bo	D6.03
SHIM Seung-Bo	B5.01
SHIM Sugie	P1-nu.021
SHIM Yoon Su	P1-co.206
SHIM Yoon su	E6.04
SHIM Yoon Su	B6.05
SHIN Changdong	B13.04
SHIN Changdong	B13.03

SHIN Dong Hoon	B3.05
SHIN Dong Hoon	P1-ap.113
SHIN Dongbin	A6.04
SHIN Dongbin	H9.03
SHIN Dongbin	A6.02
SHIN Dongguen	E3.05
SHIN Dongmyeong	P1-ap.149
SHIN Dong-Soo	P2-op.002
SHIN Heungjoo	P2-ap.214
SHIN Hong kee	P2-ap.210
SHIN Hyejin	P1-ap.118
SHIN Hyejin	P1-ap.117,
	P1-ap.120
SHIN Hyeondeok	P1-co.204
SHIN Hyun-Joon	G7.01
SHIN Jae Ho	P2-pl.031
SHIN Jaeho	E5.04
SHIN KwangWoo	P1-co.319
SHIN Min Kyoong	B3.09
SHIN S J	B7.04
SHIN Sangwon	P2-se.029
SHIN Somin	P2-pl.031
SHIN Soochul	P1-co.104
SHIN Soohyeon	P2-co.209
SHIN Sung Gyun	P1-nu.024
SHIN Sung Gyun	P1-nu.026
SHIN Sung-Gyun	B1.04
SHIN Sung-Il	F12.02
SHIN Yong-il	E5.02
SHIN Yong-il	C13.04
SHIN Yooleemi	H8.07
SHIN Young-Han	A6.08,
	B6.04
SHIN Young-han	C8.04
SHIN Young-Han	C8.05
SHIN Younghoon	P2-at.014
SHIN Younghoon	H12.01
SHINDE Kiran Prakash	
	G5.03
SHON WonHyuk	P2-co.316
SHON WonHyuk	P2-co.315
SHTRIKMAN H.	H6.06
SIKORSKI Marcin	C8.08
SILVA Luis O	C12.06

SIM Heung-Sun	C5.05
SIM Heung-Sun	G5.01,
	H6.07
SIM Kyung Ik	P2-co.317,
	P2-co.320
SIM Kyung Ik	P1-co.308,
	P2-co.318
SIM Kyung Ik	P2-co.321
SIM Kyung Ik	A8.01
SIM Seung-Bo	G5.04
SIM Young-Chul	F2.05
SIN Sang-Jin	A14.02
SIN Sang-Jin	A14.05
SIN Sang-Jin	A14.04
SINGER Robert H.	P2-ap.201
SINGH Jitendra Pal	A3.08
SINGH R.	E12.02
SIYEON Kim	P1-pa.029
SKAKALOVA Viera	F10.01
SLUSAR Tetiana	D5.06
SLUSAR Tetiana V	D5.07
SMET Jurgen H	F10.01
SMIRNOVA Nadya	F1.03
SNYDER G. Jeffrey	H4.08
SO Hyeon Seob	P1-pl.004
SO Hyeon Seob	P2-co.303
SO HyeonSeob	P2-se.025
SO Ji Eun	P1-nu.028
SO JoonHo	P2-pl.020
SO Jungho	E13.08
SO jungho	P1-nu.009
SOH Hyungjoon	P2-st.033
SOHN Ahrum	C3.02
SOHN Ahrum	A2.04
SOHN Ahurm	F2.06
SOHN Yeongsup	P1-co.614
SON Donghyeon	P2-co.102
SON Hye Mi	P1-ap.104
SON Hye Mi	P1-ap.103
SON Jicheol	P1-co.505
SON Joon-Gon	P2-ap.122
SON Jukyung	P1-nu.007
SON Jukyung	P1-nu.010
SON Junwoo	P2-co.302

SON Minho B14.02  
SON Sanghyuk P2-se.018  
SON Seung-Woo A4.01,  
P2-st.017  
SON Seung-Woo P2-st.020  
SON Soo hyun P1-pl.002  
SON Woo-Sik D4.06  
SON Yoon-Kyoo P2-pl.034  
SON Young-Woo F6.04  
SONG Changyong C8.07  
SONG Dae-Yup P1-co.218  
SONG DaYe P2-se.035  
SONG Dongjoon P2-co.206  
SONG Hosin P1-co.212  
SONG Hyunwook P2-ap.212  
SONG I. P1-pl.037  
SONG Jae Yong P2-se.043  
SONG Jae Yong A2.05  
SONG Jaemin P1-pl.004  
SONG Jeonghyeon B14.04  
SONG Jin Dong P1-co.509  
SONG Jingdong P2-ap.143  
SONG Jonghyun P2-co.208  
SONG Jonghyun P1-co.423  
SONG Jun Ho P2-ap.206  
SONG Min P2-st.004  
SONG Mi-Young D4.01  
SONG S. P2-co.312  
SONG S. J. P2-co.307  
SONG Sanghoon C8.08  
SONG Sehwan P2-ap.138  
SONG Seung Ah P2-pl.030  
SONG Seung-Woo P2-ap.221  
SONG Sunky C7.01  
SONG Tae Kwon P1-co.302  
SONG Tae Kwon P1-co.314  
SONG Tae Kwon P1-co.312  
SONG Taekwon P1-co.315  
SONG Taesoo C1.01  
SONG Yong Seon C11.01  
SONG Younggul F3.05  
So-Ra Kim E13.05  
SPRUNG Michael C8.06  
SPRUNG Michael P2-co.105

STEPANYAN Samuel P1-nu.028  
Stephen R. Sharpe E14.04  
STEPHENSON Edward H14.02  
STOLFA Andrea G7.01  
STRUZHKIN Viktor V C9.04  
Subhasish Chakraborty H3.06  
SUH Eun-Kyung P2-se.017  
SUH Hyung Suck P2-pl.010  
SUH HyungSuck P2-pl.002  
SUH Hyung-Suck P2-pl.007  
SUH Junho B5.01  
SUH Junho D6.03  
SUH Junho G5.04  
SUK Hyyong P1-pl.035  
SUK Hyyong P2-pl.018  
SUK Hyyong P2-pl.027  
Suklyun Hong H6.05  
Suklyun Hong P1-ap.150  
Suklyun Hong P2-ap.125  
Suklyun Hong P1-co.601  
SUN Gwangmin B13.08,  
P1-pa.036  
SUN Gwang-min P1-pa.029  
SUN Yiyang G9.03  
SUNG Ha-June E6.01  
Sung Joo ROH P1-pa.020  
Sunglae Cho P1-co.610  
SUR Yeahan D9.03  
SWAGTEN Henk J. M. P2-ap.131,  
P2-ap.132  
SYED Akbar Ali P2-ap.134  
TAE KYU Kim P2-at.013  
Tae Won Noh P2-co.203  
TAIVANSAIKHAN Purev P1-co.407  
TAJIMA Osamu P1-pa.038  
Takashi Taniguchi P1-co.602  
Takashi Taniguchi P1-co.507  
Takashi Taniguchi P1-co.506  
Takashige Omatsu G12.05  
TAKEYAMA Shojiro D10.02

TAKEZOE Hideo	D8.03	Valentin	F12.03
TAMANG Sudarsan	P1-co.613	VAN ONSEM Gerrit	G13.01
TAN Joshua Artem	P1-nu.006, P1-nu.028	VAN PARIJS Isis	G13.01
TANABE Hiroshi	B12.02	VOZNYI Oleksandr	P1-ap.102
TANAKA Hidekazu	C3.02	VU Hoa Thi	P2-se.046
TANIGUCHI Takashi	A2.07	VU Hoa Thi	P2-se.042
TANIGUCHI Takashi	P1-co.510	W. A. Peters	D1.01
TANIGUCHI Takashi	F10.01	W. E. Pickett	D5.02, P2-co.313
TANIGUCHI Takashi	G5.02	W. E. Pickett	D5.03
TAPASZTO Levente	A7.02	WADA Michiharu	H1.01
TCHOE Youngbin	H3.09	WALKER Bright	F3.01, F3.02
TERZOLO Laurent	P2-pl.026	WANG Han	G9.03
The AMoRE Collaboration	E13.05	WANG Lili	P2-ap.118
Thi Hinh Dinh	P1-co.301	WANG Sonjong	P1-pl.022
Thomas G. Folland	H3.06	WANTANA N.	H3.04
TIVAKORNSASITHORN Kritsanu	G8.08	WATANABE Kenji	A2.07
TIVAKORNSASITHORN Kritsanu	G8.04	WATANABE Kenji	P1-co.510
TOKUNAGA Yusuke	A8.03	WATANABE Kenji	F10.01
TOKURA Yoshinori	A8.03	WATANABE Kenji	G5.02
TOMITA Nozomu	P1-pa.038	WATANABE Tomo-Hiko	P1-pl.016
Toshitaka Kajino	D1.02	WATANABE Yutaka	E1.01
TRINH Ly Thi	P1-co.616	WATANABE Yutaka	H1.01
Trinh Thi Ly	P1-co.610	WEI Di	G5.02
TRIVEDI Nandini	C5.02	WEON Byung Mook	G7.03
TRUONG Gia Khuong	P2-st.010	WEON Byung Mook	D8.07
TSHOO Kyoungso	G1.04	WEST Damien	G9.03
TURIMOV Bobur	A1.07	WI H.M.	P1-pl.010
UHM Han Sup	P2-pl.030	WI Hanmin	P1-pl.009
UHM Han Sup	P2-pl.031	WI Hyunho	P1-pl.022
UHM Heesoo	P1-co.109	WI Sangwon	C8.01
ULLAH Farman	D3.02	WILSON Howard	D12.01
ULLAH Hamid	C8.05	WILSON S. D.	P2-co.307
ULLAH Naveed	P2-co.101	WON Choi Jung	P1-co.620
UM Jaegon	A4.05	WON Eunil	P1-pa.007
UM Jaegon	A4.02	WON Eunil	P1-pa.038
UMAR Muhammad	A3.03	WON JONG Yoo	P1-ap.121
UR REHMAN Hafeez	P2-at.004	WON Namkung	P1-nu.024
UWATOKO Yoshiya	D9.04	WOO Hyeonseok	P2-ap.147
Uwe Griebner	F12.03	WOO Hyeonseok	P2-ap.142
VALENTI R	F5.05	WOO Hyeonseok	P1-ap.119
		WOO Hyun-Joo	P2-op.002

WOO J. K.	P1-pa.022
WOO J. K.	H13.03
WOO Jinhee	P1-co.615
WOO Jong-Kwan	P2-ap.204
WOO Won Seok	P2-ap.210
WRIGHT Oliver Bernard	
	H3.01,
	H3.02
WU J.W.	C3.04
WU Jeong Weon	G3.04
WU Jing	A12.08
WU Junqiao	C7.07
WU S M	B7.04
WU Sangwook	E4.03
WU Yang	P2-op.020
WULFERDING Dirk	D5.07
X. Bonnin	P1-pl.019
Xavier Mateos	F12.03
XIA Xuewei	F1.02
XIAO H	E10.03
XIAOTAO Geng	P2-co.329
XIE J	E10.03
XUE Junpeng	P2-ap.119
Y. G. Kim	F14.07
YACOBY Amir	G5.02
YAGI Masatoshi	P1-pl.011
YAMADA Ichihoro	P1-pl.002
YAN Yaping	P1-ap.141
YANG Bee Lyong	P2-ap.105,
	P2-ap.106,
	P2-ap.107
YANG Chanho	A3.02
YANG Chenxi	A2.02
YANG Daeho	P2-at.016
YANG Gwang-Woo	B1.04
YANG Heejun	F6.04
YANG Ho-Soon	P2-ap.121
YANG Hyeok-Jun	A3.06
YANG Hyoung Woo	P2-co.305
YANG Hyun Kyoung	P2-ap.223
YANG Hyun Kyoung	P2-ap.224
YANG In-Sang	P1-co.320
YANG In-Sang	P1-co.319
YANG In-Sang	F5.03

YANG Janghee	B13.04
YANG Janghee	B13.03
YANG Jeong-hun	A12.07
YANG Jeongyeol	B13.04
YANG Jeongyeol	B13.03
YANG Jinho	P1-ap.133
YANG Jongmann	P2-as.006
YANG JungYup	H2.02,
	P2-se.036
YANG JungYup	P2-ap.129
YANG Jungyup	P2-se.034
YANG JungYup	A2.06
YANG Jung-Yup	H4.03
YANG Kwangmo	P1-nu.016
YANG Seong-Gyu	C5.03
YANG SeungMo	P2-ap.130
YANG Seungmo	P2-ap.129
YANG SeungMo	A2.06
YANG Seung-Mo	H4.03
YANG Sung-Chul	B1.04
YANG Un-ki	C14.02,
	H13.01,
	P1-pa.001
YANG Un-ki	H13.05
YANG Wenge	C9.03
YANG Wonjun	P2-ap.120
YANG Zhenyu	P1-ap.102
Yangjin Lee	B3.03
Yannis K. Semertzidis	H5.02
Yannis K. Semertzidis	F5.07
YEO Changsu	B3.09
YEO Dong Kyu	P2-se.017
YEO Hwan-Seop	F2.04
YEO Insung	B13.04
YEO Insung	B13.03
YEOM Han Woong	H6.04
YEOM Han Woong	D5.07
YEOM Hanwoong	C7.01
YEOM Jun Ho	P2-pl.026
YEOM Junho	P1-pl.007
YI Gyu-Chul	A2.07
YI Gyu-Chul	H3.09
YI Gyu-Chul	D3.03
YI Myunggi	P2-st.010

YI Myunggi	P2-st.009	YOON Hosang	A2.07
YI Sang-Heon	A14.07	YOON Hyunjung	E4.03
YI Seho	C7.04	YOON Jisang	P2-ap.220
YI Seoung Soo	P2-op.002	YOON Jonghwan	P1-ap.134, P2-ap.220
YI Su Do	D4.01		
YI Sunwouk	E9.04	YOON Jungran	P1-nu.025
YI Sunwouk	H5.01	YOON Junho	P2-op.013
YI Yeonjin	E3.05	YOON Junho	P2-op.014
Yicheng Wang	F12.03	YOON Kookhyun	F14.03
Yiming Yang	P2-se.016	YOON Kyung Byung	C8.08
YIN Yuxiang	P2-ap.131, P2-ap.132	YOON Kyusuk	P2-co.105
		YOON S.W.	P1-pl.044
YONG YU JAE	P2-ap.148	YOON Sangmoon	F5.08
YONG YU JAE	P2-ap.149	YOON Siwoo	P1-pl.040
Yong-jun Lim	H8.03	YOON Siwoo	P1-pl.047
YOO Daekyoung	F3.05	YOON Sungyoung	P2-pl.044
YOO Dongsuk	P1-co.613	YOON Taeyoung	D8.02
YOO Hwidong	H13.06	YOON Tae-Young	D8.06
YOO Hyung-Ha	P2-st.019	YOON Wonsik	G1.07
YOO Jung-Woo	H4.04	YOON Yeo Woong	B14.04
YOO Jung-Woo	P2-ap.214	YOON Young Soo	E13.02, P1-pa.030
YOO Jung-Woo	C3.01		
YOO Jung-Woo	P2-ap.215	YOON Yung Jin	P1-ap.102
YOO Kyung-Hwa	P2-ap.206	YOSHIDA Mitsuhiro	P1-pa.038
YOO Pilsun	P1-co.401	YOU Chun-Yeol	P2-ap.131, P2-ap.132
YOO Sang-Cheol	P1-co.417		
YOO Sung-Mi	D13.01	YOU Chun-Yeol	P2-ap.133
YOO Taehee	G8.02	YOUN Sungwoo	P1-pa.013
YOO Taehee	G8.08	YOUN SungWoo	P1-pa.012
YOO Taehee	G8.04	Younghee Kim	P2-ap.125
YOO Won Jong	A2.02	Young-Ouk Lee	B1.03
YOO Yang-Seok	F2.05	YOUSAF Masood	P1-co.205
YOO Yong-Chan	E9.04	YU Dongho	G12.03
YOO Young Joon	P1-ap.103, P1-ap.104	YU Geumbong	H13.01, P1-pa.001
YOO Young Joon	H3.03	YU GeumBong	H13.05
YOOK Soon-Hyung	P2-st.031	YU In-Keun	P2-pl.044
YOOK Youngmin	P1-pa.021	YU Intae	B13.04
YOON C. S.	P1-pa.022	YU Intae	B13.03
YOON C. S.	H13.03	YU Jae Su	C3.03
YOON Chiho	P1-co.502	YU Jae Su	H3.05
YOON Hansub	A3.01, P2-ap.136	YU Nan Ei	G12.04
		YU Sanghyuck	P1-ap.159
YOON Hongkee	P1-co.215	YU Sanghyuck	P1-ap.158,

	P2-se.031
YU Segi	P1-co.401
Yubai Pan	F12.03
YuChul Yang	G13.04
YUN G S	P1-pl.034
YUN Gunsu	A12.03
YUN Gunsu	P1-pl.017,
	P1-pl.023
YUN Hyung-Joong	A3.04
YUN Hyung-Joong	A3.05
YUN Jae Hyun	P1-co.224
YUN Kyuseok	C8.06
YUN Seok Joon	P1-ap.142
YUN Seungjin	C12.02
YUN Sung-woo	C8.04
YUN Won Seok	P1-co.208
YUN Won Seok	P1-co.219
YUN Won Seok	A7.01
YUNE Jiwon	C6.03
Yura Kang	P2-ap.125
ZABOROVA Elena	G3.04
ZAMAN Muhammad	P1-nu.022
ZHANG Chao	E9.04
ZHANG Shengbai	G9.03
ZHAO BumSuk	D13.07
ZHAO Nan	C6.02
ZHAO Tian-Ming	D13.02
ZOH Inhae	E9.04
ZOLETNIK S.	P1-pl.010
ZOZULYA Alexey	C8.06
ZOZULYA Alexey	P2-co.105
ZUPAN Jure	D14.03





## 한국물리학회 회보 제34권 제1호

인 쇄 2016년 4월 18일

발 행 2016년 4월 20일

발행인 김승환  
사단법인 한국물리학회

발행처 서울특별시 강남구 테헤란로 7길 22(역삼동)  
Tel. 02-556-4737(대표전화)  
Fax. 02-554-1643  
Homepage. <http://www.kps.or.kr>  
e-mail. [office@kps.or.kr](mailto:office@kps.or.kr)

인쇄인 좋은생각좋은사람들(Tel. 031-902-3105)

※ 이 책자는 2016년도 정부재원(과학기술진흥기금 및 복권기금)으로  
한국과학기술단체총연합회의 지원을 받아 발간되었음