

The Korean Physical Society

# 한국 물리학회 회보

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2014

봄 학술논문발표회 및  
제 90회 정기총회

2014. 4. 23(수)~25(금)  
대전컨벤션센터



*The Korean Physical Society*

## 구두발표논문 시간표





## SESSION A

학회 주관 세션

A

2014년 4월 23일(수) 학회주관세션

### [AP1] 한국물리학회 기초강연

2014년 4월 23일 수요일 17:00 – 18:00

장소: 301호

좌장: 노 태 원 서울대

AP-01 [17:00-18:00]

**Towards monocrystalline graphene** / LEE Young Hee(Center for Integrated Nanostructure Physics, Institute for Basic Science, Sungkyunkwan University, Suwon, Kyunggi-do 440-746, South Korea, Department of Energy Science, Department of Physics, Sungkyunkwan University, Suwon, Kyunggi-do 440-746, South Korea.)

2014년 4월 24일(목) 학회주관세션

### [AP2] 한국물리학회-KIAS 기초강연

2014년 4월 24일 목요일 13:00 – 14:00

장소: 301호

좌장: 김 두 철 고등과학원

AP-02 [13:00-14:00]

**Superscillations and weak measurement** / BERRY Michael(H H Wills Physics Laboratory, University of Bristol, UK.)

2014년 4월 23일(수) 학회주관세션

### [A1] KPS-인텔 특별세션

2014년 4월 23일 수요일 15:00 – 17:00

장소: 206호

좌장: 윤 영 귀 중앙대

A1-01 [15:00-15:50]

**Accelrys Materials Studio**를 이용한 양자 물성 계산 프로그램 소개 / 임 석호(Accelrys Korea.)

A1-02 [16:00-16:50]

인텔 소프트웨어를 이용한 전자구조 계산 소개 / 박진우, 홍석륜(세종대학교 그래핀연구소 & 물리학과.)



2014년 4월 24일(목) 학회주관세션

**[A2] 여성위원회 특별세션 – 물리학 석박사의 진로선택**

2014년 4월 24일 목요일 11:30 – 13:00

장소: 107호

좌장: 김 시 연 중앙대

A2-01 [11:30-11:40]

위원장님, 학회장님 인사말씀

A2-02 [11:40-12:05]

물리학 석박사의 진로 선택, 기업체 연구개발직 / 안성용(삼성전기.)

A2-03 [12:05-12:30]

물리학 석박사의 진로 선택, 국책연구소의 연구직 / 박병근(국과연.)

A2-04 [12:30-13:00]

점심식사와 질의 응답

**[A3] Open KIAS 특강**

2014년 4월 24일 목요일 11:00 – 12:45

장소: 301호

좌장: 고 병 원 KIAS

A3-01 [11:00-11:50]

**Search for Dark Matter and Neutrinoless Double Beta Decay /**  
KIM Yeongduk(IBS, Center for Underground Physics / Sejong University, Physics  
Department.)

A3-02 [11:50-12:40]

**Neutrino, Dark Matter and New Physics /** CHUN Eung Jin(KIAS.)

**[A4] 정책세션: 한국연구재단 기초연구사업 현황 및 추진방향**

2014년 4월 24일 목요일 15:00 – 15:45

장소: 301호

좌장: 이 재 일 인하대

A4-01 [15:00-15:30]

한국연구재단 2014년도 기초연구사업 현황 및 추진 방향 / 홍순형(한국연구  
재단 기초연구본부장.)

A4-02 [15:30-15:45]

질의/응답 / 홍순형, 남계춘(한국연구재단 기초연구본부장, 한국연구재단 자연과  
학단장.)



**[A5] "고교생 물리페스티벌" 특별강연**

2014년 4월 24일 목요일 16:25 - 17:00

장소: 201호

좌장: 김 준 성 포항공대

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**A5-01** [16:25-17:00]

메타물질-21세기 인간들의 새로운 작품 / 김철구(연세대, 과학기술정보연.)

**[A6] KIAS 대중강연**

2014년 4월 24일 목요일 18:00 - 20:00

장소: 101/102호

좌장: 전 응 진 KIAS

**A6-01** [18:00-18:50]

디지털 다음은? 퀀텀! 양자컴퓨터와 양자정보의 세계를 들여다 본다 / 김재완(고등과학원.)

**A6-02** [19:00-19:50]

구글 신은 모든 것을 알고 있다! 빅데이터와 복잡계 네트워크 / 정하웅(카이스트.)



## SESSION B

## 입자물리학과회

2014년 4월 23일(수) 입자물리학과회 구두 발표

### [BG1] 입자물리학과회 General Session: QCD

2014년 4월 23일 수요일 11:00 - 12:15

장소: 108호

좌장: 김 낙 우 경희대

BG-01 [11:00-11:15]

**Neutral Kaon Indirect CP Violation** / 이원중, 장용철(서울대학교 물리천문학부.)

BG-02 [11:15-11:30]

**A New Approach to Quark Confinement** / CUNDY Nigel, LEE Weonjong, CHO Yongmin<sup>1</sup>(Seoul National University, <sup>1</sup>건국대학교.)

BG-03 [11:30-11:45]

**Lattice Calculation of Beyond the Standard Model Kaon B-parameter using Improved Staggered Quarks** / LEE Weonjong, LEEM Jaehoon, YOON Boram<sup>1</sup>, SHAPE Stephen<sup>2</sup>(서울대학교, <sup>1</sup>Los Alamos National Lab, Nuclear, Particle, Astrophysics and Cosmology Group(T-2), <sup>2</sup>University of Washington, Physics Department.)

BG-04 [11:45-12:00]

**Non-perturbative Renormalization of Bilinear Operators with HYP Improved Staggered Quarks** / 김장호, 이원중, 박성우(서울대학교.)

BG-05 [12:00-12:15]

**GPU Computing on Lattice QCD** / 이원중, 정환철, 박정환(서울대학교, 물리천문학부.)

### [BG2] 입자물리학과회 General Session: 끈

2014년 4월 23일 수요일 13:00 - 14:30

장소: 108호

좌장: 이 원 중 서울대

BG-06 [13:00-13:15]

**Free energy of M-theory brane dynamics and holography** / KIM Nakwoo(Kyung Hee University.)

BG-07\* [13:15-13:30]

**Matrix Models from Localization of 5-dimensional SYM** / RO Daeho, LEE Bum-Hoon<sup>1</sup>, YANG Hyun Seok<sup>2</sup>(Department of Physics, Sogang University, <sup>1</sup>Department of Physics and Center for Quantum Spacetime, Sogang University, <sup>2</sup>Center for Quantum Spacetime, Sogang University.)

**B****BG-08** [13:30-13:45]**Renormalized Entanglement Entropy of the Mass-deformed ABJM Theory** / 권오갑, 김경규<sup>1</sup>, 박찬용, 신현준<sup>2</sup>(이화여자대학교, <sup>1</sup>GIST, <sup>2</sup>KIAS.)**BG-09\*** [13:45-14:00]**A new analytic method for calculating greybody factors of 5D black holes** / HYUN Young-Hwan, KIM Yoonbai, PARK Seong Chan(Sungkyunkwan University.)**BG-10\*** [14:00-14:15]**Quasi-local charges and asymptotic symmetry generators** / HYUN Seungjoon, YI Sang-Heon, PARK Sang-A(Department of Physics, Yonsei University.)**BG-11\*** [14:15-14:30]**U-gravity and U-geometry : SL(N)** / 박정혁, 서윤지(서강대학교, 물리학과.)**[BG3] 입자물리학회 General Session: 끈, 현상론**

2014년 4월 23일 수요일 15:00 - 16:15

장소: 108호

좌장: 계 범 석 부산대

**BG-12** [15:00-15:15]**Quasi-particles in the non-Fermi liquid** / SEO Yunseok, SIN Sang-Jin, KIM Bom Soo<sup>1</sup>(Hanyang University, <sup>1</sup>Tel Aviv University.)**BG-13** [15:15-15:30]**Towards Heterotic Line Bundle Standard Models** / LEE Seung-Joo, HE Yang-Hui<sup>1</sup>, LUKAS Andre<sup>2</sup>, SUN Chuang<sup>2</sup>(KIAS, <sup>1</sup>City University London, <sup>2</sup>Oxford University.)**BG-14** [15:30-15:45]**Dark Matter in Zee-Babu Model** / 백승원, OKADA Hiroshi, 고병원, SENAHA Eibun<sup>1</sup>(KIAS, <sup>1</sup>Nagoya University.)**BG-15** [15:45-16:00]**Gravity-mediated (or Composite) dark matter** / LEE Hyun Min, PARK Myeonghun<sup>1</sup>, SANZ Veronica<sup>2</sup>(중앙대학교, 물리학과, <sup>1</sup>Kavli Institute for the Physics and Mathematics of the Universe, <sup>2</sup>University of Sussex, Department of Physics and Astronomy.)**BG-16** [16:00-16:15]**Hidden sector monopole, vector dark matter and dark radiation with Higgs portal** / 박완일(고등과학원.)





2014년 4월 24일(목) 입자물리학과회 구두 발표

**[BG4] 입자물리학과회 General Session: 현상론**

2014년 4월 24일 목요일 09:00 – 10:30

장소: 108호

좌장: 이 현 민 중앙대

**BG-17** [09:00-09:15]

**Higgs-dilaton(radion) system confronting the LHC Higgs data / 정  
동원(고등과학원)**

**BG-18** [09:15-09:30]

**For natural Higgs boson in SUSY / 계범석, 신창섭(부산대학교, 물리학과,  
Rutgers University, Dep. of Physics and Astronomy.)**

**BG-19** [09:30-09:45]

**Coleman-Weinberg Higgs and Higgs factory / KIM Hyung Do(Seoul  
National University, Department of Physics and Astronomy.)**

**BG-20** [09:45-10:00]

**Inert Doublet Model With Local U(1) Higgs Symmetry / 유채현, 고병  
원, OMURA Yuji(고등과학원, Nagoya University.)**

**BG-21** [10:00-10:15]

**Probing for new physics with B, D, and K systems and lattice QCD  
/ BAILEY Jon A., LEE Weonjong, SHARPE Stephen R.<sup>1</sup>, JANG Yong-Chull,  
LEEM Jaehoon, DU Daping<sup>2</sup>, EL-KHADRA A. X.<sup>3</sup>, GOTTLIEB Steven<sup>4</sup>, JAIN R. D.<sup>3</sup>,  
KRONFELD Andreas<sup>5</sup>, VAN DE WATER Ruth<sup>5</sup>, ZHOU R.<sup>4</sup>(서울대학교, <sup>1</sup>University  
of Washington, Seattle. <sup>2</sup>Syracuse University. <sup>3</sup>University of Illinois, Urbana.  
<sup>4</sup>Indiana University. <sup>5</sup>Fermilab.)**

**BG-22** [10:15-10:30]

**New production mechanism for heavy neutrinos at the LHC /  
YANG Un-ki, DEV P.S. Bhupal<sup>1</sup>, PILAFTSIS Apostolos<sup>1</sup>(서울대학교 물리천문학부,  
<sup>1</sup>University of Manchester.)**

**[BG5] 입자물리학과회 General Session: Belle, RENO**

2014년 4월 24일 목요일 11:00 – 12:30

장소: 108호

좌장: 서 선 희 서울대

**BG-23** [11:00-11:15]

**Measurement of the Branching Fractions for  $B^+ \rightarrow (c\bar{c}b)K^+ \rightarrow$   
 $ppb\bar{K}^+$  Decays / 이재금, OLSEN Stephen Lars(서울대학교 물리천문학부.)**



BG-24 [11:15-11:30]

**Search for neutral isospin partner of the  $Ds_0^+$  and news on XYZ states /** CHOI Sookyung, OLSEN Stephen<sup>1</sup>(경상대학교 물리학과, <sup>1</sup>서울대학교 물리학과.)

BG-25 [11:30-11:45]

**Observation of a Charged  $DD^*$ bar Mass Peak in  $e^+e^- \rightarrow \pi^+(DD^*\text{bar})^-$  at  $E_{cm} = 4.26$  GeV /** XU Xinning, OLSEN Stephen Lars(Seoul National University.)

BG-26 [11:45-12:00]

**Detection of reactor neutrinos with neutron captures on hydrogen /** 서선희, 김우영<sup>1</sup>, 선용근<sup>1</sup>, 박인곤<sup>2</sup>, 장지승<sup>3</sup>, 박명렬<sup>4</sup>, 최준호<sup>4</sup>, 장한일<sup>5</sup>, 김상용, 김수봉, 박정식, 서현관, 이동하, 이병훈, 이순규, 최선호, 최원국, 양장희<sup>6</sup>, 유인태<sup>6</sup>, 최영일<sup>6</sup>, 김영덕<sup>7</sup>, 전은주<sup>7</sup>, 김바로<sup>8</sup>, 김승찬<sup>8</sup>, 박령균<sup>8</sup>, 김재률<sup>8</sup>, 소선행<sup>8</sup>, 송숙형<sup>8</sup>, 신창동<sup>8</sup>, 여인성<sup>8</sup>, 임인택<sup>8</sup>, 주경광<sup>8</sup>, 김현수<sup>9</sup>, 김시연<sup>10</sup>, 고영주<sup>10</sup>(서울대, 물리학과, <sup>1</sup>경북대, 물리학과, <sup>2</sup>경상대, 물리학과, <sup>3</sup>광주과학기술원, 물리학과, <sup>4</sup>동신대, 물리학과, <sup>5</sup>서영대, 물리학과, <sup>6</sup>성균관대, 물리학과, <sup>7</sup>BS/세종대, 물리학과, <sup>8</sup>전남대, 물리학과, <sup>9</sup>전북대, 물리학과, <sup>10</sup>중앙대, 물리학과.)

BG-27 [12:00-12:15]

**New results from RENO /** 서현관, 김우영<sup>1</sup>, 선용근<sup>1</sup>, 장지승<sup>2</sup>, 박명렬<sup>3</sup>, 최준호<sup>3</sup>, 장한일<sup>4</sup>, 김상용, 김수봉, 박정식, 서선희, 이동하, 이병훈, 이순규, 최선호, 최원국, 양장희<sup>5</sup>, 유인태<sup>5</sup>, 최영일<sup>5</sup>, 김영덕<sup>6</sup>, 전은주<sup>6</sup>, 김바로<sup>7</sup>, 김승찬<sup>7</sup>, 박령균<sup>7</sup>, 김재률<sup>7</sup>, 소선행<sup>7</sup>, 송숙형<sup>7</sup>, 신창동<sup>7</sup>, 여인성<sup>7</sup>, 임인택<sup>7</sup>, 주경광<sup>7</sup>, 김현수<sup>8</sup>, 김시연<sup>9</sup>, 고영주<sup>9</sup>(서울대학교, 물리학과, <sup>1</sup>경북대학교, 물리학과, <sup>2</sup>광주과학기술원, <sup>3</sup>동신대학교, 방사선학과, <sup>4</sup>서영대학교, <sup>5</sup>성균관대학교, 물리학과, <sup>6</sup>BS/세종대, <sup>7</sup>전남대학교, 물리학과, <sup>8</sup>전북대학교, 물리학과, <sup>9</sup>중앙대학교, 물리학과.)

BG-28\* [12:15-12:30]

**Reactor neutrinos and backgrounds at RENO /** 최원국, 김우영<sup>1</sup>, 선용근<sup>1</sup>, 박인곤<sup>2</sup>, 장지승<sup>3</sup>, 박명렬<sup>4</sup>, 최준호<sup>4</sup>, 장한일<sup>5</sup>, 김상용, 김수봉, 박정식, 서선희, 서현관, 이동하, 이병훈, 이순규, 최선호, 최원국, 양장희<sup>6</sup>, 유인태<sup>6</sup>, 최영일<sup>6</sup>, 김영덕<sup>7</sup>, 전은주<sup>7</sup>, 김바로<sup>8</sup>, 김승찬<sup>8</sup>, 박령균<sup>8</sup>, 김재률<sup>8</sup>, 소선행<sup>8</sup>, 송숙형<sup>8</sup>, 신창동<sup>8</sup>, 여인성<sup>8</sup>, 임인택<sup>8</sup>, 주경광<sup>8</sup>, 김현수<sup>9</sup>, 김시연<sup>10</sup>, 고영주<sup>10</sup>(서울대학교, <sup>1</sup>경북대학교, <sup>2</sup>경상대학교, <sup>3</sup>광주과학기술원, <sup>4</sup>동신대학교, <sup>5</sup>서영대학교, <sup>6</sup>성균관대학교, <sup>7</sup>BS/세종대, <sup>8</sup>전남대학교, <sup>9</sup>전북대학교, <sup>10</sup>중앙대학교.)

**[BG6] 입자물리학회 General Session: CUP, OPERA**

2014년 4월 24일 목요일 14:00 - 15:30

장소: 108호

좌장: 이 현 수 이화여대

BG-29 [14:00-14:15]

**Study of NaI crystal responses to nuclear and electron recoils in WIMP searches /** 이현수(이화여자대학교, 물리학과 (KIMS Collaboration).)



BG-30 [14:15-14:30]

**Low Energy Backgrounds in the KIMS-Nal Experiment** / 김경원(IFS-Center for Underground Physics, 서울대학교 (KIMS collaboration).)

BG-31 [14:30-14:45]

**Status of SBL Experiment** / KIM Jinyu, KIM Hongjoo<sup>1</sup>, LEE Jooyoung<sup>1</sup>, JOO Kyungkwang<sup>2</sup>, SO Sun-heang<sup>2</sup>, SONG Sook Hyung<sup>2</sup>, YEO In Sung<sup>2</sup>, KIM Ba Ro<sup>2</sup>, MA Kyungju, JEON Eun-ju<sup>3</sup>, KIM Yeongduk<sup>3</sup>, LEE Jaison<sup>3</sup>, LEE Jeong-yeon<sup>3</sup>, PARK Kang-soon<sup>3</sup>, PARK Hyangkyu<sup>3</sup>, SUN Gwang-Min<sup>4</sup>, KIM Siyeon<sup>5</sup>, KO Youngju<sup>5</sup>(Sejong University. <sup>1</sup>Kyungpook National University. <sup>2</sup>Chonnam National University. <sup>3</sup>Institute of Basic Science. <sup>4</sup>Korea Atomic Energy Research Institute. <sup>5</sup>Chung-Ang University.)

BG-32 [14:45-15:00]

**Status of AMoRE experiment using MMC sensors at low temperature** / SO Jungho, AMORE Collaboration(기초과학연구원, 지하실험연구단.)

BG-33 [15:00-15:15]

**Search for  $\nu_e$  CC events in the OPERA Experiment** / KIM Jihyun, YOON Chun Sil, PARK In Gon, KIM Sung Hyun<sup>1</sup>, PARK Byung Do<sup>2</sup>(GNU. <sup>1</sup>CUP, IBS. <sup>2</sup>Changwon Samsung Hospital, SKKU.)

**입자물리분과운영위원회**

2014년 4월 24일 목요일 16:00 – 17:00

장소: 108호

2014년 4월 25일(금) 입자물리학과회 구두 발표

**[BG7] 입자물리학과회 General Session: CMS**

2014년 4월 25일 금요일 09:00 – 10:45

장소: 108호

좌장: 김 현 수 전북대

BG-34 [09:00-09:15]

**A study of initial state gluon radiation on the Drell-Yan process at the LHC** / KIM Junho, PARK Jaegyun, ALMOND John, YU Geumbong, YANG Un-ki(서울대학교 물리천문학부.)

BG-35 [09:15-09:30]

**Results of the Measurement of the Transverse Momentum Distribution of W Bosons in pp Collisions at 8 TeV** / YUSUPOV Hamid, BUTANOV Khakimjan, PARK Sang-il, SAKHAROV Alexandre, LEE SangEun, SON Dongchul, KIM Guinyun, KIM Jungmin<sup>1</sup>, KROPIVITSKAYA Anna<sup>1</sup>, NAM Soonkwon<sup>1</sup>(The Center for High Energy Physics, Kyungpook National University. <sup>1</sup>Kangwon National University.)



BG-36 [09:30-09:45]

**Monte-Carlo Study of Randall-Sundrum Black Hole at LHC /** GOH Junghwan, HWANG chanwook, KANG Dongwoo, HYUN Young-hwan, LEE seunghak, PARK Seongchan, YU intae(Sungkyunkwan University.)

BG-37 [09:45-10:00]

**Search for doubly charged Higgs bosons at  $\sqrt{s}=8\text{TeV}$  at CMS experiment. /** LEE Jongseok, CHOI Youngil, CHOI suyong<sup>1</sup>(Sungkyunkwan University, Department of Physics. <sup>1</sup>Korea University, Department of Physics.)

BG-38 [10:00-10:15]

**Search for a vector-like bottom quark partner in same sign dilepton final states /** CHO Yong-jin, CHOI Young-Kyu, CHOI Young-II(Sungkyunkwan University.)

BG-39 [10:15-10:30]

**Status report for the bounding Higgs width from  $H \rightarrow WW$  at CMS /** 이상은, 손동철, 김귀년, SAKHAROV Alexandre, BUTANOV Khakimjan, HAMMID Yusupov, 남순권<sup>1</sup>, KROPIVNITSKAYA Anna<sup>1</sup>(경북대학교, 강원대학교.)

**[BG8] 입자물리학분과회 General Session: CMS, 검출기**

2014년 4월 25일 금요일 11:00 – 12:30

장소: 108호

좌장: 유 인 태 성균관대

BG-40 [11:00-11:15]

**Top-quark Mass Measurements with CMS /** 김민석, 김동희, 유인태<sup>1</sup>, 고정환<sup>1</sup>, 권은향<sup>1</sup>(경북대학교, 물리학과. <sup>1</sup>성균관대학교, 물리학과.)

BG-41 [11:15-11:30]

**MVA and NoPU MET implementation at the reconstruction level /** BUTANOV Khakimjan, YUSUPOV Hammid, PARK Sang-il, LEE Sangeun, SON Dongchul, KIM Guinyun, KIM Jungmin<sup>1</sup>, NAM Soonkwon<sup>1</sup>(The Center for High Energy Physics, Kyungpook National University. <sup>1</sup>Kangwon National University.)

BG-42 [11:30-11:45]

**Muon Trigger Level 1 Upgrade in CMS /** LEE Jason, PARK Inkyu, RYU Minsang, KIM Jihyun, CHOI Minkyoo, RYU Geonmo, KIM Hyuonyong, LEE Jangbae, CHOI Kijin(University of Seoul, Department of Physics.)

BG-43\* [11:45-12:00]

**Study of GEM Triggering in the CMS software /** CHOI Kijin, RYU minsang<sup>1</sup>, KIM Jihyun, LEE Jason, CHOI Minkyoo, RYU Geonmo, KIM Hyuonyong, LEE Jangbae, PARK Inkyu(University of Seoul, Department of Physics. <sup>1</sup>Chonbuk National University, Department of Physics.)



BG-44\* [12:00-12:15]

**Upgrade activity for the CMS forward Muon detector using GEM**

/ 박인규, 최민규, 김현수<sup>1</sup>, 류민상<sup>1</sup>, 김지현, LEE Jason, 박원일, 정영균<sup>1</sup>, 김태희, 김현용, 류건모, 이장배, 최기진(서울시립대학교 물리학과, <sup>1</sup>전북대학교 물리학과.)

BG-45 [12:15-12:30]

**Phonon Simulation In a CaMoO4 Crystal Detector Used For Rare Event Search Experiments**

/ 이주희, 이민규, 김용함<sup>1</sup>, 강찬석<sup>1</sup>, 소중호<sup>1</sup>, 이혜진<sup>1</sup>, 김소라<sup>1</sup>, 김건보<sup>1</sup>, 윤원식<sup>1</sup>(한국표준과학연구원, 양자측정센터, <sup>1</sup>기초과학연구원, 지하실험연구단.)



## SESSION C

## 원자핵물리학분과회

2014년 4월 23일(수) 원자핵물리학분과회 구두 발표

### [CG1] 원자핵물리학분과회 General Session

2014년 4월 23일 수요일 11:00 – 12:00

장소: 107호

좌장: 천 명 기 숭실대

C

CG-01 [11:00-11:20]

**Model-independent Aspects of the Reaction  $K^{+}p \rightarrow K^{+}\Lambda$**  / 오  
용석, JACKSON B.C.<sup>1</sup>, NAKAYAMA K.<sup>1</sup>, HABERZETTL H.<sup>2</sup>(경북대학교, <sup>1</sup>Univ. of  
Georgia, <sup>2</sup>George Washington Univ..)

CG-02 [11:20-11:40]

**Jet-quenching parameter of QGP** / 남승일(부경대.)

CG-03 [11:40-12:00]

**Reconstruction of photons and jets in relativistic heavy ion  
collisions using CMS detector at LHC** / 김용선, 고연주, 홍병식(고려대학  
교, 물리학과.)

### [CG2] 원자핵물리학분과회 General Session

2014년 4월 23일 수요일 13:30 – 14:45

장소: 107호

좌장: 오 용 석 경북대

CG-04 [13:30-13:45]

**Investigates about gluonic dimension 6 operators** / LEE SuHoung,  
KIM HyungJoo(연세대학교.)

CG-05\* [13:45-14:00]

**Generalized Form Factors and Transverse Charge Densities of the  
Pseudoscalar Mesons from the Instanton Vacuum.** / 손현동, 김현철(인  
하대학교.)

CG-06\* [14:00-14:15]

**Study of  $np \rightarrow d\gamma$  reaction up to a few MeV region using extended  
chiral perturbation theory with vector mesons and  $\Delta(1232)$**  / 함철  
민, 박태선<sup>1</sup>, 홍승우<sup>1</sup>(성균관대학교, 에너지과학과, <sup>1</sup>성균관대학교, 물리학과.)

CG-07 [14:15-14:30]

**Effects of the time-dependent non-thermal distribution on the  
big bang nucleosynthesis** / 홍승우, 박태선, 민경주(성균관대학교 물리학과,  
<sup>1</sup>성균관대학교 에너지과학과.)



CG-08 [14:30-14:45]

**Photoproduction of scalar mesons** / 이제희, 류휘영<sup>1</sup>, 김현철(인하대학교, 한국과학기술정보연구원.)

**[CG3] 원자핵물리학과회 General Session**

2014년 4월 23일 수요일 15:00 – 16:00

장소: 107호

좌장: 김 현 철 인하대

CG-09 [15:00-15:20]

**Double-Lambda He-6 in cluster effective field theory** / ANDO Shung-Ichi, OH Yongseok<sup>1</sup>(Sunmoon University, Department of Information Display, <sup>1</sup>Kyunpook National University, Department of Physics.)

CG-10 [15:20-15:40]

**Rescattering contributions in  $\Lambda(1520)$  photoproduction off the proton** / 류휘영, 김현철(한국과학기술정보연구원, <sup>1</sup>인하대학교, 물리학과.)

CG-11 [15:40-16:00]

**Production of  $J/\Psi$  mesons in heavy ion collisions** / CHO Sungtae, LEE Su Hyoung(Yonsei University.)

**원자핵물리학과회 분과총회**

2014년 4월 23일 수요일 16:00 – 16:30

장소: 107호

좌장: 안 정 근 고려대

2014년 4월 24일(목) 원자핵물리학과회 구두 발표

**[CG4] 원자핵물리학과회 General Session**

2014년 4월 24일 목요일 10:00 – 11:15

장소: 107호

좌장: 김 은 주 전북대

CG-12\* [10:00-10:15]

**QCD phase transition at RAON?** / 이창환, 이유정<sup>1</sup>, 김영만<sup>2</sup>, GAITANOS Theodoros<sup>3</sup>, WOLTER Hermann<sup>4</sup>(부산대학교 물리학과, <sup>1</sup>부산대학교 물리학과, 기초과학연구원 중이온가속기구축사업단, <sup>2</sup>기초과학연구원 중이온가속기구축사업단, <sup>3</sup>Giessen U., <sup>4</sup>Munich U.)

CG-13\* [10:15-10:30]

**Development of an event-reconstruction algorithm and radiation tests for prototype neutron detectors for high-energy experiments of the LAMPS** / 김범곤, 이기수, 박재범, 유재희, 홍병식, 이경세, 김영진(고려대학교, 물리학과, <sup>1</sup>BS(기초과학연구원))



CG-14 [10:30-10:45]

**Simulation and design of the low-energy LAMPS system at RAON**

/ 박재범, 유재희, 김범곤, 이경세, 홍병식, 김영진<sup>1</sup>(고려대학교, <sup>1</sup>IBS.)

CG-15\* [10:45-11:00]

**Simulation and test results of the low-energy neutron detector for LAMPS at RAON** / 유재희, 박재범, 김범곤, 이경세, 홍병식(고려대.)

C

CG-16\* [11:00-11:15]

**Nuclear Symmetry Energy in QCD degree of freedom** / 이수형, 정기상(연세대학교.)

**[CG5] 원자핵물리학회 General Session**

2014년 4월 24일 목요일 14:00 - 15:30

장소: 107호

좌장: 유 인 권 부산대

CG-17 [14:00-14:15]

**Thin Gaseous Ionization Detectors for Measurements of High-energy Hadron Beams and for dose verification in particle therapy** / 이경세, 김신형, 김범곤, 박성근, 박재범, 홍병식(고려대학교.)

CG-18 [14:15-14:30]

**핵전자기펄스의 발생과 효과에 대한 전산모사 연구** / 가동하, 김석철<sup>1</sup>, 노응휘<sup>2</sup>, 문기영<sup>1</sup>, 심우섭, 엄원섭<sup>2</sup>(국방과학연구소, 화생방부, <sup>1</sup>볼트시뮬레이션, <sup>2</sup>연세대학교, 기계공학과.)

CG-19\* [14:30-14:45]

**Low  $p_T$  non-photonic electron production in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** / OH Kunsu(Pusan National University.)

CG-20\* [14:45-15:00]

**Bottomonia Production in pp, pPb, and PbPb Collisions in CMS** / 이송교, 문동호<sup>1</sup>, 김현철, 조미희, 이기수, 홍병식(Korea University, <sup>1</sup>University of Illinois at Chicago.)

CG-21\* [15:00-15:15]

**Measurement of Electrons from Beauty-Hadron Decays in p-Pb Collision at  $\sqrt{s_{NN}}=5.02$  TeV and in Pb-Pb Collision at  $\sqrt{s_{NN}}=2.76$  TeV with ALICE at the LHC** / KIM Minjung, YOON Jin-Hee, KWEON MinJung(Inha University.)





CG-22\* [15:15-15:30]

**Azimuthal anisotropy of prompt J/psi in PbPb collisions in CMS /**

이기수, 문동호, 조미희, 이송교, 김현철, 홍병식(고려대학교, <sup>1</sup>UIC.)

**[CG6] 원자핵물리학회 General Session**

2014년 4월 24일 목요일 16:00 – 17:15

장소: 107호

좌장: 권민정 인하대

CG-23\* [16:00-16:15]

**Nuclear Modification Factor of Prompt and Non-prompt J/psi in PbPb Collisions at 2.76 TeV /**

조미희, 문동호, 김현철, 이기수, 이송교, 홍병식(Korea university.)

CG-24 [16:15-16:30]

**Study of the production of B mesons in p-Pb collisions using displaced electrons in ALICE /**

KWEON MinJung, YOON Jin-Hee, CHO Soyeon(Inha university.)

CG-25\* [16:30-16:45]

**Isolated photon measurements in pp and PbPb collisions with CMS /**

고연주, 김용선, 홍병식(고려대학교, 물리학과.)

CG-26 [16:45-17:00]

**Current Status of D<sup>0</sup> Analysis in P+P Collisions at Sqrt(s)=200 GeV using the VTX in the PHENIX Experiment at RHIC /**

문태봉(for PHENIX collaboration.)

CG-27 [17:00-17:15]

**Status of the W-to-Muon Analysis in the Run 12 of PHENIX /**

KIM Chong(Korea University / RIKEN.)



## SESSION D

## 응집물질물리학과회

2014년 4월 23일(수) 응집물질물리학과회 구두 발표

[DG1] 응집물질물리학과회 General Session: 바이오/무른물질/유기물질

2014년 4월 23일 수요일 13:00 - 14:52

장소: 101호

좌장: 윤 태 영 KAIST

D

DG-01\* [13:00-13:14]

**Cell-to-cell Heterogeneity In EGFR Signaling Revealed By Single-Cell Single-Molecule Analysis** / RYU Ji Young(KAIST, Physics Department), KIM jihye, BAE jiseob, LEE Wonhee(KAIST, graduate school of nanoscience and technology), YOON Tae-young(KAIST, Physics Department)

DG-02\* [13:14-13:28]

**Destabilization Of I-motif Structure By High Li<sup>+</sup> Concentration** / KIM Sung Eun, LEE Il-Buem(Korea University, Department of Physics), HYEON Changbong(Korea Institute for Advanced Study, School of Computational Sciences), HONG Seok-Cheol(Korea University, Department of Physics)

DG-03\* [13:28-13:42]

**Elasticity driven single stranded gap creation mechanism by exonuclease III** / 지상미, 이광록(광주과학기술원)

DG-04\* [13:42-13:56]

**Single-molecule Studies on Oligomeric State of Werner Syndrome Protein** / LEE Jinwoo(Department of Physics and Astronomy, Seoul National University), HYUN Kwang-Beom, KIM Jaehoon(Department of Biological Sciences, KAIST), HOHNG Sungchul(Department of Physics and Astronomy, Seoul National University)

DG-05\*[13:56-14:10]

**Single-Molecule Study on Gene Regulation Mechanism of Human Argonaute 2** / JO Myung Hyun(Seoul National University, Department of Physics and Astronomy), SHIN Soochul(Seoul National University, Department of Biophysics and Chemical Biology), JUNG Seung-Ryoung(Seoul National University, Department of Physics and Astronomy), KIM Eunji, SONG Ji-Joon(KAIST, Department of Biological Sciences), HOHNG Sungchul(Seoul National University, Department of Physics and Astronomy)

DG-06\*[14:10-14:24]

**Effects of RNA Polymerase Concentration Variation on the Downstream Protein Expression Noise in Living Cells** / 양소라, 김승현, 김철희, 안형전(포항공대, 물리학과), 이남기(포항공대, 물리학과 & I-BIO)



DG-07\* [14:24-14:38]

**NSF Disassembles the SNARE Complex in One-Round of ATP Hydrolysis** / RYU Je-Kyung, MIN Duyoung, RAH Sang-Hyun(KAIST, Dept. of Physics), PARK Yongsoo(Max-Planck-Institute for Biophysical Chemistry, Dept. of Neurobiology), KIM Soojin, KIM Homin(KAIST, Graduate School of Medical Science and Engineering), JAHN Reinhard(Max-Planck-Institute for Biophysical Chemistry, Dept. of Neurobiology), YOON Tae-Young(KAIST, Dept. of Physics)

DG-08\* [14:38-14:52]

**The behaviors of spherical colloidal particles of weak anchoring energy in homogeneous nematic colloidal system** / KIM Sung-Jo, KIM Jong-Hyun(Department of physics, Chungnam National University)

[DG2] 응집물질물리학과회 General Session: 바이오/무른물질/유기물질  
2014년 4월 23일 수요일 15:00 – 16:45 장소: 101호  
좌장: 이 남 기 포스텍

DG-09 [15:00-15:15]

**AT content as a determinant of the chromosome structure** / KIM Hajin(유니스트, 생명과학부)

DG-10 [15:15-15:30]

**Biological modeling of pancreatic islets** / JO Junghyo(APCTP; POSTECH, Physics)

DG-11[15:30-15:45]

수화층의 비선형 점탄성 특성 / 김봉수, 권소영, 김규환, 제원호(서울대)

DG-12 [15:45-16:00]

**Single-molecule Dynamics with Sub-millisecond Resolution and Tens of Millisecond Observation time by Liposome Tethering** / 김재열, 김철희, 이남기(포항공대)

DG-13 [16:00-16:15]

**STORM for live cells: super-resolution fluorescence microscopy via single-molecule localization** / 심상희(UNIST, 생명과학부)

DG-14 [16:15-16:30]

**Systems Biology of Human Gut Microbiota** / KIM Pan-Jun(Asia Pacific Center for Theoretical Physics)

DG-15 [16:30-16:45]

**Photo-luminescent Hybrid Mesoporous Silica: A Competent and Tunable Tool for Theranostic Application** / GANDHI Sakthivel, KWON



Bong-Joon, WOO Hyun-Joo, SHIN Dong-Soo, JANG Kiwan(창원대)

**응집물질물리학과회운영위원회**

2014년 4월 23일 수요일 12:30 – 13:00

장소: 102호

**[DG3] 응집물질물리학과회 General Session: 유전체**

2014년 4월 23일 수요일 13:00 – 14:45

장소: 102호

좌장: 조 지 영 GIST

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**DG-16\*** [13:00-13:15]

**Electrical Conductivity and Local Structure Controlled by Oxygen Vacancy Level in  $\text{BaSnO}_{3-\delta}$**  / SOHN Egon, LEE Woong-Jhae, KIM Hyung Joon, KIM Tai Hoon(Seoul National University, Department of Physics and Astronomy), SEO Dongmin, CHOI E. J.(University of Seoul, Department of Physics), KIM Kee Hoon(Seoul National University, Department of Physics and Astronomy)

**DG-17\*** [13:15-13:30]

**Growth and Structural Properties of  $\text{BiInO}_3\text{-PbTiO}_3$  Thin Films Deposited by Pulsed Laser Deposition** / JIN Hye-Jin, OH Seol Hee, JO William(Department of Physics, Ewha Womans University)

**DG-18\*** [13:30-13:45]

**Structural, optical, and magnetic properties of  $\text{PbVO}_3$  thin films epitaxially grown on  $\text{LaAlO}_3$  and  $\text{SrTiO}_3$  substrates** / JO William, OH Seol Hee, JIN Hye-Jin, SHIN Hae-Young, SHIN Ran Hee, YOON Seokhyun(Department of Physics, Ewha Womans University), SEO Yu-Seong, AHN Jai-Seok(Department of Physics, Pusan National University)

**DG-19** [13:45-14:00]

**Crossing the thermal lubricity and electronic effects in Nanotribology: vanadium dioxide under metal–insulator transition** / KIM Jong Hung(Center for Nanomaterials and Chemical Reactions, Institute for Basic Science (IBS) ; Graduate School of EEWS, Korea Advanced Institute of Science and Technology (KAIST)), FU Deyi(Department of Materials Science and Engineering, University of California, Berkeley,USA), KWON Sangku(Center for Nanomaterials and Chemical Reactions, Institute for Basic Science (IBS) ; Graduate School of EEWS, Korea Advanced Institute of Science and Technology (KAIST)), LIU Kai, WU Junqiao(Department of Materials Science and Engineering, University of California, Berkeley,USA), PARK Jeong Young(Center for Nanomaterials and Chemical Reactions, Institute for Basic Science (IBS) ; Graduate School of EEWS, Korea Advanced Institute of Science and Technology (KAIST))



DG-20 [14:00-14:15]

**Observation of Andreev Reflection (AR) Signal using an Atomic Filament in a Resistive Switching (RS) System** / HWANG Inrok(KIST (Korea Institute of Science and Technology)), LEE Keundong(Konkuk University), JIN Hyunwoo(KIST (Korea Institute of Science and Technology)), PARK Bae Ho(Konkuk University), LEE Suyoun(KIST (Korea Institute of Science and Technology))

DG-21 [14:15-14:30]

**Tunneling Electroresistance by Interfacial Phase Transitions in Ultrathin Oxide Heterostructures** / CHOI Woo Seok(Department of Physics, Sungkyunkwan University, Suwon, Gyeonggi-do 440-746, Korea)

DG-22 [14:30-14:45]

**The Electronic Structure of Sodium Dihydrogen Phosphate ( $\text{NaH}_2\text{PO}_4$ ) Crystal: More Insight into the Hydrogen Bond Interaction** / LEE Kwang-Sei(Department of Nano Science & Engineering, Center for Nano Manufacturing, Inje University, Gimhae), LEE Cheol Eui(Department of Physics and Institute for Nano Science, Korea University, Seoul)

[DG4] 응집물질물리학과회 General Session: 유전체

2014년 4월 23일 수요일 15:00 - 16:15

장소: 102호

좌장: 송 태 권 창원대

DG-23\* [15:00-15:15]

**Investigation of New Lead-Free  $\text{BiFeO}_3\text{-BaTiO}_3$  piezoelectric ceramics** / 이명환, 김다정, 박진수, KUMAR Shalendra, 김명호, 송태권, 김상욱, 김원정, 김상수(국립창원대), 도달현(계명대)

DG-24\* [15:15-15:30]

**The Mn doping effect of the lead-free  $(\text{K}_{0.5}\text{Na}_{0.5})(\text{Mn}_x\text{Nb}_{1-x})\text{O}_3$  ferroelectric thin films fabricated by chemical solution deposition** / 김일원, 석해진, 원성식, 안창원(울산대)

DG-25\* [15:30-15:45]

**Preparation of K-dependent Piezoelectric  $(\text{K}_x\text{Na}_{1-x})\text{NbO}_3$  Thin Films by Chemical Solution Deposition** / KIM Ill Won, WON Sung Sik, AHN Chang Won(University of Ulsan, Department of Physics and EHSRC), KIM Seung-Hyun(Brown University, School of Engineering)

DG-26\* [15:45-16:00]

**Frequency-dependent P-E hysteresis loops of  $\text{BiFeO}_3$  film grown on different electrodes** / SHIN Yeong Jae, JEON Byung Chul, YANG Sang Mo(Center for Functional Interfaces of Correlated Electron Systems, Institute



for Basic Science (IBS), Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea), **YOON Jong-Gul**(Department of Physics, University of Suwon, Gyeonggi-do 445-743, Republic of Korea), **LEE Seung Ran**, **NOH Tea Won**(Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science (IBS), Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea)

**DG-27** [16:00-16:15]

**Piezoresponse Force Microscope에 의한 강유전 도메인 구조 연구 / 서정대, 안윤호, 손종역(경희대)**

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[DT1] 응집물질물리학회 Tutorial: 스핀 - 궤도 상호작용과 전자구조의 위상특성

2014년 4월 23일 수요일 18:00 - 19:40

장소: 101/102호

좌장: 유재준 서울대

**DT-01** [18:00-19:40]

스핀-궤도 상호작용과 전자구조의 위상특성 / 지승훈(포항공대 물리학과)

[DT2] 응집물질물리학회 Tutorial: 스핀 - 궤도 상호작용과 스핀전자 소자

2014년 4월 23일 수요일 20:00 - 21:30

장소: 101/102호

좌장: 김기훈 서울대

**DT-02** [20:00-21:30]

스핀-궤도 상호작용과 스핀전자 소자 / 엄종화(세종대 물리학과)

[DF1] 응집물질물리학회 Focus Session: 물성측정/계기/시설, "방사광 및 X-선 레이저 기반 응집물질 구조연구"

2014년 4월 23일 수요일 13:00 - 14:45

장소: 103호

좌장: 노도영 GIST

**DF-01(초)** [13:00-13:26]

**Nanostructure and molecular orientation in organic photovoltaics**

/ **KIM Hyo Jung**(Department of Organic Material Science and Engineering, Pusan National University, Busan 609-735, Korea)

**DF-02(초)** [13:26-13:52]

**Noble Features of Graphene-Mediated Nano Thin Films / CHUNG**

**Jinwook**(Physics Department, Pohang University of Science and Technology (POSTECH))



DF-03(초) [13:52-14:18]

**Real-time X-ray Scattering as a Nanostructure Probe for Organic and Inorganic Nano-materials** / JEON Tae-Yeol, LEE Hyun Hwi(Pohang Accelerator Laboratory, POSTECH, Pohang 790-784, Korea)

DF-04(초) [14:18-14:45]

**X-ray resonant magnetic scattering study of interlayer antiferromagnetic coupling in a GaMnAs/GaAs multilayer** / LEE Dong Ryeol, KIM Dong-Ok(Department of Physics, Soongsil University), CHO Byeong-Gwan, LEE Ki Bong(Department of Physics, POSTECH), CHOI Yongseong(Argonne National Lab., USA), CHUNG Jae-Ho(Department of Physics, Korea University)

[DG5] 응집물질물리학회 General Session: 물성측정/계기/시설

2014년 4월 23일 수요일 15:00 - 16:30

장소: 103호

좌장: 이 동 렬 송실대

DG-28\* [15:00-15:15]

**Development of femtosecond x-ray pump-probe instrumentation using a laser-plasma x-ray source** / IQBAL Mazhar, IJAZ M., SON JoonGon, SEO Okkyun, AN Kangwoo(Department of Physics and Photon Science, Gwangju Institute of Science and Technology, 1Oryong-dong, Buk-gu, Gwangju, 500-712 Rep. of Korea), STIEL H.(Max Born Institute, Max-Born Str. 2A, 12489 Berlin, Germany), JANULEWICZ K. A., NOH Do Young(Department of Physics and Photon Science, Gwangju Institute of Science and Technology, 1Oryong-dong, Buk-gu, Gwangju, 500-712 Rep. of Korea)

DG-29\* [15:15-15:30]

**Possible Fermi level tuning and Shubnikov-de Haas oscillation in Bi<sub>2</sub>-xCu<sub>x</sub>Se<sub>3</sub> single crystals.** / RHYEE Jong Soo, LEE Min Ho(Department of Applied Physics, Kyung Hee University)

DG-30\* [15:30-15:45]

**전이 금속 치환에 의한 PbPdO<sub>2</sub>의 물성 변화** / 정명화, 이규준, 추성민(서강대, 물리학과)

DG-31 [15:45-16:00]

**Thermoelectric Properties of Se-deficient and Pb-/Sn-codoped In<sub>4</sub>Pb<sub>0.01</sub>Sn<sub>0.03</sub>Se<sub>3-x</sub> Polycrystalline Compounds** / KIM Jin-Hee, RHYEE Jong-Soo, KIM Min Jae, OH Sue kyung(Department of Applied Physics, Kyung Hee University)

DG-32 [16:00-16:15]

**Thermoelectric Properties of Single Crystalline Mg<sub>3</sub>Sb<sub>2</sub> grown by**



**Bridgman method** / 정명화, 김수현, 김충만(서강대, 물리학과), J. Kajino, T. TAKABATAKE(Hiroshima University, Advanced Sciences of Matter)

DG-33 [16:15-16:30]

**Effect of thermal annealing on physical properties of bulk and thin films** / 엄영호, 황영훈(울산대)

2014년 4월 24일(목) 응집물질물리학회 학회 구두 발표

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[DG6] 응집물질물리학회 학회 General Session: 강상관계

2014년 4월 24일 목요일 09:00 - 10:52

장소: 101호

좌장: 최 광 용 중앙대

DG-34\* [09:00-09:14]

**Metamagnetic Transitions Induced by Formation of Magnetic Clusters in Single Crystal Eu<sub>2</sub>CoMnO<sub>6</sub>** / 최환영, 이나라(연세대), SEO M.S., PARK S.Y.(Division of Materials Science, Korea Basic Science Institute, Daejeon), 조연정(경북대), 최영재(연세대)

DG-35\* [09:14-09:28]

**Anisotropic magneto-thermal transport in the S=1/2 frustrated spin ladder BiCu<sub>2</sub>PO<sub>6</sub>** / JEON Byung-Gu, KOTESWARARAO B.(CeNSCMR, Dept. of Physics and Astronomy, Seoul National University, Republic of Korea), SHU G. J., CHOU F. C.(Center for Condensed Matter Sciences, National Taiwan University, Taiwan), KIM Kee Hoon(CeNSCMR, Dept. of Physics and Astronomy, Seoul National University, Republic of Korea)

DG-36 [09:28-09:42]

**Application of dynamical vertex approximation to cuprates** / LEE Choong-KI, HAN Mancheon, CHOI Hyoun Joon(Department of Physics and IPAP, Yonsei University, Center for Computational Studies of Advanced Electronic Material Properties, Yonsei University)

DG-37 [09:42-09:56]

**Temperature Dependence of Thermoelectric Properties in V<sub>2</sub>O<sub>5</sub> Films** / KANG Manil, LEE Jaeran, KIM Sok Won(University of Ulsan), RYU Ji-Wook(Kongju National University)

DG-38 [09:56-10:10]

**Electric Field Driven Dynamic Percolation in Electronically Phase Separated Manganite Thin Films** / JEEN Hyoungjeen(Department of Physics, Pusan National University), BISWAS Amlan(Department of Physics, University of Florida, USA)





DG-39 [10:10-10:24]

**Strong Ferromagnetic-dielectric Coupling in Multiferroic  $\text{Lu}_2\text{CoMnO}_6$  Single Crystals** / CHOI Young Jai, LEE Nara, CHOI Hwan Young(Yonsei University), JO Younjung(Kyungpook National University), SEO Min Su, PARK Seung-Young(KBSI)

DG-40 [10:24-10:38]

**Kondo Screening near the Mott Transition - the Signatures of Nozieres' Exhaustion** / LEE Hyun-Jung, PARK Kwon(KIAS, School of Physics)

DG-41 [10:38-10:52]

**Continuous-time impurity solver implementation for DMFT** / HAN Mancheon(Department of Physics and IPAP, Yonsei University, Center for Computational Studies of Advanced Electronic Material Properties, Yonsei University), LEE Choong-Ki(Center for Computational Studies of Advanced Electronic Material Properties, Yonsei University), CHOI Hyoung Joon(Department of Physics and IPAP, Yonsei University, Center for Computational Studies of Advanced Electronic Material Properties, Yonsei University)

[DG7] 응집물질물리학분과회 General Session: 초전도/저온물성

2014년4월 24일 목요일 11:00 - 12:15

장소: 101호

좌장: 정 연 옥 KRISS

DG-42\* [11:00-11:15]

**Extended X-ray Absorption Fine Structure Study of  $\text{MgB}_2$  Films with Different Thickness Crystalline SiC Buffer Layers** / KANG Byeongwon, PUTRI Witha Berlian Kesuma(충북대), KANG W. N.(성균관대), MIYANAGA T.(Hirotsaki University, Department of Physics), YANG D. S.(충북대)

DG-43 [11:15-11:30]

**Current status of superconducting qubit** / CHONG Yonuk, HA Dong-Gwang(Korea Research Institute of Standards and Science)

DG-44 [11:30-11:45]

**Hall conductivity in the normal and topological superconducting phases of the Rashba systems** / 정석범(IBS), ROY Rahul(Department of Physics and Astronomy, UCLA)

DG-45 [11:45-12:00]

**Quality factor measurement of superconducting microwave resonators at single-photon level and mK temperature** / HA Dong-Gwang, PARK Gwan Yeol, KIM Seon Hoo, CHOI Jiman, PARK Jung Hwan, SONG Woon(Korea Research Institute of Standards and Science), LEE Soon



Gul(Korea University), IM Hyunsik, KIM Hyungsang(Dongguk University),  
CHONG Yonuk(Korea Research Institute of Standards and Science)

DG-46 [12:00-12:15]

**Superconductivity at 3.4 K in the misfit layered compound  
(SnSe)<sub>1.2</sub>(TiSe)<sub>2</sub>** / 송유장, 이종수(경희대)

[DP1] 응집물질물리학회 Pioneer Symposium: 초전도/저온물성,  
"비고전적인 초전도체의 전자구조"

2014년 4월 24일 목요일 14:00 – 15:48

장소: 101호

\* Session in English

좌장: 황 정 식 성균관대

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DP-01(초) [14:00-14:30]

**Optical properties of iron-based superconductors** / CHRISTOPHER  
Homes(Brookhaven National Laboratory, Condensed Matter Physics and  
Materials Science Department)

DP-02(초) [14:30-14:56]

**Charge Dynamics of the BaFe<sub>2</sub>As<sub>2</sub> High-T<sub>c</sub> Superconductors** /  
MOON SOONJAE(Hanyang University)

DP-03(초) [14:56-15:22]

**Computational studies of electronic and magnetic properties of  
Fe-based superconductors** / CHOI Hyung Joon(Department of Physics,  
Yonsei University)

DP-04(초) [15:22-15:48]

**Quantum size effects and proximity effects of Pb ultrathin films**  
/ KIM Jungdae(Department of Physics and Energy Harvest Storage Research  
Center (EHSRC), University of Ulsan, Ulsan, Korea)

[DP2] 응집물질물리학회 Pioneer Symposium: 초전도/저온물성,  
"비고전적인 초전도체의 전자구조"

2014년 4월 24일 목요일 16:00 – 16:56

장소: 101호

\* Session in English

좌장: 최 한 용 성균관대

DP-05(초) [16:00-16:30]

**Density-Matrix Theory for high-T<sub>c</sub> superconductors in non-  
equilibrium: Higgs mode and pairing glue** / MANSKE Dirk(Max Planck  
Institute for Solid State Research)

DP-06(초) [16:30-16:56]

**Observation of band dependent pseudogap in iron pnictide**



**superconductor Sr<sub>2</sub>VO<sub>3</sub>FeAs** / KIM Y.K.(Yonsei university; Advanced light source, Lawrence Berkeley national laboratory), KIM C.(Yonsei university), OK J. M., KIM J. S.(POSTECH), MO S.-K.(Advanced light source, Lawrence Berkeley national laboratory)

**[DF2] 응집물질물리학분과회 Focus Session: 계산과학, "에너지 분야에서  
의 계산과학"**

2014년 4월 24일 목요일 09:00 – 10:45

장소: 102호

좌장: 정 석 민 전북대

**DF-05(초)** [09:00-09:30]

**Multi-scale Computational Screening of Doped Graphene Catalysts for PEM Fuel Cells** / HAN Byungchan, KWAK Dohyun(DGIST), NOH Seunghyo(Tokyo Institute of Technology)

**DF-06(초)** [09:30-10:00]

**Computer Simulations of Hydrogen Storage in Porous Materials** / 정동현, 김대진, 국혜인, 최승훈((주)안실리코텍)

**DF-07(초)** [10:00-10:30]

**Electronic structure calculations within or beyond Born-Oppenheimer approximation for energy storage and energy conversion** / PARK Noejung, ODKHUU Dorj, SHIN Dong-bin, CHOI Min(Department of Physics, Ulsan National Institute of Science and Technology, Ulsan 689-798, Republic of Korea)

**DF-08** [10:30-10:45]

**금속도핑된 CaAlSiN<sub>3</sub> 형광체에 대한 전산모사 연구** / 장승훈, 공기정, 방보극, 김창해, 장현주(한국화학연구원, 화학소재연구본부)

**[DF3] 응집물질물리학분과회 Focus Session: 계산과학, "에너지 분야에서  
의 계산과학"**

2014년 4월 24일 목요일 11:00 – 12:45

장소: 102호

좌장: 박 노 정 UNIST

**DF-09(초)** [11:00-11:30]

**New Anode Materials for Li Ion Batteries: Ab initio Study** / KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

**DF-10(초)** [11:30-12:00]

**A Key Player for Designing Novel Energy-Related Materials: Reactive Force Field Simulation** / HAN SANG SOO(Center for Computational Science, Korea Institute of Science and Technology (KIST))



DF-11\* [12:00-12:15]

**First-Principle Study on Vibrational and Thermal Property of Graphynes** / KIM Cheol-Woon, KANG Seoung-Hun, LEE Hyeonsu, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

DF-12\* [12:15-12:30]

**First-Principles Study of Structural, Electronic, and Defect Properties of Inorganic Perovskites  $\text{CsPbX}_3$  ( $X = \text{Cl, Br, I}$ )** / 우진희, 장윤희, 고재현, 김응현(한국과학기술원 나노과학기술대학원)

DF-13\* [12:30-12:45]

**Graphdiyne as a high-capacity lithium ion battery anode material** / LEE Hoonkyung, JANG Byungryul, KOO Jahyun, PARK Minwoo(Konkuk Univ, Sch Phys, Seoul 143701, South Korea), LEE Hosik(Ulsan Natl Inst Sci & Technol UNIST, Sch Mech & Adv Mat Engn, Ulsan 689798, South Korea), NAM Jaewook(Sungkyunkwan Univ, Sch Chem Engn, Suwon 300, South Korea), KWON Yongkyung(Konkuk Univ, Sch Phys, Seoul 143701, South Korea)

[DG8] 응집물질물리학분과회 General Session: 계산과학

2014년 4월 24일 목요일 14:00 - 15:52

장소: 102호

좌장: 한 상 수 KIST

DG-47\* [14:00-14:14]

**First-principles supercell calculations for accurate defect transition levels in silicon nanowires** / KIM Sunghyun(Korea Advanced Institute of Science and Technology, Dept. Physics), PARK Ji-Sang(National Renewable Energy laboratory), CHANG K.J.(Korea Advanced Institute of Science and Technology, Dept. Physics)

DG-48\* [14:14-14:28]

**First-Principles Calculations of the Electronic and Optical Properties of  $\text{GaAs}_x\text{Sb}_{1-x}$**  / PARK Jejune, KANG Seoung-Hun, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

DG-49\* [14:28-14:42]

**First-principles Calculations of the Phonon Transport in Carbon Atomic Chains Based on Atomistic Green's Function Formalism** / KIM Hu Sung, KIM Yong-Hoon(Korea Advanced Institute for Science and Technology, Graduate School of EEWS)

DG-50\* [14:42-14:56]

**The electronic properties of oxygen interstitial defects in**



**amorphous In-Ga-Zn-O semiconductors** / HAN WooHyun, OH YoungJun, CHANG KeeJoo(Department of Physics, Korea Advanced Institute of Science and Technology)

DG-51\* [14:56-15:10]

**Critical effect of universal "extended metallic contact" on charge injection properties in metal-organic interfaces: A model study** / KIM Han Seul, KIM Yong-Hoon(Graduate School of EEWS, Korea Advanced Institute for Science and Technology)

DG-52\* [15:10-15:24]

**Exotic Geometrical and Electronic Properties in Hydrogenated Graphyne Tailoring the Electronic Band Gap of Graphyne** / KOO Jahun, HWANG Ho Jun(Division of Quantum Phases & Devices, School of Physics, Konkuk University, Seoul 143-701, Korea), HUANG Bing(National Renewable Energy Laboratory, 1617 Cole Boulevard, Golden, Colorado 80401, United States), LEE Hyunpyo(Division of Quantum Phases & Devices, School of Physics, Konkuk University, Seoul 143-701, Korea), LEE Hosik(School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan), PARK Minwoo, KWON Yongkyung(Division of Quantum Phases & Devices, School of Physics, Konkuk University, Seoul 143-701, Korea), WEI Su-Huai(National Renewable Energy Laboratory, 1617 Cole Boulevard, Golden, Colorado 80401, United States), LEE Hoonkyung(Division of Quantum Phases & Devices, School of Physics, Konkuk University, Seoul 143-701, Korea)

DG-53 [15:24-15:38]

**Effect of the Coulomb correlation and strain on the orbital and charge orderings in  $\text{LaTiO}_3/\text{SrTiO}_3$  superlattice** / LEE Alex Taekyung, HAN Myung Joon(KAIST, Department of physics)

DG-54 [15:38-15:52]

**Dipolar polarization and piezoelectricity of a hexagonal boron nitride sheet decorated with hydrogen and fluorine** / 신영한, NOOR-A-ALAM Mohammad, 김혜정(울산대)

[DG9] 응집물질물리학회 General Session: 계산과학

2014년 4월 24일 목요일 16:00 - 16:45

장소: 102호

좌장: 김 옹 훈 KAIST

DG-55\* [16:00-16:15]

**The electronic properties of  $\text{MoS}_2$  supported on  $\text{SiO}_2$  substrate** / SUNG Ha Jun, CHOE Duk-Hyun, CHANG Kee Joo(KAIST)

DG-56\* [16:15-16:30]

**Tunable Band Gap Of  $\text{MoS}_2$  Monolayer Through Strain Or**



**Functionalization** / 이훈경, 박민우(건국대)

**DG-57\*** [16:30-16:45]

**A Finite-Size Supercell Correction Scheme for Charged Defects in 2-Dimensional System** / KIM Young-Sung(Korea Research Institute of Standards and Science), NOH Ji-Young, KIM Hanchul(Sookmyung Women's University)

**응집물질물리학회 총회**

2014년 4월 24일 목요일 17:00 – 17:30

장소: 102호

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**[DG10] 응집물질물리학회 General Session: 표면/계면/나노물질**

2014년 4월 24일 목요일 09:00 – 10:45

장소: 103호

좌장: 김 건 세종대

**DG-58** [09:00-09:15]

**Atomic Structure of the Au/Si(111)-5x2 Surface: Density-fuctional Calculations** / KANG Myung Ho, KWON Se Gab(포스텍, 물리학과)

**DG-59** [09:15-09:30]

**Itinerant Magnetic Order Driven by Resonant Surface State in Sn/Si(111)** / LEE Jun-Ho, KIM Sun-Woo, CHO Jun-Hyung(Hanyang University, Department of Physics and Research Institute for Natural Sciences)

**DG-60** [09:30-09:45]

**Structural model for the hexagonal In/Si(111)- $\sqrt{7} \times \sqrt{3}$  surface** / PARK Jae Whan, KANG Myung Ho(포스텍 물리학과)

**DG-61\*** [09:45-10:00]

**Structural Phase Transition in Nanowire Controlled by Electron Doping and Electric Field** / 김현중, 김선우, 조준형(한양대)

**DG-62\*** [10:00-10:15]

**Comparative Study of Pyridine and Pyrimidine Adsorption on Si(5 5 12)** / KIM Gyu-Hyeong, JEONG Sukmin(Chonbuk National University, Department of Physics and Research Institute of Physics and Chemistry)

**DG-63** [10:15-10:30]

**Fermi velocity renormalization in graphene** / HWANG Choongyu(Pusan National University, Department of Physics), SIEGEL David, LANZARA Alessandra(University of California, Berkeley, Department of Physics)

**DG-64** [10:30-10:45]

**Multifunctional Material Using Heterostructure Composed of**



## Transition Metal Oxide / 서지원(성균관대)

[DF4] 응집물질물리학회 Focus Session: 표면/계면/나노물질, "나노 구조의 국소특성 측정기술과 그 응용" /

2014년 4월 24일 목요일 11:00 - 12:45

장소: 103호

\*Session in English

좌장: 이 진 환 KAIST

### DF-14(초) [11:00-11:30]

**The quantum and classical world of atomic spins on surfaces /**  
HEINRICH Andreas (IBM Research, Almaden Research Center)

### DF-15 [11:30-11:45]

**Reduced Dimensionality Induced Helimagnetism in Fe Nanoislands /** PHARK Soo-hyon (Max-Planck-Institute of Microstructure Physics, Germany), NAKAMURA Kohji (Mie University, Japan), FISCHER Jeison A., CORBETTA Marco, SANDER Dirk, KIRSCHNER Juergen (Max-Planck-Institute of Microstructure Physics, Germany)

### DF-16(초) [11:45-12:15]

**Measurement of the Magnetic Penetration Depth by Magnetic Force Microscopy /** KIM Jeehoon, KIM Yonwon, PARK Minju, YANG Jinho, YEOM H. W. (CALDES, IBS and POSTECH, Department of Physics)

### DF-17(초) [12:15-12:45]

**Confocal absorption spectral imaging of MoS<sub>2</sub>: Evolution of optical spectra with the atomic thickness of MoS<sub>2</sub> /** 김정용, DHAKAL Krishna (IBS), DUONG Dinh Loc (IBS Center for Integrated Nanostructure Physics, Institute for Basic Science (IBS), Sungkyunkwan University)

[DF5] 응집물질물리학회 Focus Session: 나노/중시계, "그래핀과 위상부도체"

2014년 4월 24일 목요일 14:00 - 15:45

장소: 103호

좌장: 이 후 중 포스텍

### DF-18(초) [14:00-14:30]

**Dirac Fermions in Graphene Superlattices and in Nanopatterned Two-Dimensional Electron Gases /** PARK CHEOL-HWAN (Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University)

### DF-19(초) [14:30-15:00]

**Molecular Graphene: Designing Dirac Fermions by Atom Manipulation /** 고원희 (삼성전자종합기술원)



DF-20(초) [15:00-15:30]

**Magnetic ordering on edges of topological insulators** / 손영우(고등과학원)

DF-21 [15:30-15:45]

**Electronic Structures of Graphene on Hexagonal Boron Nitride** / MOON Pilkyung(Korea Institute for Advanced Study, School of Computational Sciences), KOSHINO Mikito(Tohoku University, Department of Physics)

[DF6] 응집물질물리학회 Focus Session: 나노/중시계, "그래핀과 위상부도체"

2014년 4월 24일 목요일 16:00 - 16:56

장소: 103호

좌장: 심 흥 선 KAIST

DF-22 [16:00-16:14]

**Topological Surface State of SmB<sub>6</sub> and Spin-Lattice Relaxation** / 타키토테츠야(한양대), 이기훈(포스텍, 물리학과/APCTP)

DF-23\* [16:14-16:28]

**Conductance recovery and spin-polarized currents in B-N binary edge doped graphene nanoribbons** / KIM Yong-Hoon, KIM Seong Sik, KIM Hyo Seok, KIM Han Seul(Graduate School of EEWS, KAIST)

DF-24\* [16:28-16:42]

**Universal conductance fluctuation behavior in disordered graphene topological insulators** / CHOE Duk-Hyun, CHANG Kee Joo(Department of Physics, KAIST)

DF-25\* [16:42-16:56]

**First principle study of chemically modified Bismuth and Antimony bilayer** / 진경환, 지승훈(포항공대)

[EF2] 응집물질물리학회/응용물리학회 공동 Focus Session: 스핀 퀀도돌림 I

2014년 4월 24일 목요일 09:00 - 10:40

장소: 104호

좌장: 최 석 봉 서울대

EF-06(초) [09:00-09:25]

**Tilting of the spin orientation induced by Rashba effect in ferromagnetic metal layer** / PI Ung Hwan, KIM Kee Won, BAE Ji Young, LEE Sung Chul, CHO Young Jin, KIM Kwang Seok, SEO Sunae(Samsung Advanced Institute of Technology (SAIT), Gyeonggi-Do 446-712, Republic of Korea.)





EF-07(초) [09:25-09:50]

**Current induced spin-orbit torque in Ta|CoFeB|MgO heterostructures** / KIM Junyeon(National Institute for Materials Science.)

EF-08(초) [09:50-10:15]

**Measurement of Spin-orbit Torques in Heavy element/ferromagnet/oxide Structures** / PARK Byong-Guk, OH Young-Wan, CHO Soonha, LEE Kyeong-Dong(Materials Science and Engineering, KAIST.)

EF-09(초) [10:15-10:40]

**Pd/FePd/MgO 구조에서의 스핀궤도 토크의 측정** / 유천열(인하대학교 물리학과.)

[EF3] 응집물질물리학분과회/응용물리학분과회 공동 Focus Session: 스핀궤도돌림힘 II

2014년 4월 24일 목요일 11:00 - 12:45

장소: 104호

좌장: 유 천 열 인하대

EF-10(초) [11:00-11:25]

**Interfacial Spin-Orbit Coupling Effects In Magnetic Bilayers** / KIM Kyoung-Whan, RYU Jisu<sup>1</sup>, MOON Jung-Hwan<sup>2</sup>, SEO Soo-Man<sup>2</sup>, LEE Kyung-Jin<sup>2</sup>, STILES Mark<sup>3</sup>, LEE Hyun-Woo(Department of Physics, POSTECH. <sup>1</sup>SAMSUNG electronics. <sup>2</sup>Department of Materials Science and Engineering, Korea University. <sup>3</sup>National Institute of Standards and Technology.)

EF-11(초) [11:25-11:50]

**Spin-orbitronics and Spin-orbit Caloritronics** / LEE Kyung-Jin(Korea University, Department of Materials Science and Engineering.)

EF-12(초) [11:50-12:15]

**Cavity Mode Dependence of Inverse Spin Hall to Anomalous Hall ratio** / PARK Seung-young, KIM Sang-il, SEO Min-su(Division of Materials Science, Korea Basic Science Institute.)

EF-13(초) [12:15-12:45]

**광자기 커리 현상을 이용한 스핀-궤도 돌림힘 측정법** / 윤상준, 최석봉(서울대학교 물리천문학부.)



2014년 4월 25일(금) 응집물질물리학회 학회 구두 발표

[DF7] 응집물질물리학회 Focus Session: 강상관계, "2차원 강상관계 물질"

2014년 4월 25일 금요일 09:00 - 10:45

장소: 101호

좌장: 박 제 근 서울대

DF-26(초) [09:00-09:26]

**Inhomogeneous superconducting phase in the quantum critical compound CeCoIn<sub>5</sub>** / SEO S.(Sungkyunkwan University, Suwon 440-746, Korea), LU XX.(Sungkyunkwan University, Suwon 440-746, Korea and Zhejiang University, Hangzhou 310027, China), THOMPSON J.D.(Los Alamos National Laboratory, NM 87544, U.S.A.), PARK Tuson(Sungkyunkwan University, Suwon 440-746, Korea)

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DF-27(초) [09:26-09:52]

**Chiral Electronic Structures in Quasi Two-Dimensional Bi-based Layered Compounds** / 김준성(포항공대)

DF-28(초) [09:52-10:18]

**A New Emerging 2 dimensional Materials : Bulky 2-dimensional electron gas system based on Electride** / KIM SungWng(Department of Energy Science, Sungkyunkwan University and IBS Centre for Intergrated Nanostructured Physics, Institute for Basic Science)

DF-29(초) [10:18-10:45]

**Observation of magnon decay and non-linear spin waves in LuMnO<sub>3</sub>** / OH Joosung(Dept. Physics and Astronomy, Seoul National University), LE Manh Duc(Center for Correlated Electron Systems, Institute for Basic Science), LEE Jung-hyun, SONG Wan-Young(Dept. Physics, SungKyunKwan University), WOO Hyungje, PERRING Toby(ISIS Facility, STFC Rutherford Appleton Laboratory), BUYERS William J L, YAMANI Zahra(Chalk River Laboratories, National Research Council of Canada), PARK Je-Geun(Dept. Physics and Astronomy, Seoul National University)

[DF8] 응집물질물리학회 Focus Session: 강상관계, "강한 스핀-궤도 상호작용 물리"

2014년 4월 25일 금요일 11:00 - 12:45

장소: 101호

좌장: 송 중 현 충남대

DF-30(초) [11:00-11:26]

**Infrared spectroscopic study on highly insulating three-dimensional topological insulators** / LEE Yunsang(Soongsil University, Physics)



DF-31(초) [11:26-11:52]

**Exotic Ordering Behaviors in a 5d Layered Compound IrTe<sub>2</sub>** / PARK Jae-Hoon(포항공대)

DF-32(초) [11:52-12:18]

**Weyl metal: Toward interacting topological states of matter** / KIM Ki-Seok(POSTECH, Department of Physics), KIM Heon-Jung(Daegu Univ. Department of Physics), SASAKI M(Yamagata Univ. Department of Physics), JHO Yong-Soo, KIM Kyoung-Min(POSTECH, Department of Physics)

DF-33(초) [12:18-12:45]

**Search for topological materials via first-principles calculations** / YU Jaejun(Department of Physics and Astronomy, Seoul National University)

[DF9] 응집물질물리학회 Focus Session: 강상관계, "강한 스핀-궤도 상호작용 물리"

2014년 4월 25일 금요일 13:00 - 14:00

장소: 101호

좌장: 김 동 욱 이화여대

DF-34 [13:00-13:15]

**Effect of Ti substitution on the spin-flop transition of Li<sub>2</sub>MnO<sub>3</sub> single crystal with honeycomb lattice** / K Balamurugan, LEE Sang-Hyun(Center for Correlated Electron Systems, IBS), KIM Jun-Sung, OK Jong-Mok(Dept. of Physics, POSTECH), JO Youn-Jung(Dept. of Physics, Kyungpook National University), SONG Young-Mi(National Center for Inter-University Research Facilities), CHOI E. S.(National High Magnetic Field Laboratory, Florida State University), LE Manh Duc(Center for Correlated Electron Systems, IBS), PARK Je-Geun(Dept. of Physics and Astronomy, Seoul National University)

DF-35 [13:15-13:30]

**Molecular  $S_{\text{eff}}$  states in Lacunar spinel chalcogenides** / 김흥식(한국과학기술원 물리학과), 임진오(Department of Physics and Astronomy, Northwestern University), 한명준(한국과학기술원 물리학과), 진호섭(기초과학연구원, 강상관계물질연구단, 서울대학교)

DF-36\* [13:30-13:45]

**Detection of Dzyaloshinskii-Moriya Interaction and Chiral Domain Wall Dynamics driven by Spin-Orbit Torque** / JE Soong-Geun, KIM Duck-Ho, YOO Sang-Cheol(Department of Physics and Astronomy, Seoul National University), MIN Byoung-Chul(Center for Spintronics Research, Korea Institute of Science and Technology), LEE Kyung-Jin(Department of Materials Science and Engineering, Korea University), CHO E Sug-Bong(Department of Physics and Astronomy, Seoul National University)



DF-37\* [13:45-14:00]

**Pressure Tunable Giant Rashba Effect in the BiTeI Proven by Shubnikov-de Hass Oscillations** / PARK Joonbum, JIN Kyung-Whan(Department of Physics, Pohang University of Science and Technology, Korea), JO Y. J.(Department of Physics, Kyungpook National University, Daegu, Korea), KANG W.(Department of Physics, Ewha Woman's University, Seoul, Korea), CHOI E. S.(National High Magnetic Field Laboratory, Florida State University, Tallahassee, Florida, USA), RHYEE J.-S.(Department of Applied Physics, Kyung Hee University, Yongin, Korea), JHI Seung-Hoon, KIM Jun Sung(Department of Physics, Pohang University of Science and Technology, Korea)

[DG11] 응집물질물리학회 General Session: 나노/중시계

2014년 4월 25일 금요일 09:00 - 10:40

장소: 102호

좌장: 김 진 희 KRISS

DG-65 [09:00-09:20]

**Effect of phase coherence in entangled mesoscopic Kondo systems** / HONG Jongbae(포항공대)

DG-66 [09:20-09:40]

**Electro-Optical Manipulation Of Plasmon Transmission On Graphene** / MOON Kyungsun, PARK Suk-Young(Dept. of Physics, Yonsei Univ.)

DG-67 [09:40-09:55]

**Ab initio study of electronic and transport Properties of Single Layer 2H and 1T MoS<sub>2</sub> Heterostructures** / SUNG Dongchul, HONG Suklyun(Graphene Research Institute and Department of Physics, Sejong University)

DG-68\* [09:55-10:10]

**First-principles Study of Doping Effect in Graphene on Oxide Substrates** / MIN Kyung-Ah, HONG Suklyun(Department of Physics and Graphene Research Institute, Sejong University)

DG-69\* [10:10-10:25]

**Strain Effect on Electronic Structure of Several Graphyne Structures : First Principle Study** / LEE Hyeonsu, KANG Seoung-Hun, PARK Sora, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University, Seoul, 130-701, Korea)

DG-70\* [10:25-10:40]

**Study of adsorbed molecules on MoS<sub>2</sub> nanostructures using first-principles calculations** / CHA Janghwan, SUNG Dongchul, HONG Suklyun(Department of Physics and Graphene Research Institute, Sejong University)



**[DF10] 응집물질물리학회 Focus Session: 나노/중시계, "중시계 열물성 물리"**

2014년 4월 25일 금요일 11:00 – 12:45

장소: 102호

좌장: 배 명 호 KRISS

**DF-38(초) [11:00-11:30]**

**Surface polar optical phonon interaction induced many-body effects and hot electron relaxation in 2D structures** / 황의현(SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University)

**DF-39(초) [11:30-12:00]**

**Spin and orbital caloritronics in a mesoscopic quantum dot system** / 임종수(고등과학원), LOPEZ Rosa, SANCHEZ David(IFISC)

**DF-40(초) [12:00-12:30]**

**Peierls distortion and chemical potential tuning in n-type Indium-Selenides** / 이종수(경희대)

**DF-41 [12:30-12:45]**

**Calibration of thermo-mechanical motion in doubly-clamped beam resonator using in-situ optical and capacitive sensing** / CHO Sungwan, KIM Sang goon(Korea Research Institute of Standards and Science), CHO Sung Un(Seoul National University), SHIM Seung Bo(Korea Research Institute of Standards and Science)

**[DG12] 응집물질물리학회 General Session: 자성체**

2014년 4월 25일 금요일 09:00 – 10:45

장소: 103호

좌장: 이 현 우 포스텍

**DG-71 [09:00-09:15]**

**p-type conductivity generated by ferromagnetic ordering via percolative anionic H chain formation in ZnCoO** / LEE Hosik(UNIST), SHIN Jong Moon, CHO Yong Chan, LEE Seunghun, PARK Chul Hong(Pusan National University), PARK Noejung(UNIST), JEONG Se-Young(Pusan National University), KIM Sung Youb(UNIST)

**DG-72\* [09:15-09:30]**

**Thickness Dependence of Magnetic Anisotropy of GaMnAs Film** / BAC Seul-Ki, LEE Hakjoon, LEE Sangyeop, SHIN Jinsik, CHOI Seonghoon, JEONG Yujin, LEE Sanghoon(고려대), LIU X, FURDYNA J. K.(University of Notre Dame, Physics)

**DG-73\* [09:30-09:45]**

**Surface Dependence of Magnetic Anisotropy of Fe Films Grown**



**on Semiconductor Buffer Layers** / JEONG Yujin, LEE Hakjoon, LEE Sangyeop, YOO Taehee, LEE Sanghoon(Physics Department , Korea University), LIU X., FURDYNA J.K.(Physics Department , University of Notre Dame)

DG-74\* [09:45-10:00]

**The variation of exchange bias in  $[\text{Pt}/\text{Co}]_3/\text{IrMn}$**  / YOON Seungha, CHO B. K.(Gwangju Institute of Science and Technology)

DG-75\* [10:00-10:15]

**Metal free half metallicity in  $\text{g-C}_4\text{N}_3/\text{BN}$  Hybridized System** / HASHMI Arqum, 손지철, 홍지상(부경대)

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DG-76 [10:15-10:30]

**Large negative magnetoresistance for  $\text{SrRu}_{1-x}\text{Fe}_x\text{O}_3$  thin films** / JUNG Chang uk, TOREH Kirstie Raquel Natalia, TAMBUNAN Octolia Togibasa, VU Binh Nam(Hankuk University of Foreign Studies, Physics)

DG-77 [10:30-10:45]

**Mn이 치환된  $\text{CeNi}_{0.8}\text{Bi}_2$  물질에서의 전도성과 자성 연구** / 정명화, 김수환, 이규준(서강대, 물리학과)

[DG13] 응집물질물리학회 General Session: 자성체

2014년 4월 25일 금요일 11:00 - 12:00

장소: 103호

좌장: 이 현 우 포스텍

DG-78\* [11:00-11:15]

**비정질  $[\text{CoSiB}/\text{Pt}]_N$  다층 수직자화 박막에서의 자구벽 연구** / 정명화, 최영하, 이규준(서강대, 물리학과), 윤정범, 조재훈, 유천열(인하대, 물리학과), 김태완(세종대, 신소재공학과)

DG-79 [11:15-11:30]

**Magnonic crystals based on coupled vortex gyration** / HAN Dong-Soo(National Creative Research Initiative Center for Spin Dynamics and Spin-Wave Devices, and Research Institute of Advanced Materials, Department of Materials Science and Engineering, Seoul National University, Seoul 151-744, Republic of Korea), VOGEL ANDREAS(Institut für Angewandte Physik und Zentrum für Mikrostrukturforschung, Universität Hamburg, 20355 Hamburg, Germany), JUNG HYUNSUNG, LEE KI-SUK(National Creative Research Initiative Center for Spin Dynamics and Spin-Wave Devices, and Research Institute of Advanced Materials, Department of Materials Science and Engineering, Seoul National University, Seoul 151-744, Republic of Korea), WEIGAND MARKUS, STOLL HERMANN, SCHUTZ GISELA(Max-Planck-Institut für Intelligente Systeme, 70569 Stuttgart, Germany), FISCHER PETER(Center for X-ray Optics, Lawrence Berkeley National Laboratory, Berkeley CA 94720, USA), MEIER GUIDO(Institut für Angewandte Physik und Zentrum für Mikrostrukturforschung, Universität



Hamburg, 20355 Hamburg, Germany), **KIM SANG-KOOG**(National Creative Research Initiative Center for Spin Dynamics and Spin-Wave Devices, and Research Institute of Advanced Materials, Department of Materials Science and Engineering, Seoul National University, Seoul 151-744, Republic of Korea)

**DG-80\*** [11:30-11:45]

**Magnetic Field Effect on Electroluminescence in a Top-emitting OLED with Epitaxial Si(100)∕MgO(100)∕Fe(100)∕MgO(100) Multilayers**

/ **LEE Nyun Jong**(Department of Physics, Ewha Womans University, Seoul, South Korea), **ITO Eisuke**(Flucto-Order Functions Research Team, RIKEN Advanced Science Institute, Wako, Saitama, Japan), **BAE Yu Jeong**(Department of Physics, Ewha Womans University, Seoul, South Korea), **JUNG Heeyoung**, **LEE Changhee**(School of Electrical Engineering and Computer Science, Seoul National University, Seoul, South Korea), **KIM Tae Hee**(Department of Physics, Ewha Womans University, Seoul, South Korea)

**DG-81\*** [11:45-12:00]

**틈 없는 반도체 PbPdO<sub>2</sub> 박막의 열 처리에 의한 자기 특성 변화 / 정명화, 추성민, 이규준, 박성민, 박광서(서강대, 물리학과)**



## SESSION E

## 응용물리학과회

2014년 4월 23일(수) 응용물리학과회 구두 발표

### [EG1] 응용물리학과회 General Session: Best Presentation Competition (Photonics and Optoelectronics)

2014년 4월 23일 수요일 13:00 - 14:30

장소: 104호

좌장: 김 선 경 경희대

EG-01\* [13:00-13:15]

#### Electrical Current Switching Within 1fs Timescale Driven By CEP-Controlled Few-Cycle Optical Pulses In Sapphire And Quartz /

권오준, PAASCH-COLBERG Tim<sup>1</sup>, KARPOWICZ Nicholas<sup>1</sup>, KEIBER Sabine<sup>1</sup>, APALKOV Vadym<sup>2</sup>, STOCKMAN Mark I.<sup>2</sup>, KRAUSZ Ferenc<sup>3</sup>, KIM D.(Physics Department, Center for Attosecond Science and Technology, POSTECH, Kyungbuk 790-784, Pohang, Korea; Max Planck Center for Attosecond Science, Pohang, Kyungbuk 790-784, Korea. <sup>1</sup>Max-Planck-Institut für Quantenoptik, Hans-Kopfermann-Strasse 1, D-85748 Garching, Germany. <sup>2</sup>Department of Physics and Astronomy, Georgia State University, Atlanta, Georgia 30340, US. <sup>3</sup>Max-Planck-Institut für Quantenoptik, Hans-Kopfermann-Strasse 1, D-85748 Garching, Germany; Fakultät für Physik, Ludwig-Maximilians-Universität, Am Coulombwall 1, D-85748 Garching, Germany.)

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EG-02\* [13:15-13:30]

#### Generalized Snell's Law and Electrically Controlled Polarization of Extraordinary Beam in Complementary Metasurface / 이연익, 우정원(이화여자대학교, 물리학과.)

EG-03\* [13:30-13:45]

#### 생체친화물질로 구성된 나노 플라스모닉스 구조 집적 / 박준한, 김성환(아주대학교, 에너지시스템학과.)

EG-04\* [13:45-14:00]

#### Compensation of luminance distortion in spatially interlaced stereoscopic 3D display / 최희진, 박민영(세종대학교, 물리학과.)

EG-05\* [14:00-14:15]

#### MgF<sub>2</sub> Monoplate Retarder를 사용한 Rotating-Compensator Ellipsometer의 제작과 III-V 반도체 물질의 전이점 에너지 연구 / 최준호, 김태중, 박한결, 박재찬, 김영동(경희대학교 물리학과 및 나노광물성 연구실.)

EG-06\* [14:15-14:30]

#### Coalescence and Surface Flattening of [1-10-3]-oriented GaN Non-flat Top Twins Grown on m-plane Sapphire Substrates / 주미연, 윤한섭, 이혜미, 이상화, 김진교(경희대학교, 물리학과.)





**[EF4] 응용물리학회/반도체물리학회 공동 Focus Session: 3-5족 반도체 나노선 및 소자 I**

2014년 4월 23일 수요일 13:00 - 14:30

장소: 105호

좌장: 임 현 식 동국대

**EF-14(초)** [13:00-13:30]

**Microstructural Characterization of III-V Semiconductor Nanowires: A Transmission Electron Microscopy Study / KIM Young Heon**(Korea Research Institute of Standards and Science.)

**EF-15(초)** [13:30-14:00]

**III-V Semiconductor Nanowires Grown on Si by MOCVD / SHIN Jae Cheol**(Korea Photonics Technology Institute.)

**EF-16(초)** [14:00-14:30]

**Van der Waals heteroepitaxy of InAs/graphene and InAs/graphene/InAs / HONG Young Joon**(Sejong University, Department of Nanotechnology and Advanced Materials Engineering & Graphene Research Institute.)

**[EF1] 응용물리학회 Focus Session: 펄스초 자성 동역학**

2014년 4월 23일 수요일 15:00 - 16:40

장소: 104호

좌장: 이 재 동 DGIST

**EF-01(초)** [15:00-15:30]

**Exploring dynamical magnetism on a fs time-scale / AESCHLIMANN Martin**(Department of Physics and Research Center OPTIMAS, University of Kaiserslautern, Germany.)

**EF-02** [15:30-15:45]

**All-optical Study of Spin Waves / YUN Sang-Jun, CHO Cheong-Gu, CHOE Sug-Bong**(Seoul National University, Department of Physics.)

**EF-03(초)** [15:45-16:05]

**Observation of spin dynamics in Co/Ni multilayers by femtosecond pulse laser / SONG Hyon-Seok, SOHN Jeong-Woo<sup>1</sup>, YANG See-Hun<sup>2</sup>, PARKIN Stuart<sup>2</sup>, LEE Kyeong-Dong<sup>3</sup>, YOU Chun-Yeol<sup>4</sup>, HONG Jung-il, PARK Byong-Guk<sup>3</sup>, SHIN Sung-Chul<sup>1</sup>**(DGIST, Department of Emerging Materials Science. <sup>1</sup>KAIST, Department of Physics and CNSM and DGIST, Department of Emerging Materials Science. <sup>2</sup>Almaden Research Center, IBM Research Division. <sup>3</sup>KAIST, Department of Materials Science and Engineering. <sup>4</sup>Inha University, Department of Physics.)



EF-04(초) [16:05-16:25]

**Control of coherent phonon via electron-lattice interaction in ferromagnetic Co/Pt superlattice multilayers** / 김철훈, 심제호<sup>1</sup>, 김동현<sup>1</sup>, 김동연(POSTECH, 물리학과, Max-Planck Center for Attosecond Science, <sup>1</sup>충북대, 물리학과.)

EF-05 [16:25-16:40]

**Femtosecond Demagnetization of Ferromagnetic Metal: Cooperative Dynamics of Delocalized Spin and Coherent Phonon** / LEE JaeDong, YUN Won Seok<sup>1</sup>(Emerging Materials Science, DGIST, <sup>1</sup>Emerging Materials Science, DGIST and Center for X-ray Optics, LBNL.)

[EF5] 응용물리학과회/반도체물리학과회 공동 Focus Session: 3-5족 반도체 나노선 및 소자 II

2014년 4월 23일 수요일 15:00 - 16:30

장소: 105호

좌장: 도 응 주 고려대

EF-17(초) [15:00-15:30]

**Low-dimensional Quantum Transport in InAs Nanowires** / 배명호, 김범규<sup>1</sup>, 최선재<sup>2</sup>, 송종현<sup>2</sup>, 김주진<sup>1</sup>, 김남, 신재철<sup>3</sup>(한국표준과학연구원, <sup>1</sup>전북대학교, <sup>2</sup>충남대학교, <sup>3</sup>한국광기술원.)

EF-18(초) [15:30-16:00]

**III-V and IV semiconductor nanowires for optoelectronic and biomedical device applications** / 이상권, 김동주(중앙대학교 물리학과.)

EF-19(초) [16:00-16:30]

**QWR FET using AlGaAs/GaAs V-groove type Quantum wire** / HAHN Cheol Koo, ROH Cheong Hyun, OGURA M.<sup>1</sup>(KETI, Photonics Convergence Research Center, <sup>1</sup>AIST.)

응용물리학과총회

2014년 4월 23일 수요일 18:00 - 19:00

장소: 104호

2014년 4월 24일(목) 응용물리학과회 구두 발표

[EF2] 응용물리학과회/응집물질물리학과회 공동 Focus Session: 스핀 퀀도돌림 I

2014년 4월 24일 목요일 09:00 - 10:40

장소: 104호

좌장: 최 석 봉 서울대

EF-06(초) [09:00-09:25]

**Tilting of the spin orientation induced by Rashba effect in**



**ferromagnetic metal layer** / PI Ung Hwan, KIM Kee Won, BAE Ji Young, LEE Sung Chul, CHO Young Jin, KIM Kwang Seok, SEO Sunae(Samsung Advanced Institute of Technology (SAIT), Gyeonggi-Do 446-712, Republic of Korea.)

EF-07(초) [09:25-09:50]

**Current induced spin-orbit torque in Ta|CoFeB|MgO heterostructures** / KIM Junyeon(National Institute for Materials Science.)

EF-08(초) [09:50-10:15]

**Measurement of Spin-orbit Torques in Heavy element/ferromagnet/oxide Structures** / PARK Byong-Guk, OH Young-Wan, CHO Soonha, LEE Kyeong-Dong(Materials Science and Engineering, KAIST.)

EF-09(초) [10:15-10:40]

**Pd/FePd/MgO 구조에서의 스핀궤도 토크의 측정** / 유천열(인하대학교 물리학과.)

**[EG6] 응용물리학과회 General Session: Best Presentation Competition (Nanomaterials and Nanodevices)**

2014년 4월 24일 목요일 09:00 – 10:25

장소: 105호

좌장: 장재원 부경대

EG-27 [09:00-09:25]

**High Performance Graphene Electrodes Fabricated by Conducting Polymer Supported Transfer and Hybridization** / 강영호, 이병훈<sup>1</sup>, 이종훈<sup>2</sup>, 이광희<sup>2</sup>(전남대학교, 물리교육과. <sup>1</sup>Univ. of California, Santa Barbara. <sup>2</sup>광주과학기술원, 신소재공학과.)

EG-28\* [09:25-09:40]

**Proton Irradiation Effects on multi-layer MoS<sub>2</sub> based Field Effect Transistors** / TAKHEE Lee, TAE-YOUNG Kim, KYUNGJUNE Cho, WOANSEO Park(Seoul National University.)

EG-29\* [09:40-09:55]

**MoS<sub>2</sub>의 화학 도핑과 이를 이용한 광학 및 정류 특성 소자 제작 연구** / 최민섭, QU Deshun, 이지아, LIU Xiaochi, LI Hua-Min, 라창호, 이승환, 유원중(SKKU Advanced Institute of Nano-Technology (SAINT).)

EG-30\* [09:55-10:10]

**Electrical and optoelectrical properties of MoS<sub>2</sub>/WSe<sub>2</sub> heterojunction** / 이섬균, 유경화, 김상정, 박명욱(연세대학교 물리학과.)



EG-31\* [10:10-10:25]

**Anomalous Water Behaviors on Hexagonal Boron Nitride: Ab initio Study** / KANG Seoung-Hun, KIM gunn<sup>1</sup>, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University. <sup>1</sup>Department of Physics and Graphene Research Institute, Sejong University.)

[EF3] 응용물리학회/응집물질물리학회 공동 Focus Session: 스핀 궤도돌림힘 II

2014년 4월 24일 목요일 11:00 - 12:45

장소: 104호

좌장: 유 천 열 인하대

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EF-10(초) [11:00-11:25]

**Interfacial Spin-Orbit Coupling Effects In Magnetic Bilayers** / KIM Kyoung-Whan, RYU Jisu<sup>1</sup>, MOON Jung-Hwan<sup>2</sup>, SEO Soo-Man<sup>2</sup>, LEE Kyung-Jin<sup>2</sup>, STILES Mark<sup>3</sup>, LEE Hyun-Woo(Department of Physics, POSTECH. <sup>1</sup>SAMSUNG electronics. <sup>2</sup>Department of Materials Science and Engineering, Korea University. <sup>3</sup>National Institute of Standards and Technology.)

EF-11(초) [11:25-11:50]

**Spin-orbitronics and Spin-orbit Caloritronics** / LEE Kyung-Jin(Korea University, Department of Materials Science and Engineering.)

EF-12(초) [11:50-12:15]

**Cavity Mode Dependence of Inverse Spin Hall to Anomalous Hall ratio** / PARK Seung-young, KIM Sang-il, SEO Min-su(Division of Materials Science, Korea Basic Science Institute.)

EF-13(초) [12:15-12:45]

광자기 커르 현상을 이용한 스핀-궤도 돌림힘 측정법 / 윤상준, 최석봉(서울대학교 물리천문학부.)

[EF6] 응용물리학회 Focus Session: 그래핀과 생체물질의 만남, 결합, 새로운 지평

2014년 4월 24일 목요일 11:00 - 12:50

장소: 105호

좌장: 홍 석 철 고려대

EF-20(초) [11:00-11:22]

**Biomolecular Probe Development for Analysis and Control of Aberrant Biomolecules** / 정용원(카이스트, 화학과.)

EF-21(초) [11:22-11:44]

**Protein patterning using tip-based nanolithography** / JANG Jae-Won(Pukyong National University, Department of Physics.)



EF-22(초) [11:44-12:06]

**Electrochemical DNA sensors using graphene-based materials as additives** / 이은철(가천대학교.)

EF-23(초) [12:06-12:28]

**Biomedical Applications of Optical Biosensors based on Graphene Oxide and Nucleic Acid** / 민달희(서울대학교 화학부.)

EF-24(초) [12:28-12:50]

**Graphene Substrate for the Control of Stem Cell Differentiation and Motor Protein Activities** / HONG Seunghun(Physics, Seoul National University.)

**[EG2] 응용물리학과회 General Session: Best Presentation Competition (Advanced Materials)**

2014년 4월 24일 목요일 14:00 – 15:40

장소: 104호

좌장: 엄 중 화 세종대

EG-07 [14:00-14:25]

**Air Transparent Soundproof Window** / KIM Sang-Hoon, LEE Seong-Hyun<sup>1</sup>(Division of Marine Engineering, Mokpo National Maritime University. <sup>1</sup>Korea Institute of Machinery and Materials.)

EG-08\* [14:25-14:40]

**Effective Isolation Of Primo Vessels In The Lymph By Sound And Ultrasonic Wave Stimulation** / 박도영, 허준이<sup>1</sup>, 정지환<sup>1</sup>, 이해리<sup>1</sup>, 박지수<sup>1</sup>, 이상석<sup>2</sup>(상지대학교 동서의료공학과. <sup>1</sup>상지대학교 한방의료공학과. <sup>2</sup>상지대학교 한방의료공학과.)

EG-09\* [14:40-14:55]

**Size Effect of Local Electrical Properties in Artificially Fabricated Nickel Oxide Nano-dots** / LEE Nuri, JO William, KIM D.-W., LIU C.<sup>1</sup>, MENY C.<sup>2</sup>(Ewha Womans University, Department of physics. <sup>1</sup>Hankuk University of foreign studies, Department of physics. <sup>2</sup>UMR 7504 ULP-CNRS, Institutes of Physics and Chemistry of Materials of Strasbourg.)

EG-10\* [14:55-15:10]

**Photo-Assisted Metal-Insulator Transition in VO<sub>2</sub> Films** / JUNG Juho, LEE Jaeran, KIM Sok Won, RYU Ji-Wook<sup>1</sup>(University of Ulsan. <sup>1</sup>Kongju National University.)

EG-11\* [15:10-15:25]

**바이오 리지스트 silk를 이용한 E-beam lithography 패터닝과 SiO<sub>2</sub> 식각공정기술** / 김태형, 김성환<sup>1</sup>(아주대학교, 에너지시스템학과. <sup>1</sup>아주대학교, 물리



학과/에너지시스템학과.)

EG-12 [15:25-15:40]

**Synthesis of ZnO-TiO<sub>2</sub> hybrid nanostructures Prepared By Using Electrohydrodynamic Lithography** / 이수옥, 문충만, 이재중<sup>1</sup>(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea. <sup>1</sup>Nanomechanical Systems Research Division, KIMM, Daejeon 171, Republic of Korea.)

[EF7] 응용물리학회 Focus Session: 바이오의학물리심포지엄 I

2014년 4월 24일 목요일 14:00 - 15:45

장소: 105호

좌장: 최 은 하 광운대

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EF-25(초) [14:00-14:30]

**최신 초음파영상진단기술 동향 / 이충희**(한국과학기술정보연구원 ReSEAT 프로그램.)

EF-26(초) [14:30-15:00]

**Dosimetry Standard of Mammography X-ray** / 이철영, 김인중, 김병철, 김현문(한국표준과학연구원.)

EF-27 [15:00-15:15]

**형광염료(Dil)를 이용하는 림프관내 프리모 시스템의 관찰법 개발 / 소광섭, 유주환, 박수연**(서울대 차세대융합기술연구원 나노프리모센터.)

EF-28 [15:15-15:30]

**Mathematical Modeling of PIP<sub>2</sub>-mediated Vesicle Fusion** / HAN Kyungreem, KOH Duk-Su<sup>1</sup>, CHOI MooYoung(Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University, Seoul 151-747, Korea. <sup>1</sup>Department of Physiology and Biophysics, University of Washington, Seattle, WA 98195-7290, USA.)

EF-29 [15:30-15:45]

**The Study on Electroporation efficiency along with Mechanical Properties of Cell** / 김홍배(서울대학교 농생명과학대학.)

[EG3] 응용물리학회 General Session: Biophysics and Bioengineering

2014년 4월 24일 목요일 16:00 - 17:25

장소: 104호

좌장: 이 은 철 가천대

EG-13 [16:00-16:25]

**Scanning-Aperture Trapping and Manipulation of Single Charged Nanoparticles** / KIM Ji Tae, SPINDLER Susann, SANDOGHDAR Vahid(Max



Planck Institute for the Science of Light and Friedrich-Alexander University, 91058 Erlangen, Germany.)

**EG-14** [16:25-16:50]

**Biophysical and X-ray Science using a High-pressure Technique / 김채운**(UNIST, 물리학과.)

**EG-15** [16:50-17:15]

**Micro-Magnetic Biosensor with Femtomolar Resolution / TORATI Sri Ramulu, REDDY Venu, SINHA Brajalal, KIM Cheolgi**(DGIST, Emerging Materials Science.)

**[EF8] 응용물리학회 Focus Session: 바이오의학물리심포지엄 II**

2014년 4월 24일 목요일 16:00 - 17:25

장소: 105호

좌장: 백 구 현 광운대

**EF-30(초)** [16:00-16:30]

**저선량 CT를 위한 샘플링 기법 / 조승룡**(카이스트, 원자력 및 양자공학과.)

**EF-31** [16:30-16:45]

**원자현미경을 이용 노화에 따른 섬유아세포의 탄성 변화 측정 / 김경숙, 신민경, 박현국**(경희대학교.)

**EF-32** [16:45-17:05]

**Visualization of OH radical interactions in living cells by adding D<sub>2</sub>O in non-thermal plasma jet / 백구연, 이채복, 최은하, 엄환섭**(광운대학교 전자바이오물리학과, '광운대학교 플라즈마 디스플레이 및 바이오학과.)

**EF-33** [17:05-17:25]

**Fluorescence Imaging for In Vivo Biology and Clinical Applications / 유정선, 장영태<sup>1</sup>, 이병철<sup>2</sup>, 김상은<sup>2</sup>**(서울대학교 융합과학기술대학원, <sup>1</sup>싱가포르국립대 화학부, <sup>2</sup>분당서울대학교병원 핵의학과.)

2014년 4월 25일(금) 응용물리학회 구두 발표

**[EG4] 응용물리학회 General Session: Best Presentation Competition (Nanomaterials and Nanodevices)**

2014년 4월 25일 금요일 09:00 - 10:40

장소: 104호

좌장: 임 은 주 단국대

**EG-16** [09:00-09:25]

**Self-powered environmental sensor system driven by nanogenerators / 이민백**(인하대학교, 물리학과.)



EG-17 [09:25-09:40]

투명 나노발전소자를 위한 PDMS기반의 마찰전기 발전소자 제작 및 광학적/전기적 특성 연구 / 고영환, 이수현, 유재수(경희대학교, 전자전파공학과.)

EG-18\* [09:40-09:55]

**Fabrication and Characterization of Flexible Energy Harvesters using CNTs-templated Pb(Zr,Ti)O<sub>3</sub> Nanoparticles** / HAN Jin Kyu, JEON Do Hyen, KWAK Jin Ho, RA Eun Ju<sup>1</sup>, LIM Jong Sun<sup>1</sup>, LEE Ju Hyuck<sup>2</sup>, KIM Sang Woo<sup>3</sup>, BU Sang Don(Department of Physics, Chonbuk National University. <sup>1</sup>Thin Film Materials Research Group, Division of Advanced Materials, Korea Research Institute of Chemical Technology. <sup>2</sup>Advanced Institute of Nanotechnology (SAINT) Center for Human Interface Nanotechnology (HINT), Sungkyunkwan University. <sup>3</sup>School of Materials Science and Engineering, Advanced Institute of Nanotechnology (SAINT) Center for Human Interface Nanotechnology (HINT), Sungkyunkwan University.)

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EG-19\* [09:55-10:10]

**Raman scattering studies of Cu<sub>2</sub>ZnSnSe<sub>4</sub> thin film solar cells** / NGUYEN Thi Thu Trang, SHIN Hae-Young, KIM Gee Yeong, KIM Ju Ri, JO William, YOON Seokhyun(Department of Physics, Ewha Womans University.)

EG-20\* [10:10-10:25]

**Polarized Raman Spectroscopy with Differing Angles of Laser Incidence on a Few Layers of MoS<sub>2</sub>** / HEO Gaeun, SENTHILKUMAR V.<sup>1</sup>, TAM Le Chinh<sup>1</sup>, KIM Yong Soo<sup>1</sup>, SEONG Maeng-Je(Chung-Ang University, Department of Physics. <sup>1</sup>University of Ulsan.)

EG-21\* [10:25-10:40]

**CdSe양자점-유기반도체 하이브리드 나노구조체의 광전자 특성 연구** / 한 윤덕, 조은혜, 박성연<sup>1</sup>, 전수민<sup>1</sup>, 김정용<sup>2</sup>, 이광섭<sup>1</sup>, 주진수(고려대학교 물리학과. <sup>1</sup>한남대학교 신소재공학과. <sup>2</sup>성균관대학교 에너지과학과.)

**[EG7] 응용물리학과회 General Session: Best Presentation Competition (Nanomaterials and Nanodevices)**

2014년 4월 25일 금요일 09:00 - 10:35

장소: 105호

좌장: 정 창 욱 한국외대

EG-32\* [09:00-09:15]

**The Influences of Structural and Chemical Disorder on the Thermal Conductance of Interface between Graphene and Metals** / KIM Jaehyeon, PARK Jeong Young, LYEHO Ho-Ki<sup>1</sup>(KAIST, Graduate School of EEWS; Institute for Basic Science, Center for nanomaterials and Chemical Reactions, Daejeon 305-701, South Korea. <sup>1</sup>Korea Research Institute of Standards and Science, Daejeon 305-340, South Korea.)





EG-33\* [09:15-09:30]

**Mechanism of photocurrent at a junction between stacking domains in tri-layer graphene** / KIM Minjung, CHOI Seon-Myeong<sup>1</sup>, YOON Ho Ang<sup>2</sup>, KIM Jung Cheol, LEE Sang Wook<sup>2</sup>, SON Young-Woo<sup>1</sup>, CHEONG Hyeonsik(Department of Physics, Sogang University. <sup>1</sup>School of Computational Sciences, Korean Institute for Advanced Study. <sup>2</sup>Division of Quantum Phases and Devices, School of Physics, Konkuk University.)

EG-34\* [09:30-09:45]

**Graphene/ hBN/ Graphene 수직 구조의 터널링 다이오드 소자 제작 및 특성 연구** / 이승환, 최민섭, 이지아, 유원종(성균관대학교, 나노과학기술대학원.)

EG-35\* [09:45-10:00]

**Two-Photon Induced Luminescence of Graphene Oxide Quantum Dots for Heavy Metal Ion Sensing** / JANG Min-Ho, HA Hyun Dong<sup>1</sup>, SEO Tae Seok<sup>1</sup>, CHO Yong-Hoon(Department of Physics and Graphene Research Center of KI for the NanoCentury, KAIST. <sup>1</sup>Department of Chemical and Biomolecular Engineering and Institute for the BioCentury, KAIST.)

EG-36 [10:00-10:20]

**Growth of Three Dimensional Flower-like MoS<sub>2</sub> Hierarchical Structures on Graphene/Carbon Nanotube Network: An Advanced Architecture for Energy Storage Devices** / LINGAPPAN Niranjanmurthi, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)

EG-37 [10:20-10:35]

**Direct and Epitaxial Growth of a Single-Crystal Lateral Hybridized Boron Nitride and Graphene layer (h-BNC) on a Wide-Band Gap Semiconductor Wafer** / 신하철, 안종렬, 이준해, 안성준, 문영권, 박지훈, 박종윤(성균관대학교, 물리학과.)

**[EG5] 응용물리학회 General Session: Best Presentation Competition (Spin and Magnetism)**

2014년 4월 25일 금요일 11:00 - 12:15

장소: 104호

좌장: 도 용 주 고려대

EG-22\* [11:00-11:15]

**Interaction between magnetic nanoparticles with a three dimensional magnetic vortex** / KIM Min-Kwan, LEE Ha-Youn, DHAK Prasanta, LEE Jae-Hyeok, YOO Myoung-Woo, LEE Jehyun, KIM Miyoung<sup>1</sup>, NAM Ki Tae<sup>1</sup>, KIM Sang-Koog(National Creative Research Initiative Center for Spin Dynamics and Spin-Wave Devices, Nanospinics Laboratory, and Research Institute of Advanced Materials, Department of Materials Science and Engineering, College of Engineering, Seoul National University. <sup>1</sup>Department of



Materials Science and Engineering, Seoul National University.)

EG-23\* [11:15-11:30]

**Dynamic transient states of skyrmion in soft magnetic nano-disks**

/ KIM Junhoe, HAN Dong-Soo, YOO Myoung-Woo, KIM Sang-Koog(National Creative Research Initiative Center for Spin Dynamics and Spin-Wave Devices, Nanospinics Laboratory, and Research Institute of Advanced Materials, Department of Materials Science and Engineering, College of Engineering, Seoul National University.)

EG-24\* [11:30-11:45]

**Dynamics of magnetic nano-spheres with a three-dimensional magnetic vortex**

/ YOO Myoung-Woo, LEE Jehyun, HAN Dong-Soo, LEE Hayoun, KIM Sang-Koog(National Creative Research Initiative Center for Spin Dynamics and Spin-Wave Devices, Nanospinics Laboratory, and Research Institute of Advanced Materials, Department of Materials Science and Engineering, College of Engineering.)

E

EG-25\* [11:45-12:00]

**무기/유기 혼성구조 계면에서의 전자기기적 구조와 스핀주입에 대한 연구**

/ 배유정, 이년중, 김태희, PRATT Andrew<sup>1</sup>, WADE Jessica<sup>2</sup>, KIM Ji-seon<sup>2</sup>(이화여자대학교, 물리학과. <sup>1</sup>National Institute for Materials Science, Tsukuba, Japan. <sup>2</sup>Department of Physics, Imperial College London, London SW7 2AZ, UK.)

EG-26\* [12:00-12:15]

**Analysis of Fe<sub>3</sub>O<sub>4</sub> thin Film Thermal Conductivity by Callaway Modeling**

/ PARK No-Won, LEE Won-YONG, KIM Jin-A<sup>1</sup>, YOON Soon-Gil<sup>2</sup>, LEE Sang-Kwon(Department of Physics, Chung-Ang University. <sup>1</sup>Department of Materials Engineering, Chungnam National University. <sup>2</sup>Department of Materials Engineering, Chungnam National University.)

**[EG8] 응용물리학회 General Session: Best Presentation Competition (Nanomaterials and Nanodevices)**

2014년 4월 25일 금요일 11:00 - 12:40

장소: 105호

좌장: 김 준 호 인천대

EG-38 [11:00-11:25]

**Crystallinity and Preferential ordering of 1,4,5,8,9,11-Hexaazatriphenylene-hexanitrile Thin Film between an Organic and Transparent Conductive Oxide layers**

/ KIM Hyo Jung, LEE Jeong-Hwan<sup>1</sup>, KIM Jang-Joo<sup>1</sup>, LEE Hyun Hwi<sup>2</sup>(Pusan National University. <sup>1</sup>Seoul National University. <sup>2</sup>Pohang Accelerator Lab..)

EG-39\* [11:25-11:40]

**Hydrothermal growth of ZnO nanosheets assembled hollow**



**structure: mechanisms and photoinduced properties** / HAHN Sung hong, KHOA Nguyen Tri, KIM Soon Wook, THUAN Doan Van, YOO Dae-Hwang(University of Ulsan, Department of Physics.)

EG-40\* [11:40-11:55]

**Topological Control of Graphene with Artificial DNA Nanostructure** / 문영권, 신지훈<sup>1</sup>, 박성하, 안종렬(성균관대학교, 물리학과. <sup>1</sup>성균관대학교, SAINT.)

EG-41\* [11:55-12:10]

**Multi-Color Optical Waveguide using Blue-light-emitting Organic Nanowire Hybridized with Quantum Dots: Application to Remote Bio-sensing** / CHO Eun Hei, KIM Bong-Gi<sup>1</sup>, LEE Jubok<sup>2</sup>, PARK Dong Hyuk<sup>3</sup>, JEON Sumin<sup>4</sup>, LEE Kwang-sup<sup>4</sup>, KIM Jinsang<sup>1</sup>, KIM Jeongyong<sup>2</sup>, JOO Jinsoo(Department of Physics, Korea University. <sup>1</sup>Macromolecular Science and Engineering, University of Michigan. <sup>2</sup>IBS Center for Integrated Nanostructure Physics, Sungkyunkwan University. <sup>3</sup>Division of Nano-systems Engineering, Inha University. <sup>4</sup>Department of Advanced Materials, Hannam University.)

EG-42\* [12:10-12:25]

**The role of grain boundaries in  $\text{Cu}_2\text{ZnSn}(\text{S,Se})_4$  and  $\text{Cu}(\text{In,Ga})\text{Se}_2$  thin-film by Kelvin probe force microscopy** / 김지영, 김주리, 조월렬, 손대호<sup>1</sup>, 양기정<sup>1</sup>, 김대환<sup>1</sup>, 조현준<sup>1</sup>, 강진규<sup>1</sup>(이화여대 물리학과. <sup>1</sup>DGIST.)

EG-43\* [12:25-12:40]

**Direct Aqueous Dispersion of Carbon Nanotubes with Polyelectrolyte** / SIM Yumin, SEONG Maeng-Je(Chung-Ang University, Department of Physics.)



## SESSION F

## 통계물리학분과회

2014년 4월 23일(수) 통계물리학분과회 구두 발표

### [FG1] 통계물리학분과회 General Session: 통계역학

2014년 4월 23일 수요일 11:00 – 12:15

장소: 201호

좌장: 박 수 찬 가톨릭대

FG-01 [11:00-11:15]

**Brownian Particle Under A Dragged Harmonic Potential** / NOH Jae Dong, PARK Jong-Min(University of Seoul, physics.)

FG-02 [11:15-11:30]

**Integral Fluctuation Theorem for Hidden Entropy Production** / BAEK Yongjoo, HA Meesoon<sup>1</sup>, JEONG Hawoong<sup>2</sup>, PARK Hyunggyu<sup>3</sup>(Natural Science Research Institute, KAIST. <sup>1</sup>Department of Physics Education, Chosun University. <sup>2</sup>Department of Physics, KAIST. <sup>3</sup>School of Physics, KIAS.)

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FG-03\* [11:30-11:45]

**Entropy production in systems with slow and fast variables** / NOH Jae Dong, CHUN Hyun-Myung(University of Seoul.)

FG-04 [11:45-12:00]

**Decomposition of Lippmann-Schwinger solution set and complex eigenstates** / KIM Sungyun(호서대학교.)

FG-05 [12:00-12:15]

**On community detection using q-state Potts model** / 이재성, 황성민<sup>1</sup>, 강병남<sup>1</sup>, 여준현<sup>2</sup>, 김두철(고등과학원. <sup>1</sup>서울대학교. <sup>2</sup>건국대학교.)

### [FG2] 통계물리학분과회 General Session: 통계물리학의 연구 동향 I

2014년 4월 23일 수요일 13:00 – 14:30

장소: 201호

좌장: 노 재 동 서울시립대

FG-07(초) [13:00-13:30]

**Fluctuation Relations for Spintronics** / LIM Jong Soo, LÓPEZ Rosa<sup>1</sup>, SÁNCHEZ David<sup>1</sup>(School of Physics, Korea Institute for Advanced Study. <sup>1</sup>Institut de Física Interdisciplinar i de Sistemes Complexos IFISC (CSIC-UIB).)

FG-08(초) [13:30-14:00]

**Multiplex networks: introducing a new layer of complexity** / 고광 일(고려대학교 물리학과.)



FG-09(초) [14:00-14:30]

**Finite-time finite-size scaling of phase transition** / 김범준(성균관대학교 물리학과.)

통계물리분과총회

2014년 4월 23일 수요일 14:30 - 15:00

장소: 201호

2014년 4월 24일(목) 통계물리학분과회 구두 발표

[FG3] 통계물리학분과회 General Session: 생물물리

2014년 4월 24일 목요일 09:00 - 10:45

장소: 201호

좌장: 김철민 UNIST

FG-10(초) [09:00-09:30]

**Analysis on long-range residue-residue communication employing molecular dynamics** / WU Sangwook, LEE Chang Jun<sup>1</sup>, PEDERSEN Lee<sup>1</sup>(Pukyong National University, Department of Physics. <sup>1</sup>University of North Carolina at Chapel Hill, Department of Chemistry.)

FG-11 [09:30-09:45]

**Cross-link induced collapse of Gaussian polymer chains** / 베네타토 스 파나요티스(경북대학교 자연과학대학 물리학과.)

FG-12 [09:45-10:00]

**Phase Dynamics of Neural Responses to External Auditory Stimuli** / GOH Segun, HAN Kyungreem, KIM Kiwoong<sup>1</sup>, KWON Hyukchan<sup>1</sup>, KIM Min-Young<sup>1</sup>, CHOI MooYoung(Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University, Seoul 151-747, Korea. <sup>1</sup>Center for Biosignals, Korea Research Institute of Standards and Science (KRISS), Daejeon 305-340, Korea.)

FG-13 [10:00-10:15]

**Thermodynamic and Statistical-Mechanical Measures for Synchronization of Bursting Neurons** / LIM Woochang, KIM Sang-Yoon<sup>1</sup>(Daegu National University of Education, Department of Science Education. <sup>1</sup>LABASIS Corporation, Research Division.)

FG-14 [10:15-10:30]

**Global Organization of Human Gut Microbiota** / KIM Pan-Jun, SUNG Jaeyun, JANG Sungho<sup>1</sup>, CHIA Nicholas<sup>2</sup>, JIN Yong-Su<sup>3</sup>, JUNG Gyooyeol<sup>1</sup>(Asia Pacific Center for Theoretical Physics. <sup>1</sup>Department of Chemical Engineering, Pohang University of Science and Technology. <sup>2</sup>Department of Surgery, Mayo Clinic. <sup>3</sup>Department of Food Science and Human Nutrition, University of Illinois.)



FG-15\* [10:30-10:45]

생체 내 유모세포 부동섬모의 이온채널은 어떻게 잡음을 줄이는가? / 안강현, 김경중(충남대학교, 물리학과.)

[FG4] 통계물리학과회 General Session: 통계물리학의 연구 동향 II

2014년 4월 24일 목요일 11:00 - 12:30

장소: 201호

좌장: 정 형 채 세종대

FG-16(초) [11:00-11:30]

Discontinuous phase transition in a core contact process on complex networks / 김엽, 채희승, 육순형(경희대학교 물리학과.)

FG-17(초) [11:30-12:00]

Study of protein folding by using partition function zeros / 이주련(숭실대학교 생명정보학과.)

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FG-18(초) [12:00-12:30]

Atomic Superfluid in Two Dimensions / 신용일(서울대학교 물리천문학부.)

[FG5] 통계물리학과회 General Session: 복잡계 및 상전이와 임계현상

2014년 4월 24일 목요일 14:00 - 15:30

장소: 201호

좌장: 이 재 우 인하대

FG-19 [14:00-14:15]

Nash equilibrium and evolutionary dynamics in semifinalists' dilemma / BAEK Seung Ki, SON Seung-Woo<sup>1</sup>, JEONG Hyeong-Chai<sup>2</sup>(Department of Physics, Pukyong National University. <sup>1</sup>Department of Applied Physics, Hanyang University. <sup>2</sup>Department of Physics, Sejong University.)

FG-20 [14:15-14:30]

Synchronization of conformist and contrarian oscillators under pinning force / HOANG Danh-Tai, JO Junghyo<sup>1</sup>, HONG Hyunsuk<sup>2</sup>(APCTP. <sup>1</sup>APCTP, POSTECH. <sup>2</sup>Chonbuk National University.)

FG-21\* [14:30-14:45]

Multiple Resource Demands And Viability In Multiplex Networks / 고광일, 민병준(고려대학교, 물리학과.)

FG-22 [14:45-15:00]

Necessary condition for discontinuous percolation transitions / CHO Young Sul, KAHNG Byungnam(Seoul National University.)



**FG-23** [15:00-15:15]

**Critical behavior of degree-ordered percolation** / NOH Jae Dong, SHIM pyoung-seop, LEE Hyun keun<sup>1</sup>(University of Seoul. <sup>1</sup>KIAS.)

**FG-24\*** [15:15-15:30]

**Generalized Epidemic Process on Locally Clustered Networks**  
/ CHUNG Kihong, BAEK Yongjoo, KIM Daniel, HA Meesoon<sup>1</sup>, JEONG Hawoong<sup>2</sup>(Department of Physics, KAIST. <sup>1</sup>Department of Physics Education, Chosun University. <sup>2</sup>Department of Physics and Institute for the BioCentury, KAIST.)

**FG-06** [15:30-15:45]

**Zero-one-only process: a correlated random walk with a stochastic ratchet** / BAEK Seung Ki(Department of Physics, Pukyong National University.)



## SESSION G

## 물리교육분과회

2014년 4월 24일(목) 물리교육분과회 구두 발표

### [GG1] 물리교육분과회 General Session

2014년 4월 24일 목요일 09:30 - 10:45

장소: 204호

좌장: 김성원 이화여대

GG-01 [09:30-09:45]

**On one-dimensional three-body elastic collision problems / 이정일,**  
이준학(고려대학교 물리학과.)

GG-02 [09:45-10:00]

**예비 물리 교사의 관 내 정상파 모형발달에서 간섭무늬영상에 대한 시각적  
지각과 해석의 역할 / 박정우, 유준희(서울대학교.)**

GG-03 [10:00-10:15]

**Moments of Inertia of Spheres without Integration in Arbitrary  
Dimensions / HONG Seok-In, HONG Seok-Cheol<sup>1</sup>(Department of Science  
Education, Gyeongin National University of Education. <sup>1</sup>Department of Physics,  
Korea University.)**

GG-04 [10:15-10:30]

**과학교육에서 전산적 사고(Computational Thinking)를 위한 학습 프로  
그램 개발 / 이승우, 이지애, 정진규, 김영민(부산대학교.)**

GG-05 [10:30-10:45]

**일반물리학을 수강한 대학생들의 물리 개념 인식 수준과 물리상수 인식 수  
준 비교 / 김성원, 김완선, 이현주<sup>1</sup>, 윤소영(이화여자대학교, 과학교육과. <sup>1</sup>이화여  
자대학교/서울시립대학교.)**

### [GG2] 물리교육분과회 General Session

2014년 4월 24일 목요일 14:00 - 15:45

장소: 204호

좌장: 송진웅 서울대

GG-06 [14:00-14:15]

**중학교 물리지도를 위한 행동목표와 형성평가의 개발과 활용 / 김정희, 박  
종원(전남대학교 물리교육과.)**

GG-07 [14:15-14:30]

**중학교 학생들의 탐구가설 생성과 그 과정에 나타난 특징 / 김익균, 김종주,  
정미숙, 최선태, 박종원(충북대학교 물리교육과. <sup>1</sup>전남대학교.)**

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GG-08 [14:30-14:45]

관성에 대한 논의: 교과서 분석, 학생들의 이해를 중심으로 / 이봉우, 김희경<sup>1</sup>(단국대학교, <sup>1</sup>강원대학교.)

GG-09 [14:45-15:00]

**Correlation between Students' Beliefs about Learning Physics and Their Achievement** / 김홍정, 임성민<sup>1</sup>(국립중앙과학관 연구진흥과, <sup>1</sup>대구대학교 물리교육과.)

GG-10 [15:00-15:15]

중학 과학 교과서의 전자기 단원에 제시된 표상 분석 / 조광희, 조한국<sup>1</sup>, 윤혜경<sup>2</sup>(조선대학교, <sup>1</sup>단국대학교, <sup>2</sup>춘천교육대학교.)

GG-11\* [15:15-15:30]

통합적 과학교육을 위한 계에 대한 논의 / 송진웅, 지영래(서울대학교, 물리교육과.)

GG-12 [15:30-15:45]

**Conceptual Correspondence between Mechanical and Electromagnetic Oscillations** / LEE Jong Duk, RYU Chang-Mo(포항공과대학교 물리학과.)

**[GF1] 물리교육분과회 Focus Session**

2014년 4월 24일 목요일 16:00 - 17:20

장소: 204호

좌장: 박 종 원 전남대

GF-01 [16:00-16:20]

미국 물리교육과정의 이해 / 문공주(이화여자대학교 과학교육과.)

GF-02 [16:20-16:40]

영국의 교육과정 분석 - 물리 내용을 중심으로 / 이봉우(단국대학교 과학교육과.)

GF-03 [16:40-17:00]

핀란드의 물리교육 / 유준희(서울대학교 물리교육과.)

GF-04 [17:00-17:20]

종합토론



## SESSION H

## 플라스마물리학분과회

2014년 4월 24일(목) 플라스마물리학분과회 구두 발표

### [HG1] 플라스마물리학분과회 General Session

2014년 4월 24일 목요일 16:00 – 17:10

장소: 206호

좌장: 이 봉 주 조선대

HG-01 [16:00-16:25]

**Ultrafast XANES Measurements using the Third and Fourth Generation Light Sources** / CHO Byoung-ick(Gwangju Institute of Science and Technology (GIST), Department of Physics and Photon Science.)

HG-02\* [16:25-16:40]

**Mode conversion of extraordinary waves incident on stratified magnetized plasmas with perpendicular inhomogeneity** / 김슬옹, 김기홍(아주대 에너지시스템학과.)

HG-03 [16:40-16:55]

**Destruction of NF<sub>3</sub> using a Microwave Plasma Torch with Brown gas** /KANG Min ho, NA Young ho, HONG Chang ki<sup>1</sup>, KIM Youn jea<sup>1</sup>, UHM Han sup(Department of Electrical and Biological Physics, Kwangwoon University, Korea. <sup>1</sup>School of Mechanical Engineering, Sungkyunkwan University, Korea.)

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HG-04 [16:55-17:10]

**An Anisotropic Turbulent Plasma Transport In The Hasegawa-Wakatani Model** / 민병훈, 김창배, 안찬용(숭실대학교.)

### 플라스마물리학분과회 분과총회

2014년 4월 24일 목요일 17:10 – 17:25

장소: 206호

좌장: 노 승 정 단국대

2014년 4월 25일(금) 플라스마물리학분과회 구두 발표

### [HT1] 플라스마물리학분과회 Tutorial Session: Fusion Plasma Physics

2014년 4월 25일 금요일 09:00 – 10:40

장소: 206호

좌장: 나 용 수 서울대

HT-01 [09:00-09:50]

**Fusion Plasma Physics** / KIKUCH M(JAERI.)

HT-02 [09:50-10:40]

**Fusion Plasma Physics** / 함택수(서울대학교.)



**[HG2] 플라스마물리학회 General Session: KSTAR**

2014년 4월 25일 금요일 11:00 - 12:30

장소: 206호

좌장: 김 한 성 원자력연구원

**HG-05 [11:00-11:30]**

**Intrinsic Non-axisymmetric Field in Axisymmetric KSTAR / IN Yongkyoon, PARK Jong-kyu<sup>1</sup>, JEON Young-mu, KIM Jayhyun, OKABAYASHI Michio<sup>1</sup>**(National Fusion Research Institute. <sup>1</sup>Princeton Plasma Physics Laboratory, Princeton, NJ, U.S.A..)

**HG-06 [11:30-11:50]**

**A New ELM-Free H-Mode, 'Bursty H-Mode', Driven By RMP / JEON YoungMu, PARK J.-K.<sup>1</sup>, EVANS T.E.<sup>2</sup>, PARK G.Y., GHIM Y.-c.<sup>3</sup>, HAN H.S., KO W.H., NAM Y.U., LEE K.D., LEE S.G., BAK J.G., YOON S.W., OH Y.K., KWAK J.G.**(National Fusion Research Institute. <sup>1</sup>Princeton Plasma Physics Laboratory. <sup>2</sup>General Atomics. <sup>3</sup>Korea Advanced Institute of Science and Technology.)

**HG-07 [11:50-12:10]**

**Characteristics of ELM Precursor Measured by Two-dimensional Beam Emission Spectroscopy in KSTAR / NAM YongUn, ZOLETNIK Sandor<sup>1</sup>, LAMPERT Mate<sup>1</sup>, DUNAI Daniel<sup>1</sup>**(National Fusion Research Institute. <sup>1</sup>Wigner RCP Institute for Particle and Nuclear Physics.)

**HG-08 [12:10-12:30]**

**Analysis of Deposition Mechanism inside the Castellations Gap in KSTAR / HONG SUK-HO, LIM SUN-TAEK<sup>1</sup>, LEE JIN-YOUNG<sup>1</sup>, YANG SEUNG-JAE<sup>1</sup>, LHO TAEHYEOP, PARK CHONGRAE<sup>1</sup>, KIM GON-HO<sup>1</sup>**(NFR. <sup>1</sup>SNU.)



## SESSION I

## 광학 및 양자전자학분과회

2014년 4월 23일(수) 광학 및 양자전자학분과회 구두 발표

### [IG1] 광학 및 양자전자학분과회 General Session

2014년 4월 23일 수요일 13:00 - 14:30

장소: 209호

좌장: 이 광 결 한양대

IG-01\* [13:00-13:15]

**Generating Globally Enhanced Chiral Field Using Negative-Index Metamaterials** / YOO SeokJae, CHO Minhaeng<sup>1</sup>, PARK Q-Han(Department of Physics, Korea University. <sup>1</sup>Department of Chemistry, Korea University.)

IG-02 [13:15-13:30]

**Correlation Singularity in the Beam-Wandered Model** / 김선명(연세대학교 원주캠퍼스 물리학과.)

IG-03 [13:30-13:45]

**Dynamic Mathematica Platform Presenting Waves Through the Polarizers and Wave Plates Realized with Jones Vectors** / HEE-JOONG Yun, YONG-DAE Choi<sup>1</sup>, BOKYEONG Kim<sup>2</sup>(ReSeat Program, KISTI. <sup>1</sup>Department of Microbiology & Nanomaterials. <sup>2</sup>Department of Astronomy and Space Science, Chungnam National University,.)

IG-04 [13:45-14:00]

**THz Near-field Spectral Encoding Imaging With Rainbow Metasurface Filter** / 이강희, 최현주, 손재현, 박현성, 안재욱<sup>1</sup>, 민범기(카이스트, 기계공학과, <sup>1</sup>카이스트, 물리학과.)

IG-05 [14:00-14:15]

**Interference Effect in Momentum and Energy in Partially Coherent Electromagnetic Waves due to Polarization and Magnetization** / LEE Jinhyung, KIM Sun Myong(연세대학교 매지캠퍼스 물리학과.)

2014년 4월 24일(목) 광학 및 양자전자학분과회 구두 발표

### [IG2] 광학 및 양자전자학분과회 General Session

2014년 4월 24일 목요일 11:00 - 12:15

장소: 209호

좌장: 김 선 명 연세대

IG-06 [11:00-11:15]

**1/4파장판과 편광기로 구성된 출력경을 사용한 선편광된 Yb:YAG 레이저 출력 특성 연구** / 김현철, 임한범, 김현수(조선대학교 광기술공학과.)



IG-07\* [11:15-11:30]

**High Efficiency, High Energy, CEP-Stabilized Infrared Optical Parametric Amplifier** / GENG Xiaotao, LING Weijun<sup>1</sup>, GUO Shuyan<sup>2</sup>, WEI Zhiyi<sup>2</sup>, KRAUSZ F.<sup>3</sup>, KIM D.<sup>4</sup>

(Physics Department, Center for Attosecond Science and Technology, POSTECH, Pohang, Kyungbuk 790-784, South Korea; Max Planck Center for Attosecond Science, Pohang, Kyungbuk 790-784, South Korea.

<sup>1</sup>Physics Department, Center for Attosecond Science and Technology, POSTECH, Pohang, Kyungbuk 790-784, South Korea; Department of physics, Tianshui Normal University, Tianshui, 741001, China. <sup>2</sup>Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, Beijing, China.

<sup>3</sup>Max-Planck-Institut für Quantum Optics, Hans-Kopfermann-Str.1, D-85748 Garching, Germany; Department for Physics, D-, Ludwig-Maximilians-Universität, Am Coulombwall 1, D-85748, Garching, Germany. <sup>4</sup>Physics Department, Center for Attosecond Science and Technology, POSTECH, Pohang, Kyungbuk 790-784, South Korea; Max Planck Center for Attosecond Science, Pohang, Kyungbuk 790-784, South Korea.)

IG-08\* [11:30-11:45]

**Spectro-angular Light Scattering Measurements of Individual Micro-sized Objects** / 정재황, 박용근(KAIST 물리학과.)

IG-09\* [11:45-12:00]

**Terahertz polarization spectroscopy of an organic material in a sub-wavelength-scale metal slit** / JO HanLae, LEE KangHee<sup>1</sup>, HAN Daehoon, AHN Jaewook

(Department of Physics, KAIST, Daejeon 305-701, Korea.

<sup>1</sup>Department of Mechanical Engineering, KAIST, Daejeon 305-701, Korea.)

IG-10 [12:00-12:15]

**Flip chip White LED PKG for angular color homogeneity applying imprinting technologies** / PARK Seung Hyun, LEE Gye Seon<sup>1</sup>, RYU Sang Wan<sup>2</sup>

(Korea Photonics Technology Institute, Department of Physics, Chonnam National University. <sup>1</sup>Korea Photonics Technology Institute. <sup>2</sup>Department of Physics, Chonnam National University.)

**[IG3] 광학및양자전자학분과회 General Session**

2014년 4월 24일 목요일 14:00 - 15:30

장소: 209호

좌장: 이진형 한양대

IG-11\* [14:00-14:15]

**FCPM을 이용한 BTBP 농도에 따른 네마틱 액정의 정렬특성 분석** / 김태성, 홍동혁, 이재란, 김석원(울산대학교, 물리학과.)

IG-12\* [14:15-14:30]

**Speckle noise elimination with axial averaging** / JEON Philjun, BAE Yoonsung<sup>1</sup>, KIM Dugyoung(연세대학교 물리학과. <sup>1</sup>광주과학기술원 정보통신공학과.)



**IG-13\*** [14:30-14:45]

**CdSe/CdS 양자로드의 형광에 대한 자기상관함수의 분석** / 이재란, 정찬배, 신광수<sup>1</sup>, 현택환<sup>1</sup>, 김수용<sup>2</sup>, 김석원(울산대학교, 물리학과, <sup>1</sup>서울대학교, 화학생명공학과, <sup>2</sup>KAIST, 물리학과.)

**IG-14** [14:45-15:00]

**Jitter Measurement of Angle between Polygon Mirror Facets** / 김덕영, 지윤영(연세대 물리학과.)

**IG-15\*** [15:00-15:15]

**FCS에 의한 Quantum dot의 온도 의존성 연구** / 정찬배, 이재란, 김석원(울산대학교, 물리학과.)

**IG-16\*** [15:15-15:30]

**Dispersion Measurement of a Fiber Bundle Using Two Photon Absorption** / 김덕영, 소병휘, 지윤영(연세대 물리학과.)





## SESSION J

## 원자 및 분자물리학분과회

2014년 4월 23일(수) 원자 및 분자물리학분과회 구두 발표

### [JP1] 원자 및 분자물리학분과회 Pioneering Symposium: Manipulation of atoms and photons using coherence effects I

2014년 4월 23일 수요일 11:00 – 12:00

장소: 202호

\* Session in English

좌장: 김진태 조선대

후원: 조선대학교 산업융합특성화 인재양성사업단, 전남대학교 광전자

창의인력양성사업단

JP-01(초) [11:00-11:30]

**Photoassociation Spectroscopy for Ultracold Molecules / XIAO Liantuan**(Shanxi Univ., Institute of Laser Spectroscopy, State Key Lab. of Quantum Optics and Quantum Optics Devices, China.)

JP-02(초) [11:30-12:00]

**How to Grab an Atom without Squeezing It / CHO Donghyun, KIM Huidong, HAN Hyok Sang**(Department of Physics, Korea University.)

### [JP2] 원자 및 분자물리학분과회 Pioneering Symposium: Manipulation of atoms and photons using coherence effects II

2014년 4월 23일 수요일 13:10 – 14:40

장소: 202호

\* Session in English

좌장: 노흥렬 전남대

후원: 조선대학교 산업융합특성화 인재양성사업단, 전남대학교 광전자

창의인력양성사업단

JP-03(초) [13:10-13:40]

**Ladder-type electromagnetically induced transparency with optical pumping effect / TSAI chin-chun**(National Cheng Kung University, Department of Physics, Taiwan.)

JP-04(초) [13:40-14:10]

**EIT & EIA @ KNUE / 김중복**(한국교원대학교, 물리교육과.)

JP-05(초) [14:10-14:40]

**Anti-correlated light switching in a non-resonant double-Lambda system / KANG Hoonsoo, KIM Bongjune**(광주과학기술원, 고등광기술연구소.)

### 원자 및 분자물리학분과회 분과총회

2014년 4월 23일 수요일 18:00 – 19:00

장소: 202호

좌장: 김진태 조선대



2014년 4월 24일(목) 원자 및 분자물리학분과회 구두 발표

**[JG1] 원자 및 분자물리학분과회 General Session: Cold Atom Physics**

2014년 4월 24일 목요일 09:00 - 10:10

장소: 202호

좌장: 문 증 철 표준원

**J-01(초) [9:00-9:25]**

**Ultracold atoms interacting with on-chip one-dimensional photonic crystal nanostructures.** / LEE Jae Hoon(표준과학연구원.)

**J-02 [9:25-9:40]**

**Vortex nucleation in a Bose-Einstein condensate circulating in an anharmonic trapping potential** / KANG Seji, SEO Sang Won(Dept. of Physics and Astronomy, Seoul National University.)

**J-03 [9:40-9:55]**

**Vortex Pair Annihilation in Two-Dimensional Superfluid Turbulence** / 권우진, 문걸, 최재윤, 서상원, 신용일(서울대학교 물리천문학부 양자기체 연구실.)

**J-04 [9:55-10:10]**

**Efficient Laser Trap of Neutral Radium Atoms for Electric Dipole Moment Search** / PARK Sung Jong, SHIN Taeksu, KIM Yong Kyun, KIM Sun Kee(Institute for Basic Science.)

**[JG2] 원자 및 분자물리학분과회 General Session: Quantum Optics I**

2014년 4월 24일 목요일 10:30 - 12:25

장소: 202호

좌장: 조 재 윤 KIAS

**J-05(초) [10:30-10:55]**

**Theory for Generalized Causal Nonlocality with Non-linear Schordinger Equation** / SON Wonmin(Sogang University.)

**J-06 [10:55-11:10]**

**Transient Quantum Fluctuation Theorems And Generalized Measurements** / BALASUBRAMANIAN Prasanna Venkatesh, WATANABE Gentaro, TALKNER Peter<sup>1</sup>(APCTP. <sup>1</sup>University of Augsburg, Germany.)

**J-07 [11:10-11:25]**

**Structural Complexity from a measurement** / YEE Ki Hyuk, BANG Jeongho<sup>1</sup>, JEONG Hyunseok<sup>1</sup>, LEE JINHYOUNG<sup>2</sup>(Dept. of Physics. <sup>1</sup>Center for Macroscopic Quantum Cortol & Department of Physics and Astronomy, Seoul National University and Dept. of Physics, Hanyang University,. <sup>2</sup>Dept. of Physics, Hanyang University.)

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J-08\* [11:25-11:40]

**A New Approach to the Quantum-to-Classical Transition: Coarsening of the Measurement References** / LIM YOUNGRONG, KIM MYUNGSHIK<sup>1</sup>, JEONG HYUNSEOK(CMQC, Department of Physics and Astronomy, Seoul National University. <sup>1</sup>QOLS, Blackett Laboratory, Imperial College London.)

J-09\* [11:40-11:55]

**Solution for N qubit-mixed state discrimination with minimum-error** / 권영현, 하동훈(한양대학교 응용물리학과.)

J-10\* [11:55-12:10]

**Vacuum-fluctuation-induced Decoherence of a Qubit in a Cavity** / 김영완, 이강호<sup>1</sup>, 강기천(전남대 물리학과. <sup>1</sup>Dept. of physics, Ben Gurion University, Israel.)

J-11 [12:10-12:25]

**Generation of W type multipartite entangled steady states in driven-dissipative dipolar lattice gases** / LEE Sun Kyung, CHOI K. S., CHO Jaeyoon<sup>1</sup>(Korea Institute of Science and Technology. <sup>1</sup>Korea Institute of Advanced Study.)

[JG3] 원자 및 분자물리학분과회 General Session: Quantum Optics 2

2014년 4월 24일 목요일 14:00 - 15:40

장소: 202호

좌장: 안재욱 KIAS

J-12(초) [14:00-14:25]

**광섬유 공간모드를 이용한 양자정보처리** / 박희수, 최상경, 송광용(한국표준과학연구원. <sup>1</sup>중앙대학교 물리학과.)

J-13\* [14:25-14:40]

**Time-bin Entangled Photon Pairs by a CW Multi-mode Diode Laser** / KWON Osung, PARK Kwang-Kyoon<sup>1</sup>, RA Young-Sik<sup>1</sup>, KIM Yong-Su, KIM Yoon-Ho<sup>1</sup>(KIST, Center for Nano & Quantum Information. <sup>1</sup>POSTECH, Department of Physics.)

J-14\* [14:40-14:55]

**Preservation of spatial coherence in atomic vapor photonic quantum memory** / LEE Jong-Chan, PARK Kwang-Kyoon, CHO Young-Wook, KIM Yoon-Ho(POSTECH, Dept. of Physics.)

J-15 [14:55-15:10]

**Measurement of the ac Stark shift in a superconducting qubit** / HA Dong-Gwang, PARK Gwan Yeol, SHIM Seung-Bo, PARK Jung Hwan, SONG



Woon, LEE Soon Gul<sup>1</sup>, CHONG Yonuk(Korea Research Institute of Standards and Science. <sup>1</sup>Korea University.)

J-16\* [15:10-15:25]

**Protecting Quantum Information From Decoherence Using Weak Measurement** / LEE Jong-Chan, KIM Yong-Su, JEONG Youn-Chang, KWON Osung, KIM Yoon-Ho(POSTECH, Dept. of Physics.)

J-17\* [15:25-15:40]

**Scheme for direct observation of commutation relation of position and momentum operators with quantum interference** / LEE Jong-Chan, KIM Yong-Su, RA Young-Sik, LIM Hyang-Tag, KIM Yoon-Ho(POSTECH, Dept. of Physics.)

[JG4] 원자 및 분자물리학회 General Session: Atomic and Molecular Physics

2014년 4월 24일 목요일 16:00 – 17:10

장소: 202호

좌장: 최 낙 렬 금오공대

J-18(초) [16:00-16:25]

**Attosecond Resolved Study of Core Level Dynamics of Krypton Atoms** / MAILAM Anand, KIM hyunguk, BHATTACHARJEE Nilapha, KHURELBAATAR Tsendsuren, KIM Dongeon(POSTECH, Department of Physics, Center for Attosecond Science and Technology (CASTECH), and Max Planck Center for Attosecond Science (MPC-AS), Pohang, Kyungbuk, Republic of Korea.)

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J-19 [16:25-16:40]

**보미안 궤적의 수치적 계산: 강한 레이저에 의한 일차원 원자모형의 이온화** / 변창우, 이민호, 김대성<sup>1</sup>, 최낙렬(금오공과대학교 교양교과과정부, <sup>1</sup>경기과학기술 대학 기계자동학과.)

J-20 [16:40-16:55]

**Design and construction of a TL-VMI spectrometer for high energy charged particle detection** / KLING Nora G., PAUL D.<sup>1</sup>, GURA A., G. Laurent, DE S.<sup>2</sup>, LI H., WANG Z., AHN B.<sup>1</sup>, KIM C.H.<sup>1</sup>, KIM T.K.<sup>3</sup>, LITVINYUK I.V.<sup>4</sup>, COCKE C.L., BEN-ITZHAK I., KIM D.<sup>1</sup>, KLING M.F.<sup>5</sup>(J.R. Macdonald Laboratory, Department of Physics, Kansas-State University, USA. <sup>1</sup>Physics Department, CASTECH, POSTECH, Pohang, Republic of Korea, Max Planck Center for Attosecond Science, Pohang, Republic of Korea. <sup>2</sup>J.R. Macdonald Laboratory, Department of Physics, Kansas-State University, USA, Saha Institute of Nuclear Physics, Kolkata, India. <sup>3</sup>Department of Chemistry and Chemistry Institute of Functional Materials, Pusan National University,. <sup>4</sup>Centre for Quantum Dynamics and Australian Attosecond Science Facility, Griffith University, Nathan,. <sup>5</sup>J.R. Macdonald Laboratory, Department of Physics, Kansas-State University, USA, Max-Planck-Institut für Quantenoptik, Hans-Kopfermann-Str. 1, 85748 Garching, Germany.)



J-21 [16:55-17:10]

**Contradiction between the spin derived from magnetic dipole moment and a covariant Stern-Gerlach experiment / 최태승, 한영덕**(서울여자대학교, '우석대학교.)



## SESSION K

## 반도체물리학과회

2014년 4월 23일(수) 반도체물리학 분과회 구두 발표

### [KG1] 반도체물리학과회 General Session

2014년 4월 23일 수요일 11:00 – 12:00

장소: 106호

좌장: 홍진표 한양대

KG-01\* [11:00-11:15]

**The field emission properties of GaN nanoneedles formed by chemical vapor-phase etching methods** / 조종희, 김제형, 조용훈(한국과학기술원, 물리학과.)

KG-02\* [11:15-11:30]

**Surface Plasmon-enhanced light emission of InGaN/GaN Green Light-emitting diodes with Ag nanoclusters in micro-hole patterned p-GaN** / LEE seulbe, SEO Tae Hoon, PARK Ah Hyun, LEE Gun Hee(School of Semiconductor and Chemical Engineering & Semiconductor Physics Research Center, Chonbuk National University.)

KG-03\* [11:30-11:45]

**Graphene Oxide Layers Fabricated by Horizontal-Dip Coating for Solution-Processable Organic Semiconducting Devices** / PARK Byoungchoo, JEON Hong Goo, HUH Yoon Ho, YUN Soo Hong, KIM Ki Woong<sup>1</sup>, LEE Sun Sook<sup>1</sup>, LIM Jongsun<sup>1</sup>, AN Ki-Seok<sup>1</sup>(광운대학교 전자물리학과. <sup>1</sup>한국화학연구원.)

KG-04\* [11:45-12:00]

**Tandem Structured Hot Electron-based Photovoltaic Cell with Double Schottky Barriers** / LEE Young Keun, LEE Hyosun, PARK Jeong Young(KAIST, EEWS.)

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### [KG2] 반도체물리학과회 General Session

2014년 4월 23일 수요일 13:30 – 14:45

장소: 106호

좌장: 홍진표 한양대

KG-05\* [13:30-13:45]

**GaN 나노구조와 MEH-PPV 폴리머를 기반으로 하는 하이브리드 광소자에 관한 연구** / 신민정, 권동오, 이찬미, 전인준, 안형수, 이삼녕, 하동한(한국해양대학교, 응용과학과. <sup>1</sup>한국표준과학연구원, 양자특정센터.)

KG-06\* [13:45-14:00]

**Stability enhancement of organic solar cell by using reduced graphene oxide as hole transport layer** / HO Nhu Thuy,



SENTHILKUMAR V., NHO Sung Ho, CHO Shinuk, SEONG Maeng-Je<sup>1</sup>, KIM Yong Soo<sup>2</sup>(University of Ulsan, Dep. of Physics and Energy Harvest-Storage Research Center. <sup>1</sup>Department of Physics, Chung-Ang University. <sup>2</sup>Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan.)

**KG-07\*** [14:00-14:15]

**Removal of residual PMMA on graphene surface by Infrared irradiation** / MUN SEOK Jeong, HYE MIN Oh, DOO JAE Park<sup>1</sup>, YOUNG HEE Lee(Center for Integrated Nanostructure Physics (CINAP), Institute for Basic Science (IBS), Department of Energy Science, BK21 Physics Division, and Center for Nanotubes and Nanostructured Composites, Sungkyunkwan University, Suwon 446-746, Korea. <sup>1</sup>Center for Integrated Nanostructure Physics (CINAP), Institute for Basic Science (IBS).)

**KG-08\*** [14:15-14:30]

**Nano-absorption spectroscopy by Near-field Scanning Optical Microscopy with Aperture in Low Dimensional Materials** / 김용환, 김지희, 박두재, 정문석(성균관대학교 에너지과학과.)

**KG-09\*** [14:30-14:45]

**Femtosecond Transient Absorption Spectroscopy in Graphene Quantum Dots** : 김효정, 김지희<sup>1</sup>, 정문석(에너지과학과, 나노구조물리연구단, 성균관대학교, <sup>1</sup>나노구조물리연구단, 성균관대학교.)

**[KP1] 반도체물리학회 Pioneer Symposium: 반도체층 박리 기술과 그 응용**

2014년 4월 23일 수요일 15:00 – 16:40

장소: 106호

\* Session in English

좌장: 오 지 훈 카이스트

**KP-01(초)** [15:00-15:25]

**Novel Epitaxial Lift-off Process for GaAs Substrate Reuse and Flexible Electronics** / CHENG Cheng-Wei(IBM T.J. Watson Research Center, 1101 Kitchawan Rd., Rt. 134, Yorktown Height, NY, 10598 USA.)

**KP-02(초)** [15:25-15:50]

**Void Formation by Surface-Diffusion-Driven Evolution of Hole Patterns on Si(001)** / SUDOH Koichi(The Institute of Scientific and Industrial Research, Osaka University, 8-1 Mihogaoka, Ibaraki, Osaka 567-0047, Japan.)

**KP-03(초)** [15:50-16:15]

**Realization of sub-20 nm transfer printing via dynamic adhesion control** / JUNG Yeon-Sik(Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST).)



KP-04(초) [16:15-16:40]

**high performance flexible electronics by using transfer printing process** / KIM Dae-Hyeong(Center for Nanoparticle Research, Institute for Basic Science, School of Chemical and Biological Engineering, Seoul National University Seoul 151-744, South Korea.)

[KT1] 반도체물리학회 Tutorial: Exploring the Synthesis of Two Dimensional Materials: Graphene, Hexagonal Boron Nitride, and TMDs

2014년 4월 23일 수요일 18:00 – 19:00

장소: 106호

좌장: 김 수 민 과기연

KT-01(초) [18:00-19:00]

**Exploring the Synthesis of Two Dimensional Materials: Graphene, Hexagonal Boron Nitride, and TMDs** / KIM Ki Kang(Dongguk University-Seoul, Department of Energy and Materials Engineering.)

[EF4] 응용물리학회/반도체물리학회 공동 Focus Session: 3-5쪽 반도체 나노선 및 소자 I

2014년 4월 23일 수요일 13:00 – 14:30

장소: 105호

좌장: 임 현 식 동국대

EF-14(초) [13:00-13:30]

**Microstructural Characterization of III-V Semiconductor Nanowires: A Transmission Electron Microscopy Study** / KIM Young Heon(Korea Research Institute of Standards and Science.)

EF-15(초) [13:30-14:00]

**III-V Semiconductor Nanowires Grown on Si by MOCVD** / SHIN Jae Cheol(Korea Photonics Technology Institute.)

EF-16(초) [14:00-14:30]

**Van der Waals heteroepitaxy of InAs/graphene and InAs/graphene/InAs** / HONG Young Joon(Sejong University, Department of Nanotechnology and Advanced Materials Engineering & Graphene Research Institute.)

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**[EF5] 반도체물리학과회/응용물리학과회 공동 Focus Session: 3-5족 반도체 나노선 및 소자 II**

2014년 4월 23일 수요일 15:00 - 16:30

장소: 105호

좌장: 도 용 주 고려대

**EF-17(초)** [15:00-15:30]

**Low-dimensional Quantum Transport in InAs Nanowires** / 배명호, 김범규<sup>1</sup>, 최선재<sup>2</sup>, 송중현<sup>2</sup>, 김주진<sup>1</sup>, 김남, 신재철<sup>3</sup>(한국표준과학연구원, <sup>1</sup>전북대학교, <sup>2</sup>충남대학교, <sup>3</sup>한국광기술원.)

**EF-18(초)** [15:30-16:00]

**III-V and IV semiconductor nanowires for optoelectronic and biomedical device applications** / 이상권, 김동주(중앙대학교 물리학과.)

**EF-19(초)** [16:00-16:30]

**QWR FET using AlGaAs/GaAs V-groove type Quantum wire** / HAHN Cheol Koo, ROH Cheong Hyun, OGURA M.<sup>1</sup>(KETI, Photonics Convergence Research Center. <sup>1</sup>AIST.)

2014년 4월 24일(목) 반도체물리학과회 구두 발표

**[KG3] 반도체물리학과회 General Session**

2014년 4월 24일 목요일 09:30 - 10:45

장소: 106호

좌장: 정 문 석 성균관대

**KG-10** [09:30-09:45]

**Enhanced light output power of GaN UV-LED by a simple passivation with graphene oxide on** / JEONG hyun, JEONG seung yol<sup>1</sup>, PARK doo jae, JEONG hyeon jun<sup>2</sup>, SUH eun-kyung<sup>2</sup>, LEE geon-woon<sup>1</sup>, LEE young hee, JEONG mun seok(Center for Integrated Nanostructure Physics, Institute of Basic Science, Department of Energy Science, Sungkyunkwan University, Suwon 440-746, Republic of Korea. <sup>1</sup> Nano Carbon Materials Research Group, Korea Electrotechnology Research Institute, Changwon, 641-120, Korea. <sup>2</sup>School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University, Jeonju 561-756, Republic of Korea.)

**KG-11** [09:45-10:00]

**동일 재료 다공박막 기반의 무반사 코팅을 이용한 태양전지 효율 개선 연구** / 임정우, 정관수<sup>1</sup>, 유재수(경희대학교, 전자전파공학과. <sup>1</sup>경희대학교, 전자전파공학과; 동국대학교, 양자기반반도체연구센터.)

**KG-12** [10:00-10:30]

**유무기물기반 표면나노구조의 제작 및 소자 응용** / 유재수(경희대학교 전자전파공학과.)



**KG-13** [10:30-10:45]

**CuS** 단일 나노선의 전압에 따른 광전류 특성 및 비대칭 장벽 연구 / 김종동, 오은순(충남대학교 물리학과.)

**[KF1] 반도체물리학회 Focus Session: 2차원 층상 전이금속 Dichalcogenides I**

2014년 4월 24일 목요일 11:00 – 12:45

장소: 106호

좌장: 김 용 민 단국대

**KF-01(초)** [11:00-11:30]

**Study for Hydrogen Interaction on MoS<sub>2</sub> Surface** / HAN Sang Wook, YEOM Han Woong(Center for Artificial Low Dimensional Electronic Systems, IBS; Department of Physics, POSTECH.)

**KF-02(초)** [11:30-12:00]

**Direct growth of single layer graphene and catalyst-assisted growth of MoS<sub>2</sub> in large scale** / CHOI Hee Cheul(포스텍 화학과 & Center for Artificial Low Dimensional Electronic Systems, IBS.)

**KF-03(초)** [12:00-12:30]

**P-N Junction Devices Using 2D TMDC** / 유원종(성균관대학교, 나노과학기술펙.)

**KF-04\*** [12:30-12:45]

**Transparent and flexible MoS<sub>2</sub> thin film transistors with multilayer graphene electrode** / YOON Jongwon, PARK Woojin, BAE Ga-Yeong, KIM Yonghun, JANG Hun Soo, HYUN Yujun, LIM Sung Kwan, KAHNG Yung Ho<sup>1</sup>, HONG Woong-Ki<sup>2</sup>, LEE Byoung Hun, KO Heung Cho(Gwangju Institute of Science and Technology, School of Materials Science and Engineering. <sup>1</sup>Gwangju Institute of Science and Technology, Research Institute for Solar and Sustainable Energies. <sup>2</sup>Korea Basic Science Institute, Jeonju center.)

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**[KF2] 반도체물리학회 Focus Session: 2차원 층상 전이금속 Dichalcogenides II**

2014년 4월 24일 목요일 14:00 – 15:45

장소: 106호

좌장: 전 철 호 기초과학연구원

**KF-05(초)** [14:00-14:30]

2차원 MoS<sub>2</sub> 및 WSe<sub>2</sub> 나노조각 전자소자와 그 응용 / 임성일(연세대학교, 물리학과.)

**KF-06(초)** [14:30-15:00]

**Graphene Vertical Heterostructure Devices** / 유우종(성균관대학교, 전자전기공학부.)





**KF-07(초)** [15:00-15:30]

**Hybrid Sheets of Layered Transition Metal Dichalcogenides and Reduced Graphene Oxide** / SHIN Hyeon Suk(Department of Chemistry and Low Dimensional Carbon Materials Center, UNIST (Ulsan National Institute of Science and Technology), UNIST-gil 50, Ulsan 689-798, Republic of Korea.)

**KF-08** [15:30-15:45]

**Synthesis Of Controllable WS<sub>2</sub> Nanosheets Using Atomic Layer Deposition** / 박주상, 송정규, 김형준(연세대학교, 전기전자공학과.)

**[KG4] 반도체물리학과회 General Session**

2014년 4월 24일 목요일 16:00 - 17:00

장소: 106호

좌장: 김 은 규 한양대

**KG-14(초)** [16:00-16:30]

한국 반도체물리학 50년 / 민석기(경희대학교.)

**KG-15(초)** [16:30-17:00]

**Quantum Functional Semiconductors Material and Devices; New Capability and Advanced Concept Elements of Nano Rods** / KANG Tae Won(Dongguk University, QSRC.)

2014년 4월 25일(금) 반도체물리학 분과회 구두 발표

**[KG5] 반도체물리학과회 General Session**

2014년 4월 25일 금요일 09:15 - 10:45

장소: 106호

좌장: 유 재 수 경희대

**KG-16** [09:15-09:30]

X-선 투과 토포그래피를 이용한 사파이어 단결정 웨이퍼의 표면 잔류 damage의 평가 / 김창수, 전현구<sup>1</sup>, 정인영<sup>1</sup>, 오병성<sup>2</sup>(한국표준과학연구원, <sup>1</sup>한국 표준과학연구원, 충남대학교 물리학과, <sup>2</sup>충남대학교 물리학과.)

**KG-17** [09:30-09:45]

연성회로기판을 위한 무전해 니켈 도금막에 미치는 DMAB 효과 / 김형철, 나사균, 김나영<sup>1</sup>, 백승덕<sup>1</sup>, 임은숙<sup>1</sup>, 이연승<sup>1</sup>, 전용석<sup>2</sup>(한밭대학교, 재료공학과, <sup>1</sup>한밭 대학교, 정보통신공학과, <sup>2</sup>전주대학교, 전기전자공학과.)

**KG-18** [09:45-10:00]

**Single Quantum Dot Spectroscopy Using Single Quantum Dots Embedded in GaN Nanostructures** / KIM Je-Hyung, KO Young-Ho, GONG Su-Hyun, KO Suk-Min, CHO Yong-Hoon(KAIST.)



**KG-19** [10:00-10:30]

**Nanotechnology-Based Strategic Design for Advanced Electrode Materials beyond Lithium Ion Battery** / 강용목, 조문호<sup>1</sup>, 조경재<sup>2</sup>(동국대학교, 융합에너지신소재공학과. <sup>1</sup>POSTECH, 신소재공학과. <sup>2</sup>University of Texas at Dallas, 신소재공학과.)

**KG-20** [10:30-10:45]

**Influence of Multi-Functional TiO<sub>x</sub>N<sub>y</sub> Layer on Transitional Metal oxide-based Resistive Switching Frame** / LEE Ah Rahm, BAE Yoon Cheol, BAEK Gwang Ho, CHUNG Je Bock, HONG Jin Pyo(Department of Nanoscale Semiconductor Engineering, Hanyang University, Seoul.)

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## SESSION L

## 천체물리학분과회

2014년 4월 24일(목) 천체물리학분과회 구두 발표

### 천체물리학분과총회

2014년 4월 24일 목요일 11:00 - 12:45

장소: 205호

### [LP1] 천체물리학분과회 Pioneering Symposium: 차세대 우주론의 도전 과제들

2014년 4월 24일 목요일 14:00 - 15:40

장소: 205호

\*Session in English

좌장: 최 기 영 천문연

LP-01 [14:00-14:15]

CosKASI 소개 / 최기영(천문연구원.)

LP-02 [14:15-14:45]

Modified Gravity and Cosmic Acceleration / HU Wayne(University of Chicago.)

LP-03 [14:50-15:20]

Models of Dark Energy / LINDER Eric(Berkeley 천문연구원.)

LP-04 [15:25-15:40]

Cosmological Constraints from the Anisotropic Clustering Analysis using BOSS DR9 / LINDER Eric, OH Minji<sup>1</sup>, OKUMURA Tepei<sup>2</sup>, SABIU Cristiano<sup>3</sup>, SONG Yong-Seon<sup>4</sup>(UC Berkeley. <sup>1</sup>UST & KASI. <sup>2</sup>IPMU. <sup>3</sup>KIAS. <sup>4</sup>KASI & UST.)

### [LP2] 천체물리학분과회 Pioneering Symposium: 차세대 우주론의 도전 과제들

2014년 4월 24일 목요일 16:00 - 17:25

장소: 205호

\*Session in English

좌장: 송 용 선 천문연

LP-05 [16:00-16:30]

Beyond the Standard Model of Cosmology / SHAFIELOO Arman(APCTP.)

LP-06 [16:40-17:10]

Echoes from the past / GONG Jinn Ouk(APCTP.)



2014년 4월 25일(금) 천체물리학 분과회 구두 발표

**[LG1] 천체물리학분과회 General Session**

2014년 4월 25일 금요일 09:00 - 10:45

장소: 205호

좌장: 이 정 재 대진대

**LG-01** [09:00-09:15]

**Resolving the surface singularity problem in Eddington-inspired Born-Infeld gravity** / 김형찬(한국교통대학교.)

**LG-02\*** [09:15-09:30]

**Coded mask 기반의 X-선 우주망원경 성능 테스트** / 김민빈, 이용훈, RIPA Jakub, 김용욱, 이직, 박일홍(성균관대학교 물리학과.)

**LG-03\*** [09:30-09:45]

**ISW-Effect as a Possible Cause for Detected Non-Gaussianities in the Surrogate CMB Analysis** / KIM Andrea, RAETH Christoph<sup>1</sup>, MODEST Heike<sup>1</sup>, WON Eunil<sup>2</sup>(Korea University, Department of Physics. <sup>1</sup>MPE (Garching). <sup>2</sup>Korea University.)

**LG-04\*** [10:00-10:15]

**Environment experiment of the T/BCD in the ISS-CREAM** / KIM Hong Joo, HWANG YoungSeok, PARK JeongMin, HYUN HyoJung, KANG KookHyun, JEON Hyebin, PARK Hwanbae(Kyungpook National University.)

**LG-05\*** [10:15-10:30]

**Planck Constraints on Slow-roll Inflation coupled to Gauss-Bonnet Term** / GANSUKH Tumurtushaa, SEOKTAE Koh<sup>1</sup>, WONWOO Lee<sup>2</sup>, BUM-HOON Lee(Department of Physics, Sogang University, Seoul 121-742, Korea. <sup>1</sup>Department of Science Education, Jeju National University, Jeju 690-756, Korea. <sup>2</sup>Center for Quantum Spacetime, Sogang University, Jeju 121-742, Korea.)

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**LG-06** [10:30-10:45]

**Status of the Silicon Charge Detector for the International Space Station CREAM experiment** / LEE Jik, CHO Sang Woo, JEON JinA, LEE Hye Young, PARK Hwi Woo, PARK Il Hung(성균관대학교, 물리학과.)

**[LG2] 천체물리학분과회 General Session**

2014년 4월 25일 금요일 11:00 - 12:30

장소: 205호

좌장: 김 형 찬 한국교통대

**LG-07** [11:00-11:15]

**Axisymmetric GR-Hydrodynamics code for tabular barotropic equation of states** / KIM Hee Il, WAN Mew-Bing<sup>1</sup>, LEE Hyung Mok<sup>2</sup>(SNU,



Astronomy Program / KISTI. <sup>1</sup>APCTP. <sup>2</sup>SNU, Astronomy Program.)

**LG-08** [11:15-11:30]

**Hawking Temperature of a Wormhole in Friedmann-Robertson-Walker model** / KIM Sung-Won(Ewha Womans University.)

**LG-09** [11:30-11:45]

**A physically feasible gravitational softening in a model using smoothed particle hydrodynamics method** / 김준하(한양대학교 물리학과, MaribMir Lab.)

**LG-10** [11:45-12:00]

**Data Analysis for Gravitational Wave Detection with Multivariate Algorithms** / 오정근, 오상훈, 손재주, 김영민<sup>1</sup>, 이창환<sup>2</sup>(국가수리과학연구소, <sup>1</sup>부산대학교,)

**LG-11** [12:00-12:15]

**General Relativistic Consideration of Electromagnetic Radiation from Pulsars** / 김동훈, TRIPPE Sascha<sup>1</sup>, 양종만<sup>2</sup>(이화여자대학교-초기우주과학기술연구소, <sup>1</sup>서울대학교-천문학과, <sup>2</sup>이화여자대학교-물리학과/초기우주과학기술연구소.)

**LG-12** [12:15-12:30]

**Search for a gravitational dynamics having no curvature singularity inside a black hole** / KANG Gungwon(KISTI.)



*The Korean Physical Society*

## 포스터발표논문 시간표





## SESSION P1

입자물리학과  
포스터 발표

2014년 4월 23일 수요일 15:00 - 16:45

장소: 포스터발표장

### P1-B001

**Fabrication of magnetic calorimeter for the AMoRE project / 김소라**(for the AMoRE collaboration)(기초과학연구원.)

### P1-B002

**Prototype Detector Analysis at SBL Experiment / 김바로, 주경광, 여인성, 소선행, 송숙형, 김홍주<sup>1</sup>, 이주영<sup>1</sup>, 김시연<sup>2</sup>, 고영주<sup>2</sup>, 마경주<sup>3</sup>, 김진유<sup>3</sup>, 선헌민<sup>4</sup>, 김영덕<sup>5</sup>, 박강순<sup>5</sup>, 이정연<sup>5</sup>, 이재승<sup>5</sup>, 전은주<sup>5</sup>, 박향규<sup>5</sup>**(전남대학교, <sup>1</sup>경북대학교, <sup>2</sup>중앙대학교, <sup>3</sup>세종대학교, <sup>4</sup>한국원자력연구원, <sup>5</sup>기초과학연구원.)

### P1-B003

**Level of <sup>nat</sup>K Contamination in Sodium Iodide in the KIMS-NaI Experiment / 강운구, KIMS Collaborator**(기초과학연구원(IFS).)

### P1-B004

**Development of a Scintillation Light Detector for Cryogenic Rare Event Search Experiments / 이혜진, AMoRE collaboration**(기초과학연구원.)

### P1-B005

**Energy threshold study of the CaMoO4 cryogenic detector for the AMoRE experiment / 김건보**(for the AMoRE collaboration)(지하실험연구단, 기초과학연구원.)

### P1-B006\*

**Feasibility Study for SBL Experiment / 고영주, 김시연, 김홍주<sup>1</sup>, 이주영<sup>1</sup>, 김영덕<sup>2</sup>, 박강순<sup>2</sup>, 박향규<sup>2</sup>, 이재승<sup>2</sup>, 이정연<sup>2</sup>, 전은주<sup>2</sup>, 김진유<sup>3</sup>, 마경주<sup>3</sup>, 김바로<sup>4</sup>, 소선행<sup>4</sup>, 송숙형<sup>4</sup>, 여인성<sup>4</sup>, 주경광<sup>4</sup>, 선헌민<sup>4</sup>**(중앙대학교 물리학과, <sup>1</sup>경북대학교 물리학과, <sup>2</sup>기초과학연구원 지하실험연구단, <sup>3</sup>세종대학교 물리학과, <sup>4</sup>전남대학교 물리학과, <sup>5</sup>한국원자력연구원.)

### P1-B007

**Design of Shielding Equipment against High Energy Cosmic Rays for Manned Long-term Space Flights / LIU Dong, 우종관, 김용주, 고재우**(제주대학교 물리학과.)

### P1-B008\*

**Feasibility Study of Water-based Liquid Scintillator for Next Generation Neutrino Experiments / 소선행, 김봉건, 주경광**(전남대학교.)

P1  
포  
스  
터  
세  
션





#### P1-B009

**Observed vs expected rates of reactor neutrinos at RENO** / 여인성, 김바로, 김승찬, 박령균, 김재률, 소선행, 송숙형, 신창동, 임인택, 주경광, 김현수<sup>1</sup>, 김시연<sup>2</sup>, 고영주<sup>3</sup>, 김우영<sup>3</sup>, 선용근<sup>3</sup>, 박인곤<sup>4</sup>, 장지승<sup>5</sup>, 박명렬<sup>6</sup>, 최준호<sup>6</sup>, 장한일<sup>7</sup>, 김상용<sup>8</sup>, 김수봉<sup>8</sup>, 박정식<sup>8</sup>, 서선희<sup>9</sup>, 서현관<sup>9</sup>, 이동하<sup>8</sup>, 이병훈<sup>8</sup>, 이순규<sup>8</sup>, 최선희<sup>8</sup>, 최원국<sup>8</sup>, 양장희<sup>9</sup>, 유인태<sup>9</sup>, 최영일<sup>9</sup>, 김영덕<sup>10</sup>, 전은주<sup>10</sup>(전남대 물리학과, <sup>1</sup>전북대 물리학과, <sup>2</sup>중앙대 물리학과, <sup>3</sup>경북대 물리학과, <sup>4</sup>경상대, <sup>5</sup>광주과학기술원, <sup>6</sup>동신대, <sup>7</sup>서영대, <sup>8</sup>서울대, <sup>9</sup>성균관대, <sup>10</sup>BS/세종대.)

#### P1-B010

**Stability of Gd-loaded Liquid Scintillator in the RENO Detector** / 소선행, 김우영<sup>1</sup>, 선용근<sup>1</sup>, 박인곤<sup>2</sup>, 장지승<sup>3</sup>, 박명렬<sup>4</sup>, 최준호<sup>4</sup>, 장한일<sup>5</sup>, 김상용<sup>6</sup>, 김수봉<sup>6</sup>, 박정식<sup>6</sup>, 서선희<sup>6</sup>, 서현관<sup>6</sup>, 이동하<sup>6</sup>, 이병훈<sup>6</sup>, 이순규<sup>6</sup>, 최선희<sup>6</sup>, 최원국<sup>6</sup>, 양장희<sup>7</sup>, 유인태<sup>7</sup>, 최영일<sup>7</sup>, 김영덕<sup>8</sup>, 전은주<sup>8</sup>, 김바로, 김승찬, 박령균, 김재률, 송숙형, 신창동, 여인성, 임인택, 주경광, 김현주<sup>9</sup>, 김시연<sup>10</sup>, 고영주<sup>10</sup>(전남대학교, <sup>1</sup>경북대학교, <sup>2</sup>경상대학교, <sup>3</sup>광주과학기술원, <sup>4</sup>동신대학교, <sup>5</sup>서영대학교, <sup>6</sup>서울대학교, <sup>7</sup>성균관대학교, <sup>8</sup>BS/세종대학교, <sup>9</sup>전북대학교, <sup>10</sup>중앙대학교.)

#### P1-B011

**Measurement on optical of physical parameters of various liquid scintillators** / 김승찬, 주경광(전남대학교.)

#### P1-B012

**R&D Study on <sup>6</sup>Li-loaded Liquid Scintillation for Short Baseline Neutrino Experiment** / 송숙형, 나상미, 주경광(전남대학교.)

#### P1-B013

**Energy Calibration Using Cosmic-ray Induced Neutron Captures at RENO** / 김바로, 김승찬, 박령균, 김재률, 소선행, 송숙형, 신창동, 여인성, 임인택, 주경광, 김우영<sup>1</sup>, 선용근<sup>1</sup>, 박인곤<sup>2</sup>, 장지승<sup>3</sup>, 박명렬<sup>4</sup>, 최준호<sup>4</sup>, 장한일<sup>5</sup>, 김상용<sup>6</sup>, 김수봉<sup>6</sup>, 박정식<sup>6</sup>, 서선희<sup>6</sup>, 서현관<sup>6</sup>, 이동하<sup>6</sup>, 이병훈<sup>6</sup>, 이순규<sup>6</sup>, 최선희<sup>6</sup>, 최원국<sup>6</sup>, 양장희<sup>7</sup>, 유인태<sup>7</sup>, 최영일<sup>7</sup>, 김영덕<sup>8</sup>, 전은주<sup>8</sup>, 김현수<sup>9</sup>, 김시연<sup>10</sup>, 고영주<sup>10</sup>(전남대학교, <sup>1</sup>경북대학교, <sup>2</sup>경상대학교, <sup>3</sup>광주과학기술원, <sup>4</sup>동신대학교, <sup>5</sup>서영대학교, <sup>6</sup>서울대학교, <sup>7</sup>성균관대학교, <sup>8</sup>세종대학교, <sup>9</sup>전북대학교, <sup>10</sup>중앙대학교.)

#### P1-B014

**Study on Neutrino Oscillation of Medium Baseline using GloBES** / 신창동, 주경광(전남대학교.)

#### P1-B015

**Study of Reactor Neutrino Detection Efficiency** / 신창동, 김바로, 김승찬, 박령균, 김재률, 소선행, 송숙형, 여인성, 임인택, 주경광, 김우영<sup>1</sup>, 선용근<sup>1</sup>, 박인곤<sup>2</sup>, 장지승<sup>3</sup>, 박명렬<sup>4</sup>, 최준호<sup>4</sup>, 장한일<sup>5</sup>, 김상용<sup>6</sup>, 김수봉<sup>6</sup>, 박정식<sup>6</sup>, 서선희<sup>6</sup>, 서현관<sup>6</sup>, 이동하<sup>6</sup>, 이병훈<sup>6</sup>, 이순규<sup>6</sup>, 최선희<sup>6</sup>, 최원국<sup>6</sup>, 양장희<sup>7</sup>, 유인태<sup>7</sup>, 최영일<sup>7</sup>, 김영덕<sup>8</sup>, 전은주<sup>8</sup>, 김현수<sup>9</sup>, 김시연<sup>10</sup>, 고영주<sup>10</sup>(전남대학교, <sup>1</sup>경북대, <sup>2</sup>경상대, <sup>3</sup>광주과학기술원, <sup>4</sup>동신대, <sup>5</sup>서영대, <sup>6</sup>서울대, <sup>7</sup>성균관대, <sup>8</sup>BS/세종대, <sup>9</sup>전북대, <sup>10</sup>중앙대.)



## P1-B016\*

**Study of Cosmic-ray Induced Li & He Production at RENO** / 이순규, 김우영<sup>1</sup>, 선용근<sup>1</sup>, 박인곤<sup>2</sup>, 장지승<sup>3</sup>, 박명렬<sup>4</sup>, 최준호<sup>4</sup>, 장한일<sup>5</sup>, 김상용, 김수봉, 박정식, 서선희, 서현관, 이동하, 이병훈, 최선호, 최원국, 양장희<sup>6</sup>, 유인태<sup>6</sup>, 최영일<sup>6</sup>, 김영덕<sup>7</sup>, 전은주<sup>7</sup>, 김바로<sup>8</sup>, 김승찬<sup>8</sup>, 박영균<sup>8</sup>, 김재률<sup>8</sup>, 소선행<sup>8</sup>, 송숙형<sup>8</sup>, 신창동<sup>8</sup>, 여인성<sup>8</sup>, 임인택<sup>8</sup>, 주경광<sup>8</sup>, 김현수<sup>9</sup>, 김시연<sup>10</sup>, 고영주<sup>10</sup>(서울대학교, <sup>1</sup>경북대학교, <sup>2</sup>경상대학교, <sup>3</sup>광주과학기술원, <sup>4</sup>동신대학교, <sup>5</sup>서영대학교, <sup>6</sup>성균관대학교, <sup>7</sup>IBS/세종대학교, <sup>8</sup>전남대학교, <sup>9</sup>전북대학교, <sup>10</sup>중앙대학교.)

## P1-B017\*

**Uncertainties in flux of reactor antineutrinos** / 고영주, 김시연, 김우영<sup>1</sup>, 선용근<sup>1</sup>, 박인곤<sup>2</sup>, 장지승<sup>3</sup>, 박명렬<sup>4</sup>, 최준호<sup>4</sup>, 장한일<sup>5</sup>, 김상용<sup>6</sup>, 김수봉<sup>6</sup>, 박정식<sup>6</sup>, 서선희<sup>6</sup>, 서현관<sup>6</sup>, 이동하<sup>6</sup>, 이병훈<sup>6</sup>, 이순규<sup>6</sup>, 최선호<sup>6</sup>, 최원국<sup>6</sup>, 양장희<sup>7</sup>, 유인태<sup>7</sup>, 최영일<sup>7</sup>, 김영덕<sup>8</sup>, 전은주<sup>8</sup>, 김바로<sup>9</sup>, 김승찬<sup>9</sup>, 김재률<sup>9</sup>, 박영균<sup>9</sup>, 소선행<sup>9</sup>, 송숙형<sup>9</sup>, 신창동<sup>9</sup>, 여인성<sup>9</sup>, 임인택<sup>9</sup>, 주경광<sup>9</sup>, 김현수<sup>10</sup>(중앙대학교 물리학과, <sup>1</sup>경북대학교 물리학과, <sup>2</sup>경상대학교 물리학과, <sup>3</sup>광주과학기술원 물리학과, <sup>4</sup>동신대학교 물리학과, <sup>5</sup>서영대학교 물리학과, <sup>6</sup>서울대학교 물리학과, <sup>7</sup>성균관대학교 물리학과, <sup>8</sup>기초과학연구원 지하실험연구단, <sup>9</sup>전남대학교 물리학과, <sup>10</sup>전북대학교 물리학과.)

## P1-B018\*

**Study of Decreasing PMT Quantum Efficiency** / 김우영, 선용근, 박인곤<sup>1</sup>, 장지승<sup>2</sup>, 박명렬<sup>3</sup>, 최준호<sup>3</sup>, 장한일<sup>4</sup>, 김상용<sup>5</sup>, 김수봉<sup>5</sup>, 박정식<sup>5</sup>, 서선희<sup>5</sup>, 서현관<sup>5</sup>, 이동하<sup>5</sup>, 이병훈<sup>5</sup>, 이순규<sup>5</sup>, 최선호<sup>5</sup>, 최원국<sup>5</sup>, 양장희<sup>6</sup>, 유인태<sup>6</sup>, 최영일<sup>6</sup>, 김영덕<sup>7</sup>, 전은주<sup>7</sup>, 김바로<sup>8</sup>, 김승찬<sup>8</sup>, 박영균<sup>8</sup>, 김재률<sup>8</sup>, 소선행<sup>8</sup>, 송숙형<sup>8</sup>, 신창동<sup>8</sup>, 여인성<sup>8</sup>, 임인택<sup>8</sup>, 주경광<sup>8</sup>, 김현수<sup>9</sup>, 김시연<sup>10</sup>, 고영주<sup>10</sup>(경북대, <sup>1</sup>경상대, <sup>2</sup>광주과학기술원, <sup>3</sup>동신대, <sup>4</sup>서영대, <sup>5</sup>서울대, <sup>6</sup>성균관대, <sup>7</sup>IBS/세종대, <sup>8</sup>전남대, <sup>9</sup>전북대, <sup>10</sup>중앙대.)

## P1-B019\*

**Dark matter signal from neutrino physics** / KIM Young Min, LEE Hyun Min(중앙대학교, 물리학과.)



## SESSION P1

응집물질물리학과  
포스터 발표

2014년 4월 23일 수요일 15:00 - 16:45

장소: 포스터발표장

진행위원: [자성체, D001~D036] 이현우(포스텍)

[계산과학, D037~D049] 공기정(한국화학연구원)

### P1-D001\*

#### High Domain Wall Mobility in Pd/Co/Pt Films with thin Pd Layers /

문준, 조정구, 김덕호, 최석봉(서울대)

### P1-D002\*

#### 스핀케도토크를 이용한 Pt/Co/Pt 박막의 자구벽 운동 속도 향상 / 김주성,

제송근, 유상철(서울대), 민병철(한국과학기술연구원), 최석봉(서울대)

### P1-D003\*

#### Pt/Co/Pt 구조에서 Pt 두께에 따른 Dzyaloshinskii-Moriya Interactions

크기 변화 / 김덕호, 제송근, 유상철(서울대), 민병철(한국과학기술연구원), 이경진(고려대), 최석봉(서울대)

### P1-D004

Dzyaloshinskii-Moriya 상호작용이 Heisenberg Model의 상전이 온도  
에 미치는 영향 / 강상표, 권희영, 원창연(경희대)

### P1-D005

Dzyaloshinskii-Moriya (DM) Interaction에 의해 나타나는 2차원 자성  
구조의 Stress-Strain Relation에 대한 연구 / 권희영, 강상표, 원창연(경희대)

### P1-D006\*

#### Construction of Low Temperature Magnetic Force Microscope and Its Application to Skyrmion Materials / YANG JinHo, KIM Yunwon, PARK

MinJu(Center for Artificial Low Dimensional Electronic Systems, Institute for Basic  
Science (IBS), 77 Cheongam-Ro, Pohang 790-784, Korea. Department of Physics, Pohang  
University of Science and Technology, 77 Cheongam-Ro, Pohang 790-784, Korea), PARK  
S.Y(Physics Department, Chung-Ang University), YEOM H.W, KIM Jeehoon(Center  
for Artificial Low Dimensional Electronic Systems, Institute for Basic Science (IBS), 77  
Cheongam-Ro, Pohang 790-784, Korea. Department of Physics, Pohang University of  
Science and Technology, 77 Cheongam-Ro, Pohang 790-784, Korea)

### P1-D007\*

#### Fabrication of solid metallic cantilevers and their application for

AFM / JANG gyeongsu(CALDES. IBS. Pohang. Korea, Department of Physics.  
POSTECH. Pohang. Korea), WULFERDING dietrich, CHO doohee, YEOM  
hanwoong, KIM jeehoon(CALDES.IBS.Pohang.Korea), YANG Illkyu, JEONG  
Yoonhee(Department of Physics, POSTECH)



## P1-D008

**Electric field-induced modification of magnetism on FeCo and FeCo/MgO: A first principles study** / PUREV Taivansaikhan, DORJ Odkhuu, ORYONG Kwon, SOON CHEOL Hong(Department Of Physics, University of Ulsan)

## P1-D009\*

**Magnetocrystalline anisotropy of CoFe(011)/MgO(011)/CoFe(011) systems** / JEKAL Soyoung, KIM Eungu, KWON Oryong, HONG Sooncheol(울산대)

## P1-D010

**Brillouin Light Scattering Study of Ultra-Thin Fe Layer Between the MgO layers** / CHO Jaehun, JUNG Jin-Yong(Department of Physics, Inha University), KOHEI Nawaoka, SUZUKI Yoshishige(Department of Material Engineering Science, Osaka University), YOU Chun-Yeol(Department of Physics, Inha University)

## P1-D011

**기판 표면 형상에 의한 NiFe 박막의 자기 이방성의 변화** / DHO joonghoe, KI Sanghoon, KIM byeonggeon(kyunpook national university)

## P1-D012

**Cu 삽입층에 따른 Pt/Co/Pt 다층박막에서의 자성특성 연구** / 강승구, 조재훈(인하대), 유우석(서강대), 홍정일(DGIST), 유천열(인하대), 정명화(서강대)

## P1-D013\*

**Co<sub>x</sub>Ni<sub>1-x</sub>O/Ni<sub>0.8</sub>Fe<sub>0.2</sub> 박막에서의 이방성 자기저항을 이용한 교환 바이어스 효과 연구** / 정명화, 유우석, 추성민, 이규준(서강대, 물리학과), 유천열(인하대, 물리학과), 홍정일(DGIST, 신물질과학)

## P1-D014

**TE011 Mode Cylindrical Cavity Resonator for FMR Measurement** / 박승영, 서민수, 김상일(한국기초과학지원연구원, 물성과학연구부), 이상혁(충북대)

## P1-D015

**Study of Spin Dynamic Properties on the Magnetic Nanowires with the Shape Anisotropy** / CHO Jaehun, YOON Jungbum, YOU Chun-Yeol(Department of Physics, Inha university)

## P1-D016

**Stability of Half-metallicity of Rocksalt CaN(001) Surfaces** / LEE Jae Il, BIALEK B.(Dept. Physics, Inha Univ.), JANG Y.-R.(Dept. Physics, Univ. of Incheon)

## P1-D017

**Thickness Dependence of Locally Laser-Induced Magneto-**



**Thermoelectric Effect in  $\text{Fe}_3\text{O}_4/\text{Pt}$  Heterostructures** / LEE Kyeong-Dong, KIM Dong-Jun, PARK Byong-Guk(KAIST, Department of Materials Science and Engineering), KIM Jin-A, YOON Soon-Gil, JEONG Jong-Ryul(CNU, Department of Materials Science and Engineering), LEE Ki-Suk(UNIST, School of Mechanical and Advanced Materials Engineering), SONG Hyon-Seok(DGIST, Department of Emerging Materials Science), SOHN Jeong-Woo(KAIST, Department of Physics and CNSM), SHIN Sung-Chul(DGIST, Department of Emerging Materials Science)

**P1-D018**

**이방성 자기장에 따른 Z-type hexaferrite의 고주파수 특성** / 이찬혁(국민대), 김진모(삼성전기 중앙연구소), 김철성(국민대)

**P1-D019\***

**Excitation spectrum of the 2D triangular Heisenberg antiferromagnet hexagonal  $\text{LuMnO}_3$**  / OH Joosung, LE Manh Duc, JEONG Jaehong, PARK Je-Geun(Center for Correlated Electron Systems, Institute for Basic Science (IBS), Seoul 151-747, Korea), LEE Jung-Hyun, SONG Wan-Young(Department of Physics, Sungkyunkwan University, Suwon 440-746, Korea), WOO Hyungje, PERRING T.G.(ISIS Facility, STFC Rutherford Appleton Laboratory, Oxfordshire OX11 0QX, United Kingdom), BUYERS W.J.L.(Chalk River Laboratories, National Research Council, Chalk River, Ontario K0J 1J0, Canada), CHEONG S-W.(Department of Physics and Astronomy and Rutgers Center for Emergent Materials, Rutgers University,)

**P1-D020\***

**Investigating The Origin of Giant Dielectric Relaxation In Polycrystalline La Doped  $\text{BiMnO}_3$** : 정윤희, 김상우(포스텍, 물리학과)

**P1-D021**

**Systematic studies of magnetoelectric properties in polycrystalline Z type hexaferrites  $\text{Ba}_{3-x}\text{Sr}_x\text{Co}_2\text{Fe}_{24}\text{O}_{41}$  at room temperature** / KIM Kee Hoon, SHIN Kwangwoo, YOO Kyongjun, PARK Chang Bae(Center for Novel States of Complex Materials Research, Department of Physics and Astronomy, and Institute of Applied Physics, Seoul National University)

**P1-D022**

**치환양에 따른 다결정  $\text{Ba}_{1-x}\text{A}_x\text{Ti}_{1-y}\text{Fe}_y\text{O}_3$  ( $\text{A} = \text{La}^{3+}, \text{Bi}^{3+}$ )의 다강성 변화 연구** / 김덕현, 이민영, 유필선, 조한열, 류춘리, 이보화(한국외국어대)

**P1-D023**

**NMR을 이용한  $\text{Fe}_3\text{O}_4$  nano 입자의 Verwey transition 관찰** / 이상영, 강병기, 박세준, 이순칠(KAIST, 물리학과), 이지수, 박제근(서울대)

**P1-D024\***

**Metal-insulator transition in the  $\text{BaCrO}_3$  thin film** / JIN Hyo-Sun, LEE



K.-W.(Department of Applied Physics, Graduate School, Korea University, Sejong, Korea)

P1-D025\*

정공이 첨가된 (Hole-doped) 페로브스카이트 망간산화물의 연 X선 방사광 분광 연구 / 김대현, 이은숙, 김현우, 강정수(가톨릭대), KOLESNIK S., DABROWSKI B.(Northern Illinois University), 백재윤, 신현준(포항공대 연구소)

P1-D026\*

편극 소각 중성자 산란을 이용한  $\text{Fe}_3\text{O}_4$  초상자성 나노 입자의 자화 분포에 대한 연구 / 양우철, 이승호, 이동현, 정현(동국대), 김태환, 한영수(한국원자력연구원, 중성자과학부)

P1-D027\*

$\text{BaCo}_2\text{Fe}_{16}\text{O}_{27}$ 의 결정학적 및 초미세 구조 연구 / 김현규(국민대), 한은주(수원대), 김철성(국민대)

P1-D028\*

$\text{Co}_{0.2}\text{Zn}_{0.8}\text{Fe}_2\text{O}_4$ 의 자기적 특성 / 이상준, 김삼진, 김철성(국민대)

P1-D029\*

Z-type hexaferrite의 결정학적 및 자기적 특성 연구 / 임정태, 김철성(국민대)

P1-D030\*

이차전지 양극 물질  $\text{Na}_{0.9}\text{Li}_{0.1}\text{FeSO}_4\text{F}$ 의 결정학적 및 자기적 특성 연구 / 방소연, 최현경(국민대), 서정철(원광대), 김철성(국민대)

P1-D031

$\text{CoFe}_2\text{O}_4$  스피넬 박막의 구조적, 자기적 특성 연구 / 이두용, 김지웅, 조창우, 이승환, 김혜경, 황선민, 이지성, 민태원(부산대), 배종성(한국기초과학지원연구원 부산센터), 박성균(부산대)

P1-D032

Magnetic and Electric Properties in Cupric Divanadate / 이용우, 정윤희, 장태환(포항공대)

P1-D033

Room temperature ferromagnetic ordering in Fe doped  $\text{CeO}_2$  thin films / KUMAR Shalendra, PARK Jin Su, KIM Da Jeong, LEE Myang Hwan, SONG Tae Kwon(School Materials Science and Engineering, Changwon National University, Changwon-641-773, S. Korea), GAUTAM Sanjeev, CHAE K. H.(Advanced Materials Analysis Center, Korea Institute of Science and Technology, Seoul 136-791, S. Korea), JANG K. W.(Department of Physics, Changwon National University, Changwon-641-773, S. Korea)



P1-D034

**Electron Spin Resonance Study of Ferromagnetism in Hydrothermally Treated Fullerene** / LEE Cheol Eui, LEE Kyu Won, KIM Dowan(Korea university, department of physics)

P1-D035

**Optical Properties of multilayer BN/Graphene/BN: Van der Waals density functional approach** / 손지철, HASHMI Arqum, 홍지상(부경대학교 물리학과 나노자성체이론연구실)

P1-D036

**Experimental verification of Uhrig dynamical decoupling for normal Si:P system** / GWAK Minchan, LEE Sanggap(Korea Basic Science Institute), LEE Soonchil(Department of Physics, KAIST), YU INSUK(Department of Physics and Astronomy, Seoul National University)

P1-D037\*

**Magnetic Structure in the Metallic Cubic Perovskite BaOsO<sub>3</sub>** / JUNG Myung-Chul, LEE K.-W.(Department of Applied Physics, Graduate School, Korea University, Sejong, Korea)

P1-D038\*

**Abnormal Thermal Expansion Behavior of T-Carbon Structure** / CHOI Ho-Sik, KANG Seoung-Hun, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

P1-D039\*

**Interlayer Binding of Bilayer  $\alpha$ -graphyne**: SHIN Hyeondeok, LEE Hoonkyung(Division of Quantum Phases and Devices, School of Physics, Konkuk University, Seoul 143-701, Korea), KIM Jeongnim(Materials Science and Technology Division, Oak Ridge National Laboratory, TN 37831, U.S.A), KWON Yongkyung(Division of Quantum Phases and Devices, School of Physics, Konkuk University, Seoul 143-701, Korea)

P1-D040\*

**Quantum Monte Carlo Study of the Cohesion Energetics for sp-sp<sub>2</sub> Hybridized 2D Carbon Networks** / KANG Sinabro, SHIN Hyeondeok, PARK Minwoo, LEE Hoonkyung(Division of Quantum Phases and Devices, School of Physics, Konkuk University, Seoul 143-701, Korea), KIM Jeongnim(Materials Science and Technology Division, Oak Ridge National Laboratory, TN 37831, U.S.A.), KWON Yongkyung(Division of Quantum Phases and Devices, School of Physics, Konkuk University, Seoul 143-701, Korea)

P1-D041\*

**Effect of Spin-Orbit Coupling in the 5d<sup>1</sup> Antiferromagnetic Mott**



**Insulating  $\text{KOsO}_4$**  / SONG Young-Joon, AHN Kyo-Hoon, LEE K.-W.(Department of Applied Physics, Graduated School, Korea University, Sejong 339-700, Korea), PICKETT W. E.(Department of Physics, University of California, Davis, CA 95616, USA)

**P1-D042\***

**First-Principle Study on Structural and Electronic Properties of Carbon Nanotubes** / LEE YongJu, LEE Hayoung, KIM Cheol-woon, PARK Jejune, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

**P1-D043\***

**Research of Anisotropy of Strip-Meatamaterial Using FEM Simulation** / 장수룡, 황정식, 노슬기, 박상현(성균관대)

**P1-D044**

**First-principles study of  $\text{MoS}_2$ - $\text{WSe}_2$  layered structure** / OH Sehoon, BAIK Seung Su, CHOI Hyoung Joon(Department of Physics, IPAP, and Center for Computational Studies of Advanced Electronic Material Properties, Yonsei University, Seoul, Korea)

**P1-D045**

**CoFe 박막의 자기결정방향성에 미치는 응력의 영향에 대한 제일원리계산** / 김은구, 권오룡, 홍순철(울산대)

**P1-D046**

**Electronic and magnetic properties of single-layer  $\text{MoS}_2$  on magnetic substrate: A first-principles study** / YUN Won Seok(Dept. of Emerging Materials Science, DGIST & Center for X-ray Optics, Lawrence Berkeley National Laboratory), LEE J.D.(Dept. of Emerging Materials Science, DGIST)

**P1-D047**

**Study of Layer-selective Half-metallicity in Multi-layer Graphene Nanoribbons** / JEON Giwan, LEE Kyu Won, LEE Cheol Eui(Department of Physics, Korea University)

**P1-D048**

**Thickness effect on optical absorption spectra of  $\text{MoS}_2$ : Study of  $\text{GW}^*\text{BSE}$**  / KIM Jongmin, LEE Kyuhwan, CHA Woongtak, HWANG Ho Jun, KIM Jung Gon(Department of Emerging Materials Science, DGIST), YUN Won Seok(Department of Emerging Materials Science, DGIST & Center for X-ray Optics, Lawrence Berkeley National Laboratory), LEE J.D.(Department of Emerging Materials Science, DGIST)

**P1-D049**

**연료전지 공기극  $\text{Pt}_3\text{M}$  ( $\text{M}=\text{Co}, \text{Fe}$ ) 합금의 촉매반응성과 자성과의 상관관계: 제일원리계산** / 권오룡, 홍순철(울산대)





## SESSION P1

응용물리학과화  
포스터 발표

2014년 4월 23일 수요일 15:00 - 16:45

장소: 포스터발표장

### P1-E001\*

다양한 전압 인가 방식에 따른 교류 유기 발광 소자의 발광 특성 및 발광 메커니즘의 연구 / 권오태, 서지동, 이원재<sup>1</sup>, 김태완(홍익대학교, 정보디스플레이공학과, <sup>1</sup>가천대학교, 전자공학과.)

### P1-E002\*

Rhodamine 색소의 충돌 quenching을 이용한 immiscible liquid 사이의 이온 통과현상 관찰 / 정석현, 홍석환<sup>1</sup>, 김수용, 김석원<sup>2</sup>(KAIST, 물리학과, <sup>1</sup>중앙대학교 부속고등학교, <sup>2</sup>울산대학교, 물리학과.)

### P1-E003\*

Measurement of Reactive Hydroxyl Radical Species inside the Biosolutions during Non-thermal Atmospheric Pressure Plasma Jet Bombardment onto the Solution / 김용희, 홍영준, 백구연, 최진주, 조광섭, 김도영, 엄환섭, 최은하(플라즈마 바이오과학 연구센터, 광운대학교.)

### P1-E004\*

Dynamic quenching of rhodamine 110 using time correlated single photon counting / JUNG Seokhyun, KIM Soo Yong, KIM Sok Won<sup>1</sup>(KAIST, Department of Physics, <sup>1</sup>University of Ulsan, Department of Physics.)

### P1-E005\*

FCS를 이용한 Quadruplex와 PEG의 상호작용 측정 / 이동근, 김민중, 김수용, 김석원<sup>1</sup>(KAIST, 물리학과, <sup>1</sup>울산대, 물리학과.)

### P1-E006\*

Interference between Neural Mosaics Generates Functional Structure and Correlated Activities in the Brain / SAILAMUL Pachaya, JANG Jae Son, PAIK Se-Bum(KAIST, Bio&Brain Engineering.)

### P1-E007\*

A Common Dynamics in Human Sensory Perception Modeled as Bi-Stable System / 최우철, 안소영, 백세범(KAIST, Bio and Brain Engineering.)

### P1-E008\*

An Interference Pattern Generated by Intrinsic Geometrical Factors can develop a Periodic Structure in Biological System / JANG Jae Son, SAILAMUL Pachaya, PAIK Se-Bum(KAIST, Bio and Brain engineering.)

**P1-E009\***

압축률 변화에 따른 arachidic acid 단일층의 부분적인 적층에 대한 이미징 편광분석법 연구 / 강유리, 변준석, BARANGE Nilesh, 김태중, 김영동(경희대학교 물리학과 나노광물성연구실.)

**P1-E010\***

**Polarization of the metamagnetic resonance of cut-wire-pair structure** / NGUYEN Van Dung, YOO Young Joon, KIM Young Ju, LEE Youngpak, NGUYEN Thanh Tung<sup>1</sup>(Department of Physics, Quantum Photonic Science Research Center and RINS, Hanyang University, Seoul, 133-791, Korea. <sup>1</sup>Department of Physics and Astronomy, KU Leuven, B-3001 Leuven, Belgium.)

**P1-E011\***

**Tunable dual absorption by electromagnetic polarization** / 김영주, 유영준, 정해욱, 황지섭, 이주열<sup>1</sup>, 이영백(한양대학교, 물리학과. <sup>1</sup>성균관대학교, 물리학과.)

**P1-E012\***

**Polarization-independent Metamaterial Dual-band Perfect Absorber only using Single Pattern** / 유영준, 김영주, 이주열<sup>1</sup>, 김기원<sup>2</sup>, 강지훈<sup>3</sup>, 이영백(한양대학교, 물리학과. <sup>1</sup>성균관대학교, 물리학과. <sup>2</sup>선문대학교, 디스플레이공학과. <sup>3</sup>국민대학교, 나노전자물리학과.)

**P1-E013\***

**SiO<sub>x</sub>N<sub>y</sub> Encapsulation Film Fabricated by Plasma Enhanced Chemical Vapor Deposition** / JIN Chang-Kyu, HWANG Do-Kyung<sup>1</sup>, KIM Tae-Hwan<sup>2</sup>, CHOI Won-Kook<sup>1</sup>(한양대 전자컴퓨터통신공학과, 한국과학기술연구원 계면제어연구센터. <sup>1</sup>한국과학기술연구원 계면제어연구센터. <sup>2</sup>한양대 전자컴퓨터통신공학과.)

**P1-E014\***

**Enhanced Phosphorescence from One-dimensional Photonic Crystal Phosphor Structure** / 전현수, 최세록<sup>1</sup>, 민경택<sup>1</sup>(서울대학교 자연과학대학 물리천문학부, 서울대학교 자연과학대학 생물물리 및 화학생물학과. <sup>1</sup>서울대학교 자연과학대학 물리천문학부.)

**P1-E015\***

백색 유기발광다이오드의 색순도 향상을 위한 다중 광밴드갭 구조 제작 및 특성 연구 / 김기원, 하나영<sup>1</sup>(아주대학교 에너지시스템학부 물리학과전공. <sup>1</sup>아주대학교 에너지시스템학부 물리학과전공.)

**P1-E016\***

**Complex Plasmonic Resonances of Metallic Nano-Ring Structures** / HEO Minsung, KIM Jaekyung, SHIN Jonghwa(Department of Materials Science and Engineering, KAIST.)



P1-E017\*

**Interface Structure Effect on Magnetic Properties at Magnetic-Metal/semiconducting-Organic Interface** / KIM Dong-Ok, AHN KwangSeok, KIM JongBum, SONG KyoungMi<sup>1</sup>, KIM Jae-Sung<sup>1</sup>, CHOI Jun-Woo<sup>2</sup>, CHO Byeong-Gwan<sup>3</sup>, LEE KiBong<sup>3</sup>, LEE DongRyeol(Department of Physics, Soongsil University. <sup>1</sup>Department of Physics, Sookmyung Women's University. <sup>2</sup>Spin Device Research Center, Korea Institute of Science and Technology. <sup>3</sup>Department of Physics, Pohang University of Science and Technology.)

P1-E018\*

**Superconducting properties of Pb-based alloy thin films** / 박상일, 김남희, 김홍석, 도용주(고려대학교, 응용물리학과.)

P1-E019\*

**Stretchable electric conductor consisting of carbon nanotube sheet and elastomer** / LE Viet Thong, LEE YouRack, LEE Young Hee, SUH Dongseok(IBS 나노구조물리연구단 성균관대학교.)

P1-E020\*

**열처리에 의한 전기도금 BiTe 박막의 물성조절** / 홍기민, 노진성, 서호영, 김창수(충남대학교, <sup>1</sup>표준연구소.)

P1-E021\*

**Synthesis And Characterization Of Hexagonal Twisted Bilayer Graphene** / HONG Sung Ju, HAN Gang Hee<sup>1</sup>, R. MANZO A. Julio<sup>1</sup>, DRNDIC Marija<sup>1</sup>, JOHNSON A. T. Charlie<sup>1</sup>, PARK Yung Woo(Department of Physics and Astronomy, Seoul National University. <sup>1</sup>Department of Physics and Astronomy, University of Pennsylvania.)

P1-E022

**Fabrication of transparent conductive films using copper nanoparticle/graphene oxide on electrospun polyurethane nanofibers** / 석중현, 김경민<sup>1</sup>, 김진운(서울시립대학교 나노과학기술학과, <sup>1</sup>서울시립대학교 나노공학과.)

P1-E023

**초음파를 이용한 양자점 태양전지용 CdS 양자점 합성 및 광학적 특성 연구** / 김재호, 김건양<sup>2</sup>, 하혜진<sup>2</sup>, 손상호(경북대학교 물리학과, <sup>1</sup>경북대학교 물리교육전공, <sup>2</sup>경북대학교 과학교육과.)

P1-E024

**여러 가지 액체 내에 적용 가능한 비열 플라즈마 소스의 특성 연구** / 임승주, 민부기<sup>1</sup>, TAYLOR Nathaniel<sup>2</sup>, 이종용, 강승언<sup>1</sup>, 최은하<sup>1</sup>(광운대학교, 플라즈마바이오통계학과, <sup>1</sup>광운대학교, 전자바이오통계학과, <sup>2</sup>Drexel university,



Department of Mechanical engineering.)

P1-E025

**Effects of Dielectric Barrier Discharge (DBD) Plasma on Seed Germination and Plant Growth** / KIM Taesoo, PARK Daehun, PARK Gyungsoon, CHOI Eun Ha(광운대학교.)

P1-E026

**Selectivity of Information in Human Visual Perception** / AN Soyoung, CHOI woochul, PAIK Se-Bum(KAIST, Department of Bio and Brain Engineering.)

P1-E027

**Cobalt Phthalocyanine of Organic Semiconductor Studied by Electrical Measurements** / LEE Jaihyun, KIM Hyein, SHIN Dongguen, LEE Younjoo, PARK Soohyung, YOO jisu, JEONG Junkyeong, HYUN Gyeongho, JEONG Kwangho, YI Yeonjin(Institute of Physics and Applied Physics, Yonsei University.)

P1-E028

**Study of carrier injection and transport mechanism in TIPS-pentacene devices** / 임은주, 복문정, 조성진, 최원진, 대구찌 다이<sup>1</sup>, 이와모 토 미쯔마사(단국대학교 응용물리학과, <sup>1</sup>동경공업대학 물리전자공학과.)

P1-E029

**Carrier lifetime extension via the incorporation of robust hole/electron blocking layers in bulk heterojunction polymer solar cells** / 윤영운, 김봉수(한국과학기술연구원.)

P1-E030

**Magnetoresistance of a copolymer: FeCl<sub>3</sub>-doped poly(2,5-diocetyloxy-p-phenylene vinylene-alt-3,4-ethylenedioxythiophene vinylene)** / 김경호, 최아정, 박준모<sup>1</sup>, 최은상<sup>2</sup>, 최태림<sup>1</sup>, 박영우(서울대학교 물리천문학부, <sup>1</sup>서울대학교 화학부, <sup>2</sup>National High Magnetic Field Laboratory.)

P1-E031

**Electronic Transport and Photo-induced Current in Van Der Waals Heterostructures** / LEE Young Hee, DOAN Manh Ha, VU Quoc An, CHAE Sang Hoon, ADHIKARI Subash(IFS 나노구조물리연구단 성균관대학교.)

P1-E032

**Transmission Properties of Terahertz Waves through W doped VO<sub>2</sub> Thin Films** / 박경현, 신준환, 한상필, 김남제<sup>1</sup>, 문기원<sup>1</sup>(ETRI THz포토닉스창의연구센터, UST 차세대소자공학과, <sup>1</sup>ETRI THz포토닉스창의연구센터.)



P1-E033

**Rate Equation**을 사용하여 수치해석적으로 분석한 레이저다이오드 모듈의 열 특성 / 이종민, 이동한, 김대경<sup>1</sup>, 강승구<sup>1</sup>(충남대학교, 물리학과. <sup>1</sup>(주)코셋.)

P1-E034

**Methodology of signal extraction from numerically simulated Optical Coherence Tomography** / KIM Jong Uk, SHIN Jonghwa(한국과학기술원 신소재공학과.)

P1-E035

**Measurement of Reactive Hydroxyl Radical Species inside the Biosolutions during Non-thermal Atmospheric Pressure Plasma Jet Bombardment onto the Solution** / 김용희, 홍영준, 백구연, 권기청, 최진주, 조광섭, 김도영, 엄환섭, 최은해(플라즈마 바이오과학 연구센터, 광운대학교.)



## SESSION P1

통계물리학과  
포스터 발표

2014년 4월 23일 수요일 15:00 – 16:45

장소: 포스터발표장

### P1-F001\*

**Transfer entropy**를 이용한 주식시장에서의 **module** 구조 분석 / 김진호, 육순형, 김엽(경희대학교.)

### P1-F002\*

**Weighted network** 분석을 통한 국제금융위기의 특성 연구 / 김진호, 육순형, 김엽(경희대학교.)

### P1-F003

**Density functional theory for a planar electric double layer containing size-asymmetric ions** / KIM Soon-Chul, KIM Eun-Young(안동대학교.)

### P1-F004

**Confined Self-avoiding Polymer as Model Bacterial Chromosome Organization: Helical Structure** / JUNG Youngkyun, HA Bae-Yeun<sup>1</sup>(KISTI, <sup>1</sup>University of Waterloo.)

### P1-F005\*

**The relationship between fund performance indicator and KOSPI market** / 오갑진, 김호용, 안석원(조선대학교, 경영학부.)

### P1-F006

**Statistical Properties Of Market Microstructure Of London Stock Exchange** / 임규빈, 오갑진<sup>1</sup>, 김승환<sup>2</sup>(POSTECH, 물리학과. <sup>1</sup>조선대학교, 경영학부. <sup>2</sup>POSTECH, 물리학과.)

### P1-F007

**Who is vulnerable to weather? – A case study of investor types** / 오갑진, 안석원, 김호용(조선대학교, 경영학부.)

### P1-F008\*

**Stylometry and Network Analysis on the Annals of the Joseon Dynasty** / LEE Byunghwee, CHUNG Kihong, KIM Daniel, JEONG Hawoong<sup>1</sup>(KAIST, Department of Physics. <sup>1</sup>KAIST, Department of Physics, Institute for the BioCentury.)

### P1-F009\*

**Fine phase structures of iterated prisoners' dilemma games** / KIM



Young Jin, ROH Myungkyoon, JEONG Seonyoung, SON Seung-Woo(Hanyang University.)

**P1-F010\***

**An Empirical Study of the Discrepancy between Psychological and Probabilistic Expectation Values in a Poker Game** / ROH Myungkyoon, JEONG Seonyoung, KIM Young Jin, SON Seung-Woo(Hanyang University ERICA, Applied Physics.)

**P1-F011\***

**Coevolution of Species Abundance and Topology in Mutualistic Networks** / LEE Deok-sun, LEE Jae Woo, MAENG Seong Eun(Inha University, Dept. of Physics.)

**P1-F012**

**최수의 역설 게임에서 비참여 옵션의 역할과 약한 선택에 대한 두 가지 극한 / 정형채(세종대학교.)**

**P1-F013**

**Feature of dynamical behaviors for five air pollutant concentrations** / 김경식, 김부경<sup>1</sup>, 이동인<sup>1</sup>(부경대학교, 물리학과. <sup>1</sup>부경대학교, 환경대기학과.)

**P1-F014**

**Conformational Transitions in the HP Model on a Square Lattice** / 이주련, 이재환(숭실대학교 의생명시스템학부.)

**P1-F015**

**Generalized Conserved Lattice Gas Model on Random Networks** / KWAK Wooseop, HA Meesoon<sup>1</sup>(Department of Physics, Chosun University. <sup>1</sup>Department of Physics Education, Chosun University.)

**P1-F016**

**Segregation of Confined Polymers: Crowding Effect** / KIM Juin, JEONG Hawoong, JUNG Youngkyun<sup>1</sup>, HA Bae-Yeun<sup>2</sup>(KAIST, Department of Physics. <sup>1</sup>KISTI, Supercomputing Center. <sup>2</sup>University of Waterloo, Department of Physics and Astronomy.)

**P1-F017\***

**Auditory Information Processing in the Human Brain: Nonlinear Analysis of the Auditory-Evoked Potential** / JIN SeHyun, HAN Kyungreem, GOH Segun, CHOI MooYoung(Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University, Seoul 151-747, Korea.)



P1-F018

**Frequency-Domain Order Parameter for Synchronization Transition of Bursting Neurons** / LIM Woochang, KIM Sang-Yoon<sup>1</sup>(Daegu National University of Education, Department of Science Education. <sup>1</sup>LABASIS Corporation, Research Division.)

P1-F019\*

**Effects of Thermal Fluctuations on a Generalized Active Brownian Dynamics** / CHOI Saerom, LEE Kong-Ju-Bock, PARK Pyeong Jun<sup>1</sup>(Department of Physics, Ewha Womans University, Seoul. <sup>1</sup>School of Liberal Arts and Sciences, Korea National University of Transportation, Chungju.)

P1-F020

**Kardar Parisi Zhang class model in higher dimensions** / 김상우, 김진민(숭실대학교, 물리학과.)

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## SESSION P1

광학및양자전자학분과회  
포스터 발표

2014년 4월 23일 수요일 15:00 - 16:45

장소: 포스터발표장

### P1-I001

#### Phase Measurement Without Unwrapping Using Dual Illumination

/ KIM Dug Young, TAYEBI Behnam, JAFARFARD Mohammad(Physics department of Yonsei university.)

### P1-I002\*

CUPC/Si bilayer에서 여기파장 의존적인 THz파 변조효율 측정 / PARK Jun Mgin, YOO Hyung Keun<sup>1</sup>, HWANG In-Wook<sup>1</sup>, LEE Joong Wook(Chonnam National University, Department of Physics. <sup>1</sup>Advanced Photonics Research Institute, GIST.)

### P1-I003\*

Stem cell differentiation fluorescence lifetime imaging of 3T3-L1 cell to adipogenesis on single cell scale / 김덕영, 송영식(연세대학교 물리학과.)

### P1-I004\*

Biosensor For Diagnosing Lung Cancer Based On Anodic Aluminum Oxide Chip / KIM Sae Wan, LEE Sang Won, LEE Jas Sung, KIM Ju Seong, KANG Shin Won(School of Electronics Engineering College of IT engineering, Kyungpook National University, Sankyuk-dong Bukgu 702-710 Daegu, Rep. Korea.)

### P1-I005\*

파장보다 큰 입자의 횡산란 전산모사 정확도 분석과 그 응용 / 강승규, 신종화(한국과학기술원.)

### P1-I006

Dual Wavelength Diffraction Phase Microscopy for Real-time Measurement of Refractive Index and Thickness / KIM Dug Young, JAFARFARD Mohammad Reza, TAYEBI Behnam(Physics department of Yonsei university.)

### P1-I007\*

Terahertz conosopic detection of interference figure of R-cut sapphire / DAEHOON Han, HANLAE Jo, JONGSEOK Lim, JAEWOOK Ahn(KAIST, Department of Physics.)

### P1-I008\*

Broad tunability of a Femtosecond Optical Parametric Oscillator



**using MgO-doped Stoichiometric LiNbO<sub>3</sub>** / JEONG Tae Young, YEE ki ju(Chungnam National University, Department of Physics.)

**P1-I009\***

시간 분해 이색 여기-탐침 분광법을 이용한 **Graphite** 여기 전자 동역학 분석 /이기주, 서승원(충남대학교, 물리학과.)

**P1-I010**

원격 화학 오염물질 탐지용 **FTIR** 분광장치연구 / 강영일, 이종민(국방과학연구소.)

**P1-I011**

원거리 화학영상탐지용 분광기의 보정용 흑체 연구 / 이종민, 최명진, 강영일(국방과학연구소.)

**P1-I012**

광섬유 헤테로다인 간섭계를 이용한 진동 센서 / 최은서, 김주하, 이승석(조선대학교, 물리학과.)

**P1-I013\***

음 어드미턴스와 역 어드미턴스 해석을 이용한 2-방향 완전 흡수 박막 설계 / 김태영, 전영철, 황보창권(인하대학교, 물리학과.)

**P1-I014**

도플러 라이다 시스템에서 주파수 잠금 장치의 기준신호를 이용한 도플러 신호의 오차감소 / 박락규, 백성훈, 박승규, 김동울, 안용진(한국원자력연구원 양자광학연구부.)

**P1-I015**

차분흡수 라이다 시스템에서 주파수 잠금비율에 따른 요오드 가스의 원격탐지 / 김동울, 백성훈, 박승규, 박락규, 안용진(한국원자력연구원.)

**P1-I016\***

극자외선 노광공정용 이진마스크의 이중 흡수체 구조 설계 및 흡수체 물질에 관한 연구 / 임재동, 김원영, 김태영, 황보창권(인하대학교, 물리학과.)

**P1-I017\***

**Extraction of Optical Constants Using Multiple Reflections in the THz Emitter-sample Hybrid Structure** / HAN Jeong Woo, HAMH Sun Young, KIM Tae Heon, LEE Kyu-Sub, YU Nan Ei<sup>1</sup>, KO Do-Kyeong<sup>2</sup>, LEE JongSeok(Department of Physics and Photon Science, Gwangju Institute of Science and Technology (GIST), Gwangju 500-712, Republic of Korea. <sup>1</sup>Advanced photonics Research Institute (APRI), Gwangju Institute of Science and Technology (GIST), Gwangju 500-712, Republic of Korea. <sup>2</sup>Department of Physics and Photon Science and Advanced photonics Research Institute (APRI), Gwangju Institute of



Science and Technology, Gwangju (GIST) 500-712, Republic of Korea.)

**P1-I018\***

**Admittance Matching Analysis Of Perfect Absorption In Ultra-Thin, Unpatterned Films** / HWNAGBO Chang Kwon, BADSHA ALAMGIR, JUN Young Chul(Inha University, Dept. of Physics.)

**P1-I019**

**Optical Properties Characterize Of Different Thickness Pt Films Deposited By Ion Beam Sputtering** / ZHOU Ming, YOON Junho, KIM TaeYoung, HWANGBO Chang Kwon(InHa University, Department of Physics.)

**P1-I020**

**전산모사를 통한 Flat-type LED조명을 위한 LGP의 레이저 가공조건 분석** / 신용진, 박소희, 이승석(조선대학교 물리학과.)

**P1-I021**

**산란패턴으로 제작된 도광판에 대한 광원의 위치 변화에 따른 휘도 및 균일도 특성에 관한 연구** / 박소희, 신용진(조선대학교 물리학과.)

**P1-I022**

**레이저로 가공된 산란패턴의 도광판 설계와 휘도분포 조절의 관계에 대한 분석** / 박소희, 신용진(조선대학교 물리학과.)

**P1-I023\***

**레이저를 이용한 마이크로 렌즈 제작 및 특성 연구** / 최훈국, 김진태, 손익부<sup>1</sup>, 노영철(조선대학교 광기술공학과. <sup>1</sup>광주과학기술원 고등광기술연구소.)

**P1-I024**

**The study of change in spontaneous emission rate in organic molecules nearby a hyperbolic metamaterial** / LEE Kwang Jin, KIM Eunsun, WOO Jaeheun, GWON Minji, LEE Minyung<sup>1</sup>, KIM Dong Wook, RIBIERRE J.-C.<sup>2</sup>, WU J. W.(Department of Physics and CNRS-Ewha International Research Center, Ewha Womans University, Seoul, Korea. <sup>1</sup>Department of Chemistry and Nanoscience, Ewha Womans University, Seoul, Korea. <sup>2</sup>Center for Organic Photonics and Electronics Research, Kyushu University, Fukuoka, Japan.)

**P1-I025**

**Flip chip White LED PKG for angular color homogeneity applying imprinting technologies** / PARK Seung Hyun, LEE Gye Seon<sup>1</sup>, RYU Sang Wan<sup>1</sup>(Korea Photonics Technology Institute, Department of Physics, Chonnam National University. <sup>1</sup>Korea Photonics Technology Institute.)



## SESSION P1

원자및분자물리학회  
포스터 발표

2014년 4월 23일 수요일 15:00 - 16:45

장소: 포스터발표장

### P1-J001\*

**Adding a single photon to a coherent state** / 김기식, 장석현(인하대학교, 물리학과.)

### P1-J002

**Analytical solutions of the lineshape in polarization spectroscopy for the  $J_g=0 \rightarrow J_e=1$  transition** / HEUNG-RYOUL NOH(전남대학교, 물리학과.)

### P1-J003

**포타슘 이원자 분자의 삼엽충 형태 리드버그 전자상태 정밀 측정을 위한 에너지 연구** / 김진태(조선대학교, 광기술공학과.)

### P1-J004\*

**Cavity-QED Microlaser Pumped By Atoms In A Coherent Superposition** / KIM Junki, YANG Daeho, SONG Younghoon, LEE Moonjoo<sup>1</sup>, AN Kyungwon(Department of Physics & Astronomy, Seoul National University, Seoul 151-747, Korea. <sup>1</sup>Institute for Quantum Electronics, ETH Zürich, CH-8093 Zürich, Switzerland.)

### P1-J005

**Current Status of Chemical Physics Laser-Based Beam-Line at Max-Planck Center for Attosecond Science (MPC-AS), POSTECH / MYEONGKEE PARK, CHUL HOON KIM, DABABRATA PAUL, TAE KYU KIM<sup>1</sup>, DONG EON KIM(Department of Physics and Center for Attosecond Science and Technology (CASTECH), POSTECH. <sup>1</sup>Department of Chemistry, Pusan National University.)**

### P1-J006\*

**Entanglement generation of quantum and classical states of light using photon-addition scheme** / JEONG Hyunseok, ZAVATTA Alessandro<sup>1</sup>, KANG Minsu, LEE Seung-Woo, COSTANZO Luca<sup>1</sup>, GRANDI Samuele<sup>2</sup>, RALPH Timothy<sup>3</sup>, BELLINI Marco<sup>1</sup>(Department of Physics, Seoul National University. <sup>1</sup>Department of Physics, University of Firenze, Italy. <sup>2</sup>INO-CNR, Italy. <sup>3</sup>Centre for Quantum Computation and Communication Technology, University of Queensland, Australia.)

### P1-J007\*

**Operational Quasi-probability for Continuous Variables** / 제정우, 이진형(한양대학교 물리학과.)

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P1-J008\*

**Quantum learning speedup in binary classification** / 유석원, 방정호<sup>1</sup>, 이창협<sup>2</sup>, 이진형(한양대학교 물리학과, <sup>1</sup>서울대학교 물리학과, <sup>2</sup>Centre for Quantum Technologies, National University of Singapore.)

P1-J009

**Femtosecond SCRAP Flipping of Rubidium Atomic Qubit** / LEE Han-yeol, LIM Jongseok, AHN Jaewook(KAIST, Dept. of Physics.)

P1-J010

**동일 충실도를 갖는 혼합 큐비트 상태들의 기하학** / 이상민(부산대.)

P1-J011\*

**Generation of correlated photon pair using a PPMgSLT crystal** / 이희정, 김현오, 최희주, 차명식, 문한섭(부산대학교.)

P1-J012

**An Experiment on Operational Quasiprobabilities for Qubits** / LEE Kwang Geol, SEOL Kang Hee<sup>1</sup>, HONG Sunghyuk<sup>1</sup>, RYU Junghee<sup>2</sup>, LIM James<sup>3</sup>, LEE Jinhyoung<sup>4</sup>(Hanyang University, Department of Physics. <sup>1</sup>Hanyang University, Research Institute for Natural Sciences. <sup>2</sup>Hanyang University, Research Institute for Natural Sciences/Hanyang University, Department of Physics/University of Gdańsk, Institute of Theoretical Physics and Astrophysics/Seoul National University, Center for Macroscopic Quantum Control. <sup>3</sup>Ulm University, Institute for Theoretical Physics. <sup>4</sup>Hanyang University, Department of Physics/Seoul National University, Center for Macroscopic Quantum Control/Korea Institute for Advanced Study, School of Computational Sciences.)

P1-J013

**Photoionization of the Mg-like Cl<sup>5+</sup> and Ar<sup>6+</sup> ions** / 김대성, 권덕희(경과학기술대학교 기계자동화과, <sup>1</sup>원자력연구원 원자력데이터 개발검증센터.)

P1-J014\*

**Sequential State Discrimination for Two Mixed Qubit** / 권영현, 남궁민(한양대학교 응용물리학과.)

P1-J015\*

**Optimal POVM for Noisy QKD** / 권영현, 신재희, 하동훈(한양대학교 응용물리학과.)

P1-J016\*

**About Optimality Condition for N Mixed Quantum State Discrimination with Maximum Confidence** / 권영현, 김지환, 하동훈(한양대학교 응용물리학과.)



P1-J017\*

**Optimized entropic uncertainty for successive generalized measurements** / BAEK Kyunghyun, SON Wonmin(Sogang University, Department of physics.)

P1-J018

**Two-photon interference experiment in a polarization-based Michelson interferometer** / 김현오, 이희정, 문한섭(부산대학교.)

P1-J019

**Imprinting highly charged skyrmion spin texture and skyrmion crystal in two-dimensional spinor Bose-Einstein condensate** / 한정호, 이무송, 김민석, 신용일(서울대학교 물리천문학부 양자기체 연구실.)

P1-J020

**Interferometric Measurement of Brownian Motion of an Optically Trapped Submicron Particle in Air** / SO Jin Myeung, CHOI Jai-Min(ChonBuk National University, Devision of Science Education.)



## SESSION P2

원자핵물리학과회  
포스터 발표

2014년 4월 24일 목요일 11:00 - 12:45

장소: 포스터발표장

### P2-C001

**Analysis of TL Glow Curve on Calcite** / 홍덕균(강원대학교, 물리학과.)

### P2-C002

**Photo-transferred Thermoluminescence in Quartz** / 홍덕균, 남인태, 장승호(강원대학교, 물리학과.)

### P2-C003

**Relativistic Analyses of the  $^{22}\text{Ne}(p,p')^{22}\text{Ne}$  Reaction at 800MeV** / SHIM Sugie, KIM Moon-Won(Kongju National University, Physics Department.)

### P2-C004

**Measurement of the  $140(\alpha,p)17\text{F}$  Reaction at  $E_{\text{cm}} = 2.2 \sim 5.3$  MeV** / KIM Aram, LEE Nam Hee<sup>1</sup>, YOO Jung Sook<sup>2</sup>, HAN Mi Hee<sup>2</sup>, HAHN In Sik<sup>2</sup>, CHOI Seon Ho<sup>3</sup>, MOON Jun Young<sup>4</sup>, KWON Young Kwan<sup>4</sup>, JUNG Hyo Soon<sup>5</sup>, LEE Chun Sik<sup>5</sup>, YAMAGUCHI H.<sup>6</sup>, WAKABAYASHI Y.<sup>6</sup>, BINH D.<sup>6</sup>, HASIMOTO H.<sup>6</sup>, KAWABATA T.<sup>6</sup>, KAHL D.<sup>6</sup>, KURIHARA Y.<sup>6</sup>, KOMATSUBARA T.<sup>4</sup>, GUO B.<sup>7</sup>, WANG B.<sup>7</sup>, WANG Y.<sup>7</sup>, LIU W.<sup>7</sup>, KUBONO S.<sup>8</sup>, HAYAKAWA S.<sup>9</sup>(Department of Physics, Sung Kyun Kwan University. <sup>1</sup>Department of Physics, Ewha Womans University. <sup>2</sup>Department of Science Education, Ewha Womans University. <sup>3</sup>Department of Physics, Seoul National University. <sup>4</sup>RISP, Institute for Basic Science. <sup>5</sup>Department of Physics, Chung Ang University. <sup>6</sup>Center for Nuclear Study, University of Tokyo. <sup>7</sup>China Institute of Atomic Energy, China. <sup>8</sup>RIKEN Nishina Center, Japan. <sup>9</sup>INFN-LNS, Italy.)

### P2-C005

**Development Of Fast Ionization Chamber And MWPC For KOBRA Recoil Spectrometer** / GWAK Minsik, CHAE Kyungyuk, CHA Soomi, LEE Eunji(Physics department, Sungkyunkwan University.)

### P2-C006

**Ce:GAGG 섬광 결정의 섬광 특성연구** / 김혜림, 김홍주, 장은정, 이원근<sup>1</sup>, 기문광<sup>2</sup>, 김현덕<sup>1</sup>, 전구식<sup>1</sup>(경북대학교, 물리학과. <sup>1</sup>(주)TPS.)

### P2-C007

**Radioactive Decay Simulation using Geant4 with New Evaluation of Structure Data** / 이종화, 김충섭, 이영욱(한국원자력연구원.)

**P2-C008**

**Development of  $\text{Sm}^{3+}$  or  $\text{Tb}^{3+}$  doped  $\text{Gd}_3\text{Ga}_2\text{Al}_3\text{O}_{12}$  Phosphors for X-ray imaging** / HONGJOO Kim, MYEONGJIN oh<sup>1</sup>(Department of physics, kyungpook national university. <sup>1</sup>Department of physics kyungpook national university, Department of Radiology Daegu Heath College.)

**P2-C009**

**Water NMR Prototype for Polarized  $^{129}\text{Xe}$  NMR Signal Calibration, using bird cage coils** / KAVTANYUK Vladimir, TAN Joshua Artem, STEPANYAN Samuel, 선용근, 김우영(경북대학교 물리학과.)

**P2-C010**

**Design of the polarized radioactive ion beams with RAON for nuclear structure, reaction and astrophysics experiments** / GLADKOV Aleksey, 김우영, VLADIMIR Kavtanyuk, 선용근, 김종원<sup>1</sup>, 윤종철<sup>1</sup> (경북대학교 물리학과. <sup>1</sup>Rare Isotope Science Project (RISP), Institute for Basic Sciences (IBS).)

**P2-C011**

**SAR-OSL과 SAAD-POSL의 사고선량 비교평가** / 이용주, 이덕형, 이선형, 김명진(주)네오시스코리아, 방사선기술연구소.)

**P2-C012\***

**ALICE-ITS Pixel Chip Test-System at Pusan National University** / KIM Jiyoung, CHOI KyungEon, LIM Bong-Hwi, YOO In-Kwon(Pusan National University, Department of Physics.)

**P2-C013\***

**The relation between dibaryon field and nucleon contact interactions with a Gaussian cutoff** / IN EunJin, PARK TaeSun<sup>1</sup>, HONG Seung-Woo<sup>1</sup>(Department of Energy Science, Sungkyunkwan University. <sup>1</sup>Department of Physics, Sungkyunkwan University.)

**P2-C014**

**상온 반도체 검출기 CZT에서 오름 시간과 깊이를 통한 반응 위치 측정** / 이일맥, 이종훈, 이필수, 김진우, 장택진, 조화연, 이춘식(중앙대학교 물리학과.)

**P2-C015**

**초고온/고압 폭발 선원의 복사선 에너지 선량 계산** / 정희수, 심우섭(국방과학연구소, 화생방기술부.)

**P2-C016**

**GEANT4 and PHITS simulations for the shielding of neutrons from  $^{252}\text{Cf}$  source** / 신재원(성균관대학교, 물리학과.)





P2-C017

**New charge exchange model for GEANT4 simulation for  ${}^9\text{Be}(p, n){}^9\text{B}$  reaction** / 신재원, 함철민<sup>1</sup>, 박태선, 김도윤<sup>1</sup>, 홍승우(성균관대학교, 물리학과, <sup>1</sup>성균관대학교, 에너지과학과.)

P2-C018

**Acomparison of the radiation dose rate for beam dump materials** / CHOI Y. G., KIM Y. S.(Department of Nuclear & Energy System Engineering, Dongguk University.)

P2-C019

**A study of the  $f_0(980)$  structure as  $K\bar{K}^*\{K\}$  bound state** / LEE Hee-Jung(충북대학교 사범대학 물리교육과.)

P2-C020

**Dose measurement of the Micro CT X-ray** / KIM HyoJin, RO Tae-IK, KANG Yeong-Rok<sup>1</sup>, LEE Man Woo<sup>1</sup>, JEONG Dong-Hyeok<sup>1</sup>, KIM Jeung-Kee<sup>1</sup>, RHEE Dong Joo<sup>1</sup>(Dong-A University, Department of Physics. <sup>1</sup>Research center, Dongnam Inst. of Radiological & Medical Sciences.)

P2-C021

**Study about energy loss dependence of path-length by using inclusive RAA and flow harmonics** / 송명근, 김동조<sup>1</sup>, 강주환(연세대학교. <sup>1</sup>Jyvaskyla university.)

P2-C022

**Characterization Test Of The Pixel Chip For The LHC ALICE Silicon Pixel Detector Upgrade** / PARK Jong-han, KWEON Min-jung(INHA University.)

P2-C023

**New Evaluation of Gadolinium Neutron Resonance Parameters** / KANG Yeong-Rok, LEE Manwoo, RO Tae-IK<sup>1</sup>, KIM Guinyun<sup>2</sup>, Y. Danon<sup>3</sup>, D. Williams<sup>3</sup>(Research Center, Dongnam Inst. of Radiological & Medical Sciences. <sup>1</sup>Dong-A University. <sup>2</sup>Kyungpook National University. <sup>3</sup>RPI.)



## SESSION P2

## 응집물질물리학과 포스터 발표

2014년 4월 24일 목요일 11:00 - 12:45

장소: 포스터발표장

진행위원: [나노/중시계, D050~D087] 안강현(충남대) 강기천(전남대)

[강상관계, D088~D109] 전건상(이화여대)

[바이오/무른물질/유기물질, D110~D124] 이광록(광주과학기술원)

### P2-D050\*

**Role of Strain on structural and electrical properties of naturally bent VO<sub>2</sub> nanowires** / 양형우, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea)

### P2-D051\*

**Ab initio Study on Amorphization of Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> and GeTe** / PARK Hanjin, KIM Cheol-Woon, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

### P2-D052\*

**Fabrication of Graphene Devices for the Measurement of Specular Andreev Reflection** / JANG Seong, KIM Eunseong(Center for Supersolid & Quantum Matter Research and Department of Physics, KAIST)

### P2-D053\*

**Robust Excitonic Insulating Phase in Atomically-thin Ta<sub>2</sub>NiSe<sub>5</sub> Nanosheets** / KIM So Young, KIM Young Wook, EOM Man Jin, KANG Chang Jong(Department of Physics, Pohang University of Science and Technology, Korea), LEE Min Kyung, CHOI H. C.(Department of Chemistry, Pohang University of Science and Technology, Korea), MIN B. I., KIM Jun Sung(Department of Physics, Pohang University of Science and Technology, Korea)

### P2-D054\*

**Simultaneous Measurement of Dynamic and Static Forces by a Hybrid AFM-MEMS System** / 권소영, 김봉수, 제원호(서울대)

### P2-D055\*

**The electrical characteristics of ambi-polar carbon nanotube transistors with different Fermi level pinning to the metal electrode** / 최동환, 시미숙, 김주진(전북대), 이정오(한국화학연구원)

### P2-D056\*

**The study of electro-mechanical properties based on RuO<sub>2</sub> metallic nanowire switching device** / YOON Ho Ang, KIM Hakseong, LEE Sang Wook(Division of Quantum Phase and Device, School of Physics,



Konkuk University), PARK Jong Hyuk(Electronics and Telecommunications Research Institute)

P2-D057\*

**Thickness and resonance effect on Raman and PL spectra of MoS<sub>2</sub> thin films** / CHEONG Hyeonsik, PARK Jaesung, LEE Jae-Ung(Department of Physics, Sogang University)

P2-D058\*

**Transport Measurements On Spin Helical Mode Of Topological Insulator Bi<sub>1.5</sub>Sb<sub>0.5</sub>Te<sub>1.7</sub>Se<sub>1.3</sub>** / KIM MINSOO, PARK JOONBUM, YUN-SOK SHIN, JUN SUNG KIM, HU-JONG LEE(Department of Physics, Pohang University of Science and Technology, Korea)

P2-D059\*

**Raman spectroscopy of GaAs/AlGaAs solar cells** / 이태건, 노희석(전북대), 한임식, 김종수(영남대), 노삼규(한국표준과학연구원)

P2-D060\*

**Proving Point Defects of CVD Graphene** / LEE Young Hee, KIM Taesoo, DUONG Dinh Loc, NGUYEN Van Luan, YOON Seokjoon(IBM 나노구조물리연구단 성균관대학교)

P2-D061\*

**0.7 conductance anomaly induced by resonant tunneling state in quantum point contacts** / SEONG Jaegu, HONG Changki, CHUNG Yunchul(Department of Physics, Pusan National University)

P2-D062\*

**Electrical Transport of Ce-substituted topological insulator of Ce<sub>2</sub>Bi<sub>2-x</sub>Te<sub>3</sub>** / 정명화, 이현성, 이규준(서강대, 물리학과)

P2-D063\*

**Interlayer breathing and shear mode of graphene and MoS<sub>2</sub>** / CHEONG Hyeonsik, LEE Jae-Ung, NGUYEN The An, PARK Jaesung(Department of Physics, Sogang University)

P2-D064\*

**Magnetic field effect on single-electron pump** / 안예환(한국표준과학연구원), 서민기, 홍창기(부산대), 배명호(한국표준과학연구원), 정윤철(부산대), 김남(한국표준과학연구원)

**P2-D066\***

**Quantum Hall effect in graphene decorated with disordered multilayer patches** / NAM Youngwoo(Seoul National University, Department of Physics and Astronomy), SUN Jie, LINDVALL Niclas(Chalmers University of Technology, Department of Microtechnology and Nanoscience), YANG Seung Jae(Seoul National University, Department of Materials Science and Engineering), KIREEV Dmitry(Chalmers University of Technology, Department of Microtechnology and Nanoscience), PARK Chong Rae(Seoul National University, Department of Materials Science and Engineering), PARK Yung Woo(Seoul National University, Department of Physics and Astronomy), YURGENS August(Chalmers University of Technology, Department of Microtechnology and Nanoscience)

**P2-D067\***

**Search for Superconducting Proximity Effect of Graphene in Quantum-Hall Regime** / PARK GEON-HYOUNG, LEE GIL-HO, SHIN YUN-SOK, LEE HU-JONG(Department of Physics, Pohang University of Science and Technology, Pohang 790-784)

**P2-D068\***

**Spin-orbit Interaction and Spin-polarization by Aharonov-Bohm Effect in Carbon Nanotubes** / UHM Tae Woo, KIM Sung Won, YOU Young Gyu, KIM Hakseong, YUN Hyeol, YOON Ho Ang, LEE Sang Wook, JHANG Sung Ho(Division of Quantum Phases and Devices, School of Physics, Konkuk University)

**P2-D069\***

**실리카 나노 입자를 이용한 다양한 나노 구조를 갖는 반사방지 필름** / 김기출, 노영아(목원대)

**P2-D070\***

**자성 이온(Gd) 치환에 의한 위상절연체 ( $\text{Bi}_2\text{Te}_3$ )의 물리적 성질 변화** / 정명화, 김진수, 이규준(서강대, 물리학과), 김미영, 김한철(숙명여대, 물리학과)

**P2-D071\***

**화학적상증착법을 이용하여 다양한 기판 위에 성장된 Tin Oxide 나노구조물** / 김기출, 김미리(목원대)

**P2-D072**

**Graphene growth on copper substrates by chemical vapor deposition** / CHO Sangmo, KANG Yura, NAM Jungtae, KIM Keunsoo, HONG Suklyun(Department of Physics and Graphene Research Institute, Sejong University)



P2-D073

**Graphite ended-contacts for Graphene Nano Ribbon Field Effect Transistor** / 이태호, 하동한, 배명호(한국표준과학연구원)

P2-D074

**Oscillator dynamics of a resonator coupled to a nanospin in the presence of magnetic field along the hard axis** / KIM Gwang-Hee(Dept. of Physics, Sejong University)

P2-D075

**Transition Metal Nanoparticles Surrounded by Carbon Layers** / JANG youngrae(KAERI, Neutron Science Division)

P2-D076

**Nonlinear Oscillation and Direct Energy Transfer via Mechanical Mode Coupling by Strong Driving** / SHIM Seung-Bo(KRISs(Korea Research Institute of Standards and Science)), KIM Sang Goon(KRISs, CNU (Chungnam National University)), CHO Sungwan(KRISs)

P2-D077

**Progress report on the realization of Veselago's lens with high mobility graphene** / 이길호, 박건형, 김민수, 이재형, 이후종(POSTECH, 물리학과)

P2-D078

**Achieving Robust n-type Nitrogen-doped graphene via a Binary-doping approach** / KIM Yong-Hoon, KIM Hyo Seok, KIM Seong Sik, KIM Han Seul(KAIST, Graduate School of EEWS)

P2-D079

**Amorphous versus graphene substrate for Bi<sub>2</sub>Te<sub>3</sub> nanostructures** / 박상준, 남정태, 이임복, 배동재(세종대), 김환옥(한국기초과학지원연구원, 전자현미경연구부), 김근수(세종대)

P2-D080

**Ballistic thermoelectric transport in InAs nanowire** / 최선재(충남), 김범규(전북), 김남(한국표준과학연구원), 송종현(충남), 김주진(전북), 신재철(한국광기술원), 배명호(한국표준과학연구원)

P2-D081

**Ballistic-diffusive crossover in InAs Nanowires field-effect transistor** / 김범규(전북대), 김남(한국표준과학연구원), 김주진(전북대), 신재철(한국광기술원), 배명호(한국표준과학연구원)

**P2-D082**

**Fabrication of a graphene nano-ribbon quantum dot device** / 이정일, 김은성(Center for Supersolid & Quantum Matter Research and Department of Physics, KAIST)

**P2-D083**

**First-principles study of defect structures of hexagonal boron nitride sheet** / RYOU Junga, PARK Jinwoo, HONG Suklyun(Graphene Research Institute and Department of Physics, Sejong University)

**P2-D084**

**Investigation of Dielectric Function of Graphene in Hubbard Model** / SOLTANI Shoresh, KIM Changyoung(Institute of Physics and Applied Physics, Yonsei University)

**P2-D085**

**Reduction of Graphene Oxide Films Using Plasma Treatment** / LEE Sung-Youp, PARK Jung-Il, LEE Hyeong-Rag(Kyungpook National University, Department of Physics)

**P2-D086**

**고품질 그래핀을 얻기 위한 전기화학적 박리 전사법에서 중요 요인 조사** / 남정태, 박상준, 이임복, 배동재, 김근수(세종대)

**P2-D087**

**헬륨이온현미경을 위한 나노팁의 제작** / 민부기, 임승주, 박대훈, 박지훈, 최기홍, 홍영준, 권기청, 강승연, 최은해(광운대)

**P2-D088\***

**Optical Properties of Transparent Perovskite Tin Oxides** / HATaewoo(Department of Physics, Yonsei University 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Republic of Korea), KIM Useong(Center for Strongly Correlated Materials Research, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Republic of Korea), PARK Byung Cheol, SIM Kyung Ik(Department of Physics, Yonsei University 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Republic of Korea), CHAR Kookrin(Center for Strongly Correlated Materials Research, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Republic of Korea), KIM Jae Hoon(Department of Physics, Yonsei University 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Republic of Korea)

**P2-D089\***

**Path-integral Monte Carlo Study of 4He Adlayers on the C36 Molecules.** / KWON Yongkyung, KIM byeonjoon(konkuk university, school of physics)



P2-D090\*

**Effects of Hole Doping on Magnetic and Lattice Excitations in  $\text{Sr}_2\text{Ir}_{1-x}\text{Ru}_x\text{O}_4$  ( $x = 0-0.2$ )** / CHOI K.-Y., LEE W.-J., LEE S.H., GLAMAZDA A.(Chung-Ang University, Dept. of Physics), LEMMENS P.(TU Braunschweig, IKMP), CHOI H. Y., LEE N., CHOI Y. J.(Yonsei University, Dept. of Physics and IPAP)

P2-D091\*

**Effects of Ruthenium doping on electronic transport properties in  $\text{Jeff}=1/2$  Mott insulator  $\text{Sr}_2\text{IrO}_4$**  / HONG Y.J.(Department of Physics, Kyunpook National University, Daegu, Korea), CHOI Hwan Young, LEE Nara, CHOI Young Jai(Department of Physics and IPAP, Yonsei University, Seoul 120-749, Korea), JO Y.J.(Department of Physics, Kyunpook National University, Daegu, Korea)

P2-D092\*

**Electronic structure and Magnetic Property of Iridate Superlattice  $\text{SrIrO}_3/\text{SrTiO}_3$**  / KIM Kang-Hwan, KIM Heung-Sik, HAN Myung Joon(KAIST, Department of Physics)

P2-D093\*

**X-ray microdiffraction study of structural change of  $(1-x)(\text{Bi}_{0.5}\text{Na}_{0.5})\text{TiO}_3$ - $x\text{BaTiO}_3$  caused by composition ratio change** / 정진석, 기정연, 위상원(숭실대)

P2-D094\*

**Coexistence of spin freezing and spin liquid in the 2D triangular lattice  $\text{Ba}_3(\text{Ru},\text{Ir})\text{Ti}_2\text{O}_9$**  / CHOI K.-Y., DO S. H., LEE W. J., LEE S. H.(Chung-Ang University, Dept. of Physics), YOON S. W., SUH B. J.(The Catholic University, Dept. of Physics), JANG Z.H.(Kookmin University, Dept. of Physics), CHOI E. S.(FSU, NHMFL)

P2-D095\*

**Commensurate-Incommensurate Solid Transition In The  $^4\text{He}$  Monolayer On a Single  $\gamma$ -graphyne Sheet** / AHN Jeonghwan, LEE Hoonkyung, KWON Yongkyung(건국대)

P2-D096\*

**Magnetic Dynamic Phase Diagram of Y-type Hexaferrite  $\text{Ba}_{0.5}\text{Sr}_{1.5}\text{Zn}_2\text{Fe}_{12}\text{O}_{22}$  Using Ferromagnetic Resonance** / KIM Nam-Hui, CHO Jaehun, YOON Jungbum, SONG Kimyung, HUR Namjung, YOU Chun-Yeol(Inha University, Department of Physics), PARK Seung-Young(Korea Basic Science Institute, Division of Materials Science), JUNG Myung-Hwa(Sogang University, Department of Physics), HIRAKA Yuji, SUZUKI Yoshishige(Osaka University, Department of Materials Engineering Science)



P2-D097\*

**Momentum Dependent Observation of Band Width Controlled Charge-transfer Transition on  $\text{NiS}_{2-x}\text{Se}_x$**  / 한가람, 김용관, 경원식, 고윤영, 송동준, 김범영, 서정진(연세대), 이경동, 허남정(인하대), 김창영(연세대)

P2-D098\*

**Para- $\text{H}_2$  adsorption on a  $\text{C}_{60}$  Molecular Surface: Path-integral Monte Carlo Study** / KWON Yongkyung, PARK Sungjin(Konkuk University, School of Physics)

P2-D099

**MnFe 프러시안블루계 나노입자의 방사광 분광 연구** / 이은숙, 김대현, 김현우(가톨릭대), YUSUF S.M.(Bhabha Atomic Research Center, Solid State Physics Division), 이한구, 김재영(포항가속기 연구소), 강정수(가톨릭대)

P2-D100

**Terahertz and Infrared Study of Doped  $\text{Bi}_2\text{Te}_3$  Single Crystals** / SIM Kyung Ik, PARK Byung Cheol(Department of Physics, Yonsei University 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Republic of Korea), JO N. H., LEE K. J., JUNG M. H.(Department of Physics, Sogang University 35 Baekbeom-ro, Mapo-gu, Seoul 121-742, Republic of Korea), KIM Jae Hoon(Department of Physics, Yonsei University 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Republic of Korea)

P2-D101

**Terahertz Spectroscopy of  $\text{MoS}_2$  by Reflection Measurement** / JO Young Chan, SIM Kyung Ik, CHOI Kyujin, LEE Hee Sung, IM Seongil, KIM Jae Hoon(Department of Physics, Yonsei University 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Republic of Korea)

P2-D102

**Development of High Resolution Capacitive Dilatometer:** CHOI Seongil(Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science (IBS))

P2-D103

**Magnetic control of ferroelectric polarization in a self-formed single magnetoelectric domain of multiferroic  $\text{Ba}_3\text{NbFe}_3\text{Si}_2\text{O}_{14}$**  / LEE Nara, CHOI Young Jai(Yonsei University), CHEONG Sang-Wook(Rutgers University)

P2-D104

**Role of Local Orbital Angular Momentum in Rashba & Dresselhaus effect on semiconductor** / 조수현, 정원식, 김범영, 한가람, 김창영(연세대)





#### P2-D105

##### **Strong magnetodielectric effect in Lu<sub>2</sub>CoMnO<sub>6</sub> / SANGHYUP**

Oh, NARA Lee, H. Y. Choi, Y. J. Choi(Department of Physics and IPAP, Yonsei University, Seoul 120-749, Korea), Y. J. Jo(Department of Physics, Kyungpook National university, Daegu 702-701, Korea), M. S. Seo(Division of Materials Science, Korea Basic Science Institute, Daejeon 305-806, Korea), Y. Yoshida, H. Eisaki(Electronics and Photonics Research Institute, National Institute of Advanced Industrial Science and Technology, Ibaraki 305-8568, Japan)

#### P2-D106

##### **Metamagnetic Transition in Eu<sub>2</sub>CoMnO<sub>6</sub> / MOON J.Y, CHOI H.Y, LEE**

N(Department of Physics and IPAP, Yonsei University), SEO M.S, PARK S.Y(Division of Materials Science, Korea Basic Science Institute), JO Y.J(Department of Physics, Kyungpook National university), CHOI Y.J(Department of Physics and IPAP, Yonsei University)

#### P2-D107

##### **Optical Properties of Traditional Korean Pigments / KIM Jong**

Hyeon, HONG Taeyoon, CHOI Kyujin, HA Taewoo, PARK Byung Cheol, SIM Kyung Ik, KIM Jae Hoon(Department of Physics, Yonsei University 50 Yonsei-ro, Seodaemun-gu, Seoul 120-749, Republic of Korea)

#### P2-D108

##### **Phonon-assisted Optical Excitation in the Mott Insulator Sr<sub>3</sub>Ir<sub>2</sub>O<sub>7</sub>**

/PARK H. J., SOHN C. H., JEONG D. W.(Center for Correlated Electron Systems, Institute for Basic Science, Seoul National University, Seoul 151-747, Korea and Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea), CAO G.(Center for Advanced Materials, Department of Physics and Astronomy, University of Kentucky, Lexington, Kentucky 40506, United States), KIM K. W.(Department of Physics, Chungbuk National University, Cheongju 361-763, Korea), MOON S. J.(Department of Physics, Hanyang University, Seoul 133-791, Korea), JIN Hosub, CHO Deok-Yong, NOH T. W.(Center for Correlated Electron Systems, Institute for Basic Science, Seoul National University, Seoul 151-747, Korea and Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea)

#### P2-D109

##### **Verwey transition in nanoscale magnetite / LEE Jisoo**

(Center for Nanoparticle Research, Institute for Basic Science, and School of Chemical and Biological Engineering, Seoul National University, Seoul 151-742, Korea), PARK Je-Geun(Center for Correlated Electron Systems, Institute for Basic Science, and Department of Physics & Astronomy, Seoul National University, Seoul 151-747, Korea), HYEON Taeghwan(Center for Nanoparticle Research, Institute for Basic Science, and School of Chemical and Biological Engineering, Seoul National University, Seoul 151-742, Korea)

**P2-D110\***

**Single Molecule Studies on Mph1 the DNA Helicase:** JUNGE Yongje, HOHNG Sungchul(Department of Physics and Astronomy, Seoul National University, Seoul, Korea.)

**P2-D111\***

**Single-molecule studies on TPP riboswitch with optical tweezer combined with confocal microscope /** LEE Jongjin, UHM Heesoo(Department of Physics and Astronomy, National Center of Creative Research Initiatives, Seoul National University), HOHNG Sungchul(Department of Physics and Astronomy, Department of Biophysics and Chemical Biology, National Center of Creative Research Initiatives, Seoul National University.)

**P2-D112\***

**Highly Efficient NSF/ $\alpha$ -SNAP Mediated Disassembly of the SNARE Complex /** RYU Je-Kyung, MIN Duyoung, RAH Sang-Hyun(KAIST, Dept. of Physics), PARK Yongsoo(Max-Planck-Institute for Biophysical Chemistry, Dept. of Neurobiology), KIM Soojin, KIM Homin(KAIST, Graduate School of Medical Science and Engineering), JAHN Reinhard(Max-Planck-Institute for Biophysical Chemistry, Dept. of Neurobiology), YOON Tae-Young(KAIST, Dept. of Physics)

**P2-D113\***

**Advanced Single-molecule Co-IP Analysis for Very Weak Protein-protein Interactions /** JANGHYUN Yoo, TAE-YOUNG Yoon(KAIST, Dept. of Physics)

**P2-D114\***

**Anisotropic Charge Transport in Organic Single Crystal TMTSF(tetramethyltetraselena fulvalene) using OFET Structure /** CHOI EUNJU, LEE INJAE(Chonbuk National Univeristy, Department of Physics.)

**P2-D115\***

**Co-transcriptional Effect On Folding of TPP Riboswitch And Its Dynamics Induced By Ligand Binding /** UHM Heesoo, HOHNG Sungchul(Department of Physics and Astronomy, Seoul National University)

**P2-D116\***

**Dynamic  $\text{Ca}^{2+}$ -dependent Activity Of Membrane-anchored Synaptotagmin 1 Observed At The Content Mixing Level /** SUNG Mi Sook, LEE Tae-sun, BAE Woori(KAIST, Department of physics), YOON Tae-Young(KAIST, Department of physics)

**P2-D117\***

**Mechanical unzipping and reziping of a single SNARE complex reveals hysteresis as a force-generating mechanism /** 민두영, 김기



범(KAIST, 물리학과), 현창봉(KIAS, 계산과학부), 조용훈(KAIST, 물리학과), 신연균(KIST, 의공학연구소), 윤태영(KAIST, 물리학과)

#### P2-D118\*

유기 단 결정 반도체 TMTSF의 광학적 특성연구 / 권선호(전북대)

#### P2-D119

##### **Super-resolution Imaging of Neuron in Caenorhabditis Elegans /**

PARK Sangjun(Department of Physics and Astronomy, Seoul National University), CHOI Myunggyu(School of Biological Science, Seoul National University), LEE Jinwoo, KWON Yeongdae(Department of Physics and Astronomy, Seoul National University), LEE Junho(School of Biological Science, Seoul National University), HOHNG Sungchul(Department of Physics and Astronomy, Seoul National University)

#### P2-D120

**Translocation of DNA Bases Sandwiched between Two Graphene Layers: An Ab-initio Study on Their Energetics and Molecular Fingerprints /** SHIM YoonSu, KIM Han Seul, KIM Yong-Hoon(KAIST, Graduate school of EEWS)

#### P2-D121

**High-resolution  $^1\text{H}$  NMR study of water and hydrated ion clusters in proton exchange membrane Nafion /** LEE Cheol Eui, HAN Jun Hee, LEE Kue Won(Department of Physics, Korea University, Seoul), KIM Se Hun(Faculty of Science Education, Jeju National University, Jeju)

#### P2-D122

**Programmed Folding DNA Origami Structures Through Single-Molecule Force Control /** BAE Wooli, KIM Kipom(KAIST, 자연과학대학), MIN Duyoung, RYU Je-Kyung(KAIST, 물리학과), HYEON Changbong(KIAS)

#### P2-D123

**Single Molecule Studies on Chromodomain-Helicase-DNA-binding protein 1 /** KIRK Jaewon, HONG Sungchul(Seoul National University Dept. of Physics and Astronomy)

#### P2-D124

**Single Molecule Studies on Human Argonaute 2 /** SHIN Soochul(Department of Biophysics and Chemical Biology, SNU), JO Myung Hyun(Department of Physics and Astronomy, SNU), JUNG Seung-Ryoung(Department of Physiology and Biophysics, University of Washington), KIM Eunji, SONG Ji-Joon(Department of Biological Sciences, KAIST), HOHNG Sungchul(Department of Physics and Astronomy, SNU)



## SESSION P2

응용물리학과  
포스터 발표

2014년 4월 24일 목요일 11:00 - 12:45

장소: 포스터발표장

P2-E036\*

발열시트용 탄소섬유 시트의 발열 특성 / 김정환, 강만일, 김석원(울산대학교.)

P2-E037\*

**Characterization of MoS<sub>2</sub> thin film deposited with pulsed laser deposition method** / HUH Rock, TAM Le Chinh, SENTHILKUMAR V., YONG SOO Kim(Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan.)

P2-E038\*

**Synthesis of Large-Scale Transition Metal Dichalcogenides Using Chemical Vapor Deposition** / YUN SeokJoon(Center for Integrated Nanostructure Physics (CINAP), Institute for Basic Science (IBS), Sungkyunkwan University, Suwon 446-746, Korea.)

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세  
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P2-E039\*

**Influence of sulfurization temperature on Cu<sub>2</sub>ZnSnS<sub>4</sub> thin films prepared by direct solution method** / NGUYEN Viet Tuyen, NAM DAHYUN, MUNGUNSHAGAI Gansukh, PARK SI-NAE<sup>1</sup>, SUNG SHI-JOON<sup>1</sup>, SON DAE-HO<sup>1</sup>, KIMDAE-HWAN Kim<sup>1</sup>, KANG JIN-KYU<sup>1</sup>, HYEONSIK Cheong(Department of Physics, Sogang University, Seoul, Korea, 121-742. <sup>1</sup>Advanced Convergence Research Center, Daegu-Gyeongbuk Institute of Science and Technology (DGIST), Daegu, Korea.)

P2-E040\*

**Polarized Raman Study of Cu-poor and Zn-rich Single-crystal Cu<sub>2</sub>ZnSnSe<sub>4</sub>** / NAM Dahyun, KIM Jungcheol, LEE Jae-Ung, NAGAOKA Akira<sup>1</sup>, YOSHINO Kenji<sup>1</sup>, CHEONG Hyeonsik(서강대학교, 물리학과. <sup>1</sup>University of Miyazaki, Department of Electrical and Electronic Engineering.)

P2-E041\*

**Raman Spectroscopy of Cu<sub>2</sub>ZnSn(S,Se)<sub>4</sub> Thin Films with Different Cu/(Zn+Sn) and Zn/Sn Composition Ratio** / GANSUKH Mungunshagai, NAM Dahyun, SON Dae-ho<sup>1</sup>, YANG Kee-Jeong<sup>2</sup>, KIM Dae-Hwan<sup>2</sup>, KANG Jin-Kyu<sup>2</sup>, CHEONG Hyeonsik(Sogang University, Department of Physics. <sup>1</sup>DGIST, Advanced Convergence Technology Center. <sup>2</sup>DGIST, Energy Research Division.)

P2-E042\*

탄소나노튜브를 이용한 나노구조물의 형성 / 임웅빈, 정희성, 박세준, 안영환, 이순일, 박지용(아주대학교 에너지시스템학부.)



**P2-E043\***

**Gamma-ray Irradiation Effects on Electrical Properties of Ferroelectric  $\text{PbTiO}_3$  and  $\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3$  Thin Films** / YANG Sun A, KIM Byung Hoon, JEON Do Hyun, LEE Min Ku<sup>1</sup>, LEE Gyoung Ja<sup>1</sup>, BU Sang Don(Department of Physics, Chonbuk National University. <sup>1</sup>Nuclear Materials Development Division, Korea Atomic Energy Research Institute.)

**P2-E044\***

**Gamma-Ray Irradiation Effects on Electrical Properties of  $\text{BiFeO}_3$ - $\text{BaTiO}_3$  Ceramics** / JEON Do Hyun, YANG Sun A, KIM Byung Hoon, LEE Myang Hwan<sup>1</sup>, SONG Tae Kwon<sup>1</sup>, LEE Min Ku<sup>2</sup>, LEE Gyoung Ja<sup>2</sup>, BU Sang Don(Department of Physics, Chonbuk National University. <sup>1</sup>School of Advanced Materials Engineering, Changwon National University. <sup>2</sup>Nuclear Materials Development Division, Korea Atomic Energy Research Institute, Dae Jeon 305-353, Korea.)

**P2-E045\***

**유기증기를 감응하는 정전식 센서** / 김혁기, 함성길, 이주현, 김경아, 김나경, 이기원(공주대학교 물리학과.)

**P2-E046\***

**Amplification of hot electrons by surface plasmon effect using metal-insulator-metal structure** / LEE Changhwan, LEE Youngkeun, LEE Hyosun, AHN Changui<sup>1</sup>, PARK jeongyoung(KAIST, EEWS. <sup>1</sup>KAIST, Material Science and Engineering.)

**P2-E047\***

**산화물-그래핀 접합 기반 field effect transistor 소자 특성 연구** / 윤찬수, 이상익, 남윤승, 오태준, 김연수, 이미정, 박영구, 황인록<sup>1</sup>, 박배호(건국대학교 물리학과. <sup>1</sup>한국과학기술연구원.)

**P2-E048\***

**$\text{ZnO}$  나노선 그래핀 접합을 이용한** / 이상익, 윤찬수, 이미정, 남윤승, 오다예, 황인록<sup>1</sup>, 박배호(건국대학교 물리학과. <sup>1</sup>한국과학기술연구원.)

**P2-E049\***

**AZO 를 삽입한 ITO/AZO/PET 다층 구조의 유연한 투명 전도막의 특성 연구** / 김윤수, 이정섭, 김민호, 유형우, 김경국<sup>1</sup>, 조수행(연세대학교, 물리학과. <sup>1</sup>한국산업기술대학교, 나노광공학과.)

**P2-E050\***

**RF 마그네트론 스퍼터링법으로 성장한 알루미늄이 도핑된  $\text{ZnO}$  기반 투명 저항 변화 메모리** / 이정섭, 유형우, 김민호, 김윤수, 김경국<sup>1</sup>, 최상준<sup>2</sup>, 조수행(연세대학교, 물리학과. <sup>1</sup>한국산업기술대학교, Nano-Optical Engineering. <sup>2</sup>Samsung Electronics System LSI.)

**P2-E051\***

기포의 성장 및 접촉면과의 분리과정에 대한 연구 / 김나경, 김혁기, 함성길, 이주현, 김경아, 이기원(공주대학교 물리학과.)

**P2-E052\***

태양열 집열시스템 집열패널 제작 및 시뮬레이션을 통한 열전도 분석 / 박태영, 이상석, 박래준<sup>1</sup>(상지대학교한방의료공학과, <sup>1</sup>(주) 엑스엘 원주 220-120.)

**P2-E053\***

**Light induced phase transition in VO<sub>2</sub> nanowires** / KIM Eunah, SOHN Ahum, KIM Dong-Wook(Department of Physics, Ewha Womans University, Seoul 120-750, Korea.)

**P2-E054\***

**Synthesis and Electrical, Structural Characterization of Vanadium Oxide Thin Films on SiO<sub>2</sub>/Si by using Annealing Process** / 김현탁, 조진철, 신준환<sup>1</sup>, 정순규<sup>2</sup>(ETRI MIT창의연구센터, UST 차세대소자공학과, <sup>1</sup>UST 차세대소자공학과, <sup>2</sup>ETRI MIT창의연구센터.)

**P2-E055**

**Dry etching of graphene with double layer photoresist masks** / SUH Dongseok, PARK Jeongmin, CHAE Sang Hoon, LEE Hyun Seok(IBM 나노구조물리연구단 성균관대학교.)

**P2-E056**

**A Low Temperature Reaction of Sulfurization for Synthesis of Transition Metal Dichalcogenide Atomic Layer** / 황재석, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)

**P2-E057**

**Ar ccp 플라즈마를 이용한 그래핀 접촉저항의 개선** / 유원중, 라창호, 권재환, 강사랑, 최민섭(SKKU Advanced Institute of Nano-Technology.)

**P2-E058**

**CaTiO<sub>3</sub>:Pr<sup>3+</sup> 형광체의 광물리적 특성 및 화학적 결합 상태** / 안병철, 김영경, 양호순, 홍경수(부산대학교 물리학과.)

**P2-E059**

**Pr를 첨가한 실리카 산화물 분말의 합성과 물질 특성** / 하명규, 양호순<sup>1</sup>, 홍경수(한국기초과학지원연구원 부산센터, <sup>1</sup>부산대학교 물리학과.)

**P2-E060**

**합성 시간 및 온도에 따른 SrTiO<sub>3</sub>:Sm<sup>3+</sup> 분말의 광학적 특성 연구** / 하명규, 양호순<sup>1</sup>, 홍경수(한국기초과학지원연구원 부산센터, <sup>1</sup>부산대학교 물리학과.)



P2-E061

**LiF:Mg,Cu,Si의 Phototransferred Thermoluminescence 특성 측정 및 분석** / 박창영, 정기수, 장인수<sup>1</sup>, 이정일<sup>1</sup>, 김장렬<sup>1</sup>(경상대학교, <sup>1</sup>한국원자력연구원.)

P2-E062

**LiVO<sub>3</sub>:Er<sub>x</sub><sup>3+</sup>Yb<sub>y</sub><sup>3+</sup>Tm<sub>z</sub><sup>3+</sup> 형광체의 Up-conversion 형광특성** / 이성수, 김동균, 홍문수, 최동화, 박성준, 장기완<sup>1</sup>(신라대학교 신소재공학과, <sup>1</sup>창원대학교 물리학과.)

P2-E063

**Li<sub>0.946</sub>NbO<sub>3</sub>:Er<sub>x</sub>Yb<sub>y</sub>Tm<sub>z</sub> 형광체의 Up-conversion 형광특성** / 이성수, 최동화, 강덕화, 노준철, 김동균(신라대학교 신소재공학과.)

P2-E064

**Influence of V<sub>2</sub>O<sub>5</sub> Content on the SPH and Optical Transmission, Optical Basicity in BaO-B<sub>2</sub>O<sub>3</sub>-V<sub>2</sub>O<sub>5</sub> Glasses** / 노태호, 김영훈, 최덕, 송승기(영지대학교 물리학과.)

P2-E065

**Critical Current Measurement of 2G SC Wire in High Magnetic Field** / 김동락, 이윤아, 김성준, 박희준(한국기초과학지원연구원, 물성과학연구부.)

P2-E066

**상용 원자힘현미경을 위한 진공 챔버 설계 및 제작에 관한 연구** / 박상준, 정연욱<sup>1</sup>, 박소연<sup>2</sup>, 이영중(경북대학교 기계공학부, <sup>1</sup>경북대학교 신소재공학부, <sup>2</sup>계명대학교 약학대학.)

P2-E067

**Development of Readout Electronics for Silicon Photomultiplier** / LEE Jik, JEON JinA, KANG Myung Woo, LEE Hye Young, PARK Il Hung(SungKyunKwan University, Department of Physics.)



## SESSION P2

물리교육분과회  
포스터 발표

2014년 4월 24일 목요일 11:00 - 12:45

장소: 포스터발표장

### P2-G001

양자역학적 관점에서 본 의식의 발생 / 송정민, 이우봉(경북대학교 일반대학원 과학교육학과, 경북대학교 사범대학 화학교육과.)

### P2-G002

양자역학적 관점에서 해석된 물질과 의식의 관계 / 송정민, 이우봉(경북대학교 일반대학원 과학교육학과, 경북대학교 사범대학 화학교육과.)

### P2-G003

과학교육연구에서의 과학적 태도에 대한 메타분석 / 박종호(진주교육대학교, 과학교육과.)

### P2-G004

초등학생의 과학적 태도 및 수학적 태도, 과학적 의사소통 능력과 수학적 의사소통 능력 간의 상관관계 / 박종호(진주교육대학교, 과학교육과.)

### P2-G005

스마트폰의 가속도센서를 이용한 물리 수업이 과학학습동기에 미치는 영향 / 홍성욱, 문상철(대구대학교 과학교육학부 물리교육전공.)

### P2-G006

중학교 과학 교과서와 수학 교과서의 과학 용어 사용 연계 분석 / 윤은정, 박윤배(경북대학교.)

### P2-G007

중학교 과학영재들의 유추를 통한 전이 과정 분석 / 이지원, 김중복(한국교원대학교.)

### P2-G008

**Experiment and Theory about Thermal Conduction in Primary School Science** / KIM Taekyu(Jeonju National University of Education, Department of Science Education.)

### P2-G009

**Experimental Contrivances of Simple Tools in Primary School Science** / KIM Taekyu(Jeonju National University of Education, Department of Science Education.)

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## SESSION P2

플라스마물리학과  
포스터 발표

2014년 4월 24일 목요일 11:00 - 12:45

장소: 포스터발표장

### P2-H001

희귀동위원소 생성을 위한 Graphite 회전 표적의 실험 및 열-구조해석 / 홍성광, 김재홍<sup>1</sup>, 김종원<sup>1</sup>(한남대학교, 물리학과. <sup>1</sup>중이온가속기사업단, 기초과학연구원.)

### P2-H002

새로운 마이크로빔용 K-B 거울시스템의 개발 / 길계환, 정명호, 최효진, 임재홍, 황정연(포항가속기연구소.)

### P2-H003

PLS-II 저장링 빔 크기 측정용 Interferometer 성능향상 / 최효진, 고진주, 길계환, 황정연(포항가속기연구소.)

### P2-H004

Diagnostic Method For Klystron Using White Noise / 성태식, 김지현<sup>1</sup>, 조무현<sup>2</sup>, 남궁원<sup>3</sup>, 장성덕<sup>3</sup>(Department of physics, POSTECH. <sup>1</sup>National Fusion Research Institute. <sup>2</sup>Department of physics and Division of Advanced Nuclear Engineering, POSTECH. <sup>3</sup>Pohang Accelerator Laboratory.)

### P2-H005\*

Electron beam generation from laser wakefield acceleration using a discharge capillary waveguide with a tapered plasma density / 석희용, 남인혁, 김민석, 이승우, 이태희(광주과학기술원 물리광학과.)

### P2-H006\*

Table-Top Synchrotron Radiation Source with the Capillary E-Beam source and a Compact Hybrid Halbach-Type Undulator / 김진주, 김민석, 남인혁, 장도근, 석희용(광주과학기술원(GIST).)

### P2-H007

Study of the performance of a klystron and its efficiency by using FCI simulation / HWANG Jihyun, NAMKUNG Won<sup>1</sup>, CHO Moohyun<sup>2</sup>(Dept. of Physics, POSTECH. <sup>1</sup>Pohang Accelerator Laboratory. <sup>2</sup>Dept. of Physics and Division of Advanced Nuclear Engineering, POSTECH.)

### P2-H008

반도체 조사용 헬륨빔 조사 시스템 설계 기초 연구 / 권혁중, 김한성, 설경태, 송영기, 엄규섭, 박성균, 조용섭(양성자가속기연구센터, 한국원자력연구원.)

**P2-H009\***

**Simulation study of a ion acceleration by a circularly polarized laser pulse in a pre-formed plasma target** / 허민섭, 김영국, 조명훈(울산과학기술대학교)

**P2-H010**

**KOMAC 100 MeV 양성자 가속기 교육을 위한 simulator 제작** / 박성균, 송영기, 권혁중, 조용섭(양성자가속기연구센터, 한국원자력연구원)

**P2-H011**

**마이크로파 이온원 테스트 벤치 제작 및 분석** / 엄규섭, 김대일, 권혁중, 김한성, 조용섭(한국원자력연구원, 양성자가속기연구센터)

**P2-H012**

**ISOL 빔수송라인용 Electrostatic Bender 및 Quadrupole 공학설계** / 김한성, 권혁중, 김성구, 조용섭(한국원자력연구원, 양성자가속기연구센터)

**P2-H013**

**Field Stability Measurement of Quadrupole Magnet for KOMAC Beamline** / 정보현, 김한성, 송영기, 권혁중, 조용섭(한국원자력연구원, 양성자가속기연구센터)

**P2-H014**

**10 ns 양성자 빔 펄스 생성용 챔버 내 잔류기체분석** / 박광묵, 김한성, 권혁중, 조용섭(한국원자력연구원 양성자가속기연구센터)

**P2-H015**

**Analysis of the stability in the free-electron laser based on the harmonic wiggler** / KIM Ki-Bum, NAM Soon-Kwon<sup>1</sup>(Institute of Liberal Education, Kangwon National University. <sup>1</sup>Department of Physics, Kangwon National University.)

**P2-H016\***

**Characterisation Of A Gas Cell For Laser Wakefield Acceleration Studies** / PHUNG Vanessa Ling Jen, 남인혁, 김민석, 석희용(광주과학기술원(GIST).)

**P2-H017**

**Development of Vacuum Control System for KOMAC 100MeV Proton Linac** / SONG Young-Gi, KWON Hyeok-Jung, CHO Yung-Sub(원자력연구원)

**P2-H018**

**입자가속기 빔 위치추적(Beam Position Monitor) 제품 개발** / 길재근, 김명진, 김민석, 이재형((주)네오시스코리아, 방사선기술연구소)



#### P2-H019\*

**X-ray Tube에서 집속관의 형상에 따른 전자빔 궤적계산 및 초점크기의 변화분석** / 박태영, 이상석, 박래준<sup>1</sup>(상지대학교 한방의료공학과, <sup>1</sup>㈜엑스엘, 원주 220-120.)

#### P2-H020

**탄소나노튜브 전계방출원을 이용한 진공밀봉형 초소형 X-선 튜브 제작 및 특성 평가** / 김현진, 하준목, 하준목, RAZA Hamid Saeed, 조성오(한국과학기술원 원자력 및 양자공학과.)

#### P2-H021

**이온빔 조사를 위한 1MV 정전형 가속기 기초 설계** / 조용섭, 김계령, 이찬영(한국원자력연구원, 양성자가속기연구센터.)

#### P2-H022

**Effect of Electrode Geometry on Ion Dose of Ballistic-mode Plasma Immersion Ion Implantation** / YI Changho, NAMKUNG Won<sup>1</sup>, CHO Moohyun<sup>2</sup>(POSTECH, Dept of physics, <sup>1</sup>Pohang Accelerator Laboratory, <sup>2</sup>POSTECH, Dept of physics and division of advanced nuclear engineering.)

#### P2-H023

**OES를 이용한 CO2 플라스마 토치 불꽃의 온도 측정** / 곽형신, 강민호, 나영호, 엄환섭(광운대학교 전자바이오물리학과.)

#### P2-H024

**Analysis of the X-ray Diffraction of Al-doped CdO Thin Films** / JEONG Jin, LEE Bong Ju, YANG So Myung, KIM Young Seok(Chosun University.)

#### P2-H025

**The effect of power and deposition temperature of Al-doped ZnO Thin Films** / JEONG Jin, LEE Bong Ju(Chosun University.)

#### P2-H026

**가스 분해용 대기압 DBD 플라스마 소스 개발 및 광특성 분석** / 정희수, 류삼근, 이해완(국방과학연구소, 화생방기술부.)

#### P2-H027\*

**고주파 열플라스마법에 의해 합성된 Al-doped ZnO (AZO) 나노분말을 이용하여 제조된 투명도전박막의 전기적 및 광학적 특성** / 서준호, 송민경, 이미연<sup>1</sup>, 김민호<sup>1</sup>(전북대학교, 플라스마응용공학과, <sup>1</sup>전북대학교, 고온플라스마응용연구센터.)

**P2-H028\*****Characterization and application of high voltage pulsed plasma /**

PARK Ji Hoon, ATTRI Pankaj, KUMAR Naresh<sup>1</sup>, HONG Young June, PARK Bong Sang<sup>1</sup>, JEON Su Nam<sup>1</sup>, CHOI Eun Ha(Department of Electrical and biological Physics, Kwangwoon university. <sup>1</sup>Plasma Bioscience Research Center, Kwangwoon university.)

**P2-H029**

**In<sub>2</sub>O<sub>3</sub>: SnO<sub>2</sub> 성분비에 따른 ITO박막의 광학적 및 전기적 특성 /** 최영규, 진익현, YAO litao, 이창현, 배강, 서성보, 김동영(대구가톨릭대학교 전자디스플레이 공학과.)

**P2-H030****Numerical Study on the In-Flight Melting and Evaporation Process of a Powder Particle in Radio Frequency Thermal Plasmas for the Synthesis of Nanocatalyst /**

SEO Jun-Ho, NAM Jun Seok(Chonbuk National University.)

**P2-H031****Development of an ICP Plasma Ion Source and Experiment on the Beam Extraction Characteristics /**

KIM Dong Uk, JANG Dong Young<sup>1</sup>, CHOI Byung Ho, CHUNG Kie Hyung, SEO Hee Jeong, KANG Won Gu<sup>2</sup>, PARK Man Jin<sup>2</sup>(Korea Accelerator and Plasma Research Association, PTL. <sup>1</sup>Seoul Natl. Univ. of Sci. & Tech., MSDE. <sup>2</sup>Korea Electronics-Machinery Convergence Technology Institute, BTC.)



## SESSION P2

천체물리학분과회  
포스터 발표

2014년 4월 24일 목요일 11:00 - 12:45

장소: 포스터발표장

### P2-L001\*

초거대질량 블랙홀과 구상성단 간 상호작용에 관한 분석 / 강원기, 이수연(동  
의대학교, 물리학과.)

### P2-L002\*

감마선 폭발 관측을 위한 X선 우주망원경 제어명령체계와 데이터 구성 및  
저장 방식 / 김민빈, 이용훈, 박일홍, 이직, 김용욱, RIPA JAKUB, 박휘우, 송인  
웅(성균관대학교 물리학과.)

### P2-L003

자외선/가시광 추적 망원경의 지상관측을 통한 감도 테스트 / 김민빈, 송인  
웅, 김지은, 정수민, 김용욱, 이용훈, RIPA Jakub, 이직, 박일홍(성균관대학교 물  
리학과.)

### P2-L004\*

The Readout and Control System of Silicon Charge Detector of  
ISS-CREAM Experiment / PARK A.H., LEE Jik, PARK I.H., JO S.W., JEON  
Jina, LEE H.Y.(성균관대학교, 물리학과.)

### P2-L005

국제우주정거장 고에너지우주선 관측용 실리콘 전하검출기의 지지구조물  
설계, 해석 및 제작 / 이직, 조상우, 박휘우, 이혜영, 전진아, 박일홍(성균관대  
학교, 물리학과, '성균관대학교, 기초과학연구소)



## SESSION P3

응집물질물리학과  
포스터 발표

2014년 4월 24일 목요일 14:00 – 15:45

장소: 포스터발표장

진행위원: [표면/계면/나노물질, D125~D148] 여호기(한국표준과학연구원)

[물성측정/계기/시설, D149~D154] 신현준(포스텍)

### P3-D125\*

**Role of Ti Adhesive-layer Out-diffusion in Cr-doped SrZrO ReRAM Devices** / JO Yongcheol, KIM Jongmin, WOO Hyeonseok, KIM Seonhoo, CHOI Jiman, KIM Inho, PARK Wooyoung, LEE Jongkyung, CHO Hansol, CHO Sangeun, HAN Jaeseok, INAMDAR A. I., PAWAR S. M., IM Hyunsik, KIM Hyungsang(Dongguk University, Division of Physics and Semiconductor Science)

### P3-D126\*

**Solvent additive and annealing effect on morphology of organic solar cell** / KIM Ajeong, SECK NGOR Mbaye, AHN Gukil, KANG Jinback(Sogang University), SHIN Tae Joo(Pohang Accelerator Laboratory), KIM Hyunjung(Sogang University)

### P3-D127\*

**Circular Dichroism In Pt-based Catalyst System** / JUNG J. K., KIM B. Y., KIM C.(연세대), JIN T. W., SHIM J. H.(Postech), MUN B. S.(GIST), ARITA Masashi, SHIMADA Kenya(HISOR)

### P3-D128\*

**In situ GISAXS Study of Phase Transition in Block Copolymer-Homopolymer Mixtures** / AHN Gukil, JEROME Carnis, KIM Ajeong, KANG Jinback, SECK Ngor Mbaye, KIM Hyunjung(서강대)

### P3-D129\*

**Oxygen vacancy control in SrTiO<sub>3</sub> epitaxial thin films** / JEONG Hoidong, WOO Sungmin, LEE Sang-A(Department of Physics, Sungkyunkwan University, Suwon, Gyeonggi-do 440-746, Korea), HWANG Jaeyeol(Center for Integrated Nanostructure Physics, Institute for Basic Science (IBS)), CHOI Woo Seok(Department of Physics, Sungkyunkwan University, Suwon, Gyeonggi-do 440-746, Korea)

### P3-D130\*

**Spin-orbit coupling in graphene via heavy adatoms** / YOO Jung-Woo, PARK jungmin, JIN Mi-Jin, MODEPALLI Vijayakumar, JO Junhyeon(UNIST, Materials Science Engineering)

### P3-D131\*

**Circular Dichroism APRES on Al(111)** / 김창영, 한가람, 김범영, 정종



근, 권준영(연세대), ARITA Masashi, SHIMADA Kenya(Hiroshima Synchrotron Radiation Center)

**P3-D132\***

**Manipulation of graphene work function by self-assembled monolayer** / 황정식(성균관대), 봉지혜, 임태경(경기대), 차장환, 홍석륜(세종대), 주상현(경기대)

**P3-D133\***

**Nanoscale tribological characteristics of epitaxial graphene on silicon carbide** / 권상구(KAIST, EEWS 대학원; IBS, Center for Nanomaterials and Chemical Reactions), 고재현(KAIST, 나노과학기술대학원), YANG G. E., 김원동(KRIS), 김용현(KAIST, 나노과학기술대학원), 박정영(KAIST, EEWS 대학원; IBS, Center for Nanomaterials and Chemical Reactions)

**P3-D134\***

**Photoluminescence Properties of Si-NC/SiO<sub>2</sub> Multi-Layers with and without Cobalt Nano-Particles Controlled by Proton Irradiation** / JOO BeomSoo, JANG Seunghun, JEONG Jiwoon, HAN MoonSup(서울시립대)

**P3-D135\***

**Plasmonic Enhancement of Photocurrent in Ge doped InGaO thin film transistors** / 강성준, 박시진(경희대)

**P3-D136\***

**Preparation of atomically flat polycrystalline SrTiO<sub>3</sub> surface** / WOO Sungmin, JEONG Hoidong, LEE Sang-A, CHOI Woo Seok(Department of Physics, Sungkyunkwan University), PRELLIER Wilfrid(Laboratoire CRISMAT, CNRS UMR 6508, ENSICAEN, Normandie Université), SEO Ho Sung, KIM Yunseok(School of Advanced Materials Science & Engineering, Sungkyunkwan University)

**P3-D137**

**Attosecond nm-scale imaging using PEEM** / HOQUE MD Ziaul, KIM SEUNGCHUL, KIM Dong Eon(Max-Planck Center for Attosecond Science (MPC-AS), Pohang, 790-784, South Korea, Department of Physics, Center for Attosecond Science and Technology, Pohang University of Science and Technology(POSTECH), Pohang, 790-784, South Korea)

**P3-D138**

**Construction of Laser-based Attosecond ARTOF Beamline** / LEE Yeon(Department of Physics, Center for Attosecond Science and Technology, Pohang University of Science and Technology, Pohang, 790-784, South Korea), LEE Paengro(Department of Physics, Surface & Nanomaterials Physics Laboratory, Pohang University of Science and Technology, Pohang, 790-784, South Korea), KIM Dongeon(Department of Physics, Center for Attosecond Science and



Technology, Pohang University of Science and Technology, Pohang, 790-784, South Korea)

**P3-D139**

**The study on the physical and electrochemical properties for Gold-decorating carbon nanotube composites** / 배종성(한국기초과학지원연구원, 하이테크소재연구부), 정은혁, 정의덕, 김종필(한국기초과학지원연구원, 하이테크소재연구부), 오원태(동의대응합부품공학과)

**P3-D140**

**C - doped  $\text{LaAlO}_3$  /  $\text{SrTiO}_3$  interface** / 송종현, 황인웅, 곽용수(충남대), 김진희, 장정원(KRIS)

**P3-D141**

**Modifying Magnetic Properties of an Individual Co Nanomagnet by Circumferential Contact with Fe** / PHARK Soo-hyon, CORBETTA Marco, FISCHER Jeison A., OKA Hirofumi, SANDER Dirk, KIRSCHNER Juergen(Max-Planck-Institute of Microstructure Physics, Germany)

**P3-D142**

**Band gap engineering of graphene by using low-energy  $\text{Cs}^+$**  / 성시진, 류민태, 이평로, 김진걸, 박희민, 정진욱(포항공대)

**P3-D143**

**Charge Transport at the Interfaces between Carbon Nanotube and Wetting Metal Leads Mediated via Topological Defects** / KO Kwan Ho, KIM Han Seul(Graduate School of EEWS, Korea Advanced Institute of Science Technology), KIM Yong-Hoon(Graduate School of EEWS, Korea Advanced Institute of Science and Technology)

**P3-D144**

**Loading direction realiance on graphene thickness measured using atomic force microscope** / 오다예(건국대)

**P3-D145**

**RF-magnetron sputtering 방법으로 증착시킨 FEP박막의 제조 및 특성에 관한 연구** / 이창현, 최명규, 야오 리타오, 진익현, 배강, 김동영, 서성보(대구가톨릭대 전자디스플레이공학과)

**P3-D146**

**Ripple domain distribution in exfoliated monolayer graphene determined using atomic force microscope** / PARK Yeonggu(Division of Quantum Phases and Devices, Department of Physics)





P3-D147

**Surface state of a thin film of 2D-3D hybrid topological insulator  $(\text{Bi}_2)_1(\text{Bi}_2\text{Se}_3)_3$**  / 이평로(포항공대), 김남동, 김용삼(포항가속기연구소), 김진웅, 성시진, 김진걸, 류민태, 박희민, 정진욱(포항공대)

P3-D148

**고순도 (6,5) 단일 벽 탄소 나노 튜브의 초고속 고차 격자 진동 발생** / 노민영, 임용식, 신성일(건국대), 주태하(포항공대 화학과), KONO J(라이스대학 컴퓨터 공학과)

P3-D149\*

**Influence of supports on redox of Pt nanoparticles** / E.S. Jeong, C.-I. Park, I.-H. Hwang(Department of Physics Education and Institute of Fusion Science, Chonbuk National University, Jeonju, 561-756, Korea), M.-Y. Kim, J.-S. Choi(Oak Ridge National Laboratory, Fuels, Engines and Emissions Research Center, 2360 Cherahala Boulevard, Knoxville, TN 37932-1563, USA), S.-W. Han(Department of Physics Education and Institute of Fusion Science, Chonbuk National University, Jeonju, 561-756, Korea)

P3-D150\*

**Optical properties of p- and n-type doped intercalated graphite compounds** / JUNG Eilho, LEE Seokbae, ROH Seulki(Department of Physics, Sungkyunkwan University), MENG Xiuqing(Research Center for Light Emitting Diodes, Zhejiang Normal University), TONGAY Sefaattin(Department of Materials Science and Engineering, University of California, Berkeley), HWANG Jungseek(Department of Physics, Sungkyunkwan University)

P3-D151\*

**Coherent X-ray Diffraction Imaging with Different Phase Retrieval Algorithms** / KANG Jinback, CHA Wonsuk, JEROME Carnis, MBAYE Seck Ngor, AHN Gukil(Physics department, Sogang University), PHAM Tung Chao Thanh, YOON Kyung Byung(Chemistry department, Sogang University), KIM Hyunjung(Physics department, Sogang University)

P3-D152\*

**Electrical and local structural properties of oriented  $\text{VO}_2$  thin films** / ZHENLAN Jin, I.-H. Hwang, C.-I. Park, S.-W. Han(Division of Physics education and Institute of Fusion Science, Chonbuk National University, Jeonju 561-756, Korea)

P3-D153\*

**Speckle pattern analysis using correlation techniques in Pohang Accelerator Laboratory - 9C beamline** / CARNIS Jerome, CHA Wonsuk, KIM Ajeong(Sogang University Dept. of Physics), LEE Hae Cheol, YU Chung-Jong(Pohang Accelerator Laboratory), KIM Hyunjung(Sogang University Dept. of



Physics)

**P3-D154\***

**XPS Characterization to Determine Sputter Deposition  
Parameters for Si Nano-Crystals and Fully Oxidized Si Multi-layers  
Showing Strong Luminosity-Enhancement / JEONG Jiwoon, GU  
Minseon, AHN Hanyeol, JOO Beomsoo, HAN Moonsup(서울시립대)**

**P3**  
포  
스  
터  
세  
션



## SESSION P3

응용물리학회  
포스터 발표

2014년 4월 24일 목요일 14:00 – 15:45

장소: 포스터발표장

### P3-E068\*

**Growing of ZnO nanosheets, nanosheets assembled hollow sphere, and hollow hierarchical aggregates using trisodium citrate-assited in hydrothermal process** / HAHN Sung Hong, KHOA Nguyen Tri, KIM Soon Wook, THUAN Doan Van, YOO Dae-Hwang(University of Ulsan, Department of Physics.)

### P3-E069\*

**Study on MoS<sub>2</sub>-WSe<sub>2</sub> heterostructure** / VU Quoc An, LEE Si Young, DUONG Dinh Loc, CHAE Sang Hoon, LEE Young Hee(IBS 나노구조물리연구단 성균관대학교.)

### P3-E070\*

**Novel synthesis of Na-doped p-type ZnO by intercalation and fabrication of thickness controllable n-type ZnO / Na-doped p-type ZnO** / 오심건, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)

### P3-E071\*

**Fabrication of diode arrays of ZnO/pGaN on flexible fiber sheet** / ABBAS Kaleem, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)

### P3-E072\*

**SPR Enhanced Superefficient ZnTe/ZnO/Ag Nanoganoderma Structure as a UV-Vis Light Photocatalyst** / YAN Changzeng, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)

### P3-E073\*

**MoS<sub>2</sub> field-effect-transistor using graphene electrode** / 장아람, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)

### P3-E074\*

**Various Metal Contacts on Molybdenum Disulfide Thin Film** / KIM Jung Ho, LEE Young Hee, LIM Seong Chu(IBS 나노구조물리연구단 성균관대학교.)

### P3-E075\*

**2-D Solid State Hydrogen Molecules in Layered Structure**



**Potassium Intercalated Graphite Oxide** / LEE Tae Hoon, KIM Tae Hyung, LEE Young Hee(IBS 나노구조물리연구단 성균관대학교.)

P3-E076\*

**Mechanical Properties Of Suspended H-BN Ribbons** / KIM hakseong, YOON Ho-Ang, YOU Young-Gyu, CHOI Doo-Hua, KIM Hyun-Cheol, LEE Han-Byeol, JHANG Sung-Ho, CHUNG Hyun-Jong, LEE Sang-Wook(Division of Quantum Phases & Devices, School of Physics, Konkuk University.)

P3-E077\*

**Electrical Characterization of Nanoscale Au/TiO<sub>2</sub> Schottky Diodes Probed with Conductive Atomic Force Microscopy** / 이현수, 이영근, 배새벽<sup>1</sup>, 박정영(KAIST, <sup>1</sup>경상대학교.)

P3-E078\*

**초점 전자빔을 조사한 rubrene 나노막대의 광학적 광수송 특성 연구** / 박현정, 김민수<sup>1</sup>, 김정용<sup>2</sup>, 주진수(고려대학교 물리학과, <sup>1</sup>IBS센터 나노구조 물리단, <sup>2</sup>성균관대학교 에너지과학과.)

P3-E079\*

**Large-area Synthesis of Vertically Oriented Zinc Oxide Hexagonal Nanotube-Rod Hybrids Applying a Two-Step Growth Method** / KIM Sungwoong, LEE Won Woo, KIM Suhan, KIM Seong Been, PARK Won Il(한양대학교 신소재공학과.)

P3-E080\*

**Electrical Resistivity of Bismuth Telluride Nanotubes prepared by Galvanic Displacement Reaction of Electrodeposited Cobalt Nanowires** / 홍기민, 서호영, 노진성(충남대학교, 물리학과.)

P3-E081\*

**Detection of Lateral Spin Transport in Organic Materials using Non-local Geometry** / YUN Hoyeol, KIM Dong-Ok<sup>1</sup>, AHN Kwangseok<sup>1</sup>, LEE Dong Ryeol<sup>1</sup>, LEE Sang Wook(Division of Quantum Phases & Devices, School of Physics, Konkuk University, <sup>1</sup>Department of Physics, Soongsil University.)

P3-E082\*

**Observations of Topological Insulator characteristic in Sb<sub>2</sub>Te<sub>3</sub> thin film by sputtering method** / JIN Hyunwoo, HWANG Inrok, SEO Juhee, CHOI Jaemin, KIM Changyoung<sup>1</sup>, LEE Suyoun, PARK Baeho<sup>2</sup>(Korea Institute of Science and Technology (KIST), <sup>1</sup>Department of Physics, Yonsei University, <sup>2</sup>Department of Physics, Konkuk University.)

P3-E083\*

**Structure, ferroelectric properties, and magnetic properties of**



**Ho and Ni co-doped BiFeO<sub>3</sub> ceramics** / HWANG J.S., YOO Y. J., PARK J. S.<sup>1</sup>, KANG J.-H.<sup>2</sup>, LEE K. H.<sup>3</sup>, LEE B. W.<sup>3</sup>, KIM K. W.<sup>4</sup>, LEE Y. P.(Dept. of Physics, Hanyang University, Seoul 133-791. <sup>1</sup>Institute of Basic Sciences and Dept. of Physics, Sungkyunkwan University, Suwon 446-740. <sup>2</sup>Dept. of Nano & Electronic Physics, Kookmin University, Seoul 136-702. <sup>3</sup>Dept. of Electronic Physics, Hankuk University of Foreign Studies, Yongin 449-791. <sup>4</sup>Dept. of Information Display, Sunmoon University, Asan 336-708.)

**P3-E084\***

**산소플라스마에 의해 유도되는 파릴렌 표면 거칠기의 동역학적 연구** / 이인재, 배준완(전북대학교 물리학과.)

**P3-E085\***

**The Stability of Pt skin Layer of Pt<sub>3</sub>Ni(111) Surface Under Oxygen Pressure** / 이형철, 김보민<sup>1</sup>, 정창길<sup>1</sup>, RYO Toyoshima<sup>2</sup>, KONDOH Hiroshi<sup>2</sup>, 이한길<sup>3</sup>, SHIMADA Toru<sup>4</sup>, XUE Wei-Xue<sup>5</sup>, MUN Bongjin<sup>6</sup>(광주과학기술원, 물리광학과. <sup>1</sup>한양대학교 응용물리학과. <sup>2</sup>Keio University, Department of Chemistry. <sup>3</sup>숙명여자대학교, 화학과. <sup>4</sup>Hirosaki University, Department of Chemistry. <sup>5</sup>Dalian Institute of Chemical Science, China. <sup>6</sup>광주과학기술원, 물리광학과.)

**P3-E086\***

**Surface grating of organic Thin films, using Ultrafast-laser** / LEE Si Woo, CHAE Sang Min, JO Kuk Hyun, KIM Yong Hyun<sup>1</sup>, CHOI Ji Yeon<sup>1</sup>(Department of Organic Material Science and Engineering, Pusan National University, Busan 609-755, Korea. <sup>1</sup>Korea Institute of Machinery and Materials, 104 Sinseongno, Yuseong-Gu, Daejeon 305-343, Korea.)

**P3-E087\***

**Nucleation and Coalescence Characteristics of (103)-oriented GaN Domains Grown on m-plane Sapphire Substrate** / 윤한섭, 주미연, 이혜미, 이상화, 김진교(경희대학교, 물리학과.)

**P3-E088\***

**Coalescence Effect on the In-plane Polarity Alignment of m-oriented GaN Domains on Patterned m-plane Sapphire Substrate** / 이혜미, 주미연, 윤한섭, 이상화, 김진교(경희대학교, 물리학과.)

**P3-E089**

**Interface and surface characterization of polymer light emitting devices** / SECK Ngor Mbaye, KIM Ajeong, KANG Jinback, AHN Gukil, CARNIS Jerome, CHA Wonseok, SHIN Taejoo<sup>1</sup>, KIM Jinwoo<sup>1</sup>, KIM Kijun<sup>2</sup>, KIM Kijeong<sup>1</sup>, KIM Hyung jun(Sogang University, Department of Physics. <sup>1</sup>Pohang Light source, Pohang Accelerator Laboratory. <sup>2</sup>Sogang University, Department of Biomolecular engineering.)



P3-E090

**Micro-Prism-Embedded Microfluidics For High-Speed 3D MicroPTV** / 이원희, 김지혜, 고준영, 신중훈(한국과학기술원.)

P3-E091

**Skull Measurement Approach in Dose Calculations for Gamma Knife Perfexion** / LIM SA HOE, JUNG SHIN, KIM IN YOUNG, MOON KYUNG SUB, JUNG TAE YOUNG, JANG WOO YOUL, PARK SEUNG JIN(Chonnam Natioanl University Hwasun Hospital, Neurosurgery.)

P3-E092

**The Effect of Ethanol Solvent on ZnO Rod Structure in Hydrothermal Process** / 한성홍, 김순옥, 윤종원, THUAN Doan van, KHOA Nguyen Tri, 유대황(울산대학교.)

P3-E093

**Optical and Photocatalytic Properties of Doped-Like of Pt on ZnO Nanorod** / HAHN sung hong, THUAN van doan, KHOA Nguyen Tri, YOO Dae-Hwang(university of Ulsan.)

P3-E094

**Optical and Structural Properties of Au-ZnO Nanorod Composites** / 한성홍, 이지은, 윤종원, 최수민, 김순옥, 권민철<sup>1</sup>, 유대황(울산대학교, 물리학과, <sup>1</sup>주)유니백.)

P3-E095

**High Lithium Ion Battery Performance of Mesoporous Anatase TiO<sub>2</sub> spheres/ Multiwall Carbon Nanotubes Composite by a Combined Sol-gel and Solvothermal Method** / NGUYEN Thi Hong Trang, LINGAPPAN Niranjnurmurthi, ALI Zahid(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)

P3-E096

**Synthesis of Porous C-Fe(III) Co-doped TiO<sub>2</sub> Through a Facile Sol-gel Method and Its Photocatalytic property** / HE Wen, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)

P3-E097

**TiO<sub>2</sub>/ZnO composite structure fabricated by electrohydrodynamic lithography for photocatalytic application** / 문충만, 이수옥, 강대준(Department of Physics, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea.)



## SESSION P3

플라스마물리학과회  
포스터 발표

2014년 4월 24일 목요일 14:00 – 15:45

장소: 포스터발표장

### P3-H032

**Hollow cathode discharge**를 이용한 중수소 플라즈마의 광학적 특성 분석 / 이원욱, 박경득, 심성용, 오차환(한양대학교, 물리학과.)

### P3-H033

**Characteristics of ECR Plasma Source by using Three-Dimensional Particle-in-cell Monte-Carlo Collision Simulation** / LEE Huijea, KIM Seongbong<sup>1</sup>, YOO Sukjae<sup>1</sup>, CHO Moohyun<sup>2</sup>, NAMKUNG Won<sup>3</sup>(Dept. of Physics, POSTECH. <sup>1</sup>National Fusion Research Institute. <sup>2</sup>Division of Advanced Nuclear Engineering, POSTECH. <sup>3</sup>Pohang Accelerator Laboratory.)

### P3-H034

**Sheath Expansion Measurement of Thin Metal Wires** / KIM Sanghun, YI Changho, NAMKUNG Won<sup>1</sup>, CHO Moo-Hyun<sup>2</sup>(Dept. of Physics, POSTECH. <sup>1</sup>Pohang Accelerator Laboratory. <sup>2</sup>Dept. of Physics and Division of Advanced Nuclear Engineering, POSTECH.)

### P3-H035\*

**Raman scattering**을 이용한 플라즈마의 자기장 측정 방법 / 허민섭, 조명훈, 김영국(울산과학기술대학교.)

### P3-H036

**Progresses on parallelization for a fluid turbulence code based on the spectral method** / TERZOLO Laurent, KIM S.S., KWON J.M.(국가핵융합연구소.)

### P3-H037

**KSTAR 핵융합장치에서의 탄화수소막의 재증착 연구** / 박준우, 소현섭, 정대호, 고건희, 이호선, 홍석호(경희대학교 응용물리학과, <sup>1</sup>국가핵융합연구소.)

### P3-H038

**Neutronics Analysis to Determine the Ceramic Breeder Blanket Layers of K-DEMO** / PARK JongSung, IM Kihak, KWON Sungjin, KIM Keeman(DEMO Technology Division, National Fusion Research Institute, Daejeon, the Republic of Korea.)

### P3-H039

**분자 Collisional-Radiative model**을 이용한 플라즈마 물성 진단 / 오차환, 박경득, 심성용, 이원욱(한양대학교, 물리학과.)



P3-H040

**Optical Emission Spectroscopy를 이용한 KSTAR Edge Plasma 물성 진단** / 오차환, 심성용, 박경득, 이원욱, 정해린<sup>1</sup>, 나훈균<sup>1</sup>(한양대학교, 물리학과, <sup>1</sup>국가핵융합연구소.)

P3-H041

**The Measurements Of Heat Flux Through Thermocouples Of Divertor In KSTAR** / 방은남, 홍석호, 박준교, 김학근(국가핵융합연구소.)

P3-H042\*

**Modelling and Analysis of Real Time Control Experiment of Electron Temperature Profile in KSTAR** / KIM H.-S., KIM S.H.<sup>1</sup>, BAE Y.S.<sup>2</sup>, JEON Y.M.<sup>2</sup>, HAHN S.H.<sup>2</sup>, JOUNG M.<sup>2</sup>, LEE K.D.<sup>2</sup>, HAN H.S.<sup>2</sup>, WOO M.H.<sup>2</sup>, LEE T.G.<sup>2</sup>, YUN S.W.<sup>2</sup>, NA Y.-S.(Seoul National University, Department of Nuclear Engineering. <sup>1</sup>ITER Organization. <sup>2</sup>National Fusion Research Institute.)

P3-H043

**The Damage Simulation for the 14-MeV Neutron in Fe, Cr and Ni** / LEE Bo-Young, OH Joo-Hee, KIM Dong-Woo, KO Seung-Kook, KO Seung-Kook, LEE Hee-Seock<sup>1</sup>(울산대학교 물리학과. <sup>1</sup>포항가속기연구소.)

P3-H044

**자기 진단 센서의 신호상 노이즈 개선** / 김홍수, 박준교, 한상희, 윤시우, 이상곤(국가핵융합연구소.)

P3-H045

**디지털 적분기 개발** / 서성현(국가핵융합연구소.)

P3-H046

**KSTAR Plasma Measurement Result of Thomson Scattering Diagnostic System in 2013** / LEE J.H., OH S., LEE W.R., KIM K.P., KO W.H., LEE K.D., CHO K.W., YOON S.W., NARIHARA K.<sup>1</sup>, YAMADA I.<sup>1</sup>, HATAE T.<sup>2</sup>, YATSUKA E.<sup>2</sup>(NFRI. <sup>1</sup>NIFS. <sup>2</sup>JAEA.)

P3-H047

**A Free-Boundary Tokamak Equilibrium Solver, TES, And Its Application To Design Of Plasma Shape Controller For KSTAR** / JEON YoungMu(National Fusion Research Institute.)

P3-H048

**Rotation pedestal behavior during the ELM suppression phase by the resonant magnetic perturbations in KSTAR\*** / KO Won-Ha, JEON Y.M., LEE H.H., IDA K.<sup>1</sup>, LEE K.D., YOON S.W., LEE J.H., BAE Y.S., OH Y.K., KWAK J.G.(National Fusion Research Institute. <sup>1</sup>National Institute for Fusion Science.)





### P3-H049

**Investigation of Gradient Scale Lengths and SOL Width from Electric Probe Measurements in KSTAR** / 박준교, 김흥수, 전준우, 방은남, 서동철, 홍석호, 배민근<sup>1</sup>, 심승보<sup>2</sup>(국가핵융합연구소, 경계플라즈마연구부, <sup>1</sup>한양대학교, 전기공학과, <sup>2</sup>부산대학교, 전자전기공학과.)

### P3-H050

**Mitigation of first mirror by the gas-flowing** / 계민준, 김보성, 오수기<sup>1</sup>, 김유권(아주대학교, 에너지시스템학과, <sup>1</sup>아주대학교, 물리학과.)

### P3-H051\*

**The effect of particle and heat diffusion on the SOL region** / SHIM Seung Bo, KOTOV Vladislav<sup>1</sup>, HONG Suk-ho<sup>2</sup>, KIM Jin Yong<sup>2</sup>, LEE Hae June(Pusan national university, <sup>1</sup>Fz-Juelich, <sup>2</sup>NFRI.)

### P3-H052\*

**한국형 저 방사화강 ARAA의 수소·중수소 투과특성 연구** / 이석관, 변우준, 서희정, 신해원, 윤연길, 이주호, 김희수, 노승정(단국대학교 죽전캠퍼스 응용물리학과, 나노센서바이오텍 연구소, 용인 448-701.)

### P3-H053

**핵융합로 구조재료의 온도에 따른 수소방출 거동 전산모사** / 김희수, 이석관, 변우준, 윤연길, 서희정, 변재덕, 현준원, 노승정, 김도완<sup>1</sup>, 한준희<sup>1</sup>, 이철의<sup>1</sup>(단국대학교 죽전 센트로 캠퍼스 응용물리학과, 용인 448-701, <sup>1</sup>고려대학교 안암캠퍼스 물리학과, 서울 136-701.)

### P3-H054\*

**2D 시뮬레이션을 통한 입사파와 반사파의 위상차 조사** / 허민섭, 강태연, 조명훈(UNIST.)

### P3-H055

**Ion Temperature Measurements using Visible Spectroscopy on KSTAR** / SON S. H, HONG S. H, JUHN J. -W, KO J. S, NA H. K, PARK K. R(National Fusion Research Institute, Daejeon, Korea.)

### P3-H056\*

**Optimum Design Parameters of Neutral Beam Injection in VEST** / KIM SangKyeun, NA DongHyeon, LEE JeongWon, YOO Min-Gu, NA Yong-Su(Seoul National University, Department of Nuclear Engineering.)

### P3-H057

**Global Particle Balance of 2013 KSTAR Experiments** / JUHN June-Woo, SONG J. I., HAN H. S., LEE H. M., KIM Y. O., HAHN S. H., KIM K. P., HONG S. H.(National Fusion Research Institute.)



**P3-H058\***

**Localized Fast Ion Loss by Resonant Magnetic Perturbation in KSTAR** / KIM Jun Young, RHEE Tongnyeo<sup>1</sup>, KIM Junghee<sup>1</sup>, YOON S. W.<sup>1</sup>, OGAWA K<sup>2</sup>, ISOBE M<sup>2</sup>(University of Science and Technology. <sup>1</sup>National Fusion Research Institute. <sup>2</sup>National Institute for Fusion Science.)

**P3-H059**

난류성 유체 플라즈마에서 수송의 이방성에 관한 탐구 / 안찬용, 민병훈, 김창배(숭실대학교.)

**P3-H060**

**Thermo-mechanical analysis of W-monoblock with ANSYS** / SEON SangWon, SONG JaeHyun, KIM KyungMin, HONG SukHo(국가핵융합연구소.)

**P3-H061**

**Theory of Obliquely Propagating Shock-like Structures in a Magnetized Plasma** / KIM Seung-Shik, KIM Tae-Han(WCDN, Dept. CRE-Science.)



## SESSION P3

반도체물리학과회  
포스터 발표

2014년 4월 24일 목요일 14:00 - 15:45

장소: 포스터발표장

### P3-K001

**Synthesis and Characterization of Large-Area and Highly Crystalline Molybdenum Disulphide Atomic Layer by Chemical Vapor Deposition** / CHONG-YUN park, SEUN-HO Park, YOOSOOK Kim, JI-SUN Kim, SU-IL Lee, MYOUNG-JUN Cha(성균관 대학교, 물리학과.)

### P3-K002\*

**Direct Imprint Method Of Fabricating Bottom-Gated MoS<sub>2</sub> Field-Effect Transistors On Arbitrary Substrate** / IM Seongil, CHOI Kyunghye(Yonsei University, Institute of Physics and Applied Physic.)

### P3-K003

**MaCE (Metal-Assisted Chemical etching)에 의한 GaAs 마이크로 구조 제어 및 메커니즘 연구** / 윤석훈, 지택수<sup>1</sup>, 신재철<sup>2</sup>(한국광기술원 광바이오센터, 전남대학교 전자컴퓨터공학과. <sup>1</sup>전남대학교 전자컴퓨터공학과. <sup>2</sup>한국광기술원 광바이오센터.)

### P3-K004\*

**그라핀 층에 의한 InGaN/GaN 양자우물구조의 광학적 특성** / 조일욱, 김보라, 류미이, 남정태<sup>1</sup>, 김근수<sup>1</sup>, 유영준<sup>2</sup>, 김진수<sup>3</sup>(강원대학교 물리학과. <sup>1</sup>세종대학교 물리학과. <sup>2</sup>전자통신연구원 그라핀소재창의연구실. <sup>3</sup>전북대학교 신소재공학부 정보소재공학전공.)

### P3-K005

**Growth and characterization of p-type GaAs nanowires grown by MOCVD** / 황정우, 최정우<sup>1</sup>, 이상준<sup>2</sup>, 신재철<sup>3</sup>(한국광기술원 광바이오센터, 경희대학교 응용물리학과. <sup>1</sup>경희대학교 응용물리학과. <sup>2</sup>한국표준과학연구원 나노소재평가센터. <sup>3</sup>한국광기술원 광바이오센터.)

### P3-K006\*

**Improved quality of GaN template grown on sapphire substrates coated with Alumina** / KIM SeungHwan, PARK hynho(전북대학교.)

### P3-K007

**노랑 영역에서 발광하는 InGaN/GaN 양자 우물 나노선의 수소 이온 주입에 따른 Photoluminescence 분석** / 문미림, 박병권, 이상태, 김문덕, 김송강(충남대학교, 물리학과. <sup>1</sup>충부대학교, 정보통신학과.)

### P3-K008\*

**Structure and electrical analysis of ZnTe solar cell device grown**



**by pulsed laser deposition** / LEE Kyoung Su, LEE Dong Uk, KIM Eun Kyu(Department of Physics, Hanyang University, Seoul 133-791, Korea.)

**P3-K009**

**Bi<sub>4</sub>Te<sub>3</sub>/ZnTe 헤테로구조 나노선의 성장과 결정학 및 광학적 특성 분석** / 송만석, 김용(동아대학교 물리학과.)

**P3-K010**

**진공증착법으로 제작한 Zn<sub>x</sub>Cd<sub>1-x</sub>S 박막의 구조 및 광학적 특성** / 이정주, 한동현, 윤은정, 박창영, 김건호(경상대학교, 물리학과.)

**P3-K011\***

**Mo 박막의 Sulfur passivation 기법을 이용한 MoS<sub>2</sub> 합성** / 추동일, 이동욱, 오규진, 김은규(한양대학교 물리학과 양자기능연구실.)

**P3-K012**

**Efficiency Enhancement of Si solar cells by Low Energy Hydrogen Ion Implantation at the End of the Fabrication Process**  
/ 파리다 바스칼, 최재호, 임경호, 이재상<sup>1</sup>, 김근주(전북대학교 기계공학과. <sup>1</sup>Korea Atomic Energy Research Institute.)

**P3-K013**

**Hall effect properties for BaIn<sub>2</sub>Se<sub>4</sub> epilayer** / HONG Kwangjoon, LEE Kijeong(Department of physics, Chosun University.)

**P3-K014**

**Hall effect properties for ZnAl<sub>2</sub>Se<sub>4</sub> epilayer** / HONG Kwangjoon(Department of physics, Chosun University.)

**P3-K015**

**Exciton linewidth on the PL emissions according to the various temperatures of CdS/GaAs epilayers** / HONG Kwangjoon(Department of physics, Chosun University.)

**P3-K016**

**Tapping centers due to native defects and impurities in CuAlSe<sub>2</sub> limit the photoresponse with decreasing temperature** / HONG Kwangjoon(Department of physics, Chosun University.)

**P3-K017**

**Ballistic transport in InGaAs/InAlAs/GaAs HEMT at low temperature** / LEE Jongkyung, JO Yongcheol, KIM Jongmin, WOO Hyeonseok, KIM Sunhu, KIM Jiman, PARK Wooyoung, JO Hansol, HAN Jaeseok, INAMDAR A. I., PAWAR S. M., IM Hyunsik, KIM. Hyungsang(동국대학교 물리반도체학과.)



### P3-K018\*

**A Non-Vacuum Approach for Fabrication of  $\text{Cu}_2\text{ZnSnSe}_4$  Solar Cell and its Characterization** / KHADKA Dhruva B., KIM SeongYeon, SONG Soomin, KIM JunHo(Department of Physics, Incheon National University, Yeonsu-gu, Songdo-dong, 12-1, 406-772, Incheon, Republic of Korea.)

### P3-K019\*

**Structural Transition and Band Gap Tuning of Fe-alloyed  $\text{Cu}_2\text{ZnSnS}_4$  Chalcogenide for Photovoltaic Application** / KHADKA Dhruva B., KIM JunHo(Department of Physics, Incheon National University, Yeonsu-gu, Songdo-dong, 12-1, 406-772, Incheon, Republic of Korea.)

### P3-K020

**Effect of Post-Annealing on CZTS Solar Cell Fabricated by Spin Coating Method** / SONG Soomin, KIM SeongYeon, KIM JunHo, PARK Si-Nae<sup>1</sup>, SUNG Shi-Joon<sup>1</sup>, SON Dae-Ho<sup>1</sup>, KIM Dae-Hwan<sup>1</sup>, KANG Jin-Kyu<sup>1</sup>(Department of Physics, Incheon National University, Yeonsu-gu, Songdo-dong, 12-1, 406-772, Incheon, Republic of Korea. <sup>1</sup>Daegu Gyeongbuk Institute of Science and Technology (DGIST), Daegu 711-873, Republic of Korea.)

### P3-K021\*

**Study of  $\text{Cu}(\text{In,Ga})\text{Se}_2$  Solar Cells with  $\text{In}_2\text{S}_3$  Buffer Layer Deposited by Thermal Evaporation at Various Substrate Temperature** / KIM SeongYeon, KIM JunHo, GWAK JiHye<sup>1</sup>, YUN JaeHo<sup>1</sup>, YOON Kyung-Hoon<sup>1</sup>(Department of Physics, Incheon National University, Yeonsu-gu, Songdo-dong, 12-1, 406-772, Incheon, Republic of Korea. <sup>1</sup>Korea Institute of Energy Research, Yuseong-gu, Gajeong-ro, 152, Daejeon, Republic of Korea.)

### P3-K022

**은나노선 투명전극 기판 제작 및 전기적 광학적 특성 조사** / 이준규, 추동철, 김태환(한양대학교, 전자컴퓨터통신공학과.)

### P3-K023

**삽입된 절연층에 의한 다층 수직 구조의 금속산화물 저항 메모리의 전기적 특성 변화** / 고경욱, 김태환(한양대학교 전자컴퓨터통신공학부.)

### P3-K024

**자가조립 Au 나노입자를 포함한 polystyrene 층을 갖는 비휘발성 메모리 소자의 전하수송메커니즘** / 마택호, 윤동열, 김태환(한양대학교, 전자컴퓨터통신공학과.)

### P3-K025

**실리콘 광증배소자로 이루어진 광센서의 설계 및 시뮬레이션** / 전진아, 강명우<sup>1</sup>, 이해영, 이직<sup>1</sup>, 박일홍<sup>1</sup>(성균관대, 기초과학연구소. <sup>1</sup>성균관대, 물리학과.)

**P3-K026\***

기하 광학적 광선 추적법을 이용한 GaN-LED의 광 추출 효율 향상 방안 / 안대용, 이삼녕(한국해양대학교 나노반도체공학과.)

**P3-K027**

Potentiostatic EIS SnO<sub>2</sub> data for various deposition condition / JEONG Jin(Chosun University.)

**P3-K028**

The transition of resistivity, carrier density and hall mobility for SnO<sub>2</sub> Thin Films change the Temperature and deposition time / JEONG Jin(Chosun University.)

**P3-K029\***

열처리 된 Bulk MoS<sub>2</sub>와 금속 접합의 전기적 특성 연구 / PARK Wooyoung, JO Yongcheol, KIM Jongmin, WOO Hyeonseok, CHO Hansol, CHOI Jiman, CHO Sangeun, KIM Inho, KIM Seonhoo, LEE Jongkyung, HAN Jaeseok, INAMDAR A. I., PAWAR S. M., KIM Hyungsang, IM Hyunsik(Dongguk University, Division of Physics and Semiconductor science.)

**P3-K030\***

PEG 첨가량에 따른 무전해 구리 도금박막의 표면 분석 / 백승덕, 이연승, 김나영, 임은숙, 김형철, 나사균(국립한밭대학교, 정보통신공학과, '국립한밭대학교, 재료공학과.)

**P3-K031**

태양전지 효율 증대를 위한 실리콘 렌즈 설계 개발 / 모윤진, 서영성, 김성민, 김효진(한국광기술원 광바이오 연구센터.)

**P3-K032\***

Schottky Barrier Modulation of Metal/4H-SiC Junction with Thin Interface Spacer Driven by Surface Polarization Charge on 4H-SiC Substrate / CHOI Gahyun, JEON Youngeun<sup>1</sup>, LEE Jung Yong, YOON Hun Han, BAHNG Wook<sup>2</sup>, PARK Kibog<sup>3</sup>(Department of Physics, Ulsan National Institute of Science and Technology (UNIST). <sup>1</sup>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology (UNIST). <sup>2</sup>Power Semiconductor Research Center, Korea Electrotechnology Research Institute (KERI). <sup>3</sup>Department of Physics and School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology (UNIST).)

**P3-K033\***

실리콘 다공박막 기반의 고반사 반사기 제작 및 특성 / GUAN Xiang-yu, 임정우, 정관수<sup>1</sup>, 유재수(경희대학교, 전자전파공학과, '경희대학교, 전자전파공학과; 동국대학교, 양자기능반도체연구센터.)



**P3-K034\***

**Role of oxygen-doped metal spacer as a diffusion sponge on the enhanced annealing stability of perpendicular magnetic anisotropy features in CoFeB/MgO interface for the STT-MRAM application** / YANG Seungmo, LEE Jabin, ANN Gwangguk, KIM Jaehong<sup>1</sup>, CHUNG wooseong<sup>2</sup>, HONG JinPyo(Department of Physics, Hanyang University, Seoul, Korea. <sup>1</sup>Division of Nano-Scale Semiconductor Engineering, Hanyang University, Seoul 133-791, South Korea. <sup>2</sup>Department of Electronics and Computer Engineering, Hanyang University, Seoul 133-791, South Korea.)

**P3-K035**

**Synthesis of transfer-free graphene on insulating substrates by rapid thermal processing** / 박종윤, 고용훈<sup>1</sup>, 김유석<sup>1</sup>, 정대성<sup>2</sup>, 박승호<sup>1</sup>, 김지선<sup>1</sup>, 김이화<sup>1</sup>, 심지나<sup>1</sup>, 안기석<sup>3</sup>(성균관대학교 물리학과, 에너지과학과. <sup>1</sup>성균관대학교 물리학과. <sup>2</sup>성균관대학교 에너지과학과. <sup>3</sup>한국화학연구원 박막재료연구그룹.)

**P3-K036**

**SiO<sub>1.4</sub>/SiO<sub>2</sub> 다층구조를 이용한 실리콘 나노결정 형성 및 발광 특성** / 신동혁, 원소람, 박상준, 윤종환(강원대학교, 물리학과.)

**P3-K037\***

**MoS<sub>2</sub> Schottky Diode based H<sub>2</sub> and Photo Sensor using Pd Electrode**: IM Seongil, KIM Jin Sung, LEE Hee Sung, CHOI Kyung Hee(Yonsei University, Institute of Physics and Applied Physics.)

**P3-K038\***

**BaSnO<sub>3</sub> 기판 위에 (Ba,L a)SnO<sub>3</sub> 박막 증착 및 물성 연구** / 이용재, 김형준, 손이근, 김태훈, 김기훈(서울대학교 물리천문학부 첨단복합물질상태연구단.)

**P3-K039\***

**Influence of copper diffusion barrier in Cu/TaOx/Pt based conductive bridge memory** / BAEK GWANGHO, BAE YOONCHEOL, LEE AHRAHM, CHUNG JEBOCK, HONG JINPYO<sup>1</sup>(Hanyang University, Division of Nano-Scale Semiconductor Engineering. <sup>1</sup>Hanyang University, Department of Physics, Division of Nano-Scale Semiconductor Engineering.)



## SESSION P4

입자물리학과회  
포스터 발표

2014년 4월 25일 금요일 11:00 - 12:45

장소: 포스터발표장

### P4-B020\*

다양한 디자인 변수를 가진 단면 스트립 실리콘 센서의 제작 및 특성 비교 / 박환배, 전해빈, 우오즈미 사토루, 가동하<sup>1</sup>, 현효정, 강국현, 김보배(경북대학교 물리학과, <sup>1</sup>국방과학연구소 화생방부.)

### P4-B021\*

CWO(CdWO<sub>4</sub>) 결정 섬광체 특성 조사 / 박환배, 김보배, 강국현, 김홍주, 우오즈미 사토루, 전해빈, 채규한, 현효정(경북대학교.)

### P4-B022\*

붕소와 광다이오드를 이용한 중성자 검출 및 시뮬레이션 비교 분석 / 박환배, 강국현, 가동하<sup>1</sup>, 김귀년, 김홍주, 배재범, 우오즈미 사토루, 전해빈, 현효정(경북대학교, 물리학과, <sup>1</sup>국방과학연구소, 화생방부.)

### P4-B023

Study of  $K_L \rightarrow \pi^0 \pi^0 \gamma$  decay mode / 고재우, 김용주, 우종관, 김은주<sup>1</sup>, 안정근<sup>2</sup>, 백광윤<sup>2</sup>, 이효상<sup>2</sup>, 임계엽<sup>3</sup>, LIU Dong, NI andrew<sup>2</sup>(제주대학교, <sup>1</sup>전북대학교, <sup>2</sup>부산대학교, <sup>3</sup>KEK.)

### P4-B024\*

GEM Software Validation for CMS Detector Upgrade / 박인규, 류건모, 류민상<sup>1</sup>, 김지현, 이상훈, 최민규, 이장배, 최기진(서울시립대학교 물리학과, <sup>1</sup>전북대학교 물리학과.)

### P4-B025

A Search for supersymmetry with multilepton signatures at the CMS experiment / KIM Zero, KIM Jae Yool<sup>1</sup>, LIM In-taek<sup>1</sup>(Hanbit High School, <sup>1</sup>Chonnam National University.)

### P4-B026

Search Prospects for Heavy Neutrinos at  $\sqrt{s}=14$  TeV with the CMS GEM Muon Detector / LEE Haneol, ALMOND John, YU Geumbong, YANG Un-ki(서울대학교 물리천문학부.)

### P4-B027

Search for Heavy Neutrinos in the Same-sign Dilepton State at  $\sqrt{s}=8$  TeV Using the CMS Detector / OH SungBin, ALMOND John, YU GeumBong, YANG Un-Ki(서울대학교 물리천문학부.)

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**P4-B028**

경북대 CMS Tier2 센터의 운영 및 이용현황 / 한대희, 송지환, 김귀년, 손동철(경북대학교, 고에너지물리연구소.)

**P4-B029**

**The uncertainty study of Final State Radiation for Drell-Yan Muon decays** / PARK Sang-il, LEE Sangeun, BUTANOV Khakimjan, YUSUPOV Hammid, SON Dongchul, KIM guinyun, NAM soonkwon<sup>1</sup>(Center for High Energy Physics, Kyungpook National University. <sup>1</sup>Kangwon National University.)

**P4-B030\***

**The Korea-CMS RPC Construction at LS1** / 최영일, 김동현, 황찬욱(성균관대학교 물리학과.)

**P4-B031**

**The Electron Trigger, ID Efficiency Measurement for W Charge Asymmetry Electron Channel at Sqrt(s) = 8 TeV** / NAM Soon-Kwon, KROPIVNITSKAYA Anna, KIM Taehoon, KIM Jungmin, NAM Yeonsoo, LEE Sangeun<sup>1</sup>, SON Dongchul<sup>1</sup>, KIM Guinyun<sup>1</sup>(Kangwon National University. <sup>1</sup>Kyungpook National University.)

**P4-B032**

**The Electron Charge-Asymmetry in pp -> W+X Production using Double Rayleigh Function at Sqrt(s) = 8 TeV** / NAM Soon-Kwon, KROPIVNITSKAYA Anna, KIM Jungmin, KIM Taehoon, NAM Yeonsoo, LEE Sangeun<sup>1</sup>, SON Dongchul<sup>1</sup>, KIM Guinyun<sup>1</sup>(Kangwon National University. <sup>1</sup>Kyungpook National University.)

**P4-B033\***

**PDF Uncertainties and K-factor for the W' search at 13 TeV Collisions** / 이정은, 양유철, 오영도, 김동희(경북대학교 물리학과.)

**P4-B034\***

**Search For The Standard Model Higgs Boson In The u+u- Decay Channel In pp Collisions With Future Experimental Set Up** / LEE Jangbae, PARK Inkyu, RYU Minsang<sup>1</sup>, KIM Jihyun, LEE Jason, CHOI Minkyoo, RYU Geonmo, KIM Hyuonyong, CHOI Kijin(서울시립대학교, 물리학과. <sup>1</sup>전북대학교, 물리학과.)

**P4-B035\***

**Calculation of expected limits of Kluza-Klein W' of split-UED from a single lepton channel in pp collisions at sqrt(s) = 13 TeV using MC data** / 최재윤, 양유철, 오영도, 김동희(경북대학교 물리학과.)



P4-B036

**Search for third-generation leptoquark and scalar top quark in pp collisions at 8 TeV** / OH Youngdo, KIM DongHee(Kyungpook National University.)

P4-B037\*

**Improvement of Top Quark Reconstruction Method Using the Neural Network** / LEE Hyun Su, SHIM Ji Hyun(High Energy Particle Physics, Ewha Womans University.)

## SESSION P4

응집물질물리학과  
포스터 발표

2014년 4월 25일 금요일 11:00 - 12:45

장소: 포스터발표장

진행위원: [유전체, D155~D186] 김일원(울산대)

[초전도/저온물성, D187~D206] 공기정(한국화학연구원)

### P4-D155\*

**Ferroelectric and magnetic properties of  $\text{Bi}(\text{Fe}_{0.9}\text{Mn}_{0.1})\text{O}_3$  thin films** / 황인지, 도달현(계명대), 이명환, 송태권, 김명호, 김상욱, 김원정(창원대)

### P4-D156\*

**2차원 전자계의 온도에 따른 전하이동도 연구** / 이인학, 최병기, 김용현(서울시립대 물리학과), 장승엽, 신중훈, 장태훈(LG전자 연구소), 장영준(서울시립대 물리학과)

### P4-D157\*

**Anisotropic thermoelectric properties of Sn-intercalated  $\text{Sn}_x\text{TiSe}_2$  polycrystalline compounds** / 이종수, 김민재(경희대)

### P4-D158\*

**Effects of Annealing Temperature and Oxalic Acid Concentration on Structural Properties of Porous Anodic Alumina** / CHO Sam Yeon, KIM Jin Woo, BU Sang Don(Department of Physics, Chonbuk National University)

### P4-D159\*

**Low temperature fabrication of conducting ITO thin films by excimer laser annealing** / 강건희, 김혁진, 주범수, 한문섭(서울시립대 물리학과), 박종혁(ETRI), 장영준(서울시립대 물리학과)

### P4-D160\*

**$\text{Bi}_2\text{Se}_3$ 를 이용한 단일 열전 모듈 특성 연구** / 정명화, 김충만, 김수현(서강대, 물리학과), T. Onimaru, K. Suekuni, T. Takabatake(Advanced Sciences of Matter, Hiroshima University)

### P4-D161\*

**Effect of sintering temperature in Electrical properties on  $0.67\text{BiFeO}_3$ - $0.33\text{BaTiO}_3$  lead-free ceramics** / 김태준, 김상욱, 한성진, 김원정, 이명환, 박진수, 김다정, 김명호, 송태권(창원대), 도달현(계명대)

### P4-D162\*

**Enhanced dielectric properties induced by  $\text{ZnSnO}_3$  nanoparticles in flexible PVDF-TrFE polymer nanocomposites** / KIM Ill Won, ULLAH Amir, AHN Chang Won, TANGE Achiri(Department of Physics and EHSRC)

**P4-D163\***

**Gamma-ray irradiation effects on structural and electrical properties of  $(K_{0.5}Na_{0.5})(Mn_{0.005}Nb_{0.995})O_3$  thin films** / KIM Byung Hoon, YANG Sun A, JEON Do Hyen(Department of Physics, Chonbuk National University), SEOG Hae Jin, KIM Il Won(Department of Physics, University of Ulsan), LEE Min Ku, LEE Gyoung Ja(Nuclear Materials Development Division, Korea Atomic Energy Research Institute), BU Sang Don(Department of Physics, Chonbuk National University)

**P4-D164\***

**SnO<sub>2</sub> sol-gel films fabricated by excimer laser annealing** / 김혁진, 강건희, 주범수, 한문섭(서울시립대), 박종혁(ETRI), 장영준(서울시립대)

**P4-D165\***

**Structural, Electrical and Multiferroic Properties of La-doped Bi<sub>2</sub>Fe<sub>4</sub>O<sub>9</sub> Thin Films** / 김상수, 최지아, 김진원, RAGHAVAN C. M., 김원정, 송태권(창원대), 김종우(재료연구소)

**P4-D166\***

**Synthesis of uniform WS<sub>2</sub> thin films by using both CVD and e-beam evaporation** / 최병기, 이인학, 주범수, 한문섭, 장영준(서울시립대 물리학과)

**P4-D167\***

**Thermoelectrical properties and possible Kondo effect in Ag<sub>2</sub>Te/SnTe composite** / OH SUEKYUNG, LEE MinHo, RHYEE Jong-Soo(KyungHee University)

**P4-D168\***

**Transition Metal-doped BiFeO<sub>3</sub>-BaTiO<sub>3</sub> Bulk Ceramics System with improved Electric Properties** / 김다정, 이명환, 박진수, KUMAR S., 김명호, 송태권, 김상욱, 김상수, 김원정(창원대), 도달현(계명대)

**P4-D169**

**Investigation of The Photoluminescent Properties of Yellow Emitting CaSrSiO<sub>4</sub>:Eu<sup>2+</sup> Phosphors Concocted through Sol-gel Approach** / WOO Hyun-Joo, GANDHI Sakthivel, KWON Bong-Joon, SHIN Dong-Soo, JANG Kiwan(창원대)

**P4-D170**

**Optical Properties of Ca<sub>2</sub>SiO<sub>4</sub>:Eu<sup>2+</sup>, Sr<sub>2</sub>SiO<sub>4</sub>:Eu<sup>2+</sup>, and CaSrSiO<sub>4</sub>:Eu<sup>2+</sup> Phosphors Prepared by Solid State Reaction** / KWON Bong-Joon, GANDHI Sakthivel, WOO Hyun-Joo, SHIN Dong-Soo, JANG Kiwan(창원대)



P4-D171

**Structural properties on paramagnetic ions in mixed crystals  $[N(CH_3)_4]_2Zn_{1-x}Co_xCl_4$  ( $x=0, 0.5, 0.7, 0.9$ , and  $1$ ) by magic angle spinning nuclear magnetic resonance** / 김우영, 김남희, 임애란(전주대)

P4-D172

**희토류 원소 Eu와 Sm이 첨가된 비납계 유리의 물리적 성질 비교** / 박종호 (진주교육대)

P4-D173

**BaTiO<sub>3</sub>-KNbO<sub>3</sub>-SiO<sub>2</sub> 유리의 나노 결정화 메커니즘** / 양흥열, 최현우, 김은아, 김맥, 백창규, 양용석(부산대)

P4-D174

**Crystal growth and thermal properties of the Tutton salt  $Cs_2Fe(SO_4)_2 \cdot 6H_2O$  single crystal** / 김우영, 박영운, 박병권, 임애란(전주대)

P4-D175

**PbZr<sub>0.72</sub>Sn<sub>0.28</sub>O<sub>3</sub> 단결정의 탄성특성에 대한 브릴루앙 산란 연구** / 정민석, 이병완, 고재현(한림대전자물리학과), ROLEDER Krystian(University of Silesia, Institute of Physics), BUSSMANN-HOLDER Annette(Max-Planck-Institut für Festkörperforschung), MAJCHROWSKI Andrzej(Military University of Technology, Institute of Applied Physics), 고영호, 김광주(국방과학연구소)

P4-D176

**형상 제어된 KNbO<sub>3</sub>-ZnO 복합체의 유전 특성** / 김은아, 양흥열, 최현우, 김맥, 백창규, 양용석(부산대)

P4-D177

**NaNbO<sub>3</sub>-xGeO<sub>2</sub> ( $x=1, 0.5$ ) 유리 및 유리-세라믹의 전기적 특성** / 김맥, 양용석, 백창규, 최현우, 양흥열, 김은아(부산대)

P4-D178

**Effects of La-doping on Multiferroic Properties of Chemical Solution Deposited Bi<sub>6</sub>Fe<sub>2</sub>Ti<sub>3</sub>O<sub>18</sub> Thin Films** / 김상수, RAGHAVAN C. M., 김진원, 최지아, 이민지, 김원정, 송태권(창원대)

P4-D179

**Ferroelectric properties of epitaxial CaBi<sub>2</sub>Nb<sub>2</sub>O<sub>9</sub> thin films on single crystalline Nb doped (100) SrTiO<sub>3</sub> substrates** / 안윤호, 서정택, 손종역(경희대)

P4-D180

**Ga이 첨가된 Zn<sub>1-x</sub>Mg<sub>x</sub>O 다결정의 물성** / 전병역, 김선우, 김상우, 이종림(한국 과학영재학교)

**P4-D181**

**NMR behaviors of two inequivalent protons in paraelectric phase  $\text{RbH}_2\text{AsO}_4$  by single-crystal NMR and MAS NMR** / 최재현(전주대), 이광세(인제대), 임애란(전주대)

**P4-D182**

**Photocurrent Characteristics and Stability of the Monoclinic Phase in the Ferroelectric Nb-doped PZT Ceramics** / KIM Jong-Pil(한국기초과학지원연구원 부산센터), AHN Chang Won, KIM III Won(울산대), KIM Jung-Ha, BAE Jong-Seong, HONG Tae Eun(한국기초과학지원연구원 부산센터)

**P4-D183**

**Structural and Electrical Properties of Mn-doped  $\text{Bi}_6\text{Fe}_2\text{Ti}_3\text{O}_{18}$  Thin Films Fabricated by Chemical Solution Deposition Method** / 김상수, 김진원, RAGHAVAN C. M., 최지아, 이민지, 김원정, 송태권(창원대)

**P4-D184**

**Thermal Stability and the Electronic Structure of Croconic Acid ( $\text{H}_2\text{C}_5\text{O}_5$ ) Crystal: An Example of Organic Ferroelectrics** / LEE Kwang-Sei(Department of Nano Science & Engineering, Center for Nano Manufacturing, Inje University, Gimhae), OH In-Hwan, PARK Garam, PARK J. M. Sungil(Neutron Science Division, Korea Atomic Energy Research Institute, Daejeon), BAE Jong-Seong, KIM Hyun Gyu(Korea Basic Science Institute, Pusan)

**P4-D185**

**$x\text{BaTiO}_3\text{-(1-x)[Li}_2\text{B}_4\text{O}_7\text{-ZnO]}$  유리를 이용한 나노세라믹의 구조 및 전기 특성** / 최현우, 김맥, 백창규, 양흥열, 김은아, 조종호(부산대), 임영훈(세명대), 양용석(부산대)

**P4-D186**

**비정질 유전체  $\text{NaNbO}_3\text{-SiO}_2$ 의 유전 특성** / 백창규, 김맥, 양용석(부산대)

**P4-D187\***

**Magnetic instability in  $(\text{La}_{0.2}\text{Sr}_{0.8})_2\text{RhO}_4$ : Studies of DMFT** / AHN Kyo-Hoon(Department of Applied Physics, Graduate School, Korea University, Sejong), KUNES J.(Institute of Physics, Academy of Sciences of the Czech republic, Cukrovarnick'a 10, Praha 6, 162 53, Czech Republic), LEE K.-W.(Department of Applied Physics, Graduate School, Korea University, Sejong)

**P4-D188\***

**Drude-Lorentz analysis of Ni-doped Ba-122** / LEE Seokbae, JUNG Eilho, ROH Seulki, PARK Sangheon(Department of physics, Sungkyunkwan University), CHOI Kiyoung(Department of physics, Seoul University), HWANG Jungseek(Department of physics, Sungkyunkwan University)



**P4-D189\***

**Coulomb interaction gap in Al-SiO<sub>2</sub>-Si:P** / KIM Jongmin, JO Yongcheol, WOO Hyeonseok, KIM Seonhoo, CHOI Jiman, KIM Inho, PARK Wooyoung, LEE Jongkyung, CHO Hansol, CHO Sangeun, HAN Jaeseok, IM Hyunsik, KIM Hyungsang(Dongguk University, Division of Physics and Semiconductor Science), LEE Donguk, KIM Eunkyuu(Hanyang University, Quantum-Function Research Laboratory and Department of Physics)

**P4-D190\***

**Electronic anisotropy in BaFe<sub>2</sub>As<sub>2</sub> family revealed by temperature dependent ARPES studies** / 고윤영, 서정진(연세대), 김용관(Advanced Light Source), 송동준(National Institute of Advanced Industrial Science and Technology), 경원식(연세대), 엄만진, 김준성(포항공대), 김창영(연세대)

**P4-D191\***

**Evidence of Two Dimensional Superconducting Fluctuation Ca<sub>1-x</sub>Na<sub>x</sub>(Pt<sub>3</sub>As<sub>8</sub>)[(Fe<sub>0.97</sub>Pt<sub>0.03</sub>)<sub>2</sub>As<sub>2</sub>]<sub>5</sub> Single Crystal** / SHIN soyeon, MIN Byeong Hun, CHO Hyunyong, KO Minjee, KWON Yong Seung(Daegu Gyeongbuk Institute of Science and Technology (DGIST), Department of Emerging Materials Science)

**P4-D192\***

**Superconducting parameters of Sn<sub>1-x</sub>In<sub>x</sub>Te singlecrystalline compounds** / KIIM Ka ryeong, RHYEE jong-soo(경희대)

**P4-D193**

**A Study Of Local Superconducting Properties Of SmBCO Coated Conductors** / RI Hyeong-Cheol, PARK Heeyeon, KIM Muyong, PARK Sangkook(Kyungpook National University, Physics), OH Sangsoo(Korea Electrotechnology Research Institute)

**P4-D194**

**Effects of Eu/Tb and Ce/Tb substitutions on the Structure and Magnetic Properties of RuSr<sub>2</sub>(Eu<sub>1.2</sub>Ce<sub>0.8</sub>)Cu<sub>2</sub>O<sub>7</sub>** / LEE H.K., KIM G.W.(강원대물리학과), KIM Y.I.(한국표준과학연구원)

**P4-D195**

**Analysis Of The Local Magnetic Field In YBCO Coated Conductors With Striation Using Low Temperature Scanning Hall Probe Microscopy** / RI Hyeong-Cheol, KIM Muyong, PARK Heeyeon, PARK Sangkook(Kyungpook National University, Department of Physics)

**P4-D196**

**Dependence of Transition Properties of the YBCO Superconductor on the Energy and the Irradiation Dose of the High-energy**



**Electron-beam** / LEE Sung Hoon(고려대), KIM Hye-Won, KIM Byungnam, LEE Byung Cheol(Korea Atomic Energy Research Institute), LEE Soon-Gul(고려대)

P4-D197

**Influence of Precursor Pre-processing on Superconducting Property of  $\text{MgB}_2$**  / SINHA B. B., 장세훈, 정국채(재료연구소, 나노기능분말연구실)

P4-D198

**The Non-Classical Rotational Inertia of Solid Helium-4 Contained in Rigid Double Pendulum Torsional Oscillator** / CHOI Jaewon, SHIN Jaeho, KIM Eunseong(Center for Supersolid and Quantum Matter Research, Department of Physics, Korea Advanced Institute of Science and Technology, 373-1 Guseong-dong, Yuseong-gu, Daejeon, Republic of Korea)

P4-D199

**Variation of the extended s-wave superconducting order parameter** / CHUNG Hyunhee, KIM Heesang, KIM Nammee(Soongsil university, Physics)

P4-D200

**Weak-coupling Effects in  $\text{Ba}_{0.6}\text{K}_{0.4}\text{Fe}_2\text{As}_2$  Inter-granular Nanobridge Junctions** / LEE Sung Hoon, HONG Sung-Hak(고려대), LEE Nam Hoon, KANG Won Nam(성균관대), LEE Soon-Gul(고려대)

P4-D201

**극히 높은 고전동수의 자기장하의 2종 초전도체의 교류자화율** / 이준호, 신민철(한국과학기술원 전기전자공학과)

P4-D202

**Evidence of dimensionality by the analysis of superconducting fluctuations above and below  $T_c$  in the single crystal  $\text{Ca}_{10}(\text{Pt}_{4-d}\text{As}_8)(\text{Fe}_{2-x}\text{Pt}_x\text{As}_2)_5$  superconductor** / DAWOOD Ahmad, SEO Y. L., CHOI W. J., KWON Yong Seung(Department of Emerging Materials Science, DGIST)

P4-D203

**Simultaneous Heat Capacity and Torsional Oscillator Measurements On Solid Helium-4** / KIM Sung A, SHIN Jaeho, KIM Eunsung(한국과학기술원, 물리학과)

P4-D204

**Simultaneous observation of torsional oscillator and shear modulus measurement and unusual shear modulus properties of ultra-pure helium-4** / SHIN Jae ho, CHOI Jaewon, KIM Eunseong(KAIST, Center for Supersolid & Quantum Matter Research and Department of Physics),





SHIRAHAMA Keiya(Keio University, Department of Physics)

P4-D205

**Superconducting properties of  $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$  thin films incorporated with  $\text{AlrO}_3$  (A= Sr, Ba) iridate nanoparticl** / 송중현, JEFFREY DE VERO, 황인웅, 김두리(충남대), 김진희, 장정원(KRISS), 이두표(POSTECH), ALVIN Carl Santiago, ROLAND V. Sarmago(National Institute of Physics, University of the Philippines, Diliman 1101, Philippines)

P4-D206

**Superconductivity studies on CaC6 with angle-resolved photoemission spectroscopy** / 김범서, 경원식, 김용관, 한가람, 임춘식, 김창영(연세대), 김영욱, 김준성(포항공대)



## SESSION P4

응용물리학과  
포스터 발표

2014년 4월 25일 금요일 11:00 - 12:45

장소: 포스터발표장

P4-E098

양극산화법을 이용한 지르칼로이 산화막의 나노구조 제어방법과 특성에 관한 연구 / 박양정, 조성오, 박지원, ALI Ghafar(한국과학기술원 원자력및양자공학과.)

P4-E099

**Organic-residue-free Selective Growth of Graphene on a Cu Foil /** 이상화, 주미연, 김진교(경희대학교, 물리학과.)

P4-E100

**Analog Resistive Switching Characteristics of Maghemite Nanoparticles /** SONG Woo Jin, BAEK Yoon-Jae<sup>1</sup>, ABBAS Yawar, YOON Tae-Sik<sup>1</sup>, CHOI Young Jin, KANG Chi Jung(Department of Physics, Myongji University, Gyeonggi-do 449-728, South Korea. <sup>1</sup>Department of Materials Science and Engineering, Myongji University, Gyeonggi-do 449-728, South Korea.)

P4-E101

**Magnetoresistance of multi-layer Molybdenum disulfide /** BAEK SEUNG JAE, PARK MIN, HONG SUNG JU<sup>1</sup>, KIM Kyungho<sup>1</sup>, KANG Hojin<sup>1</sup>, PARK Yung Woo<sup>1</sup>(Seoul National University, Department of Nanoscience and Technology. <sup>1</sup>Seoul National University, Department of Physics and Astronomy.)

P4-E102

**The effect of oxygen functional groups on the electrical transport behavior of a single piece multi-layered graphene oxide /** BAEK seungjae, HONG Won G.<sup>1</sup>, MIN Park, KAISER Alan B.<sup>2</sup>, KIM Hae Jin<sup>1</sup>, KIM Byung Hoon<sup>3</sup>, PARK Yung Woo(Seoul National University. <sup>1</sup>Korea Basic Science Institute. <sup>2</sup>Victoria University of Wellington. <sup>3</sup>Incheon National University.)

P4-E103

**Wurtzite ZnS:Mg Hierarchical Spheres with Tunable Blue-Green Emission /** LIU Chunli, 김덕현, 이보화(한국외국어대학교물리학과.)

P4-E104

**A Preliminary Study on Pb<sup>2+</sup> Ion as Site Probe in SrAl<sub>2</sub>O<sub>4</sub> phosphor /** JEONG Jung Hyun, WANG Lili, NOH Hyeon Mi, SHI Jinsheng<sup>1</sup>(Department of Physics, Pukyong National University. <sup>1</sup>Department of Chemistry and Pharmaceutical Science, Qingdao Agricultural University.)

P4-E105

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**Luminescent properties of novel perovskite  $\text{SrLaMgTaO}_6\text{:Sm}^{3+}$  phosphor for white light-emitting diodes** / JEONG Jung Hyun, GUO Yue, NOH Hyeon Mi, MOON Byung Kee(Department of Physics, Pukyong National University.)

**P4-E106**

**Structure and up-conversion photoluminescence of lanthanide-doped yttrium fluoride nanoparticles** / JEONG Jung Hyun, OH Ju Hyun, MOON Byung Kee, KIM Jung Hwan<sup>1</sup>(Department of Physics, Pukyong National University. <sup>1</sup>Department of Physics, Dong-eui University.)

**P4-E107**

**Preparation and luminescence property of blue emitting phosphor  $\text{CaAl}_2\text{Si}_2\text{O}_8\text{:Eu}^{2+}$**  / JEONG Jung Hyun, KWON Sook Hyun, MOON Byung Kee, CHOI Byung Chun(Department of Physics, Pukyong National University.)

**P4-E108**

**Effect of  $\text{Eu}^{3+}/\text{Tb}^{3+}$  concentration on the luminescence properties of  $\text{CaMoO}_4\text{:Eu}^{3+}/\text{Tb}^{3+}$  phosphor for white LEDs application** / JEONG Jung Hyun, KIM Eun Ock, MOON Byung Kee, CHOI Byung Chun(Department of Physics, Pukyong National University.)

**P4-E109**

**Spectral design for warm white LED color rendering in phosphors** / 양현경, 노현미<sup>1</sup>, 문병기<sup>1</sup>, 정중현<sup>1</sup>, 이상수<sup>2</sup>(부경대학교, LED 융합공학전공. <sup>1</sup>부경대학교, 물리학과. <sup>2</sup>신라대학교, 전자재료공학과.)

**P4-E110**

**Photoluminescence properties of  $\text{CaGd}_4\text{O}_7\text{:Eu}^{3+}$  phosphors prepared by solvothermal method** / JEONG Jung Hyun, SEO Yeon Woo, MOON Byung Kee, CHOI Byung Chun(Department of Physics, Pukyong National University.)

**P4-E111**

**Up-converted luminescence in Yb, Tm co-doped  $\text{Na}_3(\text{GdVO}_4)_2$  phosphors by high energy ball milling** / 양현경, 노현미<sup>1</sup>, 문병기<sup>1</sup>, 정중현<sup>1</sup>(부경대학교, LED융합공학전공. <sup>1</sup>부경대학교, 물리학과.)

**P4-E112**

**정자기장경사에서 확산계수측정을 위한 핵자기공명 장치** / 김창수, 이상갑(기초과학지원연구원, 물성과학연구부.)

**P4-E113**

**Toward A Gate Controllable Lateral Organic Spin Valve** / YOO Jung-



Woo, JO Junhyeon, JIN Mi-jin, PARK Jungmin, MODEPALL Vijayakumar(UNIST.)

P4-E114

**Study on Reactivity of Sulfur with Cu, Zn, and Sn using Co-Sputtered Cu(Zn,Sn) Precursor** / KIM Chan, HONG Sungwook<sup>1</sup>(Department of Physics, Kyungpook National University. <sup>1</sup>Division of Science Education, Daegu Univesity.)

P4-E115

**Effect of Oxygen Pressure on Properties of VO<sub>2</sub> Films Deposited by Pulsed Laser Deposition Method** / KIM Hyun-Tak, SLUSAR Tetiana, KIM Sung-Soo, CHO Jin-Cheol(ETRI MIT Creative Research Center.)

P4-E116

**Monoclinic to tetragonal phase transition in ion-irradiated ZrO<sub>2</sub> thin films: Structural and electronic structure study** / SHARMA Aditya, VARSHNEY Mayora, SHIN Hyun-Joon, KUMAR Yogesh, GAUTAM Sanjeev<sup>1</sup>, CHAE Keun Hwa<sup>1</sup>(Pohang Accelerator Laboratory, POSTECH. <sup>1</sup>Korea Institute of Science and Technology, Advanced Analysis Center.)

P4-E117

**금속 부품의 결함 판단을 위한 공진 주파수 분석 시스템 개발** / 강준희, 이충석, 박한영<sup>1</sup>(인천대학교, <sup>1</sup>에이아이시스템즈.)

P4-E120

**Photocatalytic Activity of Pt/TiO<sub>2</sub> nanorod prepared by Hydrothermal Method** / 한성홍, 윤종원, 김순옥, 권민철, 유대황(울산대학교, 물리학과.)

P4-E121

**성장시간에 따른 ZnO particle의 구조적, 광학적 특성** / 한성홍, 서덕민, 김순옥, 윤종원, 김도희, 권민철<sup>1</sup>, 유대황(울산대학교, 물리학과. <sup>1</sup>(주)유니벵.)

P4-E122

**Combined ZnO/SnO<sub>2</sub> double-layered resistive memory** / JUNG Ranju, CHOI Jinsung, SONG Hyuncheol, NAM Junkyu, KIM Yunki(Kwangwoon University.)

P4-E123

**VO<sub>2</sub>-based Metal-Insulator Transition Critical-Temperature Sensor** / JUNG Sun-Kyu, CHO Jin-Cheol, KIM Hyun-Tak(ETRI, MIT Creative research center.)

P4-E124

**Tunnel Diode Oscillator for AC Impedance Measurement** / 신정현(KAIST.)



## SESSION P4

반도체물리학과  
포스터 발표

2014년 4월 25일 금요일 11:00 - 12:45

장소: 포스터발표장

### P4-K040\*

**2D Nanosheet MoS<sub>2</sub>-based Device Applications: Photo Detectors An Memory Transistors** / IM Seongil, LEE Hee Sung(Yonsei University, Physics and Applied Physics.)

### P4-K041\*

**Simulation을 통한 단일 양자점 메사 구조의 집광효율 개선** / 진병문, DEVARAJ vasanthan, 정혁, 백종서, 장유동, 이동한(충남대학교 물리학과.)

### P4-K042

**The Formation of GaAs Nanowires by MOCVD on ZnO Thin Films** / 김명상, 황정우<sup>1</sup>, 박희경<sup>2</sup>, 허재영<sup>2</sup>, 지택수<sup>3</sup>, 신재철<sup>1</sup>(한국광기술원 광바이오센터, 전남대학교 전자컴퓨터공학과, <sup>1</sup>한국광기술원 광바이오센터, <sup>2</sup>전남대학교 신소재공학과, <sup>3</sup>전남대학교 전자컴퓨터공학과.)

### P4-K044\*

**GaN 캡층 두께 변화에 의한 InGaN/GaN 양자우물 구조의 광학적 특성** / 류미이, 변혜령, 김은영, 남정태<sup>1</sup>, 김근수<sup>1</sup>, 유영준<sup>2</sup>, 김진수<sup>3</sup>(강원대학교, 물리학과, <sup>1</sup>세종대학교, 물리학과, <sup>2</sup>전자통신연구원, 그라핀소재연구실, <sup>3</sup>전북대학교, 신소재공학부 정보소재공학전공.)

### P4-K045\*

**InGaN GaN green nanorod Light Emitting Diode with graphene as a current spreading electrode** / LEE Gun Hee, SEO Tae Hoon, PARK Ah Hyun, LEE Seul Be, SUH Eun-Kyung(School of semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University.)

### P4-K046

**CBD법 조건 변화에 따른 CdS 박막의 특성 연구** / 신현도, 엄영호(울산대학교 물리학과.)

### P4-K047

**Undoped and Eu-doped CaS 결정의 광학적 특성** / 최성후, 방태환, 서동주<sup>1</sup>(조선대학교 물리학과, <sup>2</sup>조선대학교 물리교육과.)

### P4-K048\*

**Structural and optical properties of CdS/CdSe core-shell quantum dots** / MAN Minh Tan, 이홍석(제주대학교, 물리학과.)

**P4-K049**

**Optical Properties of Sb-doped SnO<sub>2</sub> Thin Films Grown Using Cosputtering Deposition Method /** SO Hyeon Seob, PARK Jun Woo, JUNG Dae Ho, KO Kun Hee, LEE Hosun(Department of Applied Physics, Kyung Hee University.)

**P4-K050**

**Effect of High Temperature Annealing on the Crystallinities and Electrical Properties of Hydrogen Implanted Si Solar Cells /** 바스칼 파리다, 최재호, 임경호, 이재상<sup>1</sup>, 김근주(전북대학교 기계공학과, <sup>1</sup>Korea Atomic Energy Research Institute.)

**P4-K051**

**HWE법에 의해 성장된 MgGa<sub>2</sub>Se<sub>4</sub> 박막의 점결함 연구 /** 홍광준(조선대학교 물리학과.)

**P4-K052**

**Condition of high-quality growth for CuInSe<sub>2</sub> layers grown by hot wall epitaxy /** YOU Sangha, HONG Kwangjoon(Department of physics Chosun University.)

**P4-K053**

**Temperature dependence of mobility and photocurrent on CuInSe<sub>2</sub> layers /** HONG Kwangjoon(Department of physics, Chosun University.)

**P4-K054**

**플러렌이 분산된 절연성 고분자 박막 층 사이에 삽입된 Al<sub>2</sub>O<sub>3</sub>층이 미치는 유기 쌍안정성 소자의 전기적 특성 /** 류준정, 윤동열, 김태환(한양대학교.)

**P4-K055**

**Fabrication of Polycrystalline Cu-Alloyed FeS<sub>2</sub> Thin Films Using Chemical Spray Pyrolysis /** RANA Tanka Raj, KHADKA Dhruba B., KIM JunHo(Department of Physics, Incheon National University, 119 Academy-ro, Yeonsu-gu, Incheon, 406-772, Republic of Korea.)

**P4-K056**

**나노 와이어 직경이 실리콘 나노 와이어 전계 효과 트랜지스터의 전기적 특성에 미치는 영향 /** 정현수, 김태환(한양대학교 전자컴퓨터통신공학과.)

**P4-K057**

**절연층을 이용한 Charge Trap Flash 메모리의 전기적 특성 향상 /** 유주태, 김태환(한양대학교 전자컴퓨터통신공학과.)



**P4-K058**

**자기조립박막층에 의한 유기발광소자의 효율 향상 / 김민성(한양대학교, 전자 컴퓨터통신.)**

**P4-K059**

**Investigation of DC sputtered Mo on soda-lime glass for CIGS solar cells / AHN HEEJIN, UM youngho(university of ulsan, department of physics.)**

**P4-K060**

**대화소 고감도 가이거 모드 실리콘 광센서(SiPM)의 개발 / 이혜영, 전진아, 강명우, 이직, 박일홍(성균관대학교.)**

**P4-K061**

**Design and fabrication of a SiPM with high density / 전진아, 이혜영, 이직, 박일홍(성균관대학교, 기초과학연구소, '성균관대학교, 물리학과.)**

**P4-K062**

**HRXRD를 이용한 사파이어 제조공정의 잔류응력 및 결정성 분석 / 김창수, 전현구<sup>1</sup>, 정인영<sup>1</sup>, 정양수<sup>2</sup>(한국표준과학연구원, <sup>1</sup>한국표준과학연구원, 충남대학교, <sup>2</sup>충남대학교.)**

**P4-K063**

**Electrical properties of GaN non-volatile memory device including Au quantum dots and graphene / LEE Dong Uk, SO Joon Sub, QIU Dong Ri, OH GyuJin, LEE Kyoung Su, KIM Eun Kyu(Department of Physics and Quantum-Function Research Laboratory, Hanyang University, Seoul 133-791.)**

**P4-K064\***

**The inverter with few-layer MoS<sub>2</sub> and organic pentacene / KIM Dahye, DU Hyewon, KOO Hyungjun, KIM Taekwang, SHIN Somyeong(세종대학교 물리학과.)**

**P4-K065**

**Boundary and Surface on SnO<sub>2</sub> Thin Films Grown by different Oxygen Flow gas with atomic scale grain and its effect of SnO<sub>2</sub> thin films / JEONG Jin, SHIN Young Jin(Chosun University.)**

**P4-K066\***

**Sb 도핑에 따른 비정질 Ge-Se 박막의 소자특성 변화 연구 / JAE-MIN CHOI, SANG-YEOL SHIN<sup>1</sup>, HYUNG-WOO AHN, JUHEE SEO, BYUNG-KI CHEONG, SUYOUN LEE(Electronic Materials Research Center, Korea Institute of Science and Technology, <sup>1</sup>Department of Mater. Sci. & Eng., Korea Aerospace University.)**

**P4-K067\***

질소 또는 수소 열처리된  $\text{MoS}_2$ 의 금속 접합 특성 분석 / 김인호, 김종민, 박우영, 조용철, 한재석, 조상은, 우현석, PAWAR S. M., INAMDAR A. I., 이종경(동국대학교 반도체학과, \*동국대학교 물리학과.)

**P4-K068\***

무전해 Cu 도금박막 형성에 있어 Ni 박막이 미치는 영향 / 김나영, 백승덕, 임은숙, 이연승, 김형철, 나사균(한밭대학교, 정보통신공학과, \*한밭대학교, 재료공학과.)

**P4-K069**

Spin filtering in a magnetic barrier structure: in-plane spin orientation / KIM Namme, KIM Heesang(Department Physics, Soongsil University.)

**P4-K070**

태양전지 효율 증가를 태양전지의 후면 나노 공정 개발 / 서영성, 모윤진, 김성민, 김효진(한국광기술원 광바이오 연구센터.)

**P4-K071**

그래파이트 전극을 이용한 마찰전기 나노발전기 제작과 특성 분석 / 이수현, 고영환, 유재수(경희대학교 전자전파공학과.)

**P4-K072**

Non-destructive Patterning of Rubrene Thin-film Transistors via Electron Irradiation of Polystyrene Dielectrics / KIM Jaejoon, CHO Sungcho, PARK Jiwon(KAIST, Nuclear and Quantum Engineering Department.)

**P4-K073\***

단층  $\text{MoS}_2$  제작을 위한  $\text{MoS}_2$  박편의 열처리 변화에 따른 구조적 및 광학적 특성 연구 / 이경원, 김주환, 신동희, 김창오, 김성, 최석호(경희대 응용물리학과.)

**P4-K074\***

하이드라진 도핑에 의해 제작한 n형 그래핀 양자점의 구조적 및 광학적 특성 연구 / 신동희, 김성, 김창오, 김정길, 강수석, 이경원, 오시덕, 최석호(경희대 응용물리학과.)

**P4-K075\***

$\text{HNO}_3$  도핑농도에 따른 그래핀 전계 효과 트랜지스터의 전기적 특성 연구 / 김주환, 신동희, 이대훈, 김창오, 김성, 최석호(경희대 응용물리학과.)

**P4-K076\***

Effect of Different Processing on Positive Bias Stress-Induced Degradation in Amorphous InGaZnO Thin-Film Transistors / HONG





Jinpyo, KIM Taeyoon, KANG Taesung(Novel Functional Material and Devices Lab, Department of Physics, Hanyang University, Seoul, Korea.)

**P4-K077\***

**Optical and Electrical Properties in Ge doped ZnO Thin Films / 한성진, 김상욱, 김태준, 김현우, 김원정, 이명환<sup>1</sup>, 박진수<sup>1</sup>, 김다정<sup>1</sup>, 김명호<sup>1</sup>, 송태권<sup>1</sup>, 도달현<sup>2</sup>(창원대학교 물리학과. <sup>1</sup>창원대학교 신소재융합공학. <sup>2</sup>계명대학교 신소재공학과.)**

**P4-K078\***

**Anomalous Reduction Of The Switching Voltage Of Bi-Doped Ge<sub>0.5</sub>Se<sub>0.5</sub> Ovonic Threshold Switching (OTS) Deivces / SEO Juhee, SEO Juhee<sup>1</sup>, AHN Hyung-Woo<sup>2</sup>, CHOI Jae-Min, CHEONG Byung-ki, LEE Suyoun(Electronic Materials Research Center, Korea Institute of Science and Technology. <sup>1</sup>University of Science & Technology, Department of Nanomaterials Science and Engineering. <sup>2</sup>Department of Material Science and Engineering, Korea University.)**