

# 한국 물리학회 회보

2013. 04 제31권 제1호

2013년  
봄 학술논문발표회  
및 제89회 정기총회

대전컨벤션센터  
2013. 4. 24(수) ~ 26(금)

*The Korean Physical Society*

## 구두발표논문 시간표

**[AP1] 한국물리학회 KIAS 기초강연 I**

2013년 4월 24일 수요일 17:00 - 18:00

장소: 301호

좌장: 이 기 명 KIAS

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

**The Large Hadron Collider LHC: Entering a new era of fundamental science** / HEUER Rolf(Director General, CERN, European Organization for Nuclear Research, Geneva, Switzerland)

**[A1] KPS-인텔 특별세션**

2013년 4월 24일 수요일 15:00 - 16:45

장소: 206호

좌장: 윤 영 귀 중앙대

A1-01 [15:00-15:30]

**Intel® Xeon Phi™ Coprocessor Overview** / 나승주(APAC, Product marketing, Intel)

A1-02 [15:40-16:40]

**Programing for Parallel Computing** / 박준식(SSG, Intel)

**[A2] 여성세션**

2013년 4월 25일 목요일 11:30 - 13:30

장소: 107호

좌장: 윤 진 희 인하대

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

**여성위원회 활동사항 보고** / 서은경(전북대학교)

A2-02 [11:40-12:10]

**Human Resources for the Future : Role of Scientists** / 이공주복(이화 여자대학교)

A2-03 [12:10-12:40]

**응원 받지 못한 시도들** / 김시연(중앙대학교)

A2-04 [12:40-13:30]

**자유토론**

**[AP2] 한국물리학회 KIAS 기초강연 II**

2013년 4월 25일 목요일 13:00 - 14:00

장소: 301호

좌장: 고 도 경 광주과학기술원

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

**상대론 영역에서의 레이저 과학 연구** / 남창희(Center for Relativistic Laser

**[A3] Open KIAS 특강**

2013년 4월 25일 목요일 14:00 - 15:45

장소: 206호  
좌장: 고 병 원 KIAS

A3-01(초) [14:00-14:45]

**Weighing the Neutrino / KIM Chung Wook(KIAS)**

A3-02(초) [14:45-15:30]

**Theta\_13 and Neutrino Mass Hierarchy using Reactor Neutrinos / KIM Soo-Bong(Seoul National University)**

**[A4] 고교생 물리페스티벌 참가학생을 위한 강연**

2013년 4월 25일 목요일 16:00 - 17:00

장소: 206호  
좌장: 김 준 성 포스텍

A4-01(초) [16:00-17:00]

**새로운 그래핀을 위한 새로운 전자소자 / 정현중(건국대)**

**[A5] 정책세션 : 한국연구재단 기초과학연구 지원사업의 현황 및 전망**

2013년 4월 25일 목요일 15:15 - 16:45

장소: 301호  
좌장: 이 재 일 인하대

A5-01 [15:15-15:45]

**2013년도 기초연구사업 현황 / 김동호(한국연구재단 자연과학단장)**

A5-02 [15:45-16:15]

**기초과학지원연구비, 이대로 좋은가? / 이주열, 박성균(성균관대학교, '부산대학교)**

A5-03 [16:15-16:45]

**질의/응답**

**[A6] KIAS 대중강연**

2013년 4월 25일 목요일 18:00 - 20:00

장소: 103/104호  
좌장: 전 응 진 KIAS

A6-01(초) [18:00-19:00]

**빛, 상대성이론, 우주의 시작, 그리고 Multiverse / 이필진(고등과학원)**

A6-02(초) [19:00-20:00]

**파인만의 그림과 LHC 물리학 / 박성찬(성균관대)**

**SESSION B**

**입자물리학분과회**

**B**

**[BG1] 입자물리학분과회 General Session: Particle Physics Experiment : Bell, J-Parc etc**

2013년 4월 24일 수요일 11:00 - 12:00

장소: 108호  
좌장: 유 인 태 성균관대

BG-01 [11:00-11:10]

**A direct measurement of the total decay width of the top quark at CDF / 이현수(이화여자대학교)**

BG-02\* [11:10-11:20]

**Development of Low Temperature Detectors for Neutrinoless Double Beta Decay Search / 김용함, 김건보<sup>1</sup>, 윤원식, 이민규, 이주영, 이혜진, 장용식, 김선기<sup>2</sup>, 이주희<sup>2</sup>, 최선호<sup>2</sup>, 김홍주<sup>3</sup>, 김영덕<sup>4</sup>, KORNOUKHOV Vasily<sup>5</sup>, DANEVICH Fedor<sup>6</sup>, FLEISCHMANN Andreas<sup>7</sup>(한국표준과학연구원, '서울대학교, 한국표준과학연구원, '서울대학교, '경북대학교, '세종대학교, 'Institute for Theoretical and Experimental Physics, Russia, 'Institute for Nuclear Research, Ukraine, 'University of Heidelberg, Germany)**

BG-03 [11:20-11:30]

**Status of Belle II Calorimeter Trigger System / UNNO Yuji, 고영문, 김성현, 이인수, 천병구(한양대학교, 물리학과)**

BG-04 [11:30-11:40]

**Signal-to-Noise Ratio measurement of a Double-Sided Silicon-Strip Detector sensor for new g-2/EDM experiment at J-PARC / LEE Minju, MIBE Tsutomu<sup>1</sup>, UENO Kazuki<sup>1</sup>, NISHIMURA Shoichiro<sup>1</sup>, WON Eunil, SAITO Naohito<sup>1</sup>(Korea University, Department of physics, 'KEK, High Energy Accelerator Research Organization, Tsukuba, Ibaraki, Japan)**

BG-05 [11:40-11:50]

**Recent results on Hadronic B decays in Belle / 김정현(KISTI)**

BG-06 [11:50-12:00]

**Development of the metallic magnetic calorimeter for the double beta decay experiment / 윤원식, 이민규<sup>1</sup>, 김용함, 김건보<sup>1</sup>, 이혜진<sup>1</sup>, 이주영<sup>1</sup>(과학기술연합대학원대학교, '한국표준과학연구원)**

**[BG2] 입자물리학과회 General Session : Particle Physics  
Experiment : RENO and Neutrino Physics**

2013년 4월 24일 수요일 13:00 - 14:40

장소: 108호

좌장: 김 수 봉 서울대

**BG-07 [13:00-13:10]**

**Successful Production of Gd-loaded Liquid Scintillator and Its**

**Stability at RENO / 주경광, 김우영<sup>1</sup>, 세르게이 체바토로프<sup>1</sup>, 박명렬<sup>2</sup>, 최준호<sup>2</sup>,**

김상웅<sup>3</sup>, 안정근<sup>3</sup>, 박강순<sup>4</sup>, 장한일<sup>5</sup>, 김수봉<sup>6</sup>, 박정식<sup>6</sup>, 서선희<sup>6</sup>, 이순규<sup>6</sup>, 최선호<sup>6</sup>, 최원국<sup>6</sup>, 최지훈<sup>6</sup>, 김만회<sup>7</sup>, 유인태<sup>7</sup>, 이승현<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>8</sup>, 마경주<sup>8</sup>, 전은주<sup>8</sup>, 김바로<sup>9</sup>, 김재률<sup>9</sup>, 소선행<sup>9</sup>, 송숙형<sup>9</sup>, 신창동<sup>9</sup>, 여인성<sup>9</sup>, 임인택<sup>9</sup>, 장지승<sup>10</sup>, 김현수<sup>11</sup>, 김시연<sup>12</sup>(전남대, 물리학과. <sup>1</sup>경북대, 물리학과. <sup>2</sup>동신대. <sup>3</sup>부산대, 물리학과. <sup>4</sup>서경대. <sup>5</sup>서영대. <sup>6</sup>서울대, 물리천문학부. <sup>7</sup>성균관대, 물리학과. <sup>8</sup>세종대, 물리학과. <sup>9</sup>전남대, 물리교육학과. <sup>10</sup>광주과학기술원. <sup>11</sup>전북대, 물리학과. <sup>12</sup>중앙대, 물리학과)

**BG-08 [13:10-13:20]**

**Sterile Neutrinos and Reactor-Neutrino Oscillation / KIM Siyeon,**

KANG Sin-Kyu<sup>1</sup>, KIM Yeong-Duk<sup>2</sup>, KO Young-Ju(중앙대학교, 물리학과. <sup>1</sup>서울과학기술대학교, 기초교육학부. <sup>2</sup>세종대학교, 물리학과)

**BG-09 [13:20-13:30]**

**Simulation for background estimation for overground neutrino**

**detector / 전은주, 김남영, 김영덕, 김진유, 마경주, 박근하, 이재승, 이정연, 김홍주<sup>1</sup>, 주경광<sup>2</sup>, 송숙형<sup>3</sup>, 여인성<sup>2</sup>, 선광만<sup>4</sup>(세종대학교. <sup>1</sup>경북대학교. <sup>2</sup>전남대학교. <sup>3</sup>한국표준과학연구원)**

**BG-10 [13:30-13:40]**

**New energy calibration at RENO / 최준호, 박명렬, 김우영<sup>1</sup>, 세르게이 체**

**바토로프<sup>1</sup>, 박인곤<sup>2</sup>, 김상웅<sup>3</sup>, 안정근<sup>3</sup>, 박강순<sup>4</sup>, 장한일<sup>5</sup>, 김수봉<sup>6</sup>, 박정식<sup>6</sup>, 서선희<sup>6</sup>, 이순규<sup>6</sup>, 최선호<sup>6</sup>, 최원국<sup>6</sup>, 최지훈<sup>6</sup>, 김만회<sup>7</sup>, 유인태<sup>7</sup>, 이승현<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>8</sup>, 마경주<sup>8</sup>, 전은주<sup>8</sup>, 김바로<sup>9</sup>, 김재률<sup>9</sup>, 소선행<sup>9</sup>, 송숙형<sup>9</sup>, 신창동<sup>9</sup>, 여인성<sup>9</sup>, 임인택<sup>9</sup>, 장지승<sup>10</sup>, 주경광<sup>9</sup>, 김현수<sup>10</sup>, 김시연<sup>11</sup>(동신대학교. <sup>1</sup>경북대학교. <sup>2</sup>경상대학교. <sup>3</sup>부산대학교. <sup>4</sup>서경대학교. <sup>5</sup>서영대학교. <sup>6</sup>서울대학교. <sup>7</sup>성균관대학교. <sup>8</sup>세종대학교. <sup>9</sup>전남대학교. <sup>10</sup>전북대학교. <sup>11</sup>중앙대학교)**

**BG-11 [13:40-13:50]**

**RENO-50 for a future reactor neutrino experiment / 김우영, 세르게이**

**체바토로프, 박인곤<sup>1</sup>, 박명렬<sup>2</sup>, 최준호<sup>2</sup>, 김상웅<sup>3</sup>, 안정근<sup>3</sup>, 박강순<sup>4</sup>, 장한일<sup>5</sup>, 김수봉<sup>6</sup>, 박정식<sup>6</sup>, 서선희<sup>6</sup>, 이순규<sup>6</sup>, 최선호<sup>6</sup>, 최원국<sup>6</sup>, 최지훈<sup>6</sup>, 김만회<sup>7</sup>, 유인태<sup>7</sup>, 이승현<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>8</sup>, 마경주<sup>8</sup>, 전은주<sup>8</sup>, 김바로<sup>9</sup>, 김재률<sup>9</sup>, 소선행<sup>9</sup>, 송숙형<sup>9</sup>, 신창동<sup>9</sup>, 여인성<sup>9</sup>, 임인택<sup>9</sup>, 장지승<sup>10</sup>, 주경광<sup>9</sup>, 김현수<sup>10</sup>, 김시연<sup>11</sup>(경북대학교. <sup>1</sup>경상대학교. <sup>2</sup>동신대학교. <sup>3</sup>부산대학교. <sup>4</sup>서경대학교. <sup>5</sup>서영대학교. <sup>6</sup>서울대학교. <sup>7</sup>성균관대학교. <sup>8</sup>세종대학교. <sup>9</sup>전남대학교. <sup>10</sup>전북대학교. <sup>11</sup>중앙대학교)**

**BG-12\* [13:50-14:00]**

**Removal of Cf contamination and PMT flasher at RENO / 김수봉,**

김우영<sup>1</sup>, 체바토로프 세르게이<sup>1</sup>, 박인곤<sup>2</sup>, 박명렬<sup>3</sup>, 최준호<sup>3</sup>, 김상웅<sup>4</sup>, 안정근<sup>4</sup>, 박강순<sup>5</sup>, 장한일<sup>5</sup>, 박정식<sup>6</sup>, 서선희<sup>6</sup>, 이순규<sup>6</sup>, 최선호<sup>6</sup>, 최원국<sup>6</sup>, 최지훈<sup>6</sup>, 김만회<sup>7</sup>, 유인태<sup>7</sup>, 이승현<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>8</sup>, 마경주<sup>8</sup>, 전은주<sup>8</sup>, 김바로<sup>9</sup>, 김재률<sup>9</sup>, 소선행<sup>9</sup>, 송숙형<sup>9</sup>, 신창동<sup>9</sup>, 여인성<sup>9</sup>, 임인택<sup>9</sup>, 장지승<sup>10</sup>, 주경광<sup>9</sup>, 김현수<sup>10</sup>, 김시연<sup>11</sup>(서울대학교. <sup>1</sup>경북대학교. <sup>2</sup>경상대학교. <sup>3</sup>동신대학교. <sup>4</sup>부산대학교. <sup>5</sup>서경대학교. <sup>6</sup>서영대학교. <sup>7</sup>성균관대학교. <sup>8</sup>세종대학교. <sup>9</sup>전남대학교. <sup>10</sup>전북대학교. <sup>11</sup>중앙대학교)

**BG-13 [14:00-14:10]**

**Prototype detector construction for hanaro neutrino measurements /**

김영덕, 김진유, 김홍주<sup>1</sup>, 마경주, 박강순, 선광만<sup>2</sup>, 소선행<sup>3</sup>, 송숙형<sup>3</sup>, 여인성<sup>3</sup>, 이재승, 이정연, 이주영<sup>4</sup>, 전은주, 주경광<sup>5</sup>(세종대학교, 물리학과. <sup>1</sup>경북대학교, 물리학과. <sup>2</sup>서경대학교, 교양과정부. <sup>3</sup>원자력연구원. <sup>4</sup>전남대학교, 물리학과)

**BG-14 [14:10-14:20]**

**Pulse Shape Discrimination Studies for Liquid Scintillator / 김영덕,**

김진유, 김홍주<sup>1</sup>, 마경주, 선광만<sup>2</sup>, 소선행<sup>3</sup>, 송숙형<sup>3</sup>, 여인성<sup>3</sup>, 이재승, 이정연, 이주영<sup>4</sup>, 전은주, 주경광<sup>5</sup>(세종대학교, 물리학과. <sup>1</sup>경북대학교, 물리학과. <sup>2</sup>원자력연구원. <sup>3</sup>전남대학교, 물리학과. <sup>4</sup>서경대학교, 교양과정부)

**BG-15 [14:20-14:30]**

**Measurement of quenching and channeling effects in CsI crystals**

**for WIMP search / LEE J. H., KIM B. H., KIM G. B., BHANG H. C., CHOI J. H.,**

KIM J. H., LI J., LEE J. K., KIM K. W., KIM S. C., CHOI S., KIM S. K., OLSEN S. L., MYUNG S. S., KANG W. G., KIM Y. D.<sup>1</sup>, KIM H. J.<sup>2</sup>, SO J. H.<sup>2</sup>, HAHN I. S.<sup>3</sup>, LEE H. S.<sup>3</sup>, LI J.<sup>4</sup>, YUE Q.<sup>4</sup>, LI Y. J.<sup>4</sup>, LI X. R.<sup>5</sup>(Seoul National University, Department of Physics and Astronomy. <sup>1</sup>Sejong University, Department of Physics. <sup>2</sup>Kyungpook National University, Department of Physics. <sup>3</sup>Ewha Womans University, Department of Physics. <sup>4</sup>Tsinghua University. <sup>5</sup>IHEP)

**BG-16 [14:30-14:40]**

**Annual Modulation Study Of Dark Matter Using CsI(Tl) Crystals**

**In The KIMS Experiment / CHOI J.H., KIM B.H., KIM G.B., BHANG H.C.,**

KIM J.H., LEE J.H., LI J., LEE J.K., KIM K.W., KIM S.C., CHOI S., OLSEN S.L., MYUNG S.S., KANG W.G., KIM Y.D.<sup>1</sup>, KIM H.J.<sup>2</sup>, SO J.H.<sup>2</sup>, LEE H.S.<sup>3</sup>, HAHN I.S.<sup>3</sup>, LI J.<sup>4</sup>, YUE Q.<sup>4</sup>, LI Y.J.<sup>4</sup>, LI X.R.<sup>5</sup>(Seoul National University. <sup>1</sup>Sejong University. <sup>2</sup>Kyungpook National University. <sup>3</sup>Ewha Womans University. <sup>4</sup>Tsinghua University. <sup>5</sup>IHEP)

**[BP1] 입자물리학과회 Pioneering Symposium : Neutrino Physics  
(JPS-KPS joint session)**

2013년 4월 24일 수요일 15:00 - 16:40

장소: 108호

좌장: 천 병 구 숭실대

**BP-01 [15:00-15:25]**

**Neutrino oscillation experiments with the accelerator neutrino**

beam in Japan / NAKAYA Tsuyoshi(Kyoto University)

BP-02 [15:25-15:50]

**A Precise Measurement of Neutrino Mixing Angle  $\theta_{13}$  at RENO** / KIM Soo-Bong(Seoul National University)

BP-03 [15:50-16:15]

**Recent status of neutrino oscillation phenomenology** / YASUDA Osamu(Tokyo Metropolitan University)

BP-04 [16:15-16:40]

**Neutrino models at the LHC** / CHUN Eung Jin(Korea Institute for Advanced Study)

**[BP2] 입자물리학회 Pioneer Symposium : The Frontier of Particle Physics**

2013년 4월 25일 목요일 09:00 - 10:40

장소: 108호

후원 : WCU 고에너지충돌물리연구사업단

좌장: 김 동 희 경북대

BP-05 [09:00-09:25]

**Higgs boson search with the CMS detector : results from the 7 and 8 TeV runs at the LHC** / CAMPORESI Tiziano(CERN(유럽입자물리연구소))

BP-06 [09:25-09:50]

**Physics Highlights from CMS** / LANDSBERG Greg(Brown University)

BP-07 [09:50-10:15]

**The CMS detector upgrade in phase 0, 1 and 2** / BALL Austin(CERN(유럽입자물리연구소))

BP-08 [10:15-10:40]

**Status of the BELLE-II Experiment** / IWASAKI Yoshihito(KEK)

**[BP3] 입자물리학회 Pioneer Symposium : The Frontier of Particle Physics**

2013년 4월 25일 목요일 11:00 - 12:40

장소: 108호

후원 : WCU 고에너지충돌물리연구사업단

좌장: 김 동 희 경북대

BP-09 [11:00-11:25]

**Beyond the Standard Model Physics Perspectives (no SUSY)** / KIM Hyung Do(Seoul National University, Department of Physics and Astronomy)

BP-10 [11:25-11:50]

**Prospects for SUSY at the LHC** / 이(LEE) 재식(Jae Sik)(전남대학교, 물리학과)

BP-11 [11:50-12:15]

**Theoretical Basis of Higgs Spin and Parity Measurements at the LHC** / CHOI Seong Youl(Chonbuk National University)

BP-12 [12:15-12:40]

**Prospects on Flavor Physics in the era of LHC** / KO Pyungwon(KIAS)

**[BG3] 입자물리학회 General Session : String & Fields**

2013년 4월 25일 목요일 14:00 - 15:20

장소: 108호

좌장: 남 순 건 경희대

BG-17 [14:00-14:10]

**Noether currents and Virasoro algebra for new massive gravity** / 이상현, 김원태, KULKARNI shailesh(CQeST, 서강대학교)

BG-18 [14:10-14:20]

**Fermions in hyperscaling violation geometry** / SEO YUNSEOK, SIN SANG-JIN, KIM BOM-SOO<sup>1</sup>(Hanyang University, <sup>1</sup>Tel Aviv University)

BG-19 [14:20-14:30]

**Hawking-Page phase transition in BTZ black hole revisited** / 윤명석, 김원태, 이상현(서강대학교)

BG-20 [14:30-14:40]

**Non-spherical Collapse in AdS and Early Thermalization in RHIC** / 신상진, 오은석(한양대)

BG-21 [14:40-14:50]

**Fate of false vortices:** LEE Wonwoo, LEE Bum-Hoon<sup>1</sup>, MACKENZIE Richard<sup>2</sup>, PARANJAP M. B.<sup>2</sup>, YAJNIK U. A.<sup>3</sup>, YEOM Dong-han<sup>4</sup>(양자시공간연구센터 (CQeST), 서강대학교, <sup>1</sup>양자시공간연구센터 (CQeST), 서강대학교 물리학과, <sup>2</sup>Groupe de Physique des Particules, Universite de Montreal, Canada, <sup>3</sup>Department of Physics, Indian Institute of Technology Bombay, India, <sup>4</sup>양자시공간연구센터 (CQeST), 서강대학교)

BG-22 [14:50-15:00]

**Abelian Projections of the Mass-deformed ABJM theory and Weakly Curved Dual Geometry** / KIM Yoonbai, KWON O-Kab<sup>1</sup>, TOLLA D.D., HYUN Young-Hwan(Sungkyunkwan University, <sup>1</sup>Ewha University)

BG-23 [15:00-15:10]

**Holographic entanglement entropy of confining gauge theories with matter** / 김낙우(경희대학교 물리학과)

BG-24\* [15:10-15:20]

**U-geometry : SL(5)** / 박정혁, 서윤지(서강대학교, 물리학과)

**[BG4] 입자물리학과회 General Session : AMS & etc**

2013년 4월 25일 목요일 15:30 - 16:50

장소: 108호

좌장: 손 동 철 경북대

**BG-25** [15:30-15:40]

**dE/dx and Charge Determination by the AMS02 Tracker** / SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Gi, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

**BG-26** [15:40-15:50]

**Overview of the AMS Detector and Status of Data Taking at the International Space Station** / SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Gi, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

**BG-27** [15:50-16:00]

**AMS-02 : Physics Motivations and Aspects** / SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Ki, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

**BG-28** [16:00-16:10]

**A precision measurement of the positron fraction in primary cosmic rays in the energy range 0.5-350 GeV by the AMS experiment** / SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Gi, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

**BG-29** [16:10-16:20]

**Performance of the AMS02 Transition Radiation Detector:** SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Gi, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

**BG-30** [16:20-16:30]

**Performance of the AMS02 Tracker:** SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Gi, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

**BG-31** [16:30-16:40]

**Performance of the AMS02 Electromagnetic Calorimeter:** SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Gi, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

**BG-32** [16:40-16:50]

**Study of Electron to Proton Likelihood Functions at a Few Hundred GeV from AMS Data in the Space** / SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Gi, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

**[BG5] 입자물리학과회 General Session : Particle Physics Phenomenology and Lattice Field Theory**

2013년 4월 26일 금요일 09:00 - 10:30

장소: 108호

좌장: 김 낙 우 경희대

**BG-33** [09:00-09:10]

**Gaugino masses from gravitino at one loop** / 이재용(고려대학교, 물리학과)

**BG-34** [09:10-09:20]

**Using the Higgs boson to probe the Littlest Higgs Model** / 송정현, 이강영, 심소영, CHEUNG Kingman(건국대학교, 물리학과. <sup>1</sup>경상대학교, 물리교육학과)

**BG-35\*** [09:20-09:30]

**Non-Gaussianity from Non-minimal Coupling : a Hybrid Model** / 김진수, 김윤배, 박성찬(성균관대학교, 물리학과)

**BG-36** [09:30-09:40]

**Self Energy Analysis for Staggered Fermions using Non-Perturbative Renormalization Method** / KIM Jangho, LEE Weonjong(Seoul National University)

**BG-37** [09:40-09:50]

**Dark Matter Asymmetry In Supersymmetric Dirac Leptogenesis** / CHOI Ki-Young, CHUN Eung Jin<sup>1</sup>, SHIN Chang Sub(아시아 태평양 이론물리 센터 (APCTP). <sup>1</sup>고등과학원 (KIAS))

**BG-38** [09:50-10:00]

**Higgs Mixing And Diphoton Rate Enhancement In NMSSM Models** / KWANG SIK Jeong, SANG HUI Im<sup>1</sup>, KIWOON Choi<sup>2</sup>, MASAHIRO



Yamaguchi(Tohoku University. <sup>1</sup>Seoul National University. <sup>2</sup>KAIST)

BG-39 [10:00-10:10]

**BSM corrections to indirect CP violation in neutral kaons in  $N_f = 2+1$  QCD** / BAE Taegil, JANG Yong-Chull<sup>1</sup>, JEONG Hwancheol<sup>1</sup>, JUNG Chulwoo<sup>2</sup>, KIM Hyung-Jin<sup>2</sup>, KIM Jangho<sup>1</sup>, KIM Jongjeong<sup>1</sup>, KIM Kwangwoo<sup>1</sup>, KIM Sunghee<sup>1</sup>, LEE Weonjong<sup>1</sup>, SHARPE Stephen R.<sup>3</sup>, YOON Boram<sup>1</sup>(Korea Institute of Science and Technology Information. <sup>1</sup>Department of Physics and Astronomy, Seoul National University. <sup>2</sup>Physics Department, Brookhaven National Laboratory. <sup>3</sup>Physics Department, University of Washington)

BG-40 [10:20-10:30]

**Search a very heavy bottom-like  $B' \rightarrow tW$  with multilepton final state** / CHOI Young-Kyu, CHOI Young-Il, CHO Yong-Jin(Sungkyunkwan University)

[BG6] 입자물리학과회 General Session : Particle Physics Experiment

2013년 4월 26일 금요일 11:00 - 12:30

장소: 108호

좌장: 최 수 용 고려대

BG-41 [11:00-11:10]

**Background Study for Doubly Charged Higgs Search with 8TeV center-of-mass energy at CMS** / 최영일, 이성은, 이종석, 최수용(성균관대학교 물리학과. <sup>1</sup>고려대학교 물리학과)

BG-42 [11:10-11:20]

**Fake Rates Study of RPC Muon in CMS experiment** / KWON Eunhyang, KIM Minsuk, YU Intae, GOH Junghwan, SEO Jiwoong(성균관대학교 물리학과)

BG-43 [11:20-11:30]

**W boson transverse momentum differential cross section measurement with 8 TeV CMS data** / 이상은, 손동철, 김귀년, BUTANOV Khakimjan, YUSUPOV Hammid, 박상일(경북대학교)

BG-44 [11:30-11:40]

**Search for a New Charged Gauge Boson Using Leptonic Decay in pp Collisions at a Centre-of-mass energy of 8 TeV** / LEE Jungeun, YANG Yuchul, OH Youngdo, KIM DongHee, HOEPFNER Kerstin<sup>1</sup>, ERDWEG Soren<sup>1</sup>, HEBBEKER Thomas<sup>1</sup>, KNUTZEN Simon<sup>1</sup>, MILLET Philipp<sup>1</sup>, OLSCHESKI Mark<sup>1</sup>, PADEKEN Klaas<sup>1</sup>(WCU Collider Physics Research Kyungpook National University. <sup>1</sup>RWTH Aachen University)

BG-45 [11:40-11:50]

**Search for Supersymmetry with the trilepton and missing energy final state at the CMS** / KIM Zero, KIM Jae Yool, LIM Intaek, LEE Junsu,

OH Geonhee, SONG Sanghyeon(Institute for Universe and Elementary Particles, Chonnam National University)

BG-46 [11:50-12:00]

**A search for low-mass dark matter WIMPS with the KIMS experiment** / LEE, H.S., HAHN, I.S., KIM, B.H.<sup>1</sup>, KIM, G.B.<sup>1</sup>, BHANG, H.C.<sup>1</sup>, CHOI, J.H.<sup>1</sup>, KIM, J.H.<sup>1</sup>, LEE, J.H.<sup>1</sup>, LI, J.<sup>1</sup>, LEE, J.K.<sup>1</sup>, KIM, K.W.<sup>1</sup>, KIM, S.C.<sup>1</sup>, CHOI, S.H.<sup>1</sup>, KIM, S.K.<sup>1</sup>, OLSEN, S.L.<sup>1</sup>, MYUNG, S.S.<sup>1</sup>, KANG, W.G.<sup>2</sup>, KIM, Y.D.<sup>2</sup>, KIM, H.J.<sup>3</sup>, SO, J.H.<sup>3</sup>, LI, J.<sup>4</sup>, YUE, Q.<sup>4</sup>, LI, Y.J.<sup>4</sup>, LI, X.R.<sup>5</sup>(Ewha Womans University <sup>1</sup>Seoul National University. <sup>2</sup>Sejong University. <sup>3</sup>Kyungpook National University. <sup>4</sup>Tsinghua University. <sup>5</sup>IHEP)

BG-47 [12:00-12:10]

**Measurements of  $B \rightarrow D\bar{D}s^0$  decay rates and search for isospin partner of the  $Ds^0$**  / CHOI Sookyung, OLSEN Stephen L.<sup>1</sup>(Gyeongsang. <sup>1</sup>Seoul)

BG-48 [12:10-12:20]

**The Secondary Particles at Belle II Simulation** / KIM Doris(숭실대학교)

BG-49\* [12:20-12:30]

**분쇄 조건에 따른 Y-type 육방정 페라이트의 고주파수 특성 연구** / BUTANOV Khakimjan, YUSUPOV Hammid, PARK Sangil, LEE SangEun, SON Dongchul, KIM Guinyun(The Center for High Energy Physics, Kyungpook National University)

[BG7] 고에너지물리학회 총회

2013년 4월 26일 금요일 13:00 - 14:45

장소: 108호

좌장: 손 동 철 경북대



## SESSION C

### 원자핵물리학분과회

#### [CG1] 원자핵물리학분과회 General Session

2013년 4월 24일 수요일 11:00 - 12:45

장소: 206호

좌장: 하 장 호 원자력연

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

**Developing Portable Fast Ionization Chamber** / CHAE Kyungyuk, GWAK M.S., CHA S.M., JO S.W.(Physics Department, Sungkyunkwan University)

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

**A Preliminary Evaluation of  $^{136}\text{Cs}$  Nuclear Structure/Decay Data** / 이종화, 길충섭, 이영욱(한국원자력연구원)

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

**Minipad silicon sensor for the PHENIX MPC-EX detector** / KWON Y., SUE D.G., KIM E.J.<sup>1</sup>, LEE J.H.<sup>2</sup>, PARK J.M.<sup>2</sup>, PARK K.S.<sup>2</sup>, HAHN K.I.<sup>3</sup>, HAN S.Y.<sup>3</sup>, KIM Y.K.<sup>3</sup>, JOO K.S.<sup>5</sup>, JEON S.J.<sup>5</sup>, MOON H.J.<sup>5</sup>, LIM K.S.<sup>5</sup>, HONG H.S.<sup>4</sup>, PARK H.M.<sup>5</sup>, KIM D.S.<sup>5</sup>, CHAI J.S.<sup>6</sup>(Yonsei Univ. <sup>1</sup>Chonbuk National Univ. <sup>2</sup>ETRI. <sup>3</sup>Ewha Womans Univ. <sup>4</sup>Hanyang Univ., RISP. <sup>5</sup>Myongji Univ. <sup>6</sup>Sungkyunkwan Univ.)

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

**Test of Prototype Minipad Sensors for The PHENIX MPC-EX Detector** / HAN S.Y., HAHN K.I., KIM E.J.<sup>1</sup>, LEE J.H.<sup>2</sup>, PARK K.S.<sup>2</sup>, PARK J.M.<sup>2</sup>, KIM Y.K.<sup>3</sup>, JOO K.S.<sup>4</sup>, JEON S.J.<sup>4</sup>, MOON H.J.<sup>4</sup>, LIM K.S.<sup>4</sup>, HONG H.S.<sup>4</sup>, PARK H.M.<sup>4</sup>, KIM D.S.<sup>4</sup>, CHAE J.S.<sup>5</sup>, KWON Y.<sup>6</sup>, SUE D.G.<sup>6</sup>(Ewha Womans University. <sup>1</sup>Chonbuk National University. <sup>2</sup>ETRI. <sup>3</sup>Hanyang University, RISP. <sup>4</sup>Myongji University. <sup>5</sup>Sungkyunkwan University. <sup>6</sup>Yonsei University)

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

**Measurement of  $(\gamma, n)$  and  $(n, 2n)$  reaction cross-section of  $^{232}\text{Th}$  using the neutron activation technique and neutron shielding calculation** / NAIK H., SURAYANARAYANA S.V.<sup>1</sup>, ZAMAN M.<sup>2</sup>, KIM K.S.<sup>2</sup>, GOSWAMI A., KIM G.N.<sup>2</sup>(Radiochemistry Division, Bhabha Atomic Research Centre, Mumbai - 400 085, India. <sup>1</sup>Nuclear Physics Division, Bhabha Atomic Research Centre, Mumbai - 400 085, India. <sup>2</sup>Kyungpook National University)

CG-06 [12:15-12:30]

**A study of photoneutron source based on electron accelerator including heat transfer using the jet impingement cooling method** / TATARI Mansoureh, RANJBAR Abbas Hoseini, KIM Guinyun<sup>1</sup>(Faculty of Physics, Shahid Bahonar University of Kerman, Kerman, 7616914111, Iran. <sup>1</sup>Department of Physics, Kyungpook National

University, Daegu, Korea)

CG-07 [12:30-12:45]

**Measurement of excitation functions in proton induced reactions on  $^{181}\text{Hf}$  with in energy range 3 MeV to 45 MeV** / SHAHID MUHAMMAD, KIM Kwangsoo, KIM Guinyun(Kyungpook National University)

#### [CG2] 원자핵물리학분과회 General Session

2013년 4월 24일 수요일 11:00 - 12:45

장소: 209호

좌장: 현 창 호 대구대

CG-08(초) [11:00-11:30]

**Nuclear electric dipole moment of three-body systems** / 송영호, LAZAUSKAS Rimantas<sup>1</sup>, GUDKOV Vladimir<sup>2</sup>(기초과학연구원 가속기추진사업단 이론연구부, University of South Carolina. <sup>1</sup>IPHC, IN2P3-CNRS/Universit'e Louis Pasteur BP 28, France. <sup>2</sup>University of South Carolina, USA)

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

**The Born series for S-wave quartet nd scattering at small cutoff values** / ANDO Shung-Ichi(Daegu University, Department of Physics Education)

CG-10 [11:45-12:00]

**Quenching of the axial-vector coupling constant in nuclear matter** / PARK Tae-Sun(Sungkyunkwan University, Dept. of Physics)

CG-11 [12:00-12:15]

**Shear viscosity of quark matter at finite temperature in the external magnetic field** / 남승일(고등과학원)

CG-12 [12:15-12:30]

**Equation of state for neutron stars in the relativistic Hartree-Fock calculation** / MIYATSU Tsuyoshi, CHEOUN Myung-Ki, KIM Kyungsik<sup>1</sup>(Songsil University. <sup>1</sup>Korea Aerospace university)

CG-13 [12:30-12:45]

**Nuclear Equation of State and Neutron Star Cooling** / LIM Yeunhwan, HYUN Chang Ho, PARK Tae-Sun<sup>1</sup>, LEE Chang-Hwan<sup>2</sup>(대구대학교 물리교육과. <sup>1</sup>성균관대학교 물리학과. <sup>2</sup>부산대학교 물리학과)

**[CG3] 원자핵물리학회 General Session**

2013년 4월 24일 수요일 13:00 - 14:45

장소: 206호

좌장: 안 정 근 부산대

CG-14 [13:00-13:15]

**Development of Hyperon Time-Projection-Chamber(HypTPC) for J-PARC E42** / HWANG Sanghoon, IMAI K., FOR THE J-PARC E42 COLLABORATION<sup>1</sup>, 안정근<sup>2</sup>(Japan Atomic Energy Agency, Advanced Science Research Center. <sup>1</sup>J-PARC. <sup>2</sup>부산대학교, 물리학과)

CG-15 [13:15-13:30]

**Development of the Time Projection Chamber for the H-Dibaryon Search (E42) at J-PARC** / 이효상, 안정근(부산대학교, 물리학과), for the E42 collaboration

CG-16 [13:30-13:45]

**Development of the Hyperon Spectrometer with Time Projection Chamber at J-PARC** / NI Andrey, 안정근, IMAI Kenichi<sup>1</sup>, SAKO Hiroyuki<sup>1</sup>(Pusan National University. <sup>1</sup>JAEA)

CG-17 [13:45-14:00]

**Photo-neutron production in high-Z targets and Measurement of photo-neutron spectrum at Pohang Neutron Facility** / ZAMAN Muhammad, KIM Guinyun(Kyungpook National University)

CG-18 [14:00-14:15]

**Independent Isomeric Yield Ratio of  $^{143}\text{Sm}$  from  $^{nat}\text{Sm}(\gamma, xn)$  reaction at end-point bremsstrahlung energies of 40, 50 and 60 MeV** / TATARI M., YANG S. C.<sup>1</sup>, NAIK H.<sup>2</sup>, KIM G. N.<sup>1</sup>(Faculty of Physics, Shahid Bahonar University of Kerman, Kerman-7616914111, Iran. <sup>1</sup>Department of Physics, Kyungpook National University, Daegu 702-701, Republic of Korea. <sup>2</sup>Radiochemistry Division, Bhabha Atomic Research Centre, Mumbai - 400 085, India)

CG-19 [14:15-14:30]

**Design Of Prototype Minipad Sensors For The PHENIX MPC-EX Detector** / KIM E.J., LEE J.H.<sup>1</sup>, PARK J.M.<sup>1</sup>, PARK K.S.<sup>1</sup>, HAHN K.I.<sup>2</sup>, HAN S.Y.<sup>2</sup>, KIM Y.K.<sup>3</sup>, JOO K.S.<sup>4</sup>, JEON S.J.<sup>4</sup>, MOON H.J.<sup>4</sup>, LIM K.S.<sup>4</sup>, HONG H.S.<sup>4</sup>, PARK H.M.<sup>4</sup>, KIM D.S.<sup>4</sup>, CHAI J.S.<sup>5</sup>, KWON Y.<sup>6</sup>, SUE D.G.<sup>6</sup>(Chonbuk National University. <sup>1</sup>ETRI. <sup>2</sup>Ewha Womans University. <sup>3</sup>Hanyang University, RISP. <sup>4</sup>Myongji University. <sup>5</sup>Sungkyunkwan University. <sup>6</sup>Yonsei University)

CG-20 [14:30-14:45]

**Fabrication of prototype minipad sensors for the PHENIX MPC-EX detector** / LIM K.S., JEON S.J., MOON H.J., HONG H.S., PARK H.M.,

KIM D.S., JOO K.S., KIM E.J.<sup>1</sup>, LEE J.H.<sup>2</sup>, PARK S.Y.<sup>2</sup>, PARK J.M.<sup>2</sup>, HAHN K.I.<sup>3</sup>, HAN S.Y.<sup>3</sup>, KIM Y.K.<sup>4</sup>, CHAI J.S.<sup>5</sup>, KWON Y.<sup>6</sup>, SUE D.G.<sup>6</sup>(Myongji University. <sup>1</sup>Chonbuk National University. <sup>2</sup>ETRI. <sup>3</sup>Ewha Womans University. <sup>4</sup>Hanyang University, RISP. <sup>5</sup>Sungkyunkwan University. <sup>6</sup>Yonsei University)

**[CG4] 원자핵물리학회 General Session**

2013년 4월 24일 수요일 13:00 - 14:45

장소: 209호

좌장: 천 명 기 숭실대

CG-21 [13:00-13:15]

**Ambiguity of Final state interaction for neutral-current neutrino-nucleus scattering in quasielastic region** / KIM Kyungsik(Korea Aerospace University)

CG-22 [13:15-13:30]

**Asymmetry in the neutrino and anti-neutrino reactions in anuclear medium** / CHOI Kiseok, CHEOUN Myung-Ki, KIM Kyungsik<sup>1</sup>(Soongsil University. <sup>1</sup>Korea Aerospace University)

CG-23 [13:30-13:45]

**Missing Strength In The Nuclear Quasielastic Electron Scattering / 권영신, 김경식, 천명기, 소운영**(숭실대학교 물리학과. <sup>1</sup>한국항공대학교 교양학부. <sup>2</sup>강원대학교 방사선학과)

CG-24 [13:45-14:00]

**Ab Initio No Core Shell Model For A=8 And 9** / SHIN Ik Jae, KIM Youngman, YI Deokhyun<sup>1</sup>, FORSSEN Christian<sup>2</sup>, ROTUREAU Jimmy<sup>2</sup>, MARIS Pieter<sup>3</sup>, VARY James<sup>3</sup>(Institute for Basic Science. <sup>1</sup>Institute for Basic Science/POSTECH. <sup>2</sup>Chalmers University. <sup>3</sup>Iowa State University)

CG-25 [14:00-14:15]

**Beta-decay half-lives of very neutron-rich isotopes** / CHEOUN Myung-Ki, HA Eunja(Soongsil University)

CG-26 [14:15-14:30]

**Mass dependent constraints on a long-lived negatively charged massive particle through effects on big bang nucleosynthesis** / KUSAKABE Motohiko, KIM Kyungsik(Korea Aerospace University)

CG-27 [14:30-14:45]

**Fusion of super heavy elements (Z=116 and 118) from Fe+Th and Ni+Th reactions** / KIM Kyungil, NASIROV Avazbek<sup>1</sup>, KIM Youngman(Institute for Basic Science, Daejeon. <sup>1</sup>Bogoliubov Laboratory of Theoretical Physics, JINR, Dubna, Russia)

**[CP1] 원자핵물리학회 Pioneer Symposium : The Third Generation of RIB Facilities**

2013년 4월 24일 수요일 15:00 - 16:45

장소: 209호

후원 : 기초과학연구원 중이온가속기구축사업단 좌장: 한 인 식 이화여대

CP-01(초) [15:00-15:35]

**Importance of the Tensor Forces in Nuclear Structure** / TANIHATA Isao(RCNP, Osaka University, Japan)

CP-02(초) [15:35-16:10]

**Nuclear Science Opportunity by Using RAON Experimental Systems** / KIM Yong-Kyun(Rare Isotope Science Project, Institute for Basic Science)

CP-03(초) [16:10-16:45]

**Science at the Facility for Rare Isotope Beams** / SMITH Michael(Oak Ridge National Laboratory, USA)

**[CP2] 원자핵물리학회 Pioneer Symposium : The Third Generation of RIB Facilities**

2013년 4월 25일 목요일 09:00 - 10:35

장소: 209호

후원 : 기초과학연구원 중이온가속기구축사업단 좌장: 이 창 환 부산대

CP-04(초) [9:00-9:30]

**First Observation of the  $2^-$  State in  $^{16}\text{C}$  via One-Neutron Knockout Reaction** / SATOU Yoshiteru(Seoul National University, R364n collaboration)

CP-05(초) [9:30-10:05]

**Recent Progress and Perspectives at RIKEN RI Beam Factory** / UESAKA Tomohiro(Recent Progress and Perspectives at RIKEN RI Beam Factory)

CP-06(초) [10:05-10:35]

**Equations of state of nuclear matter by Rare Isotope Accelerator** / CHEOUN Myung-Ki, KIM K.S.<sup>1</sup>, SO W.Y.<sup>2</sup>(Soongsil. <sup>1</sup>KAU. <sup>2</sup>Kangwon)

**[CP3] 원자핵물리학회 Pioneer Symposium : The Third Generation of RIB Facilities**

2013년 4월 25일 목요일 11:00 - 12:40

장소: 209호

후원 : 기초과학연구원 중이온가속기구축사업단 좌장: 한 인 식 이화여대

CP-07(초) [11:00-11:35]

**High precision mass measurements and related activities at IMP /**

HUANG Wenxue(Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou 730000, China)

CP-08(초) [11:35-12:05]

**A Gas Jet Target for Astrophysically Important Nuclear Reaction Studies using Radioactive Ion Beams** / CHAE Kyungyuk, GWAK M. S., CHA S. M., JO S. W., LEE C. S.<sup>1</sup>, MOON J.Y.<sup>1</sup>, LEE P.S.<sup>1</sup>, KIM J.W.<sup>1</sup>, LEE I.M.<sup>1</sup>, MOON C.B.<sup>2</sup>, KWON Y.K.<sup>3</sup>, KIM Y.K.<sup>3</sup>, KIM G.D.<sup>3</sup>, KIM J.Y.<sup>3</sup>(Physics Department, Sungkyunkwan University. <sup>1</sup>Physics Department, Chung-Ang University. <sup>2</sup>Hoseo University. <sup>3</sup>RISP, Institute for Basic Science)

CP-09(초) [12:05-12:40]

**Nuclear astrophysics and structure studies using low-energy RI beams** / YAMAGUCHI Hidetoshi(CNS, University of Tokyo, Japan)

**[CG5] 원자핵물리학회 General Session**

2013년 4월 25일 목요일 14:00 - 15:30

장소: 209호

좌장: 이 강 석 전남대

CG-28(초) [14:00-14:30]

**Transport in High Temperature QCD Plasmas** / 홍주희, TEANEY Derek<sup>1</sup>, CHESLER Paul<sup>2</sup>(국가 핵융합연구소, <sup>1</sup>SUNY at Stony Brook. <sup>2</sup>MIT)

CG-29 [14:30-14:45]

**DDsigma coupling constant** / 김현철(인하대학교)

CG-30 [14:45-15:00]

**The Study on the Early Stage of Heavy Ion Collision** / 신기량(안동대학교 물리학과)

CG-31 [15:00-15:15]

**Contribution from resonance decays to the hadron ratios and pT spectra** / CHOI Suk, LEE Kang Seog<sup>1</sup>(Chonnam Nationla University 산학협력단. <sup>1</sup>Chonnam Nationla University, Department of Physics)

CG-32 [15:15-15:30]

**Variation in the hadron abundances during the hadronic stage of heavy ion collisions** / CHO Sungtae, LEE Su Hounng(Yonsei University)

**원자핵물리학과총회**

2013년 4월 25일 목요일 15:30 - 15:45

장소: 209호

좌장: 유 병 길 항공대

**[CG6] 원자핵물리학과회 General Session**

2013년 4월 25일 목요일 16:00 - 17:00

장소: 209호

좌장: 최 선 호 서울대

CG-33 [16:00-16:15]

**The Strong Three-body Weak Interaction Contribution in the Nonmesonic Weak Decay of p-Shell L Hypernuclei** / BHANG Hyoung C.(서울대학교 기초과학연구원)

CG-34 [16:15-16:30]

**Hadronic Structure of the Lambda(1405)** / 안정근(부산대학교, 물리학과)

CG-35 [16:30-16:45]

**Electroproduction of Lambda(1520)** / 남승일(고등과학원)

CG-36 [16:45-17:00]

**Phi meson photoproduction with coupled-channel effects** / 류휘영, 김현철<sup>1</sup>, HOSAKA Atsushi<sup>2</sup>, TITOV Alexander<sup>3</sup>(한국과학기술정보연구원. <sup>1</sup>인하대학교, <sup>2</sup>RCNP, Osaka University. <sup>3</sup>JINR, Russia)

**[CG7] 원자핵물리학과회 General Session**

2013년 4월 26일 금요일 09:00 - 10:45

장소: 209호

좌장: 김 영 만 RISP

CG-37 [09:00-09:15]

**$\omega$ -Nucleon Interaction and Nucleon Mass in Dense Baryonic Matter** / LEE Hyun Kyu, PAENG Won-Gi, RHO Mannque<sup>1</sup>, SASAKI Chihiro<sup>2</sup>(Department of Physics, Hanyang University, Korea. <sup>1</sup>Department of Physics, Hanyang University, Korea and Institute de Physique Theorique, CEA Saclay, F-91191, Gif-sur Yvette, France. <sup>2</sup>Frankfurt Institute for Advanced Studies, D-60438 Frankfurt am Main, Germany)

CG-38 [09:15-09:30]

**Analysis of the nucleon structure in a pi-rho-omega meson model** / 정주현, 김현철, 약시브 울룩백(인하대학교)

CG-39\* [09:35-09:45]

**Meson Mass Spectra In Various Backgrounds of Holographic QCD models:** 신민재, 이창환, 김영만(부산대학교 물리학과, <sup>1</sup>기초과학연구원)

CG-40\* [09:45-10:00]

**The Energy-Momentum Tensor Form-Factors of the Pion within the Non-local chiral quark model** / 손현동, 김현철(인하대학교, 물리학과)

CG-41\* [10:00-10:15]

**The stability of tetraquark with two heavy antidiquark** / 박우성(연세대학교 물리학과 대학원)

CG-42\* [10:15-10:30]

**Chiral Effective Lagrangian From The Instanton Vacuum And The Low-Energy Constants** / 정지혜, 김현철(인하대학교)

CG-43\* [10:30-10:45]

**Nuclear Symmetry Energy from QCD Sum Rules** / 정기상, 이수형(연세대학교 물리학과)

**[CG8] 원자핵물리학과회 General Session**

2013년 4월 26일 금요일 11:00 - 12:45

장소: 209호

좌장: 유 인 권 부산대

CG-44 [11:00-11:15]

**Development of a scintillation-fiber detector for dose verification in proton therapy** / 이경세, 이수현, 홍병식, MULILO Benard, 박성근(고려대학교 물리학과)

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

**Status of PHENIX RPCs at Run 13** / 김충, 주은아, 홍병식, FORWARD UPGRADE GROUP<sup>1</sup>(고려대학교, <sup>1</sup>Brookhaven National Laboratory)

CG-46 [11:30-11:45]

**First pPb Run at LHC and Data Taking by CMS** / 이기수, 김현철, 이송교, 조미희, 홍병식, 이경세, 박성근, 오건희<sup>1</sup>, 김재률<sup>1</sup>(고려대학교, <sup>1</sup>전남대학교)

CG-47\* [11:45-12:00]

**Measurement of Phi p Scattering Length from Phi Photoproduction Near Threshold** / 류선영, 안정근<sup>1</sup>, NAKANO Takashi<sup>2</sup>(오사카대학, RCNP / 부산대학교, 물리학과. <sup>1</sup>부산대학교, 물리학과. <sup>2</sup>오사카대학, RCNP.), FOR the LEPS Collaboration

CG-48\* [12:00-12:15]

**Development of Aerogel Cherenkov Counters for the Double-Lambda Hypernuclear Production Experiment (E07) at J-PARC** / 이재기, 안정근, NAKAZAWA Kazuma<sup>1</sup>, IMAI Kenich<sup>2</sup>, WATABE Toyoki<sup>3</sup>,

TANIDA Kiyoshi<sup>4</sup>, TAKAHASHI Hitoshi<sup>5</sup>, TAKAHASHI Toshiyuki<sup>5</sup>, 황상훈<sup>2</sup>,  
KIUCHI Ryuta<sup>4</sup>, 이재용<sup>4</sup>(Pusan National University. <sup>1</sup>Gifu University. <sup>2</sup>JAEA.  
<sup>3</sup>Nagoya University. <sup>4</sup>Seoul National University. <sup>5</sup>KEK)

CG-49\* [12:15-12:30]

**Study of the multi-nucleon transfer reactions of  $^{136}\text{Xe}+^{198}\text{Pt}$  for producing exotic heavy nuclei** / KIM Y. H., WATANABE Y. X.<sup>1</sup>, HIRAYAMA Y.<sup>1</sup>, IMAI N.<sup>1</sup>, ISHIYAMA H.<sup>1</sup>, JEONG S. C.<sup>1</sup>, MIYATAKE H.<sup>1</sup>, OYAIU M.<sup>1</sup>, CLEMENT E.<sup>2</sup>, DE FRANCE G.<sup>2</sup>, NAVIN A.<sup>2</sup>, REJMUND M.<sup>2</sup>, SCHMITT C.<sup>2</sup>, POLLAROLO G.<sup>3</sup>, CORRADI L.<sup>4</sup>, FIORETTO E.<sup>4</sup>, MONTANARI D.<sup>5</sup>, CHOI S., SONG J., NIKURA M.<sup>6</sup>, SUZUKI D.<sup>6</sup>, NISHIBATA H.<sup>7</sup>, TAKATSU J.<sup>7</sup>(Seoul National University, Department of Physics and Astronomy. <sup>1</sup>High Energy Accelerator Research Organization (KEK), IPNS. <sup>2</sup>Grand Accelérateur National d'Ions Lourds. <sup>3</sup>Università di Torino and INFN, Department of Physics. <sup>4</sup>INFN, Laboratori Nazionali di Legnaro. <sup>5</sup>Università di Padova, Department of Physics. <sup>6</sup>Institute de Physique Nucleaire. <sup>7</sup>Osaka University, Department of Physics)

CG-50\* [12:30-12:45]

**Measurement of efficiency using the TnP method in 2013 pPb collisions at CMS** / 김재률, 김재호, 박령균, 송상현, 오건희, 이준수, 임인택, 홍나리, 김현철, 이기수<sup>1</sup>, 이승교<sup>1</sup>, 조미희<sup>1</sup>, 홍병식<sup>1</sup>, 문동호<sup>2</sup>(Chonnam National University. <sup>1</sup>Korea University. <sup>2</sup>University of Illinois at Chicago)

## SESSION D

응집물질물리학분과회

응집물질물리학분과회 운영위원회

2013년 4월 24일 수요일 12:30 - 13:00

장소: 101호

[DP1] 응집물질물리학분과회 Pioneering Symposium : 강상관계,  
Novel Physics on 4d&5d Correlated Electron Material

2013년 4월 24일 수요일 13:00 - 14:45

장소: 202호

좌장: 노 한 진 전남대

DP-01 [13:00-13:30]

**From p-Wave Superconductors to Relativistic-Mott Insulators via Spin-Orbit Interaction in Solids** / DAMASCELLI Andrea(Department of Physics & Astronomy & Quantum Matter Institute, University of British Columbia, Vancouver, British Columbia V6T 1Z1, Canada)

DP-02 [13:30-13:55]

**$J_{\text{eff}} = 1/2$  Physics of Ir-oxides: from Topological Insulator to Quantum Magnets** / YU Jaejun, KIM Heung Sik<sup>1</sup>, KIM Choong H.<sup>2</sup>, JEONG Hokyun, JIN Hosub(Seoul National University. <sup>1</sup>KAIST. <sup>2</sup>Cornell University)

DP-03 [13:55-14:20]

**Tuning Electronic Structures via Epitaxial Strain in  $\text{Sr}_2\text{IrO}_4$  Thin Films** / SEO Sung Seok (Ambrose)(Department of Physics and Astronomy, University of Kentucky, Lexington, KY 40506, USA)

DP-04 [14:20-14:45]

**Spectroscopic investigation on the electronic structure of  $\text{Na}_2\text{IrO}_3$**  / MOON Soonjae(Hanyang University, Department of Physics)

[DP2] 응집물질물리학분과회 Pioneering Symposium : 강상관계,  
Novel Physics on 4d&5d Correlated Electron Material

2013년 4월 24일 수요일 15:00 - 16:45

장소: 202호

좌장: 전 건 상 이화여대

DP-05 [15:00-15:30]

**Spin-Charge-Orbital Instabilities in 5d Transition-Metal Chalcogenides with Small or Negative Charge-Transfer Energy** / MIZOKAWA Takashi(Department of Complexity Science and Engineering, University of Tokyo, Chiba 277-8561, Japan)

DP-06 [15:30-15:55]

**Rashba Spin-Orbit Coupling And Orbital Chirality In Magnetic**

**Bilayers** / PARK Jin-Hong, KIM Choong H.<sup>1</sup>, LEE Hyun-Woo<sup>2</sup>, HAN Jung Hoon(Department of Physics, Sungkyunkwan University. <sup>1</sup>Cornell University. <sup>2</sup>Department of Physics, Pohang University of Science and Technology)

**DP-07** [15:55-16:20]

**Role of d orbitals in the Rashba-type spin splitting for noble-metal surfaces** / CHOI Hyoung Joon(Department of Physics, Yonsei University, Seoul, Korea)

**DP-08** [16:20-16:45]

**Quantum oscillations of a metallic triangular-lattice antiferromagnet, PdCrO<sub>2</sub>** / KIM Jun Sung, OK Jong Mok, JO Y. J.<sup>1</sup>, KIM K, SHISHIDOU T.<sup>2</sup>, CHOI E. S.<sup>3</sup>, NOH Han-Jin<sup>4</sup>, OGUCHI T.<sup>5</sup>, MIN B.I.(Department of Physics, POSTECH. <sup>1</sup>Department of Physics, Kyungpook National University. <sup>2</sup>ADSM, Hiroshima University. <sup>3</sup>National High Magnetic Field Laboratory. <sup>4</sup>Department of Physics, Chonnam National University. <sup>5</sup>ISIR, Osaka University)

**[DG1] 응집물질물리학분과회 General Session : 계산과학**

2013년 4월 24일 수요일 13:00 - 14:30

장소: 101호

좌장: 신영한 울산대

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

**Mobile fluoride acceptor anions on graphene surfaces** / 박노정, 신동빈<sup>1</sup>, 한상수<sup>2</sup>, 이호식<sup>3</sup>(울산과학기술대학교, 나노화학. <sup>1</sup>울산과학기술대학교, 물리학과. <sup>2</sup>한국표준과학연구원. <sup>3</sup>울산과학기술대학교)

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

**Non-Equilibrium Molecular Dynamics Simulation of the Lattice Thermal Conductivity of Graphene** / PARK Min-Kyu, LEE Sun-Chul<sup>1</sup>, KIM Yong-Sung(Korea Research Institute of Standards and Science; University of Science and Technology. <sup>1</sup>Korea Research Institute of Standards and Science)

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

**Oxygen- and Fluorine-Driven Unzipping of Carbon Nanotubes: First-Principles Study** / LEE Hyung-June, 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)

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

**Interplay between Structural and Electronic Properties of Layered MS<sub>2</sub> (M=Ti, Zr, Hf, Cr, Mo, W) Structures and Their Application** / KANG Seoung-Hun, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

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

**First-Principle Study on the Adsorption and Diffusion Properties of Li on Carbon Nanofoam Structure** / PARK Hanjin, PARK Sora, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

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

**Density functional calculations for the local bonding effect on the Mg acceptor level in nitride ternary alloys** / PARK Ji-Sang, CHANG Kee Joo(KAIST, 물리학과)

**[DG2] 응집물질물리학분과회 General Session : 계산과학**

2013년 4월 24일 수요일 15:00 - 16:30

장소: 101호

좌장: 김용성 표준원

**DG-07** [15:00-15:15]

**Effect of pressure on the transport property of telluride alloys superlattices** / TRAN VAN quang, KIM Miyoung<sup>1</sup>(Department of Physics, Ajou University. <sup>1</sup>Department of Nano Physics, Sookmyung Women's University)

**DG-08** [15:15-15:30]

**Stacking effect of piezoelectric flurographane layers** / 김혜정, 신영한(울산대학교, 물리학과)

**DG-09** [15:30-15:45]

**First-principles study on the antiferromagnetic exchange coupling among dopant electrons in Si nanowires** / MOON Chang-Youn, MIN Byoung-Chul<sup>1</sup>, LEE Jung Hoon<sup>1</sup>, CHANG Joonyeon<sup>1</sup>, CHOI Hyoung Joon<sup>2</sup>(KRISS. <sup>1</sup>KIST. <sup>2</sup>Yonsei University)

**DG-10** [15:45-16:00]

**Structural and magnetic properties of the Co atoms embedded in zigzag-shaped graphene nanoribbons** / LEE Alex Taekyung, CHANG Kee Joo(Department of Physics, Korean Advanced Institute of Science and Technology, Daejeon 305-701, Korea)

**DG-11** [16:00-16:15]

**Electronic structure and the  $j_{\text{eff}}=1/2$  effective Hamiltonian of A<sub>2</sub>IrO<sub>3</sub> (A=Na, Li)** / KIM Heung-Sik, YU Jaejun<sup>1</sup>(Department of Physics and astronomy, Seoul National University, Seoul, 151-747, Korea, Department of Physics, Korean Advanced Institute of Science and Technology, Daejeon 305-701, Korea. <sup>1</sup>Department of Physics and astronomy, Seoul National University, Seoul, 151-747, Korea)



DG-63 [16:15-16:30]

**Effect of dimensionality on the conductance fluctuation behavior in hydrogenated graphene systems** / CHOE Duk-Hyun, CHANG Kee Joo(Department of Physics, Korea Advanced Institute of Science and Technology, Daejeon, Korea)

[DF1] 응집물질물리학회 Focus Session : 자성체, 스핀트로닉스 최근 연구 동향

2013년 4월 24일 수요일 13:00 - 14:45

장소: 102호

좌장: 이 현 우 POSTECH

DF-01 [13:00-13:26]

**Spin Transistor : A Step Toward Semiconductor Spintronic Device** / PARK Byong-Guk(Material Science and Engineering, KAIST)

DF-02 [13:26-13:52]

**Nano-patterning of complex structures by low-energy proton irradiation** / KIM Sanghoon, LEE Soogil, KO Jungho, SON Jangyup, KIM Minseok, HONG Jongill(Materials Science and Engineering, Yonsei University, Seoul 120-749, Korea)

DF-03 [13:52-14:18]

**Magnetization dynamics induced by spin-orbit spin transfer torque** / 이경진, 이현우<sup>1</sup>, 김경환<sup>2</sup>, 류지수<sup>3</sup>, 서수만, 이서원, STILES Mark<sup>2</sup>, HANEY Paul<sup>2</sup>(고려대, 신소재공학과. <sup>1</sup>포항공대, 물리학과. <sup>2</sup>CNST, NIST, USA)

DF-04 [14:18-14:44]

**Chameleon processor : non-volatile reprogrammable logic device** / JOO Sungjung, KIM Taeyueb, SHIN Sang Hoon<sup>1</sup>, LIM Ju Young<sup>1</sup>, HONG Jinki, SONG Jin Dong<sup>2</sup>, CHANG Joonyeon<sup>3</sup>, LEE Hyun-Woo<sup>4</sup>, RHIE Kungwon, HAN Suk Hee<sup>3</sup>, SHIN Kyung-Ho<sup>3</sup>, JOHNSON Mark<sup>5</sup>(Department of Display and Semiconductor Physics, Korea University, Sejong 339-700, South Korea. <sup>1</sup>Nano Photonics Research Center, KIST, Seoul 130-650, South Korea. <sup>2</sup>Nano Photonics Research Center, KIST, Seoul 130-650, South Korea. <sup>3</sup>Spin Convergence Research Center, KIST, Seoul 130-650, South Korea. <sup>4</sup>Department of Physics, Pohang University of Science and Technology, Pohang 790-784, South Korea. <sup>5</sup>Naval Research Laboratory, Washington DC 20375, USA)

[DF2] 응집물질물리학회 Focus Session : 나노/중시계, 칩(Chip)에 서의 양자물리: 회로 양자 전기 동역학

2013년 4월 24일 수요일 15:00 - 16:45

장소: 102호

좌장: 강 기 천 전남대

DF-05 [15:00-15:26]

**Some Strange Behaviors Of Photons In A Bounded Space** /

CHOUGH Young-tak(광주대학교 광통신, 보건 의료공학과)

DF-06 [15:26-15:52]

**Superconducting Circuits for Quantum Computation and Beyond** / NATION PAUL(고려대학교, 물리학과)

DF-07 [15:52-16:18]

**Quantum Information Processing in Microwave Circuit QED** / MOON Kyungsun(Dept. of Physics, Yonsei University)

DF-08 [16:18-16:44]

**Characterization of a Josephson junction Qubit coupled to superconducting microwave resonator** / CHO Sung Un, BAE Myung-Ho, KIM Nam(Korea Research Institute of Standards and Science, Daejeon 305-340, Republic of Korea)

[EP1] 응집물질물리학회/응용물리학회 공동 **Pioneering Symposium : Emerging Phenomena in Oxide Nanostructures**

2013년 4월 24일 수요일 13:00 - 14:45

장소: 103호

좌장: 박 배 호 건국대

EP-01[13:00-13:25]

**Intriguing Phenomena of Oxide Thin Films Investigated by Scanning Probe Microscopy** / YANG Sang Mo(Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science, and Department of Physics & Astronomy, Seoul National University)

EP-02 [13:25-13:50]

**Coupled Metal-Insulator and Ferroic Transitions** / KIM Yunseok(School of Advanced Materials Science and Engineering, Sungkyunkwan University)

EP-03 [13:50-14:15]

**Self-assembled Electronic Nose Based on Air-bridge-structured Junction Nanowire Arrays** / BAIK J. M., PARK W. J., KIM M. H.<sup>1</sup>, KOO B. H.<sup>2</sup>, LEE J.-L.<sup>2</sup>(Ulsan National Institute of Science and Technology (UNIST). <sup>1</sup>Ewha Womans University. <sup>2</sup>Pohang University of Science and Technology (POSTECH))

EP-04 [14:15-14:40]

**Emerging Oxide Nanowires : Creation Concept and Their Promises for Novel Nanoscale Devices** / YANAGIDA Takeshi, KAWAI Tomoji, PARK Bae Ho<sup>1</sup>(ISIR-Sanken, Osaka University, JAPAN. <sup>1</sup>Department of Physics, Konkuk University)



**[EP2] 응집물질물리학분과회/응용물리학분과회 공동 Pioneering Symposium : Emerging Phenomena in Oxide Nanostructures**

2013년 4월 24일 수요일 15:00 - 16:45

장소: 103호

좌장: 황 윤 회 부산대

**EP-05** [15:00-15:25]

**Carrier doping and external field control of phase transition in epitaxial VO<sub>2</sub> thin films** / SHIBUYA Keisuke(Correlated Electronics Group, National Institute of Advanced Industrial Science and Technology (AIST), JAPAN)

**EP-06** [15:25-15:50]

**Polar interfaces of superlattice thin films investigated by the second harmonic generation** / LEE J. S.(Department of Physics and Photon Science, GIST)

**EP-07** [15:50-16:15]

**Carrier density modulation at LaAlO<sub>3</sub>/SrTiO<sub>3</sub> (001) interface** / BARK C.W., HAN J.Y.(Gachon University, Electrical Engineering)

**EP-08** [16:15-16:40]

**Emergent Quantum Phenomena in SrTiO<sub>3</sub> Heterostructures** / KIM M., BELL C.<sup>1</sup>, HIKITA Y.<sup>1</sup>, HWANG H. Y.<sup>2</sup>(Department of Physics & Astronomy and Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science, Seoul National University & Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA. <sup>1</sup>Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA. <sup>2</sup>Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA & Geballe Laboratory for Advanced Materials, Department of Applied Physics, Stanford University, USA)

**[DF3] 응집물질물리학분과회 Focus Session : 강상관계, 다강체 연구 동향**

2013년 4월 25일 목요일 09:00 - 10:45

장소: 202호

좌장: 박 순 용 중앙대

**DF-09** [09:00-09:30]

**Giant Tunability of Ferroelectric Polarization in Multiferroic GdMnO<sub>5</sub>** / CHOI Young Jai, LEE Nara, VECCHINI Carlo<sup>1</sup>, CHAPON L. C.<sup>2</sup>, BOMBARDI A.<sup>1</sup>, RAEDAELLI P. G.<sup>3</sup>, CHEONG Sang-Wook<sup>4</sup>(Yonsei University. <sup>1</sup>Diamond Light Source Ltd, UK. <sup>2</sup>ISIS Facility, Rutherford Appleton Laboratory, UK. <sup>3</sup>University of Oxford. <sup>4</sup>Rutgers University)

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

**Long Range Order Beyond Vortices In h-REMnO<sub>3</sub>** / CHAE Seung Chul, LEE Nara<sup>1</sup>, HORIBE Yoichi<sup>2</sup>, CHEONG Sang-Wook<sup>3</sup>(Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science, and

Department of Physics & Astronomy, Seoul National University. <sup>1</sup>Department of Physics, Yonsei University. <sup>2</sup>Department of Physics and Astronomy, Rutgers University)

**DF-11** [09:45-10:15]

**Neutron scattering studies of single crystal bismuth ferrite** / SEONGSU Lee(KAERI)

**DF-12** [10:15-10:30]

**Development and Applications of a Single Crystal Neutron Diffractometer based on a Large Area, Curved Position-Sensitive Detector** / LEE Chang-Hee, NODA Yukio<sup>1</sup>, KIM Shin-Ae, MOON Myungkook, ISHIKAWA Yoshihisa<sup>2</sup>, KIMURA Hiroyuki<sup>1</sup>, WATANABE Masashi<sup>1</sup>(NSD, KAERI. <sup>1</sup>IMRAM, Tohoku University. <sup>2</sup>IMSS, KEK)

**DF-13** [10:30-10:45]

**Synchrotron radiation-based far-infrared Mueller matrix spectroscopic ellipsometry for magnetoelectric effect** / KANG Tae Dong, STANISLAVCHUK T. N.<sup>1</sup>, STANDARD E. C.<sup>1</sup>, BASISTYY R.<sup>1</sup>, CARR G. L.<sup>2</sup>, KOTELYANSKII M.<sup>3</sup>, SIRENKO A. A.<sup>1</sup>(Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science, and Department of Physics & Astronomy, Seoul National University. <sup>1</sup>Department of Physics, New Jersey Institute of Technology, Newark, New Jersey, USA. <sup>2</sup>National Synchrotron Light Source, Brookhaven National Laboratory, Upton, New York, USA. <sup>3</sup>Rudolph Technologies Inc., Flanders, New Jersey, USA)

**[DF4] 응집물질물리학분과회 Focus Session : 강상관계, 다강체 연구 동향**

2013년 4월 25일 목요일 11:00 - 12:45

장소: 202호

좌장: 양 찬 호 KAIST

**DF-14** [11:00-11:30]

**Reliable polarization switching of BiFeO<sub>3</sub>** / BAEK Seung-Hyub(Korea Institute of Science and Technology)

**DF-15\*** [11:30-11:45]

**Anisotropic photocurrent enhancement at the mixed phase boundary in BiFeO<sub>3</sub> thin films** / CHU Kanghyun, WOO Chang-Su, KIM Seung Jin, LIM Ji Soo, JI HO Sung<sup>1</sup>, SHIN Yoon Ah<sup>2</sup>, SONG Kyung<sup>2</sup>, LEE Eui-Sup<sup>3</sup>, KIM Yong-Hyun<sup>3</sup>, JO Moon-Ho<sup>4</sup>, OH Sang Ho<sup>2</sup>, YANG Chan-Ho(Department of Physics, KAIST. <sup>1</sup>Division of Advanced Materials Science, POSTECH. <sup>2</sup>Department of Materials Science Engineering, POSTECH. <sup>3</sup>Graduate School of Nanoscience and Technology (WCU), KAIST. <sup>4</sup>Department of Materials Science and Engineering, Yonsei University)

**DF-16** [11:45-12:15]

**2-2 Structured Magnetoelectric Composites and Thick Films by**

**Aerosol-Deposition** / RYU Jungho, KAMBALE Rahul, PATIL Deepak<sup>1</sup>, YOON Woon-Ha, PARK Dong-Soo, KANG Ju-Eun, JEONG Dae-Yong<sup>2</sup>, KIM Kee Hoon<sup>1</sup>(Korea Institute of Materials Science (KIMS). <sup>1</sup>Seoul National University. <sup>2</sup>Inha University)

**DF-17\*** [12:15-12:30]

**Enhancement of Linear Magnetoelectric Coupling in Strained (Ba,Sr)<sub>3</sub>Co<sub>2</sub>Fe<sub>24</sub>O<sub>41</sub> Single Crystals** / JEON Byung-Gu, CHUN Sae Hwan, CHAI Yi Sheng, KIM Kee Hoon(CeNSCMR, Department of Physics and Astronomy, Seoul National University)

**DF-18\*** [12:30-12:45]

**Effects of Al-Doping and Thermal Annealing on Magnetoelectric Ba<sub>0.5</sub>Sr<sub>1.5</sub>Zn<sub>2</sub>Fe<sub>12</sub>O<sub>22</sub> Investigated by the Enhancement Factor of <sup>57</sup>Fe Nuclear Magnetic Resonance** / 권상일, 이순철, 강병기, 김창수, 윤동영, 조은아, CHAI Yi Sheng<sup>1</sup>, 천세환<sup>1</sup>, 김기훈<sup>1</sup>(KAIST 물리학과. <sup>1</sup>서울대학교 물리천문학부)

**[DG3] 응집물질물리학회 General Session : 강상관계**

2013년 4월 25일 목요일 14:00 - 15:30

장소: 202호

좌장: 최 광 용 중앙대

**DG-12** [14:00-14:15]

**The DFT+DMFT study for the heavy fermion compound** / 최홍철, 민병일, HAULE K.<sup>2</sup>, KOTLIAR G.<sup>2</sup>, 심지훈<sup>1</sup>(포스텍 물리학과, 포스텍 화학과. <sup>1</sup>포스텍 물리학과. <sup>2</sup>Department of Physics, Rutgers University)

**DG-13\*** [14:15-14:30]

**Direct observation of a BKT superfluid in a 2D Bose gas** / 최재윤, 서상원, 신용일(서울대학교, 물리천문학부)

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

**Charge Density Wave Induced by Ir Site-Selective Lattice Distortions in 9R-BaIrO<sub>3</sub>** / NOH Han-Jin, JEONG Jinwon, CHANG Bin, LEE Seongsu<sup>1</sup>, KIM Hyeong-Do<sup>2</sup>, KIM Kyoo<sup>3</sup>, MIN B. I.<sup>3</sup>(Dep. Of Physics, Chonnam National University. <sup>1</sup>Neutron Science Division, Korea Atomic Energy Research Institute. <sup>2</sup>Pohang Accelerator Laboratory, Pohang University of Science and Technology. <sup>3</sup>Dep. of Physics, POSTECH)

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

**Infrared Study of the Electronic Structure of Metallic Pyrochlore Iridate Bi<sub>2</sub>Ir<sub>2</sub>O<sub>7</sub>** / LEE Yunsang, MOON S. J.<sup>1</sup>, BASOV Dimitri N.<sup>2</sup>, FISHER I. R.<sup>3</sup>, RIGGS Scott C.<sup>3</sup>, SHAPIRO M. C.<sup>3</sup>, KEMPER A. F.<sup>4</sup>(Soongsil University, Physics. <sup>1</sup>Hanyang University, Physics. <sup>2</sup>UCSD, Physics. <sup>3</sup>Stanford University, Applied Physics. <sup>4</sup>Lawrence Berkeley National Laboratory, SCD)

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

**Attosecond physics of a strongly correlated electron system** / LEE J.D.(Department of Emerging Materials Science, DGIST)

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

**Development Of DFT+U Method With Spin-Orbit Interaction** / KO Eunjung, LEE Hyungjun, OH Hyungju<sup>1</sup>, PARK Se Young<sup>2</sup>, CHOI Hyoung Joon<sup>1</sup>(Center for Computational Studies of Advanced Electronic Material Properties, Yonsei University, Seoul, 120-749, Republic of Korea. <sup>1</sup>Department of Physics and IPAP, Yonsei University, Seoul, 120-749, Republic of Korea. <sup>2</sup>Department of Physics, Columbia University, New York, 10027, USA)

**[DG4] 응집물질물리학회 General Session : 표면/계면**

2013년 4월 25일 목요일 09:00 - 10:45

장소: 101호

좌장: 조 준 형 한양대

**DG-18\*** [09:00-09:15]

**Size- and Shape-Dependent Air-Stability of PbS Quantum Dots** / KO Jae-Hyeon, CHOI Hyekyoung<sup>1</sup>, JEONG Sohee<sup>1</sup>, KIM Yong-Hyun(Graduate School of Nanoscience and Technology (WCU), KAIST, Daejeon 305-701, Republic of Korea. <sup>1</sup>Nanomechanical Systems Research Division, Korea Institute of Machinery and Materials (KIMM), Daejeon 305-343, Republic of Korea; Department of Nanomechantronics, University of Science Technology (UST), Daejeon 305-343, Republic of Korea)

**DG-19\*** [09:15-09:30]

**Luminescence origins in Si-nanocrystal/SiO<sub>2</sub> multi-layers induced by proton-irradiation** / 장승훈, 주범수, 정지운, 한문섭(서울시립대학교 물리학과)

**DG-20** [09:30-09:45]

**Controlling spin stability by a vector magnetic field and atom manipulation** / CHOI Deung-Jang, YAN Shichao, LOTH Sebastian(Max Planck Research Group-Dynamics of Nanoelectronic Systems, Center for Free-Electron Laser Science, Hamburg, Germany)

**DG-21\*** [09:45-10:00]

**Ab Initio Study on Self-Assembled One-Dimensional Metal-Molecule Hybrid Chains on Ag (111) Surface** / KOO Bon-Gil, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

**DG-22** [10:00-10:15]

**Reinvestigating Structures and Electronic States of Distorted Atomic Chains on the Si(553)-Au Surface** / SHIN Jin Sung, YEOM Han

Woong(Department of Physics and Center for Low Dimensional Electronic Symmetry, Pohang University of Science and Technology)

DG-23\* [10:15-10:30]

**Driving force of phase transition in indium nanowires on Si(111) /**  
KIM Hyun-Jung, CHO Jun-Hyung(Department of Physics, Hanyang University)

DG-24 [10:30-10:45]

**Investigation of two dimensional conducting surface of topological insulator by using WAL at various temperature and angle /** SHIN Jinsik, CHOI Seonghoon, LEE Sangyeop, LEE Hakjoon, LEE Sanghoon, LIU X.<sup>1</sup>, FURDYNA J. K.<sup>1</sup>(Department of physics, Korea University.  
<sup>1</sup>Department of physics, Notre Dame University)

[DP3] 응집물질물리학회 Pioneer Symposium : 계산과학,  
More DFT & More than DFT: Current and Future of  
Electronic Structure Calculations

2013년 4월 25일 목요일 11:00 – 12:55

장소: 101호

좌장: 김 응 훈 KAIST

DP-09 [11:00-11:30]

**Beyond DFT : density matrix functional theory for ground state and excited state energy surfaces /** BAERENDS Evert Jan(WCU Program, Pohang University of Science and Technology & Theoretical Chemistry, Vrije Universiteit, Amsterdam, The Netherlands)

DP-10 [11:30-12:00]

**Symmetric Tensor Decomposition Approach to the Full Configuration Interaction Calculation /** SUGINO Osamu(The Institute for Solid State Physics, The University of Tokyo, 5-1-5 Kashiwanoha, Kashiwa, Chiba 277-8581 Japan)

DP-11 [12:00-12:20]

**Self-energy-corrected scattering-state approach for electronic transport in molecular junctions /** CHOI Hyoung Joon(Department of Physics, Yonsei University, Seoul, Korea)

DP-12 [12:20-12:40]

**Searching for high functional energy materials using multi-scale computing combined with ab-initio density functional theory /** HAN BYUNGCHAN, SEO MIN-HO, KANG JUNHEE, SEUNGHYO NOH, JOONKYO SEO(DGIST, 에너지 시스템공학전공)

DP-13 [12:40-12:55]

**Critical effects of localized atomic basis sets on the first-principles quantum conductance calculations : A case of**

**graphene-based nano gaps /** KIM Yong-Hoon, KIM Han Seul, KIM Hyo Seok(Graduate School of EEWS, KAIST)

[DP4] 응집물질물리학회 Pioneer Symposium : 계산과학,  
More DFT & More than DFT: Current and Future of  
Electronic Structure Calculations

2013년 4월 25일 목요일 14:00 – 15:45

장소: 101호

좌장: 한 승 우 서울대

DP-14 [14:00-14:30]

**Highly accurate density-functional methods based on the adiabatic-connection dissipation-uctuation theorem /** GÖRLING Andreas, HE ß ELMANN Andreas, BLEIZIFFER Patrick(Lehrstuhl für Theoretische Chemie, Universität Erlangen-Nürnberg)

DP-15 [14:30-15:00]

**Using 2D nanodevices to detect biomolecules /** AMORIM Rodrigo G., SCHEICHER Ralph H.(Division of Materials Theory, Department of Physics and Astronomy, Uppsala University, Sweden)

DP-16 [15:00-15:30]

**DNA sequencing with nanopores explored using advanced ab initio methods /** SCHEICHER Ralph H.(Division of Materials Theory, Department of Physics and Astronomy, Uppsala University, Sweden)

DP-17 [15:30-15:45]

**Inelastic transport from first-principles : maximally localized Wannier function approach /** KIM Sejoong(Korea Institute for Advanced Study)

[DP5] 응집물질물리학회 Pioneer Symposium : 계산과학,  
More DFT & More than DFT: Current and Future of  
Electronic Structure Calculations

2013년 4월 25일 목요일 16:00 – 17:00

장소: 101호

좌장: 최 형 준 연세대

DP-18 [16:00-16:20]

**GW methods within VASP: test on oxides /** KANG Youngho, KANG Gijae, HAN Seungwu(Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)

DP-19 [16:20-16:40]

**Energy Minimization for Orbital-Density-Dependent Energy Functionals /** PARK Cheol-Hwan(Seoul National University, Department of Physics and Astronomy and Center for Theoretical Physics)

DP-20 [16:40-17:00]

**Anomalous Optical Phonon Splittings in Bilayer Graphene under Shear** / 최선명, 지승훈<sup>1</sup>, 손영우(KIAS, <sup>1</sup>포항공과대학교, 물리학과)

응집물질물리학과총회

2013년 4월 25일 목요일 18:00 - 18:30

장소: 101호

[DG5] 응집물질물리학과총회 General Session : 나노/중시계

2013년 4월 25일 목요일 09:00 - 10:45

장소: 102호

좌장: 김 주 진 전북대

DG-25 [09:00-09:30]

**Tunneling Conductance : From Quantum Dot To Cuprate** / 홍중배 (포스텍)

DG-26 [09:30-09:45]

**Energy spectrum, quantum Hall effect, and valley splitting in graphene on hexagonal boron nitride** / MOON Pilkyung, KOSHINO Mikito<sup>1</sup>(Korea Institute for Advanced Study, School of Computational Sciences. <sup>1</sup>Tohoku University, Department of Physics)

DG-27 [09:45-10:00]

**Force Free Aharonov-Bohm Quantum Ring Interferometer** / SEO Minky, CHOI Hyungkook<sup>1</sup>, HONG Changki<sup>2</sup>, KIM Nam<sup>3</sup>, KANG Kicheon<sup>4</sup>, CHUNG Yunchul<sup>2</sup>(Research Center for Dielectric and Advanced Matter Physics, Pusan National University. <sup>1</sup>Braun Center for Submicron Research, Weizmann Institute of Science. <sup>2</sup>Department of Physics, Pusan National University. <sup>3</sup>Korea Research Institute of Standard and Science. <sup>4</sup>Department of Physics, Chonnam National University)

DG-28 [10:00-10:15]

**대면적 h-BN 필름위에 직성장한 고품위 대면적 CVD 그래핀의 합성과 분석 연구** / 송영재, 김민우, 이성주, WANG Min, 장성규, 강세종, 장원준(성균관대학교 나노과학기술학과, <sup>1</sup>고려대학교 물리학과)

DG-29 [10:15-10:30]

**Focused-Laser-Enabled p-n Junctions in Graphene Field-Effect Transistors** / KIM Young Duck, BAE Myung-Ho<sup>1</sup>, SEO Jung-Tak<sup>2</sup>, KIM Yong Seung<sup>3</sup>, LEE Jae Hong<sup>3</sup>, AHN Joung Real<sup>2</sup>, CHUN Seung-Hyun<sup>3</sup>, PARK Yun Daniel<sup>1</sup>(Seoul National University. <sup>1</sup>Korea Research Institute of Standard and Science. <sup>2</sup>Sungkyunkwan University. <sup>3</sup>Sejong University)

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

**화학기상증착법을 이용한 그래핀 집적 성장 방법 연구** / 최재우, 이창목, 박홍기(경희대학교)

[DG6] 응집물질물리학과총회 General Session : 나노/중시계

2013년 4월 25일 목요일 11:00 - 12:45

장소: 102호

좌장: 최 만 수 고려대

DG-31\* [11:00-11:15]

**Investigating Reduction Process of Graphene Oxide Using Electrostatic Force Microscopy** / JEONG Huiseong, LEE Kyung Moon<sup>1</sup>, AHN Yeonghwan, LEE Soonil, PARK Ji-Yong(아주대학교 에너지시스템학부 응용물리학과 전공, <sup>1</sup>아주대학교 자연과학부 물리학과)

DG-32\* [11:15-11:30]

**Superconductor-Insulator Transition in Dual-gated Bilayer-Graphene Proximity Josephson Junction** / 이길호, 정동찬, 차민철, 이 후종(Department of Physics, POSTECH. <sup>1</sup>Department of Applied Physics, Hanyang University)

DG-33\* [11:30-11:45]

**Computational Study on the Electronic Transport Properties of Gold Nanowires Based on M@Au<sub>12</sub> (M=W, Mo) Clusters** / PARK Sora, 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)

DG-34\* [11:45-12:00]

**Demonstration of Sideband Cooling and Heating with Thermal Phonon in Micromechanical System** / CHO SUNGWAN, CHO SUNG UN<sup>1</sup>, CHO MYUNG RAE<sup>2</sup>, KIM SANG GOON<sup>3</sup>, SHIM SEUNG BO<sup>3</sup>, PARK YUN DANIEL<sup>2</sup>(Seoul National University, Korea Research Institute of Standards and Science. <sup>1</sup>Korea Research Institute of Standards and Science. <sup>2</sup>Seoul National University. <sup>3</sup>Korea Research Institute of Standards and Science)

DG-35 [12:00-12:15]

**Atomic and Electronic Structure of Graphene/Hexagonal Boron Nitride Stacked Layer with Intercalated Atoms** / SUNG Dongchul, BAEK Hongwoo<sup>1</sup>, KUK Young<sup>1</sup>, KIM Gunn, HONG Suklyun(Graphene Research Institute and Department of Physics, Sejong University. <sup>1</sup>Department of Physics and Astronomy, Seoul National University)

DG-36 [12:15-12:30]

**Seeing topological solitons at the nanoscale** / KIM Tae-Hwan, YEOM Han Woong(Department of Physics, POSTECH)

**[DG7] 응집물질물리학과회 General Session : 자성체**

2013년 4월 25일 목요일 14:00 - 15:45

장소: 102호

좌장: 조 성 래 울산대

**DG-37\*** [14:00-14:15]

**Antiferromagnetic ordering in  $\text{Li}_2\text{MnO}_3$  single crystal with two dimensional honeycomb lattice** / 이상현, 최성일, 김지연, 심하성, 원충재<sup>1</sup>, 이성수<sup>3</sup>, 김신애<sup>3</sup>, 허남정<sup>2</sup>, 박제근<sup>1</sup>(BS 강상관계 기능성계면 연구단. <sup>1</sup>서울대 복합다체계 연구센터. <sup>2</sup>인하대 물리학과. <sup>3</sup>원자력연구원 중성자과학부)

**DG-38\*** [14:15-14:30]

**The control of Morin transition temperature in  $\alpha\text{-Fe}_2\text{O}_3(0001)$  film by epitaxial strain depending on the film thickness** / 박성훈, 김재영<sup>1</sup>, 박재훈(포항공대 물리학과. <sup>1</sup>포항가속기연구소)

**DG-39\*** [14:30-14:45]

**Annealing effect on unidirectional anisotropy of Fe thin film grown on GaAs substrate** / CHOI Seonghoon, YOO Taehee, KYHM S.<sup>1</sup>, LEE Sanghoon, LIU X.<sup>2</sup>, FURDYNA J. K.<sup>2</sup>(Physics Department, Korea University. <sup>1</sup>Physics Department, Hanyang University. <sup>2</sup>Physics Department, University of Notre Dame)

**DG-40\*** [14:45-15:00]

**유기물 스핀소자의 다채널 수송모델에 의한 수송 거동과 복합장벽 특성에 대한 연구** / BAE Yu Jeong, LEE Nyun Jong, PRATT Andrew<sup>1</sup>, YAMAUCHI Y.<sup>1</sup>, SOH Young-Ah<sup>2</sup>, AEPPLI Gabriel<sup>2</sup>, KIM Tae Hee(Department of Physics, Ewha Womans University, Seoul, Republic of Korea, <sup>1</sup>National Institute for Materials Science, Tsukuba, Japan. <sup>2</sup>London Centre for Nanotechnology, London, United Kingdom)

**DG-41** [15:00-15:15]

**$\text{LuFe}_2\text{O}_4$  thin films by pulsed laser deposition : growth conditions and magnetic properties** / JEONG Yoon-Hee, JUNG Min-Hwa(POSTECH, Physics)

**DG-42** [15:15-15:30]

**Prediction of Maximum Energy Product  $(BH)_{\max}$  at Elevated Temperature for Strontium Ferrite Magnet** / HONG Yang-Ki, PARK Jihoon, AN Sung Yong<sup>1</sup>(Department of Electrical and Computer Engineering and MINT Center, The University of Alabama. <sup>1</sup>Corporate R&D Institute, Samsung Electro-Mechanics Co., Ltd.)

**DG-43** [15:30-15:45]

**Injection Locking of Spin Transfer Nano-Oscillators to a Microwave Current** / KANG DooHyung, SHIN Mincheol(한국과학기술원)

**[DG8] 응집물질물리학과회 General Session : 자성체**

2013년 4월 25일 목요일 16:00 - 17:00

장소: 102호

좌장: 이 종 석 KIST

**DG-44** [16:00-16:15]

**Characteristic behaviors of optical spectra and spin-orbit exciton in  $J_{\text{eff}}=1/2$  Mott insulator  $\text{Sr}_2\text{IrO}_4$**  / KIM Beom Hyun, KHALIULLIN G.<sup>1</sup>, MIN B.I.(POSTECH. <sup>1</sup>Max Planck Institute for Solid State Research)

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

**First-principles study of carrier mediated ferromagnetism in  $\text{MoS}_2$**  / TSOGBADRAKH Namsrai, HONG Soon Cheol<sup>1</sup>(National University of Mongolia. <sup>1</sup>University of Ulsan)

**DG-46** [16:30-16:45]

**Spin Gap of Graphene and Spintronics of Graphene/BN/Co** / HONG Jisang, HASHMI Arqum(Department of Physics, Pukyong National University)

**DG-47** [16:45-17:00]

**Reversible oxidation states of Graphene/ $\text{CuOx}$  Nanojunction** / 권상구, 서형탁<sup>1</sup>, 이의섭<sup>2</sup>, 이현수, 전기준<sup>3</sup>, 황찬국<sup>4</sup>, 김용현<sup>2</sup>, 박정영(KAIST, Graduate school of EEWS. <sup>1</sup>Ajou University, Department of Materials Science and Engineering. <sup>2</sup>KAIST, Graduate school of Nanoscience and Technology. <sup>3</sup>University of Ulsan, School of Electrical Engineering. <sup>4</sup>Pohang Accelerator Laboratory, Beamline Research Division)

**[EF2] 응집물질물리학과회/응용물리학과회 공동 Focus Session : Oxide Electronics**

2013년 4월 25일 목요일 09:00 - 10:45

장소: 103호

좌장: 이 수 연 KIST

**EF-04** [09:00-09:25]

**Two-Dimensional Electron Gas States at Surface of Transparent Oxide Semiconductors** / 장영준(서울시립대학교, 물리학과)

**EF-05** [09:25-09:50]

**Elastic resistance change and action potential generation of non-faradaic  $\text{Pt/TiO}_2/\text{Pt}$  capacitors: Room-temperature kinetics of defect migration** / JEONG Doo Seok, LIM Hyungkwang, LEE Doh-Kwon, HWANG Cheol Seong<sup>1</sup>(Korea Institute of Science and Technology. <sup>1</sup>Seoul National University)

EF-06 [09:50-10:15]

**Abnormal effect of oxygen vacancies and two hysteresis curves in oxide-based memristors** / LEE Jae Sung, LEE Shin Buhm<sup>1</sup>, KAHNG Byungnam<sup>1</sup>, NOH Tae Won<sup>1</sup>(Korea Institute for Advanced Study. <sup>1</sup>Seoul National University)

EF-07 [10:15-10:40]

**Optical Properties of Metal Oxide Photo Sensor Thin Film Transistor for Interactive Device Application** / AHN Seung-eon, SONG Ihun, JEON Yongwoo, CHUNG U-in(Samsung Advanced Institute of Technology)

[DF5] 응집물질물리학과회 Focus Session : 유전체, 압전에너지 하베스팅 소자 및 시스템

2013년 4월 25일 목요일 10:45 - 12:45

장소: 103호

좌장: 황 윤 회 부산대

DF-19 [10:45-11:09]

**Piezoelectric Nanogenerators and Piezotronics for Energy Harvesting Applications** / SANG-WOO Kim(Department of Advanced Materials Science & Engineering, SKKU Advanced Institute of Nanotechnology, Institute for Basic Science, Sungkyunkwan University)

DF-20 [11:09-11:33]

**Flexible Inorganic Self-Powered Electronic Systems** / LEE Keon Jae(Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology)

DF-21 [11:33-11:57]

**Three Approach Methods on Flexible Piezoelectric Energy Harvesting** / CHONG YUN, WOO SUK Jung<sup>1</sup>, YOON Seok Jin<sup>1</sup>(Electronic Materials Research Center, KIST and KU-KIST Graduate School of Converging Science and Technology, Korea University. <sup>1</sup>Electronic Materials Research Center, KIST)

DF-22 [11:57-12:21]

**Solution-processed ZnO metal oxide semiconductor for various functional devices** / 김연상, 김경준, 박시윤, 정성윤(서울대학교 융합과학기술대학원, 차세대융합기술연구원)

DF-23 [12:21-12:45]

**Optimal Design of Piezoelectric Materials and Devices for Energy Harvesting** / KIM Miso, DUGUNDJI John<sup>1</sup>, WARDLE BrianL.<sup>1</sup>(Center for Safety Measurements, Division of Metrology for Quality of Life, Korea Research Institute of Standards and Science, Daejeon 305-340, Korea. <sup>2</sup>Department of Aeronautics and Astronautics, Massachusetts Institute of

Technology, Cambridge, Massachusetts 02139, USA)

[FF1] 응집물질물리학과회/통계물리학과회 공동 Focus Session : 바이오/무른물질 연구의 새로운 동향

2013년 4월 25일 목요일 14:00 - 15:40

장소: 103호

좌장: 김 기 범 KAIST

FF-01(초) [14:00-14:25]

**Structure Study of Liquid Crystals in Confined Space** / KIM Mahn Won(Chanwon National University and KAIST)

FF-02(초) [14:25-14:50]

**Coffee-Ring Effect and Self-Pinning Mechanism** / WEON Byung Mook, JE Jung Ho<sup>1</sup>(Sungkyunkwan University. <sup>1</sup>Pohang University of Science and Technology)

FF-03(초) [14:50-15:15]

**Electrical Power Generation by Mechanically Modulating Electrical Double Layers** / PAK Hyuk Kyu, MOON Jong Kyun, LEE Dongyun(Pusan National University, Dept of Physics)

FF-04(초) [15:15-15:40]

**Single-molecule FRET beyond the FRET range : Bending of dsDNA upon binding of Anabaena sensory rhodopsin transducer** / KIM Sung Hyun, AHN TakKyoan, KIM So Young<sup>1</sup>, JUNG Kwang-Hwan<sup>1</sup>, KIM Doseok(Sogang University, Department of Physics. <sup>1</sup>Sogang University, Department of life science)

[FF2] 응집물질물리학과회/통계물리학과회 공동 Focus Session : 바이오/무른물질 연구의 새로운 동향

2013년 4월 25일 목요일 15:45 - 16:50

장소: 103호

좌장: 김 기 범 KAIST

FF-05(초) [15:45-16:10]

**Water Phases and Protein Dynamics at Cryogenic Temperatures** / KIM CHAE UN(Cornell University, Cornell High Energy Synchrotron Source)

FF-06(초) [16:10-16:35]

**Single-molecule DNA curtains reveal the biophysical properties and biological roles of DNA translocase FtsK** / LEE Ja Yil, FINKELSTEIN Ilya J., CROZAT Estelle<sup>1</sup>, SHERRATT David J.<sup>1</sup>, GREENE Eric C.<sup>2</sup>(Columbia University, Biochemistry and Molecular Biophysics. <sup>1</sup>Oxford University, Biochemistry. <sup>2</sup>Columbia University, Biochemistry and Molecular Biophysics and Howard Hughes Medical Institute)



FF-07\* [16:35-16:50]

**Structural and Orientational Study of Molecular Wires of Discotic Liquid Crystal** / PARK Ji Hyun, LABARDI Massimiliano<sup>1</sup>, TAKANISHI Yoichi<sup>2</sup>, YAMAMOTO Jun<sup>2</sup>, SCALIA Giusy<sup>3</sup>(Graduate School of Convergence Science and Technology, Seoul National University (Korea). <sup>1</sup>CNR-IPCF, UOS Pisa (Italy). <sup>2</sup>Department of Physics, Graduate School of Science, Kyoto University (Japan). <sup>3</sup>Graduate School of Convergence Science and Technology, Seoul National University (Korea), Advanced Institutes of Convergence Technology (AICT))

[DF6] 응집물질물리학과회 Focus Session : 초전도, 초전도 물질 및 소자

2013년 4월 26일 금요일 09:00 - 10:40

장소: 202호

좌장: 정 연 옥 표준원

DF-24 [09:00-09:30]

**Perspective of nano-hybrid superconducting junctions** / 도용주(고려대학교, 디스플레이반도체물리학과)

DF-25 [09:30-10:00]

**Comparative Terahertz Study of High-Temperature and Conventional Superconductors** / KIM Jae Hoon, HONG Taeyoon, YAMAMORI Hirotake<sup>1</sup>, IVAN Bozovic<sup>2</sup>(Department of Physics, Yonsei University, Seoul 120-749, Korea. <sup>1</sup>National Institute of Advanced Industrial Science and Technology, 1-1-1 Umezono, Tsukuba 305-8568, Japan. <sup>2</sup>Brookhaven National Laboratory, Upton, New York 11973, USA)

DF-26 [10:00-10:20]

**High Magnetic Field Properties of a New Quasi-one-dimensional Superconductor Nb<sub>2</sub>Pd<sub>2</sub>Se<sub>5</sub>** / 김승현, 이범성, 최기영, 전병구, 최은상, 김기훈(서울대학교, 물리천문학부. <sup>1</sup>플로리다 주립 대학, 물리학과)

DF-27 [10:20-10:40]

**Possible Multigap Superconductivity and Magnetism in Single Crystals of Superconducting La<sub>2</sub>Pt<sub>3</sub>Ge<sub>5</sub> and Pr<sub>2</sub>Pt<sub>3</sub>Ge<sub>5</sub>** / 성낙현, 노창재, 김광석<sup>2</sup>, 조병기(광주과학기술원 신소재공학과. <sup>1</sup>광주과학기술원. <sup>2</sup>삼성종합기술원)

[DG9] 응집물질물리학과회 General Session : 초전도

2013년 4월 26일 금요일 11:00 - 12:30

장소: 202호

좌장: 김 준 성 POSTECH

DG-48 [11:00-11:15]

**Optical properties of iron-based superconductor LiFeAs single crystal** / MIN Byeong Hun, HONG JongBeom<sup>1</sup>, AHMAD Dawood, YUN JaeHyun<sup>2</sup>, IIZUKA Takuya<sup>3</sup>, KIMURA Shin-ichi<sup>4</sup>, BANG Yunkyun<sup>2</sup>, KWON

YongSeung(Daegu Gyeongbuk Institute of Science and Technology(DGIST), Department of Emerging Materials Science. <sup>1</sup>Sungkyunkwan University, Department of Physics. <sup>2</sup>Chonnam University, Department of Physics. <sup>3</sup>The Graduate University for Advanced Studie, School of Physical Sciences. <sup>4</sup>UVSOR Facility, School of Physical Sciences)

DG-49\* [11:15-11:30]

**Enhanced Density of States via Co-Doping in Li(Fe<sub>1-x</sub>Co<sub>x</sub>)As Single Crystals Implied by Transport Properties** / LEE Bumsung, KHIM Seunghyun, JEON Byung-Jo, PARK Ju-Young<sup>1</sup>, LEE Suk Ho<sup>1</sup>, CHOI Ki-Young, STEWART G. R.<sup>2</sup>, KIM Kee Hoon(Department of Physics and Astronomy, Seoul National University. <sup>1</sup>Southwestern Research Institute of Green Energy Technology Foundation. <sup>2</sup>Department of Physics, University of Florida)

DG-50 [11:30-11:45]

**Ultrafast above-transition-temperature resurrection of spin density wave driven by coherent phonon generation in BaFe<sub>2</sub>As<sub>2</sub>** / LEE J.D., YUN Won Seok, HONG Soon Cheol<sup>1</sup>(Department of Emerging Materials Science, DGIST. <sup>1</sup>Department of Physics & EHSRC, University of Ulsan)

DG-51 [11:45-12:00]

**Coherent Charge and Spin Excitation in Coexistent Phase of Antiferromagnetism and d-wave superconductivity** / LEE Hyun Jung, TAKIMOTO Tetsuya<sup>1</sup>(Korea Institute for Advanced Study, School of Physics. <sup>1</sup>Hanyang University, Department of Physics)

DG-52\* [12:00-12:15]

**Theoretical study on anisotropic magnetic exchange couplings in iron-based superconductors** / OH Hyungju, CHOI Hyoung Joon(Department of Physics and IPAP, Yonsei University)

DG-53 [12:15-12:30]

**Synthesis, Stability and Structure of (Lu<sub>1-x</sub>Ca<sub>x</sub>)Ba<sub>2</sub>Cu<sub>3</sub>O<sub>z</sub> (x = 0, 0.2) Compounds** / LEE Ho Keun(Kangwon National University)

[DF7] 응집물질물리학과회 Focus Session : 나노/중시계, 그래핀과 위상부도체

2013년 4월 26일 금요일 09:00 - 10:45

장소: 101호

좌장: 이 후 종 POSTECH

DF-28 [09:00-09:30]

**Topological Phase in Materials - from Bismuth based Topological Insulators to Majorana Fermions** / 서정필(대구경북과학기술원, 신물질과 학전공)



DF-29 [09:30-10:00]

**Directly Observing Edge States of 1D and 2D Topological Insulators** / KIM Tae-Hwan, KIM Sung Hwan, YEOM Han Woong(POSTECH, Physics)

DF-30 [10:00-10:15]

**Optical Absorption in Twisted Bilayer Graphene** / MOON Pilkyung, KOSHINO Mikito<sup>1</sup>(Korea Institute for Advanced Study, School of Computational Sciences. <sup>1</sup>Tohoku University, Department of Physics)

DF-31 [10:15-10:30]

**First-principles study on topological domain walls in silicene** / KIM Youngkuk, JIN Hosub, CHOI Keunsu, BAE Jaehyun, SON Seung-Wook, IHM Jisoon(Department of Physics and Astronomy, Seoul National University)

DF-32 [10:30-10:45]

**Ab initio Study of Growth and Electronic Structure of Graphene and Graphene-based Nanostructures** / HONG Suklyun(Department of Physics and Graphene Research Institute, Sejong University)

[DF8] 응집물질물리학회 Focus Session : 나노/중시계, 그래핀과 위상부도체

2013년 4월 26일 금요일 11:00 - 12:45

장소: 101호

좌장: 심 흥 선 KAIST

DF-33 [11:00-11:30]

**Hofstadter Butterfly and Self-similar Occurrence of Massless Dirac Particles in Graphene under Arbitrary Magnetic Field** / PARK Kwon(Korea Institute for Advanced Study)

DF-34 [11:30-11:45]

**Tunneling Conductances of Bi- and Tri-layer Graphenes** / HONG Jongbae(POSTECH)

DF-35\* [11:45-12:00]

**Pancharatnam-Berry phase of Dirac fermions in a topological junction** / 최상준, 박성훈, 심흥선(Korea Advanced Institute of Science and Technology)

DF-36\* [12:00-12:15]

**Observation of Chiral Heat Transport in Graphene in the Quantum-Hall Regime** / NAM Seung-Geol, HWANG E. H.<sup>1</sup>, LEE Hu-Jong(Department of Physics, Pohang University of Science and Technology, Korea. <sup>1</sup>SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Suwon, Korea)

DF-37\* [12:15-12:30]

**Edge and Interfacial States of 2D Topological Insulators in a Bi(111) Bilayer on Bi<sub>2</sub>Te<sub>3</sub>** / KIM Sung Hwan, JIN Kyung Hwan, PARK Joonbum<sup>1</sup>, KIM Tae-hwan, KIM Jun Sung<sup>1</sup>, JHI Seung-Hoon<sup>1</sup>, YEOM Hanwoong(Center for Low Dimensional Electronic Symmetry, Pohang University of Science and Technology, Pohang 790-784, Republic of Korea. <sup>1</sup>Department of Physics, Pohang University of Science and Technology, Pohang 790-784, Republic of Korea)

DF-38\* [12:30-12:45]

**Robustness of Topological Edge States against Peierls Distortion and Reconstruction** / KIM Hyun-Jung, BIHLMAYER Gustav<sup>1</sup>, BLUEGEL Stefan<sup>1</sup>, CHO Jun-Hyung(Department of Physics, Hanyang University, Korea. <sup>1</sup>Peter Gruenberg Institut and Institute for Advanced Simulation, Forschungszentrum Juelich and JARA, Germany)

[DG10] 응집물질물리학회 General Session : 유전체

2013년 4월 26일 금요일 09:00 - 10:45

장소: 102호

좌장: 송 태 권 창원대

DG-55\* [09:00-09:13]

**Pressure- and Temperature-Raman spectroscopy of Ba<sub>0.85</sub>Ca<sub>0.15</sub>Ti<sub>0.9</sub>Zr<sub>0.1</sub>O<sub>3</sub>** / SEO Yu-Seong, AHN Jai Seok, JEONG Il-Kyoung<sup>1</sup>(Department of Physics, Pusan National University. <sup>1</sup>Department of Physics Education, Pusan National University)

DG-56\* [09:13-09:26]

**다강체 YCrO<sub>3</sub> 다결정 박막의 강유전 도메인 구조 연구** / 서정대, 손종역 (경희대학교, 응용물리학과)

DG-57\* [09:26-09:39]

**Octahedral tilting and phase transition in perovskite ASnO<sub>3</sub>** / SIM Hyunsu, KIM Bog g(부산대학교 물리학과)

DG-58\* [09:39-09:52]

**Influence of Wall Thickness on Structural Properties of Sol-gel-derived Lead Titanate Nanotubes Prepared by Spin-coating inside Porous Alumina Membranes** / 한진규, 곽진호, 양선아, 전도현, 최용찬, 부상돈(전북대학교)

DG-59\* [09:52-10:05]

**Reversible and Irreversible Components in the Dielectric Permittivity of Ferroelectric Thin Films** / 조삼연, 곽진호, 부상돈(전북대학교)

DG-60\* [10:05-10:18]

**Control of charge transport using divalent cation in epitaxial gallium ferrite thin films** / JO W., OH S.H., SHIN R.H., LEFEVRE C.<sup>1</sup>, ROULLAND F.<sup>2</sup>, THOMASSON A.<sup>2</sup>, MENY C.<sup>2</sup>, VIART N.<sup>2</sup>(Ewha Womans University, Dept. of Physics. <sup>1</sup>Ewha Womans University, Dept. of Physics/University of Strasbourg-CNRS, Institute of Physics and Chemistry of Materials of Strasbourg. <sup>2</sup>University of Strasbourg-CNRS, Institute of Physics and Chemistry of Materials of Strasbourg)

DG-61 [10:18-10:31]

**Ferroelectric Resistive Switching in BiFeO<sub>3</sub> Nano-Island Based Switchable Diodes** / 최택집, 전지훈<sup>1</sup>, 김윤석<sup>2</sup>, 이호상, 주호용, 황인록, 김진수<sup>1</sup>, 강성웅<sup>3</sup>, 박배호<sup>1</sup>(세종대학교, 나노신소재공학과. <sup>1</sup>건국대학교, 물리학과. <sup>2</sup>성균관대학교, 신소재공학과. <sup>3</sup>광주과학기술원, 차세대에너지 연구소)

DG-62 [10:31-10:44]

**The Anomalies in the Heat Capacity and Ehrenfest Relation at the Ferroelectric Phase Transitions of Rochelle Salt (NaKC<sub>4</sub>H<sub>4</sub>O<sub>6</sub> · 4H<sub>2</sub>O)** / LEE Kwang-Sei, OH In-Hwan<sup>1</sup>, PARK Garam<sup>1</sup>, PARK J. M. Sungil<sup>1</sup>(Department of Nano Systems Engineering, Center for Nano Manufacturing, Inje University, Gimhae. <sup>1</sup>Neutron Science Division, Korea Atomic Energy Research Institute, Daejeon)

## SESSION E

응용물리학과

### [EG1] 응용물리학과 General Session

2013년 4월 24일 수요일 11:00 - 12:20

장소: 103호

좌장: 박 정 영 KAIST

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

**Identifying the growth direction of metal oxide nanowires by polarized Raman scattering spectroscopy** / SHIN Hae-Young, JUNG Hayoung<sup>1</sup>, KIM Myung Hwa<sup>1</sup>, YOON Seokhyun(Department of Physics, Ewha Womans University, Seoul, 120-750, Korea. <sup>1</sup>Department of Chemistry and Nano Science, Ewha Womans University, Seoul, 120-750, Korea)

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

**Metal-Particle-Induced Enhancement or Suppression of the Photoluminescence from RNA-Functionalized Single-Walled Carbon Nanotubes** / 김세진, 성맹제(중앙대학교, 물리학과)

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

**The Piezo Electricity Of ZnO Microwire Synthesized By CVD Method** / KIM hakseong, YOON Hoang, LEE sang Wook(Division of Quantum Phases & Devices, School of Physics, Konkuk University)

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

**Polarity-dependent Switching of Charge Conducting States in Artificially Fabricated Nickel Oxide Nano-structures** / JO William, LEE Nuri, KIM D.-W., MENY Cristian<sup>1</sup>(Ewha Womans University, Department of Physics. <sup>1</sup>UMR 7504 ULP-CNRS, Institute of Physics and Chemistry of Materials)

EG-05 [12:00-12:20]

**Tunable ferroelectricity in artificial tri-layer superlattices comprised of non-ferroic components** / 이재찬, 서지원(성균관대학교 신소재 공학부)

### [EG2] 응용물리학과 General Session

2013년 4월 24일 수요일 11:00 - 12:35

장소: 104호

좌장: 정 창 욱 한국외대

EG-06\* [11:00-11:15]

**Fabrication of Bismuth Telluride 1-Dimensional Nanostructures by Galvanic Displacement Reaction of Metal Nanowires** / 홍기민, 서호영, 김진규<sup>1</sup>, 김창연<sup>2</sup>, 김창수<sup>2</sup>(충남대학교, 물리학과. <sup>1</sup>한국기초과학지원연구원. <sup>2</sup>한국표준과학연구원)

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

**Low Surfactant Composites with Sub-Krafft Nanotube Dispersions in a Self-Organized Host** / JO HyeRan, PARK Ji Hyun, SCALIA Giusy(Graduate School of Convergence Science and Technology and Advanced Institutes of Convergence Technology, Seoul National University, Suwon, South Korea)

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

**Two Dimensional Vertical Heterojunction with MoS<sub>2</sub>, MoSe<sub>2</sub>, and WSe<sub>2</sub>** / LEE Dae-Yeong, LEE Gwan-Hyoung<sup>1</sup>, LIU Xiaochi, HONE James<sup>1</sup>, YOO Won Jong(Sungkyunkwan Univ. (SKKU), SKKU Advanced Institute of Nano-Technology (SAINT), 2066 Seobu-ro, Jangsan-gu, Suwon-si, Gyeonggi-do, 440-746, Korea. <sup>1</sup>Columbia Univ., Department of Mechanical Engineering, New York, New York, 10027, USA)

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

**Fabrication of Kesterite Cu<sub>2</sub>ZnGeX<sub>4</sub>(X=S/Se) Thin Films Synthesized by Chemical Spray Pyrolysis** / KHADKA Dhruva, 김준호 (인천대학교)

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

**Incorporation of selenium into Cu<sub>2</sub>S-ZnS-SnS<sub>2</sub> compound precursors for growth of high-efficient Cu<sub>2</sub>ZnSn(S,Se)<sub>4</sub> thin-film solar cells** / JO William, KIM GeeYeong, JEONG Ah Reum, KIM Ju Ri<sup>1</sup>, SON Dae-Ho<sup>2</sup>, KIM Dae-Hwan<sup>2</sup>, KANG Jin-Kyu<sup>2</sup>(New and Renewable Energy Research Center & Department of Physics, Ewha Womans University. <sup>1</sup>Department of Physics Ewha Womans University. <sup>2</sup>Green Energy Research Division, Daegu Gyeongbuk Institute of Science and Technology)

EG-11 [12:15-12:35]

**Evaluation of 2G HTS Tape in High Magnetic Field** / 김동락, 이윤아, 최연석(한국기초과학지원연구원 물성과학연구부)

[EP1] 응용물리학과/응집물질물리학과 공동 Pioneering

Symposium : Emerging Phenomena in Oxide Nanostructures

2013년 4월 24일 수요일 13:00 - 14:45

장소: 103호

좌장: 박 배 호 건국대

EP-01 [13:00-13:25]

**Intriguing Phenomena of Oxide Thin Films Investigated by Scanning Probe Microscopy** / YANG Sang Mo(Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science, and Department of Physics & Astronomy, Seoul National University)

EP-02 [13:25-13:50]

**Coupled Metal-Insulator and Ferroic Transitions** / KIM Yunseok(School of Advanced Materials Science and Engineering, Sungkyunkwan University)

EP-03 [13:50-14:15]

**Self-assembled Electronic Nose Based on Air-bridge-structured Junction Nanowire Arrays** / BAIK J. M., PARK W. J., KIM M. H.<sup>1</sup>, KOO B. H.<sup>2</sup>, LEE J.-L.<sup>2</sup>(Ulsan National Institute of Science and Technology (UNIST). <sup>1</sup>Ewha Womans University. <sup>2</sup>Pohang University of Science and Technology (POSTECH))

EP-04 [14:15-14:40]

**Emerging Oxide Nanowires: Creation Concept and Their Promises for Novel Nanoscale Devices** / YANAGIDA Takeshi, KAWAI Tomoji, PARK Bae Ho<sup>1</sup>(ISIR-Sanken, Osaka University, JAPAN. <sup>1</sup>Department of Physics, Konkuk University)

[EP2] 응용물리학과/응집물질물리학과 공동 Pioneering  
Symposium : Emerging Phenomena in Oxide Nanostructures

2013년 4월 24일 수요일 15:00 - 16:45

장소: 103호

좌장: 황 윤 회 부산대

EP-05 [15:00-15:25]

**Carrier doping and external field control of phase transition in epitaxial VO<sub>2</sub> thin films** / SHIBUYA Keisuke(Correlated Electronics Group, National Institute of Advanced Industrial Science and Technology (AIST), JAPAN)

EP-06 [15:25-15:50]

**Polar interfaces of superlattice thin films investigated by the second harmonic generation** / LEE J. S.(Department of Physics and Photon Science, GIST)

EP-07 [15:50-16:15]

**Carrier density modulation at LaAlO<sub>3</sub>/SrTiO<sub>3</sub> (001) interface** / BARK C.W., HAN J.Y.(Gachon University, Electrical Engineering)

EP-08 [16:15-16:40]

**Emergent Quantum Phenomena in SrTiO<sub>3</sub> Heterostructures** / KIM M., BELL C.<sup>1</sup>, HIKITA Y.<sup>1</sup>, HWANG H. Y.<sup>2</sup>(Department of Physics & Astronomy and Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science, Seoul National University & Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA. <sup>1</sup>Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA. <sup>2</sup>Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA & Geballe Laboratory for Advanced Materials, Department of Applied Physics, Stanford University, USA)

**[EF1] 응용물리학회 Focus Session : 나노플라즈모닉스**

2013년 4월 24일 수요일 15:00 - 16:45

장소: 104호

좌장: 김 선 경 경희대

**EF-01 [15:00-15:30]**

**Plasmonic optical nano-antennas** / 서민교(KAIST, Department of Physics)

**EF-02 [15:30-16:00]**

**Large-area 3D Plasmonic Nanoarchitectures** / CHOI D.(Department of Mechanical Engineering, College of Engineering)

**EF-03 [16:00-16:30]**

**Near Infrared Light-Assisted Photothermal Polymerization of a Collagen Hydrogel for Cell Encapsulation Using Plasmonic Nanoparticles** / LEE Jae Young, HONG Soongweon<sup>1</sup>, LEE Luke P.<sup>1</sup>(School Materials Science and Engineering, Gwangju Institute of Science and Technology. <sup>1</sup>Bioengineering Department and Berkeley Sensor and Actuator Center, University of California, Berkeley, CA, USA)

**응용물리학회 총회**

2013년 4월 24일 수요일 18:00 - 19:00

장소: 103호

**[EF2] 응용물리학회/응집물질물리학회 공동 Focus Session : Oxide Electronics**

2013년 4월 25일 목요일 09:00 - 10:45

장소: 103호

좌장: 이 수 연 KIST

**EF-04 [09:00-09:25]**

**Two-Dimensional Electron Gas States at Surface of Transparent Oxide Semiconductors** / 장영준(서울시립대학교, 물리학과)

**EF-05 [09:25-09:50]**

**Elastic resistance change and action potential generation of non-faradaic Pt/TiO<sub>2</sub>/Pt capacitors : Room-temperature kinetics of defect migration** / JEONG Doo Seok, LIM Hyungkwang, LEE Doh-Kwon, HWANG Cheol Seong<sup>1</sup>(Korea Institute of Science and Technology. <sup>1</sup>Seoul National University)

**EF-06 [09:50-10:15]**

**Abnormal effect of oxygen vacancies and two hysteresis curves in oxide-based memristors** / LEE Jae Sung, LEE Shin Buhm<sup>1</sup>, KAHNG Byungnam<sup>1</sup>, NOH Tae Won<sup>1</sup>(Korea Institute for Advanced Study. <sup>1</sup>Seoul National University)

**EF-07 [10:15-10:40]**

**Optical Properties of Metal Oxide Photo Sensor Thin Film Transistor for Interactive Device Application** / AHN Seung-eon, SONG Ihun, JEON Yongwoo, CHUNG U-in(Samsung Advanced Institute of Technology)

**[EF3] 응용물리학회 Focus Session : 바이오의학물리심포지엄**

2013년 4월 25일 목요일 09:00 - 10:45

장소: 104호

좌장: 소 광 섭 서울대

**EF-08 [09:00-09:35]**

**Direct Visualization of HIV-1 with Correlative Live-Cell Microscopy and Cryo-Electron Tomography** / 전상미(한국기초과학지원연구원, 전자현미경연구부)

**EF-09 [09:35-10:10]**

**차세대 IT바이오의료융합기술의 개발동향** / 이충희(한국과학기술정보연구원 ReSEAT 프로그램)

**EF-10 [10:10-10:30]**

**형광나노입자를 이용한 경락시스템 추적기술개발과 순환체계확립** / 김정대, 소광섭(서울대학교 차세대융합기술연구원)

**EF-11\* [10:30-10:45]**

**사타구니 림프절과 음파요동에 의존하는 프리모관의 형태구조학적 특성 연구** / 노영일, 이혜리, 홍예지, 허준이, 정지환, 이상석(상지대학교 한방의료공학과)

**[EF4] 응용물리학회 Focus Session : 바이오의학물리심포지엄**

2013년 4월 25일 목요일 11:00 - 12:45

장소: 104호

좌장: 황 도 근 상지대

**EF-12 [11:00-11:35]**

**액와 림프절의 림프관에서 프리모시스템의 광특성 조사 연구** Investigation on the optical properties of the primo vascular system in the lymph vessel of the axillary lymph node / 소광섭(서울대학교 차세대융합기술원 나노프리모센터)

**EF-13 [11:35-12:10]**

**Nano-ferrites application for hyperthermia with Mössbauer spectroscopy** / 김철성, 현성욱, 김민선, 김형준<sup>1</sup>, 유경화<sup>1</sup>(국민대학교, 물리학과. <sup>1</sup>연세대학교, Nanomedical National Core Research Center)

**EF-14 [12:10-12:30]**

**주사 이온 전도 현미경을 이용한 림프관 내 프리모노드에서 산알과 줄기**

세포의 생체영상 분석연구 / 배경희, 소광섭, 권희민<sup>1</sup>(서울대학교 융합기술원 나노프리오센터, <sup>1</sup>연세대학교 미래융합기술연구소)

EF-15\* [12:30-12:45]

심전계-홀소자집계형맥진기-용적맥파계를 이용한 한양방 협진용 생체신호 측정 및 특성연구 / 김근호, 이남규, 김용진, 이주형, 장명복, 이상석(상지대학교 한방의료공학과)

### [EG3] 응용물리학과회 General Session

2013년 4월 25일 목요일 14:00 - 15:45

장소: 201호

좌장: 임 은 주 단국대

EG-12 [14:00-14:20]

Real-Time X-ray Scattering as a Nanostructure Probe for Organic Photovoltaic Thin Films / 김효정, 김장주<sup>1</sup>, 이현휘<sup>2</sup>(부산대학교, 유기소재시스템공학과, <sup>1</sup>서울대학교, 재료공학부, <sup>2</sup>포항가속기연구소, 빔라인부)

EG-13\* [14:20-14:35]

In-plane anisotropic photovoltaic effects in aligned polymer solar cells / 박병주, 허윤호, 신정철, 이진희(광운대학교, 전자물리학과)

EG-14\* [14:35-14:50]

Electrical conduction mechanism with hole injection layer in organic devices: A combined dynamic analysis with current density-voltage measurements and impedance spectroscopy / SHIN Donggwen, LEE Jaihyun, KIM Hyein, YI Yeonjin(Institute of Physics and Applied Physics, Yonsei University)

EG-15\* [14:50-15:05]

A Stencil Nano Lithography with PMMA Shadow Mask and its Application in Nanoscale Organic Electronic System / YUN Hyeol, KIM Sangwook<sup>1</sup>, KIM Hakseong, MCALLISTER Kirstie, PYO Seungmoon<sup>1</sup>, KIM Jun Sung<sup>2</sup>, LEE Sang Wook(Division of Quantum Phases & Devices, School of Physics, Konkuk University, <sup>1</sup>Department of Chemistry, Konkuk University, <sup>2</sup>Department of Physics, Pohang University of Science and Technology)

EG-16\* [15:05-15:20]

Crystallographic orientation dependence of the change of Raman spectra of strained single layer graphene / CHEONG Hyeonsik, CHO Yujin, JEGAL Seonyoung, KIM Minjung, LEE Jae-Ung(Department of Physics, Sogang University)

EG-17 [15:20-15:45]

Hybrid Piezoelectric Structure for Wearable Nanogenerator / LEE

Minbaek, WANG Zhong Lin<sup>1</sup>(Inha University, Dept. of Physics, <sup>1</sup>Georgia Institute of Technology, Materials Science & Engineering)

### [EG4] 응용물리학과회 General Session

2013년 4월 25일 목요일 14:00 - 15:45

장소: 104호

좌장: 엄 종 화 세종대

EG-18\* [14:00-14:15]

Passivation effect on MoS<sub>2</sub> field effect transistors under oxygen, nitrogen, and vacuum environments / LEE Takhee, PARK Woanseo, PARK Juhun, LEE Hyunwoo, JEOUNG Hyunhak, CHO Kyungjune, HONG Seunghun(Seoul National University)

EG-19 [14:15-14:30]

Synthesis and characterization of mono- and multi-layer hybrid graphene film / 박종윤, 정대성<sup>1</sup>, 정민욱<sup>2</sup>, 김석환<sup>2</sup>, 이선숙<sup>2</sup>, 안기석<sup>3</sup>(성균관대학교 물리학과, <sup>1</sup>성균관대학교 에너지과학과, <sup>2</sup>한국화학연구원)

EG-20 [14:30-14:45]

Anomalous thermopower behaviour of inhomogeneous graphene grown by chemical vapour deposition / NAM Youngwoo, SUN Jie<sup>1</sup>, NICLAS Lindvall<sup>1</sup>, YANG Seung Jae<sup>2</sup>, PARK Chong Rae<sup>2</sup>, PARK Yung Woo, YURGENS August<sup>1</sup>(Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Republic of Korea, <sup>1</sup>Department of Microtechnology and Nanoscience, Chalmers University of Technology, SE-412 96 Gothenburg, Sweden, <sup>2</sup>Department of Materials Science and Engineering, Seoul National University, Seoul 151-747, Republic of Korea)

EG-21 [14:45-15:00]

홀로그래를 위한 경제적인 공간 광 변조기 / 최재우, 정훈(경희대학교)

EG-22 [15:00-15:15]

실리콘 박막 태양광 흡수체를 위한 입력 커플러의 설계 / 송경덕, 김선경, 박홍규(고려대학교 물리학과, <sup>1</sup>경희대학교 응용물리학과)

EG-23 [15:15-15:35]

Efficient carrier collection by surface-concentrated-light in microhole-patterned Si solar cells / 이은송<sup>1</sup>, 김준동<sup>1</sup>, 주민규<sup>2</sup>, 김현엽<sup>2</sup>, 이준신<sup>2</sup>, 현문섭<sup>3</sup>, 김동욱(이화여자대학교, 물리학과, <sup>1</sup>군산대학교, 전자공학과, <sup>2</sup>정보통신공학부, <sup>3</sup>나노융합기술원)

**[EF5] 응용물리학회 Focus Session : 나노플라즈모닉스**

2013년 4월 25일 목요일 16:00 - 17:00

장소: 104호

좌장: 민 범 기 KAIST

**EF-16** [16:00-16:30]

**Soft-nanolithographic Approaches for Promising Plasmonic Applications** / LEE Min Hyung(Department of Applied Chemistry, Kyung Hee University)

**EF-17** [16:30-17:00]

**Surface plasmon launcher from colloidal quantum dots** / LEE Chang-Won, PARK Yeonsang, KIM Jineun, SUH Hwansoo(Samsung Advanced Institute of Technology)

**[EG5] 응용물리학회 General Session**

2013년 4월 26일 금요일 09:00 - 10:45

장소: 103호

좌장: 이 은 철 가천대

**EG-24** [09:00-09:15]

**Local Structural Properties and Growth Mechanism of ZnO Nanorods on Heterointerfaces** / JIN Zhenlan, PARK C.-I., HAN S.-W.(Department of Physics Education and Institute of Fusion Science, Chonbuk National University, Jeonju 561-756, Korea)

**EG-25** [09:15-09:30]

**An intriguing 3D silicon membrane for anodes of lithium ion batteries** / XIA Fan, KIM Seong Been, KWON Sun Sang, PARK Won Il(Division of Material Science and Engineering, Hanyang University, Seoul, 133-791, Korea)

**EG-26** [09:30-09:45]

**Fabrication and Applications of Nano/micro Features of Soft Materials by Dip-Pen Nanolithography** / JANG Jae-Won(Dept. of Physics, Pukyong National University, Busan, Korea)

**EG-27** [09:45-10:00]

**Investigation of thin film growth on ultra-thin membrane using EBID** / 이소영, 문승현, 박유근, 송윤규, 박상윤(나노바이오융합연구센터, 차세대융합기술원, 서울대학교)

**EG-28** [10:00-10:15]

**Morphological investigation of self-assembled nanoparticles using light-scattering** / 윤홍주, 임재관, 황리라, 박상윤(나노바이오융합연구센터, 차세대융합기술원, 서울대학교)

**EG-29** [10:15-10:30]

**The investigation of the micro-channel structure of primo vessel inside lymph vessel by light scattering pattern** / 임재관, 윤홍주, 황리라, 박상윤(나노바이오융합연구센터, 차세대융합기술원, 서울대학교)

**EG-30** [10:30-10:45]

**Separation of Tumor Cell using Nano-patterned Si substrates and Analysis of Cell-Nanostructure Interface** / KIM Dong-Joo, KIM Gil-Sung, HYUNG Jung-Hwan, PARK No-Won<sup>1</sup>, LEE Won-Yong<sup>1</sup>, LEE Sang-Kwon<sup>1</sup>(Department of Semiconductor Science and Technology, Chonbuk National University, Jeonju 561-756, Korea. <sup>1</sup>Department of Physics, Chung-Ang University, Seoul, 156-756, Korea)

**[EF6] 응용물리학회 Focus Session : 바이오의학물리심포지엄**

2013년 4월 26일 금요일 09:00 - 10:45

장소: 104호

좌장: 최 은 하 광운대

**EF-18** [09:00-09:35]

**Preferential killing of human lung cancer cell lines with mitochondrial dysfunction by non-thermal DBD plasma** / 백구연, PANNGOM Kamonporn<sup>1</sup>, 남민경<sup>2</sup>, 임향숙<sup>2</sup>, 최은하<sup>3</sup>(광운대학교, 전자바이오물리학과. <sup>1</sup>광운대학교, 플라즈마 바이오 및 디스플레이학과. <sup>2</sup>카톨릭대학교, 의과대학. <sup>3</sup>광운대학교 전자바이오물리학과)

**EF-19** [09:35-10:10]

**펄스 및 교류자기장의 생체반응연구** / 황도근, 이현숙, 이진용(상지대학교 한방의료공학과)

**EF-20** [10:10-10:30]

**A Macrophage-Specific Fluorescent Probe Distinguishes Metastatic And Inflamed Lymph Nodes In Vivo** / 유정선, 이승찬, JOW Zhi Yen<sup>1</sup>, YUN Xian Koh<sup>1</sup>, 소광섭<sup>2</sup>, 장영태<sup>3</sup>(싱가포르 국립대, 화학부. <sup>1</sup>Agency of Science, Technology and Research, Singapore Bioimaging Consortium. <sup>2</sup>서울대학교 차세대융합기술원 나노프리로센터)

**EF-21** [10:30-10:45]

**살아있는 세포의 분자이미징 기술** / 이충희(한국과학기술정보연구원 ReSEAT 프로그램)



**[EG6] 응용물리학분과회 General Session**

2013년 4월 26일 금요일 11:00 - 12:45

장소: 103호

좌장: 이 동 한 충남대

EG-31 [11:00-11:30]

**Giant Acoustic Concentration by Extraordinary Transmission in Zero-Mass Metamaterials** / LEE Sam Hyeon, PARK Jong Jin, LEE K. J. B.<sup>1</sup>, WRIGHT Oliver B.<sup>2</sup>, JUNG Myoung Ki(Institute of Physics and Applied Physics, Yonsei University. <sup>1</sup>Department of Physics, Ewha Womans University. <sup>2</sup>Division of Applied Physics, Faculty of Engineering, Hokkaido University)

EG-32\* [11:30-11:45]

**Electrically Tunable Metamaterial Based on Twisted Nematics Liquid Crystal Cell Structure** / 이연의, 김정희, 우제흔, 최은영, 김은선, 우정원(이화여자대학교, 물리학과)

EG-33\* [11:45-12:00]

**Nd:YVO<sub>4</sub>와 GTR-KTP를 이용한 고출력 녹색 레이저의 제 2고조파 출력 특성 연구** / 박종환, 박가예, 박지연, 경석현<sup>1</sup>, 박정호<sup>2</sup>, 이준호(전자부품연구원 광전융합연구센터, 고려대학교 전기전자전파공학부. <sup>1</sup>전자부품연구원 광전융합연구센터. <sup>2</sup>고려대학교 전기전자전파공학부)

EG-34\* [12:00-12:15]

**Rupturing of the Hoogsteen base pairing in triplex DNA by magnetic tweezers** / LEE ILBUEM, JUNG HAEJUN, HONG SEOKCHEOL(Department of Physics, Korea University, Seoul, Korea)

EG-35\* [12:15-12:30]

**그래핀 전극을 이용한 전기 구동 마이크로디스크 레이저** / 김윤호, 권순홍<sup>1</sup>, 이정민<sup>2</sup>, 황민수, 강주형, 박원일<sup>2</sup>, 박홍규(고려대학교 물리학과. <sup>1</sup>중앙대학교 물리학과. <sup>2</sup>한양대학교 신소재공학부)

EG-36\* [12:30-12:45]

**Enhanced Phosphorescence from a Periodically Arranged Phosphor Structure** / 전현수, 민경택, 최세록(서울대학교 물리천문학부)

**SESSION F**

통계물리학분과회

**[FG1] 통계물리학분과회 General Session : Complex Systems**

2013년 4월 24일 수요일 11:00 - 12:55

장소: 201호

좌장: 정 우 성 포항공대

FG-01 [11:00-11:14]

**Bayesian Inference of Natural Rankings in Incomplete Competition Networks** / 박주용(카이스트 문화기술대학원)

FG-02 [11:14-11:28]

**Costly Bilingualism Model in a Population with One Zealot** / 손승우, 홍현숙(한양대학교, 응용물리학과. <sup>1</sup>전북대학교, 물리학과)

FG-03 [11:28-11:42]

**Modeling Circadian Aspects of Bursty Human Activities** / 김진홍, 이덕재, 강병남(주)원더피플(현 소속기관), NHN(논문작성시 소속기관). <sup>1</sup>서울대학교

FG-04\* [11:42-11:56]

**Promoting Cooperation by Optimal Tuning of Node-Node Correlations** / YANG Hyunmo, GHIM CHEOL-MIN'(Graduate Program of Applied Physics, UNIST. <sup>1</sup>School of Nano-Bioscience & Chemical Engineering and Graduate Program of Applied Physics, UNIST)

FG-05\* [11:56-12:10]

**Optimization of Contents Accessibility and Server Cost on Complex Networks** / 김영호, 전찬일, 정하웅(KAIST, 물리학과)

FG-06\* [12:10-12:24]

**Biconnectivity and Robustness of Multiplex Networks** / 고광일, 민병준, 이수도<sup>1</sup>, 이규민(고려대학교 물리학과. <sup>1</sup>성균관대학교 물리학과)

FG-07\* [12:24-12:38]

**Classification of Complex Networks based on Betweenness Centrality** / CHOI Woosik, YOOK Soon-Hyung, KIM Yup(경희대학교 물리학과)

FG-08\* [12:38-12:52]

**Various transition natures of heterogeneous core percolation on complex networks** / 김엽, 채희승, 육순형(경희대학교)



**[FG2] 통계물리학과회 General Session: Dynamical Systems**

2013년 4월 24일 수요일 15:00 - 16:45

장소: 201호

좌장: 노재동 서울시립대

**FG-09** [15:00-15:14]

**Quantum Behaviors of a Particle in a Harmonic Potential in Terms of Classical Molecular Dynamics** / KIM Sangrak(Kyonggi University)

**FG-10** [15:14-15:28]

**삼체문제와 카오스** / LEE Ho Joong(홍익대 기초과학과)

**FG-11** [15:28-15:42]

**Dynamic Scaling in Time Evolution of Phase Synchronized Oscillators** / HA Meesoon, CHOI Chulho<sup>1</sup>, KAHNG Byungnam<sup>1</sup>(Dept. of Physics Education, Chosun University. <sup>1</sup>Dept. of Physics and Astronomy, Seoul National University)

**FG-12** [15:42-15:56]

**Graph Spectral Analysis for Intra-Cellular Reaction Dynamics** / GHIM CHEOL-MIN(School of Nano-Bioscience & Chemical Engineering and Graduate Program of Applied Physics, UNIST)

**FG-13** [15:56-16:10]

**Sparsely Synchronized Brain Rhythms in A Small-World Neural Network** / 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(초)** [16:10-16:45]

**Single-molecule biophysics : reductionism seeking physical beauty from biological reality** / HONG Seok-Cheol(Department of Physics, Korea University, Seoul, Korea)

**[FG3] 통계물리학과회 General Session : Phase Transitions and Critical Phenomena**

2013년 4월 25일 목요일 09:00 - 10:55

장소: 201호

좌장: 홍헌숙 전북대

**FG-15** [09:00-09:14]

**Polydispersity and optimal relaxation in the hard sphere gas** / BARBIER Matthieu, TRIZAC Emmanuel<sup>1</sup>(Institute for Basic Science, Inha University. <sup>1</sup>Laboratoire de Physique Theorique et Modeles Statistiques, Universite Paris-Sud, France)

**FG-16** [09:14-09:28]

**Residual discrete symmetry of the five-state clock model** / BAEK Seung Ki, KIM Beom Jun<sup>1</sup>(Korea Institute for Advanced Study. <sup>1</sup>Sungkyunkwan University)

**FG-17** [09:28-09:42]

**Onset of Collective Synchronization in a System of Random Frequency Oscillators on Random Sparse Networks** / UM Jaegon, PARK Hyunggyu(Korea Institute for Advanced Study)

**FG-18** [09:42-09:56]

**Percolation properties of growing networks under an Achlioptas process** / YI Su Do, JO Woo Seong, KIM Beom Jun, SON Seung-Woo<sup>1</sup>(BK21 Physics Research Division and Department of Physics, Sungkyunkwan University. <sup>1</sup>Department of Applied Physics, Hanyang University)

**FG-19** [09:56-10:10]

**Ising Model with Competing Interactions on a Square Lattice** / 이재환, 김승연(숭실대학교 의생명시스템학부. <sup>1</sup>한국교통대학교 교양학부)

**FG-20** [10:10-10:24]

**Forest Fire Model as a Model of Financial Crises** / 강병남, 이덕재(서울대학교 물리천문학부)

**FG-21** [10:24-10:38]

**Transitions among multiple burst-oscillators in cultured neural networks** / 김준환, 허륜, 최준호, 이경진(고려대학교, 물리학과)

**FG-22** [10:38-10:52]

**Trail Networks Formed by Populations of Immune Cells** / 양태석, 권태구, 박진성, 이경진(고려대학교 물리학과)

**[FG4] 통계물리학과회 General Session : Biophysics**

2013년 4월 25일 목요일 11:00 - 12:55

장소: 201호

좌장: 김용운 KAIST

**FG-23** [11:00-11:14]

**Mechanical nonlinear model of cell density waves due to the ratcheting motion of the cancer cells with a viscoelasticity** / 김현, 양태석, 권태구(고려대학교, 물리학과)

**FG-24** [11:14-11:28]

**The coexistence of "heterogeneity" and "coherence" in the phase distribution of clock cell populations in SCN** / JEONG Byeongha, HONG Jin Hee, LEE Kyoung J.(Center for Cell Dynamics,

Department of Physics, Korea University)

FG-25 [11:28-11:42]

**Waves of ratcheting cancer cells in proliferating tumor layer /**  
양태석, 김현, 권태구, 이경진(고려대학교 물리학과)

FG-26\* [11:42-11:56]

**The B-Z transition of the sequences with TG repeats: a mechanical study /** HONG Seok-Cheol, KIM Sook Ho(Korea University)

FG-27\* [11:56-12:10]

**The evolution of synaptic weight distribution of a model neuronal network subject to a " $\Delta t$  stimulation" /** 이호준, 김준환, 최준호, 이경진(고려대학교 물리학과)

FG-28 [12:10-12:24]

**Force-extension relation in cross-linked semiflexible bundles /** BENETATOS Panayotis, ZIPPELIUS Annette<sup>1</sup>, ULRICH Stephan<sup>2</sup>(Department of Physics, Kyungpook National University, Korea. <sup>1</sup>Institute for Theoretical Physics, Georg-August University, Goettingen, Germany. <sup>2</sup>Lorentz Institute for Theoretical Physics, Leiden, Netherlands)

FG-29 [12:24-12:38]

**Fractal spatial distribution of pancreatic islets in three dimensions: a self-avoiding growth model /** 조정호, HORNBLAD Andreas<sup>1</sup>, KILIMNIK German<sup>2</sup>, HARA Manami<sup>2</sup>, AHLGREN Ulf<sup>1</sup>, PERIWAL Vipul<sup>3</sup>(아시아태평양이론물리센터. <sup>1</sup>Umea University, Umea Center for Molecular Medicine. <sup>2</sup>The University of Chicago, Department of Medicine. <sup>3</sup>National Institutes of Health, NIDDK)

FG-30 [12:38-12:52]

**생체모사 유모세포-뉴런계의 청각 변환에서 임계성과 흥분성의 역할 /** 안강현, 송태근<sup>1</sup>, 김혜라<sup>2</sup>, NOGARET Alain<sup>3</sup>, 정원희, 이우석(충남대학교 물리학과. <sup>1</sup>ICTP, Italy. <sup>2</sup>SK Hynix. <sup>3</sup>University of Bath, UK)

[FF1] 통계물리학과/응집물질물리학과 공동 Focus Session :  
바이오/무른물질 연구의 새로운 동향

2013년 4월 25일 목요일 14:00 - 15:40

장소: 103호

좌장: 김 기 범 KAIST

FF-01(초) [14:00-14:25]

**Structure Study of Liquid Crystals in Confined Space /** KIM Mahn Won(Chanwon National University and KAIST)

FF-02(초) [14:25-14:50]

**Coffee-Ring Effect and Self-Pinning Mechanism /** WEON Byung Mook, JE Jung Ho<sup>1</sup>(Sungkyunkwan University. <sup>1</sup>Pohang University of Science and Technology)

FF-03(초) [14:50-15:15]

**Electrical Power Generation by Mechanically Modulating Electrical Double Layers /** PAK Hyuk Kyu, MOON Jong Kyun, LEE Dongyun(Pusan National University, Dept of Physics)

FF-04(초) [15:15-15:40]

**Single-molecule FRET beyond the FRET range : Bending of dsDNA upon binding of Anabaena sensory rhodopsin transducer /** KIM Sung Hyun, AHN TakKyo, KIM So Young<sup>1</sup>, JUNG Kwang-Hwan<sup>1</sup>, KIM Doseok(Sogang University, Department of Physics. <sup>1</sup>Sogang University, Department of life science)

[FF2] 통계물리학과/응집물질물리학과 공동 Focus Session :  
바이오/무른물질 연구의 새로운 동향

2013년 4월 25일 목요일 15:45 - 16:50

장소: 103호

좌장: 김 기 범 KAIST

FF-05(초) [15:45-16:10]

**Water Phases and Protein Dynamics at Cryogenic Temperatures /** KIM CHAE UN(Cornell University, Cornell High Energy Synchrotron Source)

FF-06(초) [16:10-16:35]

**Single-molecule DNA curtains reveal the biophysical properties and biological roles of DNA translocase FtsK /** LEE Ja Yil, FINKELSTEIN Ilya J., CROZAT Estelle<sup>1</sup>, SHERRATT David J.<sup>1</sup>, GREENE Eric C.<sup>2</sup>(Columbia University, Biochemistry and Molecular Biophysics. <sup>1</sup>Oxford University, Biochemistry. <sup>2</sup>Columbia University, Biochemistry and Molecular Biophysics and Howard Hughes Medical Institute)

FF-07\* [16:35-16:50]

**Structural and Orientational Study of Molecular Wires of Discotic Liquid Crystal /** PARK Ji Hyun, LABARDI Massimiliano<sup>1</sup>, TAKANISHI Yoichi<sup>2</sup>, YAMAMOTO Jun<sup>2</sup>, SCALIA Giusy<sup>3</sup>(Graduate School of Convergence Science and Technology, Seoul National University (Korea). <sup>1</sup>CNR-IPCF, UOS Pisa (Italy). <sup>2</sup>Department of Physics, Graduate School of Science, Kyoto University (Japan). <sup>3</sup>Graduate School of Convergence Science and Technology, Seoul National University (Korea), Advanced Institutes of Convergence Technology (AICT))

## SESSION G

### 물리교육분과회

#### [GG1] 물리교육분과회 General Session

2013년 4월 25일 목요일 09:30 - 10:45

장소: 106호

좌장: 박 상 우 청주교대

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

교수내용지식(PCK) 관점에서 본 중등 물리교사 양성과정 / 이창현, 강남화  
(한국교원대학교 물리교육과)

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

예비 물리 교사가 희망하는 물리교육과 교육과정 개정 방향 / 조광희(조선  
대학교, 물리교육과)

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

카오스 현상을 시각적으로 보여주는 카오스 수차 전시물의 한계  
(Problems with Incorrectly Implemented Chaotic Waterwheels  
Intended to Demonstrate Chaotic Behaviour) / 권순필(국기핵융합연구소)

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

이공계 대학 신입생의 물리 개념에 대한 이해와 사이버과학에 대한 인식  
의 상관관계 탐색 / 김홍정, 임성민(대구대학교, 물리교육)

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

STAR 모형을 이용한 고등학교 현대물리 개념 수업의 사례 / 김재권, 김영민(학  
성고등학교, <sup>1</sup>부산대학교)

#### [GF1] 물리교육분과회 Focus Session : 의미있는 물리실험지도의 방향

2013년 4월 25일 목요일 11:00 - 12:45

장소: 106호

좌장: 윤 혜 경 춘천교대

#### GF-01 [11:00-11:15]

개념 교육을 위해 수업시간에 할 수 있는 Hand-on 실험 / 김중복, 이지원  
(한국교원대학교, 물리교육과)

#### GF-02 [11:15-11:30]

담화 기반 물리실험교육의 실천과 의의: 소크라테스식 대화와 공동생성적  
대화 / 임성민(대구대학교, 물리교육과)

#### GF-03 [11:30-11:45]

학생들의 물리학 흥미를 높이기 위한 실험수업의 활용에 대한 제안 /  
김성원(이화여자대학교, 과학교육과)

#### GF-04 [12:00-12:15]

대학 일반물리실험 과목에서의 조교들의 업무실태조사 / 김완선, 이현주,  
김진영, 김성원(이화여자대학교, 과학교육과, <sup>1</sup>서울시립대학교)

#### GF-05 [12:15-12:30]

과학 교사의 물리 실험실 수업 능력 개선을 위한 POCOM의 개발과 적용 /  
김영민, 박종원, 정진수<sup>2</sup>, 박영신<sup>3</sup>, 박종석(부산대학교, 물리교육과, <sup>1</sup>전남대학교,  
물리교육과, <sup>2</sup>대구대학교, 생물교육과, <sup>3</sup>조선대학교, 지구과학교육과, <sup>4</sup>경북대학교,  
화학교육과)

#### GF-06 [12:30-12:45]

탐구문제 발견, 실험설계, 보고서 작성을 위한 점검표 개발과 적용 / 박종  
원(전남대학교)

#### [GS1] 물리교육분과회 Special Session

2013년 4월 25일 목요일 16:30 - 18:00

장소: 107호

좌장: 김 영 민 부산대

#### GS-01 [16:30-16:40]

물리교육분과 특별세션 "T<sup>2</sup>P(Tips for Teaching Physics)-물리지도의  
비법"의 소개 / 박종원(전남대학교 물리교육과)

#### GS-02 [16:40-16:50]

태양계 시뮬레이션 프로그램 Gravity 활용을 통한 태양계 모형 만들기 /  
박상우(청주교육대학교 과학교육과)

#### GS-03 [16:50-17:00]

간단한 전기회로에 대한 역할놀이 비유활동 / 윤혜경(춘천교육대학교 과학교  
육과)

#### GS-04 [17:00-17:10]

고등학교 일반상대성이론 관련 단원의 수업에 스마트 기기의 가속도 센서  
를 이용하는 방안 / 권태영, 주성빈, 최재혁(전남대학교 물리교육과)

#### GS-05 [17:10-17:20]

초등학교 예비교사를 위한 물리실험 교재 개발 및 활용 / 김태규(전주교육  
대학교 과학교육과)

#### GS-06 [17:20-17:30]

소리를 이용한 전기적 저항 체험 장치 - 과학영재교육원 사사고육 적용사  
례를 중심으로 / 주성빈, 권태영, 최재혁(전남대학교 물리교육과)

#### GS-07 [17:30-17:40]

그레디언트(gradient)와 접선(tangent)의 차이 / 조광희(조선대학교 물리  
교육과)

GS-08 [17:40-17:50]

흥미있는 물리 수업 방법 / 안종제(서울 덕수고등학교)

GS-09 [17:50-18:00]

자기력선 시각화를 통한 고등학생의 마이스너 효과에 대한 이해 증진 / 신재성, 최재혁(금호고등학교, 전남대학교 물리교육과)

**[GG2] 물리교육분과회 General Session**

2013년 4월 26일 금요일 09:30 - 10:45

장소: 205호

좌장: 박 상 우 청주교대

GG-06 [09:30-09:45]

개정된 교육과정에 따른 물리 I 수업에서 교사가 경험하는 어려움 분석 / 최재혁, 신재성(전남대학교, 물리교육과, '금호고등학교')

GG-07 [09:45-10:00]

중등학교 학생들의 사고실험 탐색 / 김본경, 박종원(전남대학교, 물리교육과)

GG-08\* [10:00-10:15]

대학생들의 불확정성 원리 설명 과정 유형 분석 / 강남화, 최혜정(한국교원대학교, 물리교육과)

GG-09\* [10:15-10:30]

과학사적 논쟁의 구조: 원자의 구조를 중심으로 / 권상운, 이경호(서울대학교, 물리교육과)

GG-10\* [10:30-10:45]

일반상대론의 휘어진 공간 개념에 대한 학생들의 이해 / 송진웅, 김효순(서울대학교)

**[GG3] 물리교육분과회 General Session**

2013년 4월 26일 금요일 11:00 - 12:45

장소: 205호

좌장: 최 재 혁 전남대

GG-11\* [11:00-11:15]

불확정성 원리에서의 '불확정성' 의미에 대한 분석: 교재와 선행연구를 중심으로 / 박송이, 정용욱, 송진웅(서울대학교 물리교육과)

GG-12 [11:15-11:30]

Khan Academy 온라인 교육 프로그램을 통해 분석해 본 과학교육의 새로운 변화 방향 / 이승우, 김영민(부산대학교)

GG-13 [11:30-11:45]

초등학교 6학년 과학 교과서에 나타난 논증 구조 분석 / 배주영, 강남화

(한국교원대학교 물리교육과)

GG-14\* [12:00-12:15]

초등과학에서 무게와 질량의 개념과 단위 이해를 위한 프로그램의 개발 및 적용 / 홍석인, 유지은(경인교육대학교, 과학교육과)

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

문제해결을 방해하는 유추 / 이지원, 김종복(한국교원대학교)

GG-16 [12:30-12:45]

Moments of Inertia of Disks and Spheres Without Integration / SEOK-CHEOL Hong, SEOK-IN Hong'(고려대학교, 물리학과, '경인교육대학교, 과학교육과')

## SESSION H

### 플라스마물리학분과회

#### [HF1] 플라스마물리학분과회 Focus Session : Accelerator

2013년 4월 25일 목요일 14:00 - 15:45

장소: 107호

좌장: 석 희 용 광주과학기술원

#### HF-01 [14:00-14:30]

**Current Status of PAL XFEL Project** / KO In Soo(PAL-XFEL Project, POSTECH)

#### HF-02 [14:30-15:00]

**Spectrum and Power control at LCLS: Self-seeding and iSASE** / WU Juhao(XFEL Physics Team, SLAC National Accelerator Laboratory)

#### HF-03 [15:00-15:25]

**Measurement of the continuum lowering in a dense plasma** / CHO Byoung-ick(GIST, Department of Physics and Photon Science)

#### HF-04 [15:25-15:45]

**Undulator lines in PAL-XFEL** / PARC Yong Woon, KANG Heung Sik, HAN Jang Hui, KIM Dong Eon, HWANG Ilmoon, KANG Tai-hee, SIM Chi Hyun<sup>1</sup>, KO In Soo<sup>1</sup>(Pohang Accelerator Laboratory, PAL-XFEL Physics Team. <sup>1</sup>Pohang University of Science and Technology, Department of Physics)

#### [HF2] 플라스마물리학분과회 Focus Session : Nuclear Fusion

2013년 4월 26일 금요일 09:00 - 10:45

장소: 107호

좌장: 홍 석 호 NFRI

#### HF-05 [09:00-09:30]

**ELM Suppression And Its Understanding As A Bifurcated State In Application Of Low-n RMPs In KSTAR Plasmas** / JEON YoungMu, PARK JongKyu<sup>1</sup>, EVANS Todd E<sup>2</sup>, SABBAGH Steve A<sup>3</sup>, PARK YoungSeok<sup>3</sup>, PARK GunYoung, HAN HyunSun, KO Wonha, LEE KyuDong, KIM HeongSu, SEO SeongHyun, NAM YongUn, GHIM Youngcheol, KIM Jayhyun, YOON Siwoo, KIM JinYong, KIM WoongChae, OH YoungKook, KWAK JongGyu, JIN JongKook, AHN HyunSik, LEE DongGeon, CHOI JaeHun, KEUNSU Lee, KIM HakKun, YANG HyungLyol(National Fusion Research Institute. <sup>1</sup>Princeton Plasma Physics Laboratory. <sup>2</sup>General Atomics. <sup>3</sup>Columbia University)

#### HF-06 [09:30-09:55]

**Runaway electron suppression in KSTAR** / KIM Junghee, ENGLAND A. C.<sup>1</sup>, CHEN Z. Y.<sup>2</sup>, KIM W. C.<sup>3</sup>(National Fusion Research Institute, Daejeon, Korea. <sup>1</sup>Oak Ridge National Laboratory, Oak Ridge, TN, U.S.A. <sup>2</sup>Huazhong University of Science and Technology, Wuhan, China. <sup>3</sup>National Fusion Research

Institute, Daejeon, Korea and ITER Organization, Saint-Paul Lez Durance, France), KSTAR TEAM

#### HF-07 [09:55-10:20]

**Neutron Diagnostic Experiments in KSTAR with ITER Design Neutron Activation System** / CHEON M.S., SEON C.R., PAK S., LEE H.G., BERTALOT L.<sup>1</sup>(National Fusion Research Institute, Daejeon, Korea. <sup>1</sup>ITER Organization, Saint-Paul-Lez-Durance, France)

#### HF-08 [10:20-10:45]

**Development of ITER VUV Spectrometer Prototype and Its Application to Impurity Study of KSTAR Plasmas** / SEON C. R., HONG J. H.<sup>1</sup>, JANG J.<sup>1</sup>, LEE S. H.<sup>1</sup>, CHOE W.<sup>1</sup>, LEE H. H., CHEON M. S., PAK S., LEE H. G., BIEL W.<sup>2</sup>, BARNESLEY R.<sup>3</sup>(National Fusion Research Institute, Daejeon, Korea. <sup>1</sup>Korea Advanced Institute of Science and Technology, Daejeon, Korea. <sup>2</sup>Forschungszentrum Julich GmbH, Julich, Germany. <sup>3</sup>ITER Organization, Cadarache Centre, France)

#### [HG1] 플라스마물리학분과회 General Session

2013년 4월 26일 금요일 13:00 - 14:45

장소: 107호

좌장: 김 한 성 KAERI

#### HG-01 [13:00-13:20]

**Nitrogen-Doped CVD-Graphene by Inductively Coupled Plasma** / 유원종, 이지아, 이승환, 임영대(성균관대 나노기술학과)

#### HG-02 [13:20-13:40]

**The Current Status of KBSI Accelerator Project** / WON mi-sook, LEE Byoung-Seob, CHOI Seyong, OK Jung-Woo, PARK Jin Yong, SHIN Chang Seouk, BAHNG Jungbae, YOON Jang-Hee(Korea Basic Science Institute)

#### HG-03 [13:40-14:00]

**Beam Commissioning Superconducting RF System for PLS-II** / SOHN .Y, YU .I .H, JOO .Y .D, CHUN .M .H, PARK .I .S, PARK .H .J, HA .T .G, PARK .C .D, HUANG .J .H, NAM .S .H(Pohang Accelerator Laboratory, POSTECH)

#### HG-04 [14:00-14:20]

**Ion Cyclotron Wall Conditioning on KSTAR** / 홍석호, KOGUT Dmitry<sup>1</sup>, DOUAL david<sup>1</sup>, 김해진, 왕선정(국가핵융합연구소. <sup>1</sup>CEA-Cadarache)

#### HG-05 [14:20-14:40]

**Evaluation of Global Recycling of KSTAR Plasmas in 2011 by OD Particle Balance Model** / JUHN June-Woo, HONG S. H.<sup>1</sup>, HWANG Y. S.(Seoul National University. <sup>1</sup>NFRI)

## SESSION I

광학 및 양자전자학분과회

### [IG1] 광학 및 양자전자학분과회 General Session

2013년 4월 25일 목요일 14:00 - 15:45

장소: 106호

좌장: 김 현 수 조선대

IG-01 [14:00-14:15]

**Ultrashort pulse propagation and second harmonic generation in photonic structures** / OOI C. H. Raymond(Department of Physics, University of Malaya, 50603 Kuala Lumpur, Malaysia)

IG-02 [14:15-14:30]

**Optical and structural properties of plasma-treated fungal spores** / 이건준, 박경순, 최은하(광운대학교, 전자바이오물리학과 및 플라즈마바이오과학연구소)

IG-03 [14:30-14:45]

**Epsilon-Near-Zero Subwavelength Optoelectronics** / 전영철(인하대학교, 물리학과)

IG-04\* [14:45-15:00]

**Polarization Effects on Phase-shift Anomaly in Sub-wavelength Diffraction** / 이강희, 이민우, 박상언, 안재욱(KAIST, 물리학과, '한국표준과학연구원, 길이시간센터)

IG-05\* [15:00-15:15]

**Effective medium theory for resonant plasmonic systems via dressed polarizability** / YOO SeokJae, PARK Q-Han(Department of Physics, Korea University)

IG-06 [15:15-15:30]

**고해상도 엑스선 현미경을 이용한 3차원 나노 이미징** / 임준(포항공과대학교)

IG-07 [15:30-15:45]

**부분적으로 결맞는 파동에서의 보존 법칙** / 김선명(연세대학교 원주캠퍼스 물리학과)

### [IG2] 광학 및 양자전자학분과회 General Session

2013년 4월 25일 목요일 16:00 - 17:00

장소: 106호

좌장: 정 태 문 GIST-APRI

IG-08\* [16:00-16:15]

**Experimental Study of Microwave Resonances for  $\lambda/400$  Slot Antennas** / 김대식, 이광희, 박영미(서울대학교 물리천문학부)

IG-09\* [16:15-16:30]

**Magnetic scattering of light from a single rectangular hole** / KIM Dai-Sik, LEE Dukhyung, BAHK Young-Mi, HAN Sanghoon<sup>1</sup>, RHIE Ji Yeah, AHN Jae Sung, KANG Taehee(서울대학교 물리천문학부, <sup>1</sup>서울대학교 전기공학부)

IG-10\* [16:30-16:45]

**FCS를 이용한 분자확산의 온도 의존성 연구** / 정찬배, 이재란, 강만일, 김석원(울산대학교, 물리학과)

IG-11\* [16:45-17:00]

**Large-scale Integration of Photonic Crystal Waveguides and Drop-filters** / 전현수, 김한빛, 안성모(서울대학교 물리천문학부)

### [IG3] 광학 및 양자전자학분과회 General Session

2013년 4월 26일 금요일 09:30 - 10:30

장소: 206호

좌장: 안 재 욱 KAIST

IG-12 [09:30-09:45]

**천연색 양안 시차 홀로그래를 위한 초광시야각 물체광 렌즈 설계** / 한진오, 이재성, 이선호, 정상호<sup>1</sup>, 홍윤석<sup>2</sup>, 김재순(명지대학교 물리학과, <sup>1</sup>솔브레인 이엔지)

IG-13\* [09:45-10:00]

**To-can 기반 능동소자를 활용한 Optical Transceiver Embedded형 OTDR(Optical Time Domain Reflectometer) 기능구조 연구** / 박가예, 박종환, 박지연, 경석현<sup>1</sup>, 박정호<sup>2</sup>, 이준호(전자부품연구원 광전융합연구센터, 고려대학교 전기전자전파공학부, <sup>1</sup>전자부품연구원 광전융합연구센터, <sup>2</sup>고려대학교 전기전자전파공학부)

IG-14\* [10:00-10:15]

**편광형광상관분광법을 이용한 quantum rod 입자의 회전에 대한 연구** / 이재란, 김석원(울산대, 물리과)

IG-15\* [10:15-10:30]

**CLSM을 이용한 다양한 조건에서 성장된 박막의 나노로드 관측** / 김태성, 홍동혁, 강만일, 김석원(울산대학교 물리학과)

## SESSION J

원자 및 분자물리학분과회

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

2013년 4월 24일 수요일 13:00 - 14:45

장소: 204호

좌장: 신 용 일 서울대

JG-01(초) [13:00-13:25]

**Period-doubled states of superfluid Fermi gases in optical lattices along the BCS-BEC crossover** / WATANABE Gentaro, YOON Sukjin<sup>1</sup>, DALFOVO Franco<sup>2</sup>, NAKATSUKASA Takashi<sup>3</sup>(APCTP, POSTECH, RIKEN. <sup>1</sup>APCTP. <sup>2</sup>University of Trento. <sup>3</sup>RIKEN)

JG-02(초) [13:25-13:50]

**원자 간섭 측정을 위한 외장형 원자칩을 이용한 고반복 <sup>87</sup>Rb Bose-Einstein 응축 생성** / 김종복, 유훈, 김승진(한국교원대학교, 물리교육과)

JG-03(초) [13:50-14:15]

**Non-universal properties in collisions of ultracold Li<sub>2</sub> Feshbach molecules** / HEO Myoung-Sun, WANG Tout<sup>1</sup>, KETTERLE Wolfgang<sup>1</sup>(KRISS. <sup>1</sup>MIT)

JG-04\* [14:15-14:30]

**Detection of quantized vortices in a 2D Bose gas** / 서상원, 최재윤, 권우진, 신용일(서울대학교, 물리천문학부)

JG-05 [14:30-14:45]

**RF Spectroscopy of Optically Trapped Lithium : Magic Polarization** / 김휘동, 한혁상, 조동현(고려대학교)

### [JG2] 원자 및 분자물리학분과회 General Session : Quantum Optics

2013년 4월 24일 수요일 15:00 - 16:25

장소: 204호

좌장: 박 희 수 표준원

JG-06(초) [15:00-15:25]

**Sub-Poissonian, anti-bunched beam of light out of an optical cavity pumped by a Poissonian beam of atoms** / CHOUGH Young-Tak(광주대학교 광통신/보건의료공학과)

JG-07 [15:25-15:40]

**빛의 비고전적 상관성의 발현** / 김기식, PODOSHVEDOV Sergey, 장석현(인하대, 물리학과)

JG-08\* [15:40-15:55]

**Heralded single photon source for quantum optics using PPKTP** / 이희정, 문한섭, 김현오, 차명식(부산대학교)

JG-09 [15:55-16:10]

**A Coherent View on Entropy** / 황원영(전남대학교 물리교육과)

JG-10 [16:10-16:25]

**Quantum Measurement Postulate and Special Relativity** / CHOI Taeseung, HAN Yeong Deok<sup>1</sup>(Seoul Women's University. <sup>1</sup>Woosuk University)

### [JP1] 원자 및 분자물리학분과회 Pioneering Symposium : Quantum Information processing based on Atoms and Photons

2013년 4월 25일 목요일 09:00 - 10:45

장소: 206호

좌장: 박 창 용 표준원

후원 : 고려대학교 레이저분광학 연구실, 서울대학교 거시양자제어연구단

JP-01 [09:00-09:30]

**Scaling the Ion Trap Quantum Processor** / KIM Jungsang(Fitzpatrick Institute for Photonics, Electrical and Computer Engineering Department, Duke University)

JP-02 [09:30-09:55]

**Qudit Communication Network** / KIM Jaewan(Korea Institute for Advanced Study)

JP-03 [09:55-10:20]

**단일광자 기반 양자정보** / 최상경, 박희수(한국표준과학연구원)

JP-04 [10:20-10:45]

**Using weak quantum measurement to protect entanglement from decoherence** / KIM Yoon-Ho(Pohang University of Science and Technology)

### [JP2] 원자 및 분자물리학분과회 Pioneering Symposium : Quantum Information processing based on Atoms and Photons

2013년 4월 25일 목요일 11:00 - 12:45

장소: 206호

좌장: 이 진 형 한양대

후원 : 고려대학교 레이저분광학 연구실, 서울대학교 거시양자제어연구단

JP-05 [11:00-11:30]

**Quantum Contextuality and Certified Random Numbers** / KIM Kihwan(Center for Quantum Information, Institute for Interdisciplinary Information Sciences, Tsinghua University)



JP-06 [11:30-11:55]

**Slow light enhanced efficient photon echo quantum memory /**  
HAM Byoung S.(School of Information and Communications, GIST)

JP-07 [11:55-12:20]

**Terahertz flip-flop operation in cold atomic rubidium /** 안재욱,  
임종석(한국과학기술원, 물리학과)

JP-08 [12:20-12:45]

**Heat engine driven by purely quantum information /** 김상욱, 박정  
준<sup>1</sup>, 김강환<sup>2</sup>, SAGAWA Takahiro<sup>3</sup>(부산대학교, 물리교육과. <sup>1</sup>부산대학교, 물리학  
과. <sup>2</sup>KAIST, 물리학과. <sup>3</sup>Kyoto University, Yukawa institute)

원자 및 분자물리학분과 총회

2013년 4월 25일 목요일 12:45 - 13:00

장소: 206호

[JG3] 원자 및 분자물리학분과회 General Session : Atomic and Molecular  
Physics

2013년 4월 26일 금요일 09:00 - 10:25

장소: 204호

좌장: 허 명 선 표준원

JG-11(초) [09:00-09:25]

**Emerging beam resonance of He<sub>2</sub> /** 조범석, ZHANG Weiqing<sup>1</sup>,  
SCHOLLKOPF Wieland<sup>1</sup>(Ulsan National Institute of Science and Technology,  
School of Nano-Bio Science and Chemical Engineering. <sup>1</sup>Fritz Haber Institute of  
Max Planck Society, Molecular Physics Department)

JG-12 [09:25-09:40]

**Ultrafast Coherent Control of Giant Oscillating Molecular  
Dipoles in the Presence of Static Electric Fields /** CHANG Bo Young,  
SHIN Seokmin, SOLA Ignacio<sup>1</sup>(Dep. Chemistry Seoul National University. <sup>1</sup>Dep.  
Physical Chemistry U. Complutense de Madrid)

JG-13 [09:40-09:55]

**Electron Dynamics in Strong-Field Ionization of the  
Autoionization States of Helium /** BYUN Chang Woo, CHOI Nark  
Nyul(Kumoh National Institute of Technology)

JG-14 [09:55-10:10]

**Electron Dynamics in Strong-Field Ionization of the One-  
dimensional Helium Atom /** LEE Min-Ho, CHOI Nark Nyul(Kumoh  
National Institute of Technology)

JG-15 [10:10-10:25]

**Structural Modifications of Thymine Induced by Low Energy  
Electron Collision /** PARK Yeunsoo, SANCHE Leon<sup>1</sup>, WAGNER J.  
Richard<sup>1</sup>(National Fusion Research Institute, Plasma Technology Research  
Center. <sup>1</sup>University of Sherbrooke, Department of Nuclear Medicine and  
Radiobiology)

[JG4] 원자 및 분자물리학분과회 General Session : Precision Measurement  
and Quantum Information

2013년 4월 26일 금요일 10:40 - 12:25

장소: 204호

좌장: 안 재 욱 KAIST

JG-16(초) [10:40-11:05]

**Improvement of Yb optical lattice clock at KRISS toward the  
uncertainty below 10<sup>-17</sup> /** LEE Sangkyung, YU Dai-Hyuk, LEE Won-Kyu,  
PARK Sang Eon, LEE Sang-Bum, MUN Jongchul, HEO Myoung-Sun, KWON  
Taeg Yong, PARK Chang Yong(Korea Research Institute of Standards and  
Science)

JG-17(초) [11:05-11:30]

**Quantum Walk in Light Harvesting Complex /** 이진형, 임재민(한양대학교)

JG-18(초) [11:30-11:55]

**Searching for Time Symmetry Violation in Polar Molecules /** LEE  
Jeongwon, LEANHARDT Aaron<sup>1</sup>(Korea Research Institute of Standards and  
Science. <sup>1</sup>University of Michigan)

JG-19 [11:55-12:10]

**Quantum Interference Control of Two-path Two-photon Transition  
in a Four-level Diamond-confi guration Quantum System /** LEE Han-  
Gyeol, KIM Hyosub, LIM Jongseok, AHN Jaewook(KAIST, Department of  
Physics)

JG-20 [12:10-12:25]

**Development of Quantum Repeater based on Ion Trap  
Technology /** 김태현, 김민형, 김장면, 안준식, 윤종건(SK텔레콤 Quantum  
Tech. Lab.)

## SESSION K

## 반도체물리학분과회

### [KS1] 반도체물리학분과회 Sepcial Session : 2013 Korean-Japan Joint Workshop on Semiconductor Physics and Technology - Graphene and Related Materials-

2013년 4월 24일 수요일 09:45 - 12:00

장소: 106호

좌장: 김 중 수 영남대

[09:45-10:00]

**Welcoming Address / Eunkyu KIM**(KPS Semiconductor Physics Division Chair)

**KS-01(초)** [10:00-10:30]

**Transport of edge magnetoplasmons in graphene / KUMADA Norio, TANABE S., HIBINO H., KAMATA H.<sup>1</sup>, HASHISAKA M.<sup>1</sup>, MURAKI K., FUJISAWA T.<sup>1</sup>**(NTT Basic Research Laboratories, NTT Corporation. <sup>1</sup>Department of Physics, Tokyo Institute of Technology)

**KS-02(초)** [10:30-11:00]

**Charge-transfer excitonic emission of ZnO-graphene quantum dots / CHOI Won-Kook, KWON Soon-Nam<sup>1</sup>, SON Dong-Ick<sup>2</sup>, KIM Hong-Hee**(Interface Control Research Center, Korea Institute of Science and Technology. <sup>1</sup>Interface Control Research Center, Korea Institute of Science and Technology. <sup>2</sup>Soft Innovative Materials Research Center, Korea Institute of Science and Technology)

**KS-03(초)** [11:00-11:30]

**Semiconductive property in bilayer graphene modulated by electric field / TSUKAGOSHI Kazuhito**(WPI-MANA, NIMS (Japan))

**KS-04(초)** [11:30-12:00]

**Graphene p-n vertical junctions showing asymmetric rectifying behaviors and device applications / CHOI Suk-Ho**(Department of Applied Physics, Kyung Hee University)

### [KF1] 반도체물리학분과회 Focus Session : 새로운 2차원 전하의 물리학

2013년 4월 24일 수요일 11:00 - 12:15

장소: 105호

좌장: 정 문 석 성균관대

**KF-01(초)** [11:00-11:30]

**High-performance thin-film transistors based on MoS<sub>2</sub> crystals / CHOI Woong**(School of Advanced Materials Engineering, Kookmin University, Seoul 137-702)

**KF-02(초)** [11:30-12:00]

**Physical Properties of 2-Dimensional Materials / LEE Changgu**(School of Mechanical Engineering, Sungkyunkwan University and SKKU Advanced Institute of Nano Science and Technology, Sungkyunkwan University, Republic of Korea)

**KF-03\*** [12:00-12:15]

**Quantum Corrections to the Conductivity of Nano-Patterned LaAlO<sub>3</sub>/SrTiO<sub>3</sub> Heterostructures / 장정원, 노현호<sup>1</sup>, 성상근<sup>2</sup>, 송종현<sup>2</sup>, 이준성, 이순걸, 도용주, 김진희**(고려대학교, <sup>1</sup>표준과학연구원, <sup>2</sup>충남대학교)

### [KP1] 반도체물리학분과회 Pioneering Symposium : 나노복합계물성특성연구

2013년 4월 24일 수요일 14:00 - 15:00

장소: 105호

좌장: 이 흥 석 제주대

**KP-01(초)** [14:00-14:30]

**액정(Liquid crystal)을 이용한 패터닝 응용에 대한 연구 / 윤동기**(한국과학기술원 나노과학기술대학원)

**KP-02(초)** [14:30-15:00]

**Configuration Extraction of Coulomb-Induced Nonlinearities in GaAs Quantum Wells / SMITH Ryan, FUNK Andrew, CUNDIFF Steven, KIRA Mackillo<sup>1</sup>, KOCH Stephan<sup>1</sup>**(JILA, University of Colorado, Boulder, CO, USA. <sup>1</sup>Department of Physics and Material Sciences Center, Philipps-University, Marburg, Germany)

### [KS2] 반도체물리학분과회 Sepcial Session: 2013 Korean-Japan Joint Workshop on Semiconductor Physics and Technology - Graphene and Related Materials-

2013년 4월 24일 수요일 14:00 - 15:30

장소: 106호

좌장: TOKUMITSU Eisuke

**KS-05(초)** [14:00-14:30]

**Direct fabrication and integration of graphene nanoribbon transistors / KATO Toshiaki, HATAKEYAMA Rikizo, KANEKO Toshiro**(Department of Electronic Engineering, Tohoku University)

**KS-06(초)** [14:30-15:00]

**Chemically-modified graphene nano-platelets and their electrode applications / JEONG Hee Jin**(Nano Carbon Materials Research Group, Korea Electrotechnology Research Institute)

**KS-07(초)** [15:00-15:30]

**Silicene : experimental evidence and properties of the graphene-like form of silicon / FLEURENCE Antoine**(School of Materials Science, Japan Advanced Institute of Science and Technology)

**[KP2] 반도체물리학과회 Pioneering Symposium : 나노복합계물성특성연구**

2013년 4월 24일 수요일 15:15 - 16:15

장소: 105호

좌장: 윤 동 기 KAIST

**KP-03(초) [15:15-15:45]**

**Quantum dots for nanoscale devices** / 이홍석(제주대학교, 물리학과)

**KP-04(초) [15:45-16:15]**

**N-type graphene induced by molecular hydrogen exposure at room temperature** / KIM Byung Hoon, HONG Sung Ju<sup>1</sup>, BAEK Seung Jae<sup>1</sup>, JEONG Hu Young<sup>2</sup>, PARK Noejung<sup>3</sup>, LEE Sang Wook<sup>4</sup>, LIM Jeongmin<sup>3</sup>, JUN Yongseok<sup>3</sup>, PARK Yung Woo<sup>1</sup>(Department of Physics, Incheon National University, Incheon 406-772, Republic of Korea. <sup>1</sup>Department of Physics and Astronomy and Department of Nano Science and Technology, Seoul National University, Republic of Korea. <sup>2</sup>UNIST Central Research Facility and School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology, Republic of Korea. <sup>3</sup>UNIST Central Research Facility and School of Mechanical and Advanced Materials Engineering, Interdisciplinary School of Green Energy, KIER-UNIST Center for Energy, Ulsan National Institute of Science and Technology, Republic of Korea. <sup>4</sup>Division of Quantum Phases and Devices, School of Physics, Konkuk University, Seoul 143-701, Republic of Korea)

**[KS3] 반도체물리학과회 Sepcial Session: 2013 Korean-Japan Joint Workshop on Semiconductor Physics and Technology - Graphene and Related Materials-**

2013년 4월 24일 수요일 16:00 - 17:45

장소: 106호

좌장: 최 석 호 경희대

**KS-08(초) [16:00-16:30]**

**Synthesis of patched or stacked graphene and hBN flakes : An emerging route to hybrid structure discovery** / KIM Soo Min, HSU Allen<sup>1</sup>, ARAUJO P. T.<sup>1</sup>, LEE Yi-Hsien<sup>1</sup>, PALACIOS Tomás<sup>1</sup>, DRESSELHAUS Mildred<sup>2</sup>, IDROBO Juan-Carlos<sup>3</sup>, KIM Ki Kang<sup>4</sup>, KONG Jing<sup>1</sup>(Department of Electrical Engineering and Computer Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA/Institute of Advanced Composite Materials, Korea Institute of Science and Technology (KIST), Republic of Korea. <sup>1</sup>Department of Electrical Engineering and Computer Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA. <sup>2</sup>Department of Electrical Engineering and Computer Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA/Department of Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA. <sup>3</sup>Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37831, USA. <sup>4</sup>Department of Electrical Engineering and Computer Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA/Nano Information Technology Academy (NITA), Dongguk University, Seoul, 100-715, Republic of Korea)

**KS-09(초) [16:30-17:00]**

**Ballistic transport and photovoltaic effect in graphene/h-BN** / MACHIDA Tomoki, MASUBUCHI Satoru, ONUKI Masahiro<sup>1</sup>, MORIKAWA Sei<sup>1</sup>, YAMAGUCHI Takehiro<sup>1</sup>, ARAI Miho<sup>1</sup>, INOUE Yoshihisa<sup>1</sup>, WATANABE Kenji<sup>2</sup>, TANIGUCHI Takashi<sup>2</sup>(Institute of Industrial Science, University of Tokyo, Tokyo 153-8505, Japan and INQIE, University of Tokyo, Tokyo 153-8505, Japan. <sup>1</sup>Institute of Industrial Science, University of Tokyo, Tokyo 153-8505, Japan. <sup>2</sup>National Institute for Materials Science, Tsukuba, 305-0044, Japan)

**KS-10(초) [17:00-17:30]**

**Synthesis of hexagonal boron nitride and its applications** / KIM Ki Kang(Dongguk University-Seoul, Department of Energy and Materials Engineering)

**[KT1] 반도체물리학과회 Tutorial : 투과전자현미경의 기본 원리와 재료 분석에의 응용**

2013년 4월 24일 수요일 18:00 - 19:00

장소: 202호

좌장: 김 기 강 동국대

**KT-01(초) [18:00-19:00]**

**투과전자현미경의 기본 원리와 재료분석에의 응용** / 허윤욱(포항공과대학교, 철강대학원)

**[KF2] 반도체물리학과회 Focus Session : 새로운 2차원 전하의 물리학**

2013년 4월 25일 목요일 09:00 - 10:30

장소: 105호

좌장: 지 승 훈 포항공대

**KF-04(초) [09:00-09:30]**

**3밴드의 위상학적 특성** / 한정훈(성균관대학 물리학과)

**KF-05(초) [09:30-10:00]**

**Molecular Beam Epitaxial Growth and Transport Properties of Topological Insulator Bi<sub>2</sub>Se<sub>3</sub> Thin Films** / 김용승, BANSAL Namrata<sup>1</sup>, EDREY Eliav<sup>1</sup>, BRAHLEK Mathew<sup>1</sup>, HORIBE Yoichi<sup>1</sup>, LI Guo-Hong<sup>1</sup>, CHEONG Sang-Wook<sup>1</sup>, OH Seongshik<sup>1</sup>(세종대학교, 물리학과. <sup>1</sup>Rutgers University, Department of Physics)

**KF-06(초) [10:00-10:30]**

**Tuning of topological states in Bi<sub>2</sub>Se<sub>3</sub> and Bi<sub>2</sub>Te<sub>3</sub> with magnetic impurities** / JUNG Myung-Hwa, JO Na-Hyun, CHOI Young-Ha, LEE Kyu-Joon(Department of Physics, Sogang University)

**[KF3] 반도체물리학과회 Focus Session : 새로운 2차원 전하의 물리학**

2013년 4월 25일 목요일 11:00 - 12:35

장소: 105호

좌장: 정 명 화 서강대

**KF-07(초) [11:00-11:30]**

**Topological insulating property of Ge-Sb-Te phase change materials /** JHI SEUNG-HOON, KIM JINWOONG<sup>1</sup>, KIM JEONGWOO<sup>1</sup>(Department of Physics, Pohang University of Science and Technology, Korea & Division of Advanced Materials Science, POSTECH, Pohang 790-784, Republic of Korea. <sup>1</sup>Department of Physics, Pohang University of Science and Technology, Korea)

**KF-08(초) [11:30-12:00]**

**Proposal of a Topological Kondo Insulator SmB<sub>6</sub> and relating recent experimental data /** TAKIMOTO Tetsuya(Department of Physics, HanYang University)

**KF-09(초) [12:00-12:30]**

**2차원 물질의 이중접합구조 전자소자 응용 /** 유원종, 최민섭, 이대영, 이승환, 이지아(성균관대학교 나노과학기술학과)

**[KF4] 반도체물리학과회 Focus Session : 새로운 2차원 전하의 물리학**

2013년 4월 25일 목요일 14:30 - 15:45

장소: 105호

좌장: 안 중 현 연세대

**KF-10(초) [14:30-15:00]**

**Velocity Renormalization and Anomalous Quasiparticle Dispersion in Graphene /** 황의현(성균관과학기술원, 성균관대학교)

**KF-11(초) [15:00-15:30]**

**Quasiparticle Properties in Multilayer Graphene /** 민홍기(서울대학교 물리천문학부)

**KF-12\* [15:30-15:45]**

**그래핀 양자점의 크기에 따른 Cathodoluminescence 특성 연구 /** 강수석, 신동희, 김창오, 김성, 최석호(경희대 응용물리학과)

**[KF5] 반도체물리학과회 Focus Session : 새로운 2차원 전하의 물리학**

2013년 4월 25일 목요일 16:00 - 17:00

장소: 105호

좌장: 황 의 현 성균관대

**KF-13(초) [16:00-16:30]**

**Optical Separation of Mechanical Strain, Charge Doping and Electronic Coupling in Graphene /** 류순민(경희대학교, 응용화학과)

**KF-14(초) [16:30-17:00]**

**Graphene based Nanogenerator /** 안중현(연세대학교 전기전자공학부)

**[KG1] 반도체물리학과회 General Session**

2013년 4월 26일 금요일 09:00 - 10:15

장소: 105호

좌장: 한 철 구 KETI

**KG-01\* [09:00-09:15]**

**바나듐 산화물 박막의 photo-voltaic 효과에 관한 연구 /** 정주호, 강만일, 김석원, 류지욱(울산대학교 물리학과, <sup>1</sup>공주대학교 물리학과)

**KG-02\* [09:15-09:30]**

**정량주입 코팅 방식으로 제작한 대면적 유기 발광 소자와 유기 태양 전지 특성 연구 /** 전홍구, 박병주, 조찬연, 권오은(광운대학교, 전자물리학과)

**KG-03\* [09:30-09:45]**

**Surface Plasmon-Driven Hot Electron Flow Probed with Metal-Semiconductor Nanodiodes /** PARK Jeong Young, LEE Young Keun(KAIST, EEWs, NanoCentury KI)

**KG-04\* [09:45-10:00]**

**Chalcogenide Thin Film Solar Cells Fabricated by Using Spray Pyrolysis /** 김성연, 김준호(인천대)

**KG-05\* [10:00-10:15]**

**Graphene film on Ag nanocluster as transparent and current spreading electrode for improved light output power in near ultraviolet light emitting diodes /** KIM Bo Kyoung, SEO Tae Hoon, SHIN GangU, PARK Ah Hyun, LEE Seul Be, JEONG Hyun Joon, LEE Gun Hee, SUH Eun-Kyung(School of Semiconductor and Chemical Engineering & Semiconductor Physics Research Center, Chonbuk National University)

**[KG3] 반도체물리학과회 General Session**

2013년 4월 26일 금요일 09:00 - 10:30

장소: 106호

좌장: 서 은 경 전북대

**KG-11\* [09:00-09:15]**

**V<sub>2</sub>O<sub>5</sub> 박막의 전자빔 조사특성에 따른 금속-절연체 전이에 관한 연구 /** 김민수, 강만일, 김석원, 류지욱(울산대학교 물리학과, <sup>1</sup>공주대학교 물리학과)

**KG-12\* [09:15-09:30]**

**Short-term Memory Of TiO<sub>2</sub>-based Electrochemical Capacitors: Empirical Analysis With Adoption Of A Sliding Threshold /** LIM Hyungkwan, KIM Inho, KIM Jin-Sang, HWANG Cheol Seong<sup>1</sup>, JEONG Doo

Seok(Electronic Materials Research Center, Korea Institute of Science and Technology. 'WCU Hybrid Materials Program, Department of Materials Science and Engineering, and Inter-university Semiconductor Research Center, School of Engineering, Seoul National University)

**KG-13\*** [09:30-09:45]

**Improved Photovoltaic Effects In InGaN-Based Multiple Quantum Well Solar Cell With Graphene On Indium Tin Oxide Nanodot Nodes For Transparent And Current Spreading Electrode** / SEO Hoon Seo, SHIN GangU, KIM Bo Kyoung, PARK Ah Hyun, LEE Seul Be, JEONG Hyun Jun, LEE Gun Hee(School of Semiconductor and Chemical Engineering & Semiconductor Physics Research Center, Chonbuk National University)

**KG-14** [09:45-10:00]

**Study on Pressure-dependent Growth Rate of Catalyst-free and Mask-free Heteroepitaxial GaN Nano- and Micro-rods on Si (111) Substrates with the Various V/III Molar Ratios Grown by MOVPE** / KO Suk-Min, KIM Je-Hyung, KO Young-Ho, CHANG Yun Hee<sup>1</sup>, KIM Yong-Hyun<sup>1</sup>, YOON Jong Moon<sup>2</sup>, LEE Jeong Yong<sup>2</sup>, CHO Yong-Hoon(Department of Physics and Graduate School of Nanoscience & Technology (WCU), Korea Advanced Institute of Science and Technology (KAIST). <sup>1</sup>Graduate School of Nanoscience and Technology (WCU), KAIST. <sup>2</sup>Department of Materials Science and Engineering, KAIST)

**KG-15** [10:00-10:15]

**실리콘 기반 위에 성장된 AlGaIn/GaN 에피택시를 이용한 쇼트키 다이오드의 제작 및 펄스 측정** / 우현석, 노정현<sup>1</sup>, 이준호<sup>1</sup>, 송홍주<sup>1</sup>, 임현식<sup>2</sup>, 한철구<sup>1</sup>(전자부품연구원, 광전융합연구센터 / 동국대학교, 반도체학과. <sup>1</sup>전자부품연구원, 광전융합연구센터. <sup>2</sup>동국대학교, 반도체학과)

**KG-16\*** [10:15-10:30]

**Influence of Carrier Trap in InAs/GaAs Quantum-Dot Solar Cells** / 한임식, 박동우, 김종수<sup>1</sup>, 김진수<sup>2</sup>, 노삼규(한국표준과학연구원 나노소재평가센터. <sup>1</sup>영남대학교 물리학과. <sup>2</sup>전북대학교 신소재공학과)

**[KG2] 반도체물리학회 General Session**

2013년 4월 26일 금요일 11:00 - 12:15

장소: 105호

좌장: 조용훈 KAIST

**KG-06\*** [11:00-11:15]

**First-principles study for segregation of B and P dopants in Si/SiO<sub>2</sub> core-shell nanowires** / KIM Sunghyun, PARK Ji-Sang, CHANG Kee Joo(Department of Physics, KAIST)

**KG-07** [11:15-11:30]

**Generation of Hot-exciton Emission in Semiconductors Coupled with Nanocavity Plasmons** / 조창희(대구경북과학기술원, 신물질과학전공)

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

**Enhanced Light Output Power of Near-Ultraviolet Light-Emitting Diodes with Au-Doped Graphene for Transparent and Current-Spreading Electrode** / SHIN GangU, SEO Tae Hoon, KIM Bo Kyoung, PARK Ah Hyun, LEE Seul Be, JEONG Hyun Jun, LEE Gun Hee, SUH Eun-Kyung(School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center (SPRC), Chonbuk National University)

**KG-09** [11:45-12:00]

**Reliability of TaInZnO Oxide Thin Film Transistor As a Function of RF Sputtering Process Pressure** / 정권범, 박현우, 박진성(단국대학교, 물리학과. <sup>1</sup>한양대학교, 신소재공학과)

**KG-10** [12:00-12:15]

**Synthesis and solar cell application of sulfide nanowires** / GOSWAMI Syamanta, 오은순(충남대학교 물리학과)

**[KG4] 반도체물리학회 General Session**

2013년 4월 26일 금요일 11:00 - 12:15

장소: 106호

좌장: 송진동 KIST

**KG-17** 초록중복 삭제

**KG-18\*** [11:15-11:30]

**Growth and optical characterization of semi-polar InGaIn/GaN quantum well on GaN pyramid structures** / 고영호, RODRIGUEZ Christophe, 조용훈(KAIST, 물리학과)

**KG-19** [11:30-11:45]

**Investigation of Terahertz detection using low-temperature grown InGaAs/InAlAs multi quantum well** / 박동우, 한임식, 김창수, 노삼규, 지영빈<sup>1</sup>, 전태인<sup>1</sup>, 이기주<sup>2</sup>, 김진수<sup>3</sup>, 김종수<sup>4</sup>(한국표준과학연구원 나노소재평가센터, 대전. <sup>1</sup>한국해양대학교 전자공학과, 부산. <sup>2</sup>충남대학교 물리학과, 대전. <sup>3</sup>전북대학교 신소재공학부, 전주. <sup>4</sup>영남대학교 물리학과, 대구)

**KG-20** [11:45-12:00]

**금속 격자 구조에서 양자점과 표면 플라즈몬 폴라리톤의 결합** / 이정수, 장유동, 이동한(충남대학교)

**KG-21\*** [12:00-12:15]

**Epitaxial Lift-off of GaN-based Multiple Quantum Well Epilayer by Electrochemical Etching of A Superlattice Layer** / 전현수, 김동욱, 장호준, 차형래<sup>1</sup>, 전성란<sup>2</sup>(서울대학교, 물리천문학부. <sup>1</sup>서울대학교, 생물물리 및 화학생물학과. <sup>2</sup>한국광기술원)

## SESSION L

## 천체물리학분과회

### [LG1] 천체물리학분과회 General Session

2013년 4월 24일 수요일 11:00 - 12:15

장소: 205호

좌장: 이 정 재 대진대

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

**Perturbations of a Triad of Scalar Fields with Non-Zero Gradients** / OH Phillal, KOH Seoktae<sup>1</sup>, KOUWN Seyeon, KWON O-KAB<sup>2</sup>(Sungkyunkwan University. <sup>1</sup>Jeju National University. <sup>2</sup>Ewha University)

LG-02 [11:15-11:35]

**Direct Determination of Expansion History Using Redshift Distortions** / 송용선(한국천문연구원)

LG-03 [11:35-11:55]

**Centaurus A as a point source of UHECRs** / 김항배(한양대학교)

LG-04 [11:55-12:15]

**A new synthesis of matter and gravity : A nongravitating scalar field** / 김형찬, 조인용(한국교통대학교, 서울과학기술대)

### [LG2] 천체물리학분과회 General Session

2013년 4월 24일 수요일 13:00 - 14:30

장소: 205호

좌장: 김 형 찬 충주대

LG-05\* [13:00-13:15]

**The phase diagram of Fubini instanton solutions with the presence of gravity** / RO Daeho, LEE Bum-hoon<sup>1</sup>, LEE Wonwoo<sup>2</sup>, YEOM Dong-han<sup>2</sup>(서강대학교 물리학과. <sup>1</sup>서강대학교 물리학과, 양자시공간연구센터(CQUeST). <sup>2</sup>양자시공간연구센터(CQUeST))

LG-06 [13:15-13:30]

**Relation of Polytropic Internal Structure of Neutron Stars and Pulsar Glitches** / 김명국, 이창환(부산대학교 물리학과)

LG-07 [13:30-13:50]

**Equilibrium configurations of rotating neutron stars with hadron-quark crossover equation of state** / KIM Hee Il, LEE Hyung Mok(Seoul National University, Department of Physics and Astronomy)

LG-08 [13:50-14:10]

**Numerical studies on gravitational radiation capturing cross**

**section for two black holes** / KANG Gungwon, HANSEN Jakob, DIENER Peter<sup>1</sup>, KIM Hee Il<sup>2</sup>(KISTI, <sup>1</sup>Louisiana State University. <sup>2</sup>Seoul National University)

LG-09 [14:10-14:30]

**Gravitational Waves from Tidal Disruption of a Star by a Massive Black Hole : a Semi-relativistic Approach** / 김동훈, 양종만(초기우주과 학기술연구소(IEU), 기초과학연구소(BSRI)/이화여자대학교, <sup>1</sup>초기우주과 학기술연구소(IEU), 물리학과/이화여자대학교)

### [LG3] 천체물리학분과회 General Session

2013년 4월 24일 수요일 15:00 - 16:30

장소: 205호

좌장: 박 일 흥 성균관대

LG-10 [15:00-15:20]

**Ultra-Fast Flash Observatory for the measurement of early photons from Gamma Ray Bursts** / 정수민(성균관대학교, 물리학과)

LG-11\* [15:20-15:35]

**Coded mask 기반의 X-선 우주망원경 개발 · 제작 및 성능 테스트** / 김민빈, RIPA Jakub, 이직, 박일흥(성균관대학교 물리학과)

LG-12 [15:35-15:55]

**The Status of Development and Construction of the SCD for ISS-CREAM experiment** / 정인석, 박일흥, 이직, 정수민, 최지영(성균관대학교)

LG-13\* [15:55-16:10]

**A prototype of the JEM-EUSO telescope on Telescope Array site** / JUNG Aera, KIM Sug-Whan<sup>1</sup>, KIM Soon-Wook<sup>2</sup>, KIM Jeong-Sook<sup>2</sup>, PARK Il Hung<sup>2</sup>, PARK Hwi Woo<sup>3</sup>, YANG Jongmann, LEE Jik<sup>3</sup>, LIM Heuijin<sup>4</sup>(Department of Physics, Ewha Womans University. <sup>1</sup>Department of Astronomy, Yonsei University. <sup>2</sup>Korea Astronomy and Space Science Institute. <sup>3</sup>Department of Physics, Sungkyunkwan University. <sup>4</sup>Dongnam Inst. of Radiological & Medical Sciences)

LG-14 [16:10-16:30]

**Construction Plan of TALE 5m Large Mirror Telescope** / 양종만, 오 세지, 채민정, 김란, 박일흥<sup>1</sup>, 권영준<sup>2</sup>, 조우람<sup>3</sup>, 천병구<sup>3</sup>, 김항배<sup>3</sup>, 신복균<sup>3</sup>, 김지현<sup>3</sup>, 류동수<sup>4</sup>, 김지화<sup>4</sup>(이화여자대학교, 물리학과. <sup>1</sup>성균관대학교, 물리학과. <sup>2</sup>연세대학교, 물리학과. <sup>3</sup>한양대학교, 물리학과. <sup>4</sup>충남대학교, 천문우주학과)

### 천체물리학분과 총회

2013년 4월 24일 수요일 16:30 - 16:45

장소: 205호

좌장: 박 명 구 경북대



## 포스터발표논문 시간표

## SESSION P1

응집물질물리학분과회 포스터 발표  
나노/중시계, 표면/계면

2013년 4월 24일 수요일 13:00 - 14:45

장소: 포스터발표장

진행: 도용주(고려대), 이동렬(숭실대)

P1  
포  
스  
터  
세  
션

### P1-D001\*

**Quantized Conductance in an InAs nanowire** / 김홍석, 이상준, 홍영준<sup>1</sup>, RO Yungoo<sup>1</sup>, FUKUI Takashi<sup>1</sup>, 도용주(고려대학교, 디스플레이반도체물리학과, <sup>1</sup>Hokkaido University, Graduate School of Information Science and Technology)

### P1-D002\*

**Crossed Andreev Reflection in Superconductor-Topological Superconductor Double Josephson Junctions** / LEE Minchul, KHIM Heunghwan<sup>1</sup>, CHOI Mahn-Soo<sup>1</sup>(Department of Applied Physics, Kyung Hee University, Korea. <sup>1</sup>Department of Physics, Korea University, Korea)

### P1-D003\*

**Observation of Josephson effect in S-TI-S proximity-coupled junctions** / LEE Jae Hyeong, LEE Gil-Ho, NAM Seung-Geol, LEE Janghee, PARK Joonbum, SHIN Yun-sok, KIM Jun Sung, LEE Hu-Jong(Pohang University of Science and Technology, Korea, Department of Physics)

### P1-D004\*

**Graphene-based Andreev Interferometry – an Updated Report** / KIM Minsoo, JEONG Dongchan, LEE Gil-Ho, SHING Yun-Sok, LEE Hyun-Woo, LEE Hu-Jong(Department of Physics, Pohang University of Science and Technology, Pohang 790-784, Republic of Korea)

### P1-D005\*

**Numerical Simulation of the Surface Current Profile in a Topological Insulator in Comparison with Experimental Results** / LEE Janghee, LEE Jae-Hyeong, PARK Joonbum, KIM Jun Sung, LEE Hu-Jong(Department of Physics, POSTECH, Korea)

### P1-D006\*

**Strong confinement in a bosonic graphene system** / PARK Sul-Ah, SON Young-Woo<sup>1</sup>, AHN Kang-Hun(Department of Physics, Chungnam National University. <sup>1</sup>KIAS)

### P1-D007\*

**Polarization Dependence of Raman 2D band in Bilayer Graphene with Various Excitation Energies** / CHEONG Hyeonsik, LEE Jae-Ung, SECK Ngor Mbaye, YOON Duhee, CHOI Seon-Myeong<sup>1</sup>, SON Young-

Woo'(Sogang University, Department of Physics. 'Korean Institute for Advanced Study, School of Computational Sciences)

P1-D008\*

**Spatial Variation in the Local Electronic Structure of Carpet-like Graphene Structures** / MIN Kyung-Ah, KIM Gunn, HONG Suklyun(Department of Physics and Graphene Research Institute, Sejong University)

P1-D009\*

**Influence of Excitation Energy on Raman Spectra of Multilayer Graphene** / CHEONG Hyeonsik, NGUYEN The An, LEE Jae-Ung, YOON Duhee(서강대학교, 물리학과)

P1-D010\*

**Atomic and Electronic Structure of MoS<sub>2</sub> Nanostructures** / CHA Janghwan, SUNG Dongchul, HONG Suklyun(Department of Physics and Graphene Research Institute, Sejong University)

P1-D011\*

**국소 양극 산화법을 이용한 그래핀 산화물의 터널링 효과 연구** / 김철견, 이정원, 이덕현, 이승웅, 박배호(건국대학교 물리학과 양자상 및 소자 전공)

P1-D012\*

**Field effect tunneling transistor using graphene oxide barrier** / 김중호(건국대학교, 물리학과)

P1-D013\*

**Ripple Domain Distributions In Exfoliated Graphene** / PARK Yeonggu, LEE Mi Jung, CHOI Jin Sik, CHOI Taek Jib', PARK Bae Ho(Division of Quantum Phases and Devices, Department of Physics, Konkuk University, Seoul, Korea. 'HMC & INAME, Faculty of Nanotechnology and Advanced Materials Engineering, Sejong University, Seoul, Korea)

P1-D014\*

**산화물/그래핀 접합 barristor 구조를 이용한 쇼트키 현상 연구** / 윤찬수, 이상익, 황인록, 이근동, 남윤승, 박배호(건국대학교 물리학과)

P1-D015\*

**Synthesis and characterization of graphene on Pt substrate using CVD** / NAM Jungtae, KIM Dong Chul', ANDERSEN Pål C.', PARK Sang Jun, BAE Dong Jae, MUNSHI Mazid', DHEERAJ Dasa L.', FIMLAND Bjørn-Ove', WEMAN Helge', SEO Sunae, KIM Keun Soo(Department of Physics & Graphene Research Institute, Sejong University, Seoul, 143-747, Korea. 'Department of Electronics and Telecommunications, Norwegian University of Science and Technology (NTNU) No-7491 Trondheim, Norway)

P1-D016\*

**Heterostructure transistor of Graphene and MoS<sub>2</sub>** / DU Hyewon, KIM Taekwang, SHIN Somyeong, KIM Hakseong', LEE Dukhyun', PARK Baeho', LEE Sangwook', SEO Sunae(Sejong Univ. 'Konkuk Univ)

P1-D017\*

**The fabrication and characteristics of ZnO nanowire/graphene contact** / KIM Tae Kwang, DU Hye Won, SHIN So Myung, KIM Hak Sung', LEE Sang Wook', SEO Sunae(Department of Physics, Sejong University. 'Department of Physics, Konkuk University)

P1-D018\*

**The LiF effect on Graphene field effect transistor** / SHIN somyeong, DU Hyewon, KIM Taekwang, SEO sunae(Department of Physics, Sejong University, Seoul, 143-747, Korea)

P1-D019

**Controlling the surface-morphology of copper-foils for high-quality and large-area CVD-grown graphene** / 배동재, 이임복, 남정태, 박상준, 김근수(세종대학교, 물리학과 & 그래핀 연구소)

P1-D020

**Properties of supercapacitor using tungsten molybdenum complex oxide** / KIM Do-Hyung, JUNG JINJOO(Department of Physics, Kyungpook University)

P1-D021

**Fabrication of NaCl nano-pillar through nano-liquid channel with nanopipette based QTF-AFM system** / AN Sangmin, LEE Kunyoung, KIM Bongsu, KIM Qhwan, KWON Soyoung, JHE Wonho(Seoul National University)

P1-D022

**아크 방전 단일벽 탄소나노튜브에서의 결맞은 격자 진동에 관한 연구** / 노민영, 임용식, 오인섭, 김명중(건국대학교, 나노전자기계공학과. '한국과학기술연구원, 소프트 혁신 소재센터)

P1-D023

**Spin-dependent transport in vertical graphene spin-valve junctions** / PARK Jae-Hyun, LEE Hu-Jong(Department of Physics, POSTECH)

P1-D024

**Chemical Reduction of Mesoporous Silica into Mesoporous Silicon** / KIM DO-HYUNG, WON HAYEON(경북대학교, 물리학과)

## P1-D025

**졸겔법과 수열합성법으로 제조한 란탄족 계열 나노 입자 합성 비교 / 김도형, 주진식(경북대학교 물리학과)**

## P1-D026

**Transport Properties of Metal-ZGNR-Metal Vertical Heterostructures / RYOU Junga, KIM Han Seul<sup>1</sup>, KIM Yong-Hoon<sup>2</sup>, HONG Suklyun(Graphene Research Institute and Department of Physics, Sejong University. <sup>1</sup>Graduate School of EEWS, KAIST. <sup>2</sup>Graduate School of EEWS and KI for the NanoCentury, KAIST)**

## P1-D027

**Enhanced Light Emission of Si Nanocrystal Multilayers / 유종현, 이민중, 오광석, 윤종환(강원대학교 물리학과)**

## P1-D028

**Enhanced Retention Time of Al-Based Nanocrystal Floating Gate Memory Devices / 유종현, 박상준, 정현우, 윤종환(강원대학교 물리학과)**

## P1-D029

**환원된 그래핀 산화물(Reduced Graphene Oxide, rGO)의 광학적 특성 및 분석 / 정일호, 황정식, 이효영, 이정현<sup>1</sup>, 황은희(성균관대학교 물리학과. <sup>1</sup>성균관대학교 화학과)**

## P1-D030

**Gate-Tunable Quantum Dot Single Electron Pump / AHN Yehwan, SEO Minky<sup>1</sup>, BAE Myung-Ho, CHUNG Yunchul<sup>1</sup>, LEE In-Ho, KIM Nam(Korea Research Institute of Standards and Science, Daejeon 305-340, Republic of Korea. <sup>1</sup>Department of Physics, Pusan National University, Busan 609-735, Republic of Korea)**

## P1-D031\*

**Circular dichroism in perovskite oxide materials / 정원식, 조수현, 고윤영, 경원식, 김창영, YOSHIDA Y<sup>1</sup>(연세대학교 물리학과. <sup>1</sup>AIST)**

## P1-D032\*

**Circular dichroism ARPES and Dresselhaus effect study on semiconductor InSb / CHO Soohyun, JUNG Wonsig, KIM Beomyoung, KIM Changyoung(연세대학교, 물리학과)**

## P1-D033\*

**Evolution of Rashba-type band splitting energy depending on SOC strength / KIM Beomyoung, KIM Panjin<sup>1</sup>, JUNG Wonsig, KOH Yoonyoung, KYUNG Wonsick, PARK JOONBUM<sup>2</sup>, KIM JUN SUNG<sup>2</sup>, MATSUNAMI Masaharu<sup>3</sup>, KIMURA Shin-ichi<sup>3</sup>, HAN Jung Hoon<sup>1</sup>, KIM**

Changyoung(Institute of Physics and Applied Physics, Yonsei University, Seoul 120-749, Korea. <sup>1</sup>Department of Physics and BK21 Physics Research Division, Sungkyunkwan University, Suwon 440-746, Korea. <sup>2</sup>Department of Physics, Pohang University of Science and Technology, Pohang 790-784, Korea. <sup>3</sup>UVSOR Facility, Institute for Molecular Science and Graduate University for Advanced Studies, Okazaki 444-8585, Japan)

## P1-D034

**Optical properties of SuperLattice LMO/SMO/NMO / ROH seulki, HWANG jungseek, LEE seokbae, JUNG ilho, LEE jaicahn<sup>1</sup>, SEO jiwon<sup>1</sup>, CHOI minsu<sup>1</sup>(Department of Physics, Sungkyunkwan University. <sup>1</sup>School of Advanced Materials, Sungkyunkwan University)**

## P1-D035\*

**Nanoscale Probing of Switching Behaviors of Pt Nanodisk on Single-crystalline SrTiO<sub>3</sub> with Conductive Atomic Force Microscopy / LEE Hyunsoo, KIM Haeri<sup>1</sup>, VAN Trong Nghia, KIM Dong Wook<sup>1</sup>, PARK Jeong Young(Graduate School of EEWS (WCU) and Nanocentury KI, KAIST, Daejeon, 305-701, South Korea. <sup>1</sup>Department of Physics, Ewha Womans University, 52 Ewhayeodae-gil, Seodaemun-gu, Seoul 120-750, Republic of Korea)**

## P1-D036

**SrTiO<sub>3</sub>와 LaAlO<sub>3</sub> 계면에서 기판홀더에 따른 전기적 특성 및 물성분석 / 송종현, 황인웅, 김진희(충남대학교 물리학과. <sup>1</sup>한국표준과학연구원)**

## P1-D037

**LaAlO<sub>3</sub> 기판위에 증착된 SrTiO<sub>3</sub>/LaAlO<sub>3</sub> 초격자의 구조에 따른 전기적 특성 / 송종현, 신현섭(충남대학교 물리학과)**

## P1-D038

**Adsorption structure of bifunctional amine compounds on Ge(100) / KIM DO HWAN, KIM Sehun<sup>1</sup>, HONG Suklyun<sup>2</sup>(Daegu University. <sup>1</sup>Korea Advanced Institute of Science and Technology. <sup>2</sup>Sejong University)**

## P1-D039\*

**STM-induced photon emission spectra and mapping from Ag films grown on Si(111)-7x7 / 김상한, 우정석, 심형준, 이근섭(인하대학교 물리학과)**

## P1-D040\*

**Nitrogen Pair Formation at The Si(001)/SiO<sub>2</sub> Interface / 정석민, 김규형(전북대학교 물리학과)**

## P1-D041

**Thermally-induced Desulfurization of Thiophene on Si(100) /**

PARK Jinwoo, LEE Hankoo<sup>1</sup>, SOON Aloysius<sup>2</sup>, YU Byungdeok<sup>3</sup>, HONG Suklyun(Department of Physics and Graphene Research Institute, Sejong University. <sup>1</sup>Beamline Research Division, Pohang Accelerator Laboratory. <sup>2</sup>Department of Materials Science & Engineering, Yonsei University. <sup>3</sup>Department of Physics, University of Seoul)

#### P1-D042

**Bandgap opening of single layer graphene induced by adsorption of Na<sup>+</sup> ion** / 성시진, 이평로, 김진걸, 류민태, 박희민, 정진욱(Postech)

#### P1-D043\*

**Electronic properties of Bi<sub>2</sub>Te<sub>2</sub>Se induced by alkali metal doping and annealing** / 이평로, 성시진, 김진걸, 류민태, 박희민, 박준범, 김준성, 정진욱(POSTECH)

#### P1-D044\*

**중성근처에서 무전해 도금된 구리 박막의 특성 분석** / 윤재식, 조양래, 이연승, 김형철, 나사균(국립한밭대학교, 정보통신공학과, <sup>1</sup>국립한밭대학교, 재료공학과)

#### P1-D045\*

**CuI 박막의 성장 메커니즘에 대해 in-situ x-ray 산란을 이용한 연구** / 안광석, 김종범, 조원혁, 이현휘, 김효정<sup>2</sup>, 이동렬(숭실대학교 물리학과, <sup>1</sup>포항 가속기 연구소, <sup>2</sup>서울대학교 재료공학과)

#### P1-D046\*

**The Effect of Al<sub>2</sub>O<sub>3</sub> passivation layer in Pulsed-Laser-Deposited ZnO<sub>2</sub> film on n-GaAs substrate as a function of post-annealing temperature** / CHAE Jimin, KIM Hyo-Jin<sup>1</sup>, PARK Sang han, CHO Mann-Ho(Yonsei University, Department of Physics. <sup>1</sup>Samsung Electronics)

#### P1-D047\*

**High-resolution x-ray photoemission study of photochemically oxidized Ga<sub>2</sub>O<sub>3</sub> on GaN/AlGaIn heterostructure on silicon wafer** / 주범수, 장영준, 장승훈, 한문섭, 신종훈<sup>1</sup>, 장승엽<sup>2</sup>, 장태훈<sup>3</sup>(서울시립대학교 물리학과, <sup>1</sup>LG 전자)

#### P1-D048\*

**Change in interfacial reaction and thermal stability of (HfO<sub>2</sub>)<sub>x</sub>(SiO<sub>2</sub>)<sub>1-x</sub> film on strained Si<sub>0.7</sub>Ge<sub>0.3</sub> as a function of film concentration** / KIM Dae-Kyoung, KANG Yu Seon, KANG Hang Kyu, CHO Mann-Ho, KO Dae Hong<sup>1</sup>, KIM Chang Soo<sup>2</sup>, KIM Dong Chan<sup>3</sup>(Yonsei University, Department of Physics. <sup>1</sup>Yonsei University, Department of Material Science and Engineering. <sup>2</sup>KRISS. <sup>3</sup>Samsung Electronics)

#### P1-D049

**WO<sub>x</sub> 박막의 TiN와 Ti 상부전극에 따른 Resistive switching 특성 연구**

/ 김두환, 김종민, 우현석, 조용철, INAMDAR A.I, 정웅, 임현식, 김형상(동국대학교, 반도체과학과, <sup>1</sup>동국대학교, 물리학과)

#### P1-D050\*

**Self-Assembled Chairal Hexagonal Porous Structures of Discoid Organic Charge Accepting Molecule on Au(111)** / 박용섭, 김지훈, 원상연<sup>1</sup>, 권영균, 강세종(경희대학교 물리학과, <sup>1</sup>고려대학교 물리학과)

#### P1-D051\*

**Measuring Temporal and Structural Correlations from Colloidal Suspensions** / JO Wonhyuk, LEE Soohyung<sup>1</sup>, SUB Weiheng<sup>1</sup>, LEE Dong Ryeol(Soongsil University, Physics. <sup>1</sup>KRISS)

#### P1-D052\*

**Reverse Hofmeister Effect on Positively Charged Lipid/Water Interface** / LEE Jonggwan, SUNG Woongmo, KIM Doseok(Dept. of Physics, Sogang University)

2013년 4월 24일 수요일 13:00 - 14:45

장소: 포스터발표장

## P1-E001\*

**SERS-based Molecule detection scheme using 2-dimensional DNA nanostructure** / LEE Junwye, KIM Myoungsoon<sup>1</sup>, DUGASANI Sreekantha Reddy, PARK Sung Ha, HUH Nam<sup>1</sup>(Sungkyunkwan Advanced Institute of Nanotechnology (SAINT) and Department of Physics. <sup>1</sup>Samsung Advanced Institute of Technology (SAIT))

## P1-E002\*

**Selective ion detection using glass nanopipette with poly(vinyl chloride) membrane based on ion selective electrode method** / KANG Eunji, TOMOHIDE Takami, SON Jongwan, DENG Xiaolong, TOMOJI Kawai, PARK Beaho(Division of Quantum Phases and Devices, Department of Physics, Konkuk University)

## P1-E003

**돌 치료의 보사법: 열특성** / 이승호, 권기홍<sup>1</sup>, 김상우<sup>2</sup>(경희대학교 한의대 침구 경락과학연구소, <sup>1</sup>대전대학교 신소재공학과, <sup>2</sup>KAIST, 생명과학과)

## P1-E004

**Development of electrochemical DNA sensors based on functionalized graphene-graphene oxide composites** / TIAN Tian, LI Zhiqiang, 이은철<sup>1</sup>(가천대, 바이오나노학과, <sup>1</sup>가천대, 나노물리학과)

## P1-E005\*

**임상용 PET 조사야 내 실리콘 센서 삽입을 통한 성능 개선 시뮬레이션 연구** / 김종국, 정영준, 전상준<sup>1</sup>, 이영섭, 김민호, 이기상<sup>2</sup>, 김경민(한국원자력의학원 분자영상연구부, <sup>1</sup>명지대학교 물리학과, <sup>2</sup>고려대학교 방사선학과)

## P1-E006\*

**SERS-based Molecule Detection Scheme using 2-D DNA Nanostructure** / LEE Junwye, KIM Myungsoon<sup>1</sup>, NAM Huh<sup>1</sup>, PARK Sung Ha(Sungkyunkwan University, Sungkyunkwan Advanced Institute of Nanotechnology (SAINT). <sup>1</sup>Samsung, Samsung Advanced Institute of Technology (SAIT))

## P1-E007\*

**Negative refractive index induced by magnetic multi-plasmons in a flower-shaped metamaterial** / P. V. Tuong, J. W. Park, K. W. Kim<sup>1</sup>, J. Y. Rhee<sup>2</sup>, Y. P. Lee(Department of Physics, Hanyang University, Seoul, Korea.

<sup>1</sup>Department of Information Display, Sunmoon University, Asan, Korea.<sup>2</sup>Department of Physics, Sungkyunkwan University, Suwon, Korea)

## P1-E008\*

**Switchable single- and dual-band metamaterial perfect absorber** / H. Y. Zheng, J. W. Park, J. Y. Rhee<sup>1</sup>, K. W. Kim<sup>2</sup>, Y. P. Lee(Department of Physics and Quantum Photonic Science Research Center, Hanyang University, Seoul 133-791, Republic of Korea. <sup>1</sup>Department of Physics, Sungkyunkwan University, Suwon 440-746, Republic of Korea. <sup>2</sup>Department of Information Display, Sunmoon University, Asan, Choongnam 336-840, Republic of Korea)

## P1-E009

**BaSO<sub>4</sub> 열형광체의 냉각과정에 따른 UV 및 X-선 감도 측정** / 김성화, 우종철, 이은숙, 김일홍, 김영국(경남대학교)

## P1-E010\*

**Observation of metal phase below T<sub>c</sub> and temperature dependence of photocurrent in VO<sub>2</sub> Device** / SEO Giwan, KIM Minjung<sup>1</sup>, KIM Bong-Jun<sup>2</sup>, LEE Yong Wook<sup>3</sup>, CHEONG Hyeonsik<sup>1</sup>, KIM Hyun-Tak(University of Science and Technology, ETRI. <sup>1</sup>Department of Physics, Sogang University. <sup>2</sup>Metal-Insulator Transition Creative Research Center, ETRI. <sup>3</sup>School of Electrical Engineering, Pukyong National University)

## P1-E011\*

**Measurement of Photon Detection Efficiency in the Spectral Wavelength and Bias Voltage for Silicon Photomultiplier** / 이직, 양슬기, 전진아<sup>2</sup>, 이해영<sup>2</sup>, 박일홍, 김석환(성균관대학교, 물리학과, <sup>1</sup>연세대학교, 천문우주학과, <sup>2</sup>이화여자대학교, 물리학과)

## P1-E012\*

**Flexible GHz metamaterial absorber fabricated by ink-jet printing** / J. W. Park, J. M. Kim, Y. J. Kim, J. H. Kang<sup>1</sup>, K. W. Kim<sup>2</sup>, Y. P. Lee(Department of Physics, Hanyang University, Seoul, Korea. <sup>1</sup>Dept. of Nano & Electronic Physics, Kookmin University, Seoul, Korea. <sup>2</sup>Department of Information Display, Sunmoon University, Asan, Korea)

## P1-E013\*

**Effect of Interface Recombination on In(S,O,OH) Buffer Adopted CIGS Solar Cell** / 송수민, KHADAK Dhruba, 김준호, 곽지혜<sup>1</sup>, 윤재호(인천대학교, <sup>1</sup>한국에너지기술연구원)

## P1-E014\*

**Simulation Studies of Patterned Crystalline Si Nanostructures for Efficient Light Trapping** / 조윤애, 이은송이, 권민지, 김동욱(이화여자대학교, 물리학과)



## P1-E015\*

**The Interface Studies of ITO/CuI/NPB and ITO/CuI/Alq<sub>3</sub> by Measuring Photoemission Spectroscopy** / PARK SOOHYUNG, LEE Hyunbok, JEONG junkyeong, YI yeonjin(Institute of Physics and Applied Physics, Yonsei University)

## P1-E016

**Cr<sub>2</sub>O<sub>3</sub> nanoparticles as additives for improving polymer solar cells** / LIU Zhihai, 서순민, 이은철(가천대, 바이오나노학과, <sup>1</sup>가천대, 나노물리학과)

## P1-E017

**X선 음극 마이크로 집속관 설계를 위한 전자빔 궤적 시뮬레이션 연구** / 박태영, 박광준, 장창실, 박래준, 이상석(상지대학교 한방의료공학과, <sup>1</sup>주엑스엘 강원도 원주시 태장동 1720-26번지 의료기기산업기술단지)

## P1-E018\*

**Optical transmission through DNA monolayers on side-polished optical fiber** / 정우현, PAULSON Bjorn, 신인철, 손준영, 박성하, 오경환(연세대학교, 물리및응용물리학과, <sup>1</sup>성균관대학교, 물리학과)

## P1-E019

**Effect of photocrosslinkable polymer thin film as the hole extraction layer on the enhanced fill factor for organic bulk-heterojunction solar cells characterized by transient photovoltage and impedance spectroscopy** / 윤영운, 김봉수(한국과학기술연구원)

## P1-E020\*

**동일한 fill factor하에서 마이크로 렌즈 크기에 따른 유기 발광 소자의 외부 발광 효율 변화에 대한 연구** / 황덕현, 권오태, 이원재, 한원근, 김태완(홍익대학교 정보디스플레이공학과, <sup>1</sup>가천대학교 전자공학과)

## P1-E021\*

**마이크로 렌즈의 fill factor 변화에 따른 유기 발광 소자 광추출 효과의 예측과 실험** / 황덕현, 권오태, 장경욱, 송민종, 김태완(홍익대학교 정보디스플레이공학과, <sup>1</sup>가천대학교 전기공학과, <sup>2</sup>광주보건대학 방사선과)

## P1-E022

**Molecular Layer Deposition of Metal-Organic Hybrid Laminate Films** / YOO Jung-woo, JO Jun-hyeon, JIN Mi-jin, MODEPALL Vijayakumar, PARK Jung-min(울산과학기술대학교 기계신소재공학부)

## P1-E023

**탄소나노튜브를 함유한 유기발광소자의 교류특성과 percolation 효과** / 원범희, 전소연, 정동근, 유세기(성균관대, 물리학과, <sup>1</sup>한국외대, 물리학과)

## P1-E024\*

**안트라센이 함유된 부분 지환식 폴리이미드 기반 투명 저항 변화 메모리 특성 연구** / 유형우, 이광훈<sup>1</sup>, 유환철<sup>1</sup>, 김민호<sup>1</sup>, 정재우<sup>1</sup>, 김윤수<sup>1</sup>, 김경국<sup>2</sup>, 정찬문<sup>1</sup>, 조수행(연세대학교 물리학과, <sup>1</sup>연세대학교 화학과, <sup>2</sup>한국산업기술대학교 나노광공학과)

## P1-E025\*

**양자점-파이공액 유기분자 하이브리드 나노구조에서의 광전자 특성 연구** / 한윤덕, 이용백, 전수민<sup>1</sup>, 김정용<sup>2</sup>, 이광섭<sup>1</sup>, 주진수(고려대학교 물리학과, <sup>1</sup>한남대학교 신소재공학과, <sup>2</sup>성균관대학교 에너지공학과)

## P1-E026

**Study of Electric Field Distribution in ITO/PI/TIPS-pentacene/Au diodes by Time-Resolved Optical Second Harmonic Generation Measurement** / BAE Jaeyoon, TAGUCHI Dai<sup>1</sup>, IWAMOTO Mitsumasa<sup>1</sup>, LIM Eunju(Dankook University, Department of Applied Physics, <sup>1</sup>Tokyo Institute of Technology, Department of Physical Electronics)

## SESSION P1

통계물리학회  
포스터 발표

2013년 4월 24일 수요일 13:00 - 14:45

장소: 포스터발표장

P1-F001

**Jammed packing structure of 2D snowman-like dimer system /** HAN Youngkyu, LEE Juncheol<sup>1</sup>, CHOI Q. Siyoung<sup>1</sup>, CHOI Myung Cheol<sup>1</sup>, KIM Mahn Won(KAIST, Department of Physics. <sup>1</sup>KAIST, Department of Bio and Brain Engineering)

P1-F002\*

**Experimental Study of Fluctuation Theorem Using a Colloidal Particle Under Optical Trap With The Strength Changing With Time /** 박혁규, 이동윤, 권철안(부산대학교 물리학과, <sup>1</sup>명지대학교 물리학과)

P1-F003\*

**Single-chain glass transition of polystyrene oligomer: Effect of confinement and tacticity /** KIM Juin, KIM Hyungjun<sup>1</sup>, JEONG Hawoong, GODDARD, III William A.<sup>1</sup>(KAIST, 물리학과, <sup>1</sup>KAIST, EEWs)

P1-F004\*

**Large-scale Analysis Of Human Diet In The Nutritional Basis /** KIM Seunghyeon, KIM Pan-Jun, JIN Yong-su<sup>1</sup>, FOO Mathias(Emergent Dynamics of Complex Living Systems, APCP. <sup>1</sup>Institute for Genomic Biology, Illinois)

P1-F005\*

**The Dynamics of Network Using Extreme Events in Financial Market /** KIM Beom Jun, YI Il Gu, OH Gab Jin<sup>1</sup>(Sungkyunkwan University. <sup>1</sup>Chosun University)

P1-F006\*

**Effect of Clustering on Spiking Variability in Scale Free Network /** KIM Junhyeok, LEE Dongmyeong, KIM Seunghwan(Pohang University of Science and Technology, Dept. of Physics)

P1-F007\*

**Iterated Prisoner's Dilemma game with a limited memory /** KIM Young Jin, ROH Myungkyoon, SON Seung-Woo(한양대학교, 응용물리학과)

P1-F008

**Prediction of Rank Evolution via Billboard "Hot 100" Chart /** SOH Hyungjoon, JEONG Hawoong(KAIST, Department of Physics)

P1-F009

**Properties of Network Structure under an Achlioptas Process /** JO Woo Seong, YI Su Do, KIM Beom Jun, SON Seung-Woo<sup>1</sup>(BK21 Physics Research Division and Department of Physics, Sungkyunkwan University. <sup>1</sup>Department of Applied Physics, Hanyang University)

P1-F010

**Transfer entropy를 이용한 지진 네트워크 모형 /** 김엽, 권익현, 채희승, 육순형(경희대학교 물리학과)

P1-F011

**Analysis of phase transitions in neural networks /** 김경식, 백운학, 강덕두(부경대학교)

P1-F012

**Study Of Interaction Between Traders In Artificial Stock Market /** 임규빈, 오갑진<sup>1</sup>, 김승환(포항공과대학교, 물리학과, <sup>1</sup>조선대학교, 경영학부)

P1-F013

**Information Process Overflow Of Schizophrenic Functional Brain Network /** KIM Minkyung, SHIN Jeongkyu, KIM Seunghwan(Department of Physics, Pohang University of Science and Technology)

P1-F014

**Self-attracting walks on complex networks /** KYOUNG Jaegu, MAENG Seong Eun, LEE Jae Woo, LEE Deok-Sun<sup>1</sup>(Department of Physics, Inha University. <sup>1</sup>Department of Natural Medical Sciences, Inha University)

P1-F015

**Introverts and extroverts in social networks /** LEE Deok-Sun, LEE Jae Woo, MAENG Seong Eun(Department of Physics, Inha University)

P1-F016

**Characteristics of relations between the particulate matter and the meteorological factors /** 김경식, 강덕두, 이동인(부경대학교)

P1-F017

**복잡계 그물망 위에서 Levy walker를 이용한 lamb-lion 모형 /** 김엽, 박현준, 최우식, 육순형(경희대학교)

P1-F018

**Coupling-Induced Population Synchronization in An Excitatory Population of Subthreshold Izhikevich Neurons /** LIM Woochang, KIM Sang-Yoon<sup>1</sup>(Daegu National University of Education, Department of

**P1-F019**

**Global Interaction Network of Human Gut Microbiota / SUNG**

Jaeyun, KIM Pan-Jun<sup>1</sup>(Asia Pacific Center for Theoretical Physics, Pohang, Gyeongbuk, Republic of Korea. <sup>1</sup>Asia Pacific Center for Theoretical Physics, Pohang, Gyeongbuk, Republic of Korea; Department of Physics, POSTECH, Pohang, Gyeongbuk, Republic of Korea)

**P1-F020**

**Effective simulation method for spin-1 Blume-Capel model /**

KWAK Wooseop(Department of Physics, Chosun University)

**P1-F021\***

**Effect of Synergy on SIR Model in Modular Network / CHUNG Kihong,**

BAEK Yongjoo, KIM Daniel, HA Meesoon<sup>1</sup>, JEONG Hawoong(Department of Physics, KAIST. <sup>1</sup>Department of Physics Education, Chosun University)

**P1-F022\***

**Bimodality Coefficient as an Indicator of Phase Transition / BAEK**

Yongjoo, HA Meesoon<sup>1</sup>, JEONG Hawoong(Department of Physics, KAIST. <sup>1</sup>Department of Physics Education, Chosun University)

**P1-F023\***

**White x-ray induced fractal generation of silver nano-particles /**

JAE MYUNG KIM, SU YONG LEE, OKKYUN SEO, HYON CHOL KANG<sup>1</sup>, DO YOUNG NOH(School of Materials Science and Engineering, Gwangju Institute of Science and Technology. <sup>1</sup>Department of Advanced Materials Engineering, Chosun University)

**P1-F024\***

**도플러 진동측정기를 이용한 초파리 안테나의 비대칭 운동 연구 / 이우석,**

김경중, 안강현, MHATRE Natasha<sup>1</sup>, ROBERT Daniel<sup>1</sup>, 이정마<sup>2</sup>, 정연두<sup>2</sup>(충남대학교, 물리학과. <sup>1</sup>University of Bristol, Biological Sciences. <sup>2</sup>서울시립대, 생명과학과)

**P1-F025\***

**초파리 청각신호변환에서의 비대칭진동의 역할 / 김경중, 이우석, 안강현(충**

남대학교, 물리학과)

**P1-F026**

**Self-avoiding Polymer in a Cylindrical Pore: Correlation between**

**Structure and Dynamics / JUNG Youngkyun(KISTI)**

**P1-F027**

**순수 배양된 성상 세포에서의 국소적 약물(ATP) 자극에 대한 칼슘파 특성**

**연구 / 민철홍, 이경진(고려대학교 물리학과)**

**P1-F028**

**New Energy Function for Protein Loop Structure Prediction / HEO**

SEUNGRYONG, LEE JUYONG<sup>1</sup>, JOO KEEHYOUNG, LEE JOOYOUNG(KIAS, School of Computational Sciences. <sup>1</sup>NIH)

**P1-F029**

**Random Forest-Based Protein Model Quality Assessment (RFMQA) using its structural features and potential energy terms**

**/ MANAVALAN Balachandran(KIAS, School of Computational Sciences)**

**P1-F030**

**Protein backbone torsion angles prediction from amino acid sequence using support vector regression / LEE Sun young, LEE**

Jooyoung(Korea Institute for Advanced Study, School of Computational Sciences)

**P1-F031**

**Cooperative Transport of a Cargo by Multiple Molecular Motors**

**/ ANN Minjung, LEE Kong-Ju-Bock, PARK Pyeong Jun<sup>1</sup>(Ewha Womans University. <sup>1</sup>Korea National Univesity of Transportation)**

**P1-F032**

**Dynamics of an Active Particle with Asymmetric Energy Conversion Rate / CHOI Saerom, LEE Kong-Ju-Bock, PARK Pyeong**

**Jun<sup>1</sup>(Ewha Womans University. <sup>1</sup>Korea National Univesity of Transportation)**

**P1-F033**

**Mathematical Modeling Of Circadian Clock In Arabidopsis Thaliana Using System Identification Techniques / FOO MATHIAS,**

**KIM Pan-Jun, YOO Hee Young<sup>1</sup>(APCTP. <sup>1</sup>IBB, Postech)**

**P1-F034**

**Structure of simple fluids with attractive and repulsive tails: Inverse temperature expansion / KIM Eun-Young, KIM Soon-Chul(안동**

**대학교)**

## SESSION P1

반도체물리학과  
포스터 발표

2013년 4월 24일 수요일 13:00 - 14:45

장 소 : 포스터발표장

### P1-K001\*

욕조 온도에 따른 Anodized Al 기판 위에 형성된 무전해 Ni-B 박막의 특성 연구 / 김형철, 나사균, 윤재식<sup>1</sup>, 조양래<sup>2</sup>, 이연승<sup>3</sup>(국립한밭대학교, 재료공학과, <sup>1</sup>국립한밭대학교, 정보통신공학과)

### P1-K002\*

고출력용 인쇄회로기판(PCB)을 위한 무전해 구리 도금박막의 특성분석 / 조양래, 윤재식, 이연승, 김형철, 나사균(국립한밭대학교, 정보통신공학과, <sup>1</sup>국립한밭대학교, 재료공학과)

### P1-K003\*

전구체 열처리에 의한 CIS 흡수층 제조 / 고흥주, 박광훈<sup>1</sup>, 하준석<sup>2</sup>, 김영호<sup>3</sup>(한국광기술원 시험생산센터, <sup>1</sup>한국광기술원 시험생산센터, 전남대학교 신화학소재공학과, <sup>2</sup>전남대학교 신화학소재공학과, <sup>3</sup>(주)다쓰테크)

### P1-K004\*

Improvement of resistive switching properties on NiO thin film using IAR treatment / PARK Bae Ho, KIM Yeon Soo, LEE Mi Jung, JEON Jihoon, NAM Yoon Seung, LEE Sangik, YOON Chan Soo, LEE Keundong(Department of Physics, Konkuk Univ.)

### P1-K005

Effect of Reactive Electrode on Nonvolatile Memory Characteristics for Conductive Bridge Memory Cell / SONG Myung Jin, SEUNG Hyun Min, PARK Dong Hyun, PARK Jae Gun(Department of Advanced Semiconductor Material Device Development Center)

### P1-K006

저파워 ICP 플라즈마를 이용한 그래핀의 컨택저항 감소 / 유원중, 라창호, 조명훈, 강사랑(성균관대 나노과학기술학과, <sup>1</sup>성균관대 전기전자공학과)

### P1-K007

다채널 SiPM 소자 어레이의 개발 / 전진아, 이혜영, 이직, 박일홍<sup>2</sup>, 양슬기<sup>3</sup>(이화여자대학교, 물리학과, <sup>1</sup>이화여자대학교, 기초과학연구소, <sup>2</sup>성균관대학교, 물리학과, <sup>3</sup>연세대학교, 천문우주학과)

### P1-K008\*

Nonlinear Current-Voltage Characteristics of Lateral Nano-Gap Metal-Insulator-Metal Junctions : Application for Thin Film THz detector / JEON Youngeun, JUNG Sungchul, JIN Han Byul, KO Jae-Hyeon<sup>1</sup>,

KIM Nam<sup>2</sup>, EOM Daejin<sup>3</sup>, PARK Kibog(School of Electrical and Computer Engineering, KIER-UNIST Advanced Center for Energy, Ulsan National Institute of Science and Technology. <sup>1</sup>Department of Physics, Hallym University. <sup>2</sup>Division of Convergence Technology, Korea Research Institute of Standards and Science. <sup>3</sup>Korea Research Institute of Standards and Science)

### P1-K009

Development of the silicon photomultiplier and measurement system / 윤용선, 임지은, 유한영, 백인복, 장원익, 김약연(ETRI)

### P1-K010

Silicon Photomultiplier 소자의 개발 / 이혜영, 전진아, 이직, 박일홍<sup>2</sup>, 양슬기<sup>3</sup>(이화여자대학교, 물리학과, <sup>1</sup>성균관대학교, 물리학과, <sup>2</sup>연세대학교, 천문우주학과)

### P1-K011\*

Si/SiO<sub>2</sub>로 구성된 High-index Contrast Grating 구조를 이용한 Wavefront Control / 김준영, 연규혁, 김영동, 송진동(경희대학교 물리학과 및 나노광물성연구실, <sup>1</sup>한국과학기술연구원 (KIST) 광전융합시스템연구단)

### P1-K012\*

The effects of plasma treatment on MoS<sub>2</sub> thin film transistors / CHOI MIN SUP, BYUN JAE HOON<sup>1</sup>, QU DE SHUN, LEE SEUNG HWAN(Sunkyunkwan University, SKKU Advanced Institute of Nano-Technology (SAINT). <sup>1</sup>Sunkyunkwan University, Department of Electronic Engineering)

### P1-K013\*

Anisotropic Characteristics in Saturation Magnetization of Pd/Pt Based Perpendicular Magnetic Anisotropy Materials / YANG Seungmo, LEE Jabin, AN Gwangguk, HONG Jinpyo(Hanyang University, Department of Physics)

### P1-K014\*

ZnO 층을 이용하여 층 교환 프로세스로 성장한 다결정 실리콘 박막에 관한 연구 / 장원범, 최성국, 정수훈, 유진엽, 이정우, KOSUKE Hara<sup>1</sup>, HARUNA Watanabe<sup>1</sup>, NORITAKA Usami<sup>1</sup>, 장지호(한국해양대학교, 응용과학과, <sup>1</sup>Institute for Materials Research Crystal Physics, Tohoku University)

### P1-K015

Fabrication and characterization of graphene based memory with V<sub>3</sub>Si nano-particles / KIM Dongwook, LEE Dong Uk, KIM Eun Kyu(Department of Physics, Hanyang University)

### P1-K016

Abnormal Grain Growth Properties for SnO<sub>2</sub> Thin Films / JEONG Jin, MIN Soon<sup>1</sup>(Department of Physics, Chosun University. <sup>1</sup>Department of Nursing, Chosun Nursing College)

P1-K017\*

**Enhancing the Electrical Contacts of SnO<sub>2</sub> Nanowires Field Effect Transistor by Local Annealing with Induction Heating** / SHIN Jong Mok, CHOI Jae Wan, NA Junhong, YOU Min Youl, PIAO Ming Xing, KIM Gyu Tae(School of Electrical Engineering, Korea University)

P1-K018\*

**Relaxed-SiGe on insulator for High Hole Mobility MOSFET by Condensation and Annealing** / LEE Seung-Eun, KIM Tae-Hyun, LEE Du-Yeong, SONG Seung-Hyun, JEON Min-Su, TAKEMURA Yastaka<sup>1</sup>, SHIM Tae-Hun, PARK Jea-Gun(Hanyang University, Department of Electronics and Computer Engineering. <sup>1</sup>SUMCO Corporation, Epitaxial Engineering Section)

P1-K019\*

**Hydrogen Implantation for Surface Passivation of N-type Emitter Layer in Si Solar Cell by High Current Gaseous Ion Beam Implanter** / LIM Gyoungcho, KIM Kiseok, PARIDA Bhaskar, CHOI Jaeho, LEE Jae Sang<sup>1</sup>, KIM Keunjoo(Chonbuk National University, Department of Mechanical Engineering and Research Center of Industrial Technology. <sup>1</sup>Korea Atomic Energy Research Institute)

P1-K020

**수직으로 서있는 Ge 나노선에 형성한 CdS 껍질 구조** / 김형수, 송만석, 이철희, 김용(동아대학교)

P1-K021

**Investigation on nitrogen and aluminum depth profiling in silicon carbide by secondary ion mass spectrometry** / 홍태은, 강영비, 이영빈, 정의덕(한국기초과학지원연구원 하이테크소재연구부)

P1-K022\*

**All-solution-processed inverted polymer solar cells with low temperature, water-processable hybrid electron-collecting layers** / 박병주, 윤수홍, 김영찬, 배인곤(광운대학교, 전자물리학과)

P1-K023\*

**안트라센이 함유된 폴리이미드의 광학적, 전기적 특성 및 소자 응용** / 김민호, 이광훈<sup>1</sup>, 유환철<sup>2</sup>, 유형우<sup>3</sup>, 정재우<sup>1</sup>, 이정섭<sup>4</sup>, 김경국<sup>2</sup>, 정찬문<sup>1</sup>, 조수행(연세대학교 물리학과, <sup>1</sup>연세대학교 화학과, <sup>2</sup>한국산업기술대학교 나노광공학과)

P1-K024\*

**MoS<sub>2</sub> Thin Film Characteristics Deposited with Pulsed Laser Deposition** / ROCK Heo, YONG SOO Kim(University of Ulsan, Dep. of Physics and Energy Harvest-Storage Research Center)

## SESSION P1

천체물리분과회  
포스터 발표

2013년 4월 24일 수요일 13:00 - 14:45

장 소 : 포스터발표장

P1-L001\*

**Stiffer EoS for compact star with new scaling law** / 이현규, 이재현 (한양대학교 자연과학대학 물리학과)

P1-L002\*

**The GroundBIRD Experiment For The Studies Of B-mode Polarization From Cosmic Microwave Background Radiation Detection** / CHOI Jihoon, TAJIMA Osamu<sup>1</sup>, OGURI Shugo<sup>1</sup>, HAZUMI Masashi<sup>1</sup>, KAWAI Masanori<sup>1</sup>, YOSHIDA Mitsuhiro<sup>1</sup>, WON Eunil(Korea University. <sup>1</sup>High Energy Research Organization(KEK))

## SESSION P2

입자물리학분과회  
포스터 발표

2013년 4월 25일 목요일 11:00 - 12:45

장 소 : 포스터발표장

### P2-B001

**Current status of a beam hole charged veto(BHCV) for E14 KOTO at J-Parc** / 고재우, 김용주, 우종관, 나실인, 임계엽, 정명산<sup>1</sup>, 김은주<sup>3</sup>, 이효상<sup>4</sup>, 안정근<sup>4</sup>(제주대학교 물리학과, <sup>1</sup>KEK, <sup>2</sup>한양대학교 물리학과, <sup>3</sup>전북대학교 물리교육학과, <sup>4</sup>부산대학교 물리학과)

### P2-B002\*

**Study on results of fast and full simulation in Top analysis** / LEE Jangbae, PARK Inkyu, PARK Chawon, KIM Jihyun, PARK Sangnam, CHOI Minkyoo, RYU Geonmo, CHOI Kijin(University of Seoul, Department of Physics)

### P2-B003

**플라스틱 섬광검출기에서 전기장에 따른 신호변화** / 나실인, 김용주, 우종관, 고재우(제주대학교 자연과학대학 물리학과, <sup>1</sup>제주대학교 자연과학대학 물리학과, 제주대학교 기초과학연구소 소장)

### P2-B004

**CMS muon reconstruction at LHC with and without RPC hits at high eta (> 1.5) region** / 서현관, 최영일(성균관대학교)

### P2-B005

**A Research on the Paradigm of Theory-Experiment-Simulation for Probing the Standard Model** / 조기현, 김정현, 남수현, 배태길, 류희영(KISTI)

### P2-B006

**Expected spectra of prompt signals from reactor neutrinos at RENO** / 신창동, 김바로, 김재률, 소선행, 송숙형, 여인성, 임인택, 장지승, 주경광, 김우영<sup>1</sup>, 세르게이 체바토료프<sup>1</sup>, 박인곤<sup>2</sup>, 박명렬<sup>3</sup>, 최준호<sup>3</sup>, 김상용<sup>4</sup>, 안정근<sup>4</sup>, 박강순<sup>5</sup>, 장한일<sup>6</sup>, 김수봉<sup>7</sup>, 박정식<sup>7</sup>, 서선희<sup>7</sup>, 이순규<sup>7</sup>, 최선호<sup>7</sup>, 최원국<sup>7</sup>, 최지훈<sup>8</sup>, 김만환<sup>8</sup>, 유인태<sup>8</sup>, 이승현<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>9</sup>, 마경주<sup>9</sup>, 전은주<sup>9</sup>, 김현수<sup>10</sup>, 김시연<sup>11</sup>(<sup>1</sup>전남대학교, <sup>2</sup>경북대학교, <sup>3</sup>경상대학교, <sup>4</sup>동신대학교, <sup>5</sup>부산대학교, <sup>6</sup>서경대학교, <sup>7</sup>서영대학교, <sup>8</sup>서울대학교, <sup>9</sup>성균관대학교, <sup>10</sup>세종대학교, <sup>11</sup>전북대학교, <sup>12</sup>중앙대학교)

### P2-B007

**Study on the long baseline neutrino oscillation using GloBES** / 신창동, 주경광(전남대학교)

### P2-B008

**Feasibility study of a Gd-loaded DIN-based liquid scintillator** / 송숙형, 김승찬, 김봉건(전남대학교 물리학과)

### P2-B009

**Water-contents of 0.5% Gd-loaded LAB-based liquid scintillator with time** / 송숙형(전남대학교 물리학과)

### P2-B010

**CMS RPC Chamber Production During The First LHC Long Shutdown** / KWON Eunhyang, SEO Hyunkwan, LEE Jongseok, CHOI Youngil(성균관대학교 물리학과)

### P2-B011

**Reinterpretation of W' Search with Split Universal Extra Dimension Model at CMS Experiment** / CHOI Jaeyun, YANG Yuchul, OH Youngdo, KIM DongHee, PARK Seong Chan<sup>1</sup>(WCU Collider Physics Research Kyungpook National University, <sup>1</sup>SungKyunKwan University)

### P2-B012

**Search for Pair Production of R Parity Violating Scalar Top Quarks in Tau + b-jet events with the CMS Detector** / CHOI Eunmi, KONG Daejung, YANG Yuchul, OH Youngdo, KIM DongHee, KAMON Teruki<sup>1</sup>, GURROLA Alfredo<sup>2</sup>, MELO Andrew<sup>2</sup>, SHELDON Paul<sup>2</sup>, KAADZ Ketino<sup>3</sup>, MARIONNEAU Matthieu<sup>4</sup>(WCU Collider Physics Research Kyungpook National University, <sup>1</sup>WCU Collider Physics Research Kyungpook National University, Texas A&M, <sup>2</sup>Vanderbilt University, <sup>3</sup>CERN, <sup>4</sup>University of Maryland)

### P2-B013

**Data processing and reduction at RENO** / 김바로, 김재률, 신창동, 여인성, 임인택, 장지승, 주경광, 김우영<sup>1</sup>, 세르게이 체바토료프<sup>1</sup>, 박인곤<sup>2</sup>, 박명렬<sup>3</sup>, 최준호<sup>3</sup>, 김상용<sup>4</sup>, 안정근<sup>4</sup>, 박강순<sup>5</sup>, 장한일<sup>6</sup>, 김수봉<sup>7</sup>, 박정식<sup>7</sup>, 서선희<sup>7</sup>, 이순규<sup>7</sup>, 최선호<sup>7</sup>, 최원국<sup>7</sup>, 최지훈<sup>8</sup>, 김만환<sup>8</sup>, 유인태<sup>8</sup>, 이승현<sup>8</sup>, 최영일<sup>8</sup>, 김영덕<sup>9</sup>, 마경주<sup>9</sup>, 전은주<sup>9</sup>, 김현수<sup>10</sup>, 김시연<sup>11</sup>(<sup>1</sup>전남대학교, <sup>2</sup>경북대학교, <sup>3</sup>경상대학교, <sup>4</sup>동신대학교, <sup>5</sup>부산대학교, <sup>6</sup>서경대학교, <sup>7</sup>서영대학교, <sup>8</sup>서울대학교, <sup>9</sup>성균관대학교, <sup>10</sup>세종대학교, <sup>11</sup>전북대학교, <sup>12</sup>중앙대학교)

### P2-B014\*

**Development of cryogenic photon detectors for neutrinoless double beta decay** / 김용환, 이주영<sup>1</sup>, 김건보<sup>2</sup>, 김홍주<sup>3</sup>, 윤원식, 이민규, 이혜진, KHAN sajid<sup>3</sup>(한국표준과학연구원 양자측정센터, <sup>1</sup>경북대학교 물리학과, 한국표준과학연구원 양자측정센터, <sup>2</sup>서울대학교 물리학과, 한국표준과학연구원 양자측정센터, <sup>3</sup>경북대학교 물리학과)

### P2-B015

**Detailed simulation of radioactive sources for energy calibration at RENO** / 김만환(성균관대학교 물리학과)



## P2-B016

**Status of the photomultiplier tube tests for upgrade of KIMS detector** / 김경원, 강운구, 김건보, 김봉호, 김선기, 김승천, 김정훈, 명성숙, 방형찬, 이재금, 이주희, 최선호, 최정훈, LI Jin, OLSEN S.L., 김영덕, 김홍주<sup>2</sup>, 소중호<sup>3</sup>, 이현수<sup>2</sup>, 한인식<sup>2</sup>, LI J<sup>2</sup>, YUE Q<sup>3</sup>, LI Y.J.<sup>3</sup>, LI X.R.<sup>4</sup>(서울대학교, 물리천문학부. <sup>1</sup>세종대학교, 물리학과. <sup>2</sup>경북대학교, 물리학과. <sup>3</sup>Tsinghua University. <sup>4</sup>IHEP)

## P2-B017\*

**Improved Method for Expected Reactor Neutrino Flux Calculation at RENO** / 김수봉, 김우영<sup>1</sup>, 체바토로프 세르게이<sup>1</sup>, 박인곤<sup>2</sup>, 박명렬<sup>3</sup>, 최준호<sup>3</sup>, 김상용<sup>4</sup>, 안정근<sup>4</sup>, 장한일<sup>5</sup>, 박정식, 서선희, 이순규, 최선호, 최원국, 최지훈, 김만화<sup>6</sup>, 유인태<sup>6</sup>, 이승현<sup>6</sup>, 최영일<sup>6</sup>, 김영덕<sup>6</sup>, 마경주<sup>7</sup>, 전은주, 김바로<sup>8</sup>, 김재률<sup>8</sup>, 소선형<sup>8</sup>, 송숙형<sup>8</sup>, 신창동<sup>8</sup>, 여인성<sup>8</sup>, 임인택<sup>8</sup>, 장지승<sup>8</sup>, 주경광<sup>8</sup>, 김현수<sup>9</sup>, 김시연<sup>10</sup>, 박강순<sup>11</sup>(서울대학교. <sup>1</sup>경북대학교. <sup>2</sup>경상대학교. <sup>3</sup>동신대학교. <sup>4</sup>부산대학교. <sup>5</sup>서영대학교. <sup>6</sup>성균관대학교. <sup>7</sup>세종대학교. <sup>8</sup>전남대학교. <sup>9</sup>전북대학교. <sup>10</sup>중앙대학교. <sup>11</sup>서경대학교)

## P2-B018

**Long-term stability of 0.1% Gd-loaded LAB-based liquid scintillator at RENO** / 소선행, 김우영<sup>1</sup>, 체바토로프 세르게이<sup>1</sup>, 박인곤<sup>2</sup>, 박명렬<sup>3</sup>, 최준호<sup>3</sup>, 김상용<sup>4</sup>, 안정근<sup>4</sup>, 박강순<sup>5</sup>, 장한일<sup>6</sup>, 김수봉<sup>7</sup>, 박정식<sup>8</sup>, 서선희<sup>9</sup>, 이순규<sup>10</sup>, 최선호<sup>7</sup>, 최원국<sup>11</sup>, 최지훈<sup>12</sup>, 김만화<sup>13</sup>, 유인태<sup>14</sup>, 이승현<sup>15</sup>, 최영일<sup>16</sup>, 김영덕<sup>17</sup>, 마경주<sup>18</sup>, 전은주<sup>19</sup>, 김바로<sup>20</sup>, 김재률, 신창동, 여인성, 임인택, 장지승, 주경광, 김현수<sup>21</sup>, 김시연<sup>22</sup>(전남대학교. <sup>1</sup>경북대학교. <sup>2</sup>경상대학교. <sup>3</sup>동신대학교. <sup>4</sup>부산대학교. <sup>5</sup>서경대학교. <sup>6</sup>서영대학교. <sup>7</sup>서울대학교. <sup>8</sup>성균관대학교. <sup>9</sup>세종대학교. <sup>10</sup>전북대학교. <sup>11</sup>중앙대학교.)

## P2-B019

**Charge Confusion of Electrons at the AMS Tracker** / SON Dongchul, KIM Kyung Sook, JANG Woo Young, PARK Wung Hwa, HUH Chang Gi, SHARMA Neelesh, KIM Gui-Nyun, OH Seji<sup>1</sup>, CHAE Min Jung<sup>1</sup>, YANG Jongmann<sup>1</sup>, LIM Sooil<sup>1</sup>(Kyungpook National University. <sup>1</sup>Ewha Womans University)

## P2-B020

**한국 CMS Tier2 센터의 운영과 IPv6 적용** / SON Dongchul, HAN Daehee, SONG Jihwan, PARK Hyang-Kyu(Kyungpook National University)

## P2-B021\*

**Study on Pair Production of Supersymmetric Bosons at the CMS Experiment** / 김재률, 김재호, 박령균, 송상현, 오건희, 이준수, 임인택, 홍나리, 김태정<sup>1</sup>, 최수웅<sup>2</sup>, 김태연<sup>2</sup>(Chonnam National University. <sup>1</sup>Korea University. <sup>2</sup>Kangwon National University)

## P2-B022

**The Lepton transverse momentum correction study for W boson at CMS** / YUSUPOV Hammid, BUTANOV Khakimjan, PARK SangIl, LEE SangEun, SON Dongchul, KIM Guinyun(Kyungpook National University)

## P2-B023

**Study of detection efficiency at RENO** / 여인성, 김바로, 김재률, 소선행, 송숙형, 신창동, 임인택, 장지승, 주경광, 김수봉<sup>1</sup>, 박정식<sup>1</sup>, 서선희<sup>1</sup>, 이순규<sup>1</sup>, 최선호<sup>1</sup>, 최원국<sup>1</sup>, 최지훈<sup>1</sup>, 김만화<sup>2</sup>, 유인태<sup>2</sup>, 이승현<sup>2</sup>, 최영일<sup>2</sup>, 김영덕<sup>2</sup>, 마경주<sup>3</sup>, 전은주<sup>3</sup>, 김우영<sup>4</sup>, 세르게이 체바토로프<sup>4</sup>, 박인곤<sup>5</sup>, 박명렬<sup>6</sup>, 최준호<sup>6</sup>, 김상용<sup>7</sup>, 안정근<sup>7</sup>, 박강순<sup>8</sup>, 장한일<sup>9</sup>, 김현수<sup>10</sup>, 김시연<sup>11</sup>(전남대 물리학과. <sup>1</sup>서울대 물리학과. <sup>2</sup>성균관대 물리학과. <sup>3</sup>세종대 물리학과. <sup>4</sup>경북대 물리학과. <sup>5</sup>경상대 물리학과. <sup>6</sup>동신대 물리학과. <sup>7</sup>부산대 물리학과. <sup>8</sup>서경대 물리학과. <sup>9</sup>서영대 물리학과. <sup>10</sup>전북대 물리학과. <sup>11</sup>중앙대 물리학과)

## P2-B024

**Study of  $B^+ \rightarrow K^*X(3872) \rightarrow K^*p\bar{p}$  decay at Belle** / 이재금, OLSEN Stephen Lars, LI Jin, 최수경(서울대학교 물리천문학부. <sup>1</sup>경상대학교 물리학과)

## P2-B025

**저온공정을 이용한 Ag nanowire 투명전도막** / 왕병용, 김준섭<sup>1</sup>, 임대순<sup>2</sup>, 오영제<sup>3</sup>(한국과학기술연구원, 계면제어연구센터; 고려대학교, 신소재공학과. PNT(People & Technology). <sup>2</sup>고려대학교, 신소재공학과. <sup>3</sup>한국과학기술연구원, 계면제어연구센터)

## P2-B026\*

**J-PARC E14 (KOTO) 실험을 위한 하전입자 검출기 제작** / 이건호, 김은주, 우종관, 고재우, 안정근<sup>2</sup>, 이효상<sup>2</sup>, 임계엽<sup>3</sup>, 정명신<sup>4</sup>, 나실인<sup>5</sup>, 김용주<sup>1</sup>, 김상웅<sup>6</sup>(전북대학교 과학교육학부. <sup>1</sup>제주대학교 물리학과. <sup>2</sup>부산대학교 물리학과. <sup>3</sup>KEK. <sup>4</sup>한양대학교. <sup>5</sup>부산대학교)

## P2-B027

**Water scattering analysis in Super Kamiokande** / 홍나리, 김재률, 임인택, 장지승, 김수봉<sup>1</sup>, 최영일<sup>2</sup>(전남대학교 물리학과. <sup>1</sup>서울대학교 물리학과. <sup>2</sup>성균관대학교 물리학과)

## P2-B028

**The Electron Efficiency Study for W Charge Asymmetry Electron Channel at CMS** / NAM Soon-kwon, CHANG Sunghyun, KIM Jungmin, KIM Taehoon, KIM Youngnam, LEE SangEun<sup>1</sup>, BUTANOV Khakimjan<sup>1</sup>, YSUPOV Hammid<sup>1</sup>, PARK Sangil<sup>1</sup>, SON Dongchul<sup>1</sup>, KIM Guinyun<sup>1</sup>(강원대학교. <sup>1</sup>경북대학교)

## P2-B029

**The Pile Up Correction Study for W Charge Asymmetry Electron Channel at CMS** / NAM Soon-kwon, CHANG Sunghyun, KIM Jungmin, KIM Taehoon, KIM Youngnam, LEE SangEun, BUTANOV Khakimjan, YSUPOV Hammid, PARK Sangil, SON Dongchul, KIM Guinyun(강원대학교)

## SESSION P2

응집물질물리학분과회 포스터 발표  
자성체, 바이오/무른물질/유기물질

2013년 4월 25일 목요일 11:00 - 12:45

장소: 포스터발표장

진행: 이현우(포스텍), 이자일(Columbia U)

### P2-D053\*

**Magnetic behaviors of ultrathin SrRuO<sub>3</sub> film on SrTiO<sub>3</sub> along (111)-direction: ab-initio study:** KIM Bongjae, MIN B. I.(POSTECH, PHYSICS)

### P2-D054

**First-principles study of electronic, magnetic and Li-ion diffusion properties of LiFeSO<sub>4</sub>F and FeSO<sub>4</sub>F** / TSEVELMAA Tumurbaatar, ODKHUU Dorj, KWON Oryong, TSOGBADRACH Namsrai, HONG soon cheol(University of Ulsan, Department of Physics)

### P2-D055

**암영구조를 가진 반쪽금속 NaO/NaN의 계면 전자구조 연구** / 김동철, BIALEK Beata<sup>1</sup>, 이재일(한라대, <sup>1</sup>인하대)

### P2-D056\*

**마그논의 스핀 돌림힘 전달에 의한 스핀 파동 인가 자구벽 이동** / 김진욱, 문경웅, 김덕호, 최석봉(서울대학교 물리천문학부)

### P2-D057\*

**Pt/Co/Pt 박막의 Pt 두께에 따른 자구벽 이동성** / 김덕호, 유상철, 문경웅, 김진욱, 민병철, 신경호<sup>1</sup>, 최석봉(서울대학교, 물리천문학부, <sup>1</sup>한국과학기술연구원)

### P2-D058\*

**Ta/Pt/Co/Pt 구조에서의 Ta 두께에 따른 광자기 Kerr 효과 증가** / 황현석, 김덕호, 유상철, 민병철, 신경호<sup>1</sup>, 최석봉(서울대학교, 물리천문학부, <sup>1</sup>한국과학기술연구원)

### P2-D059

**강자성 복층구조에서 Dzyaloshinskii-Moriya Interaction에 의해 형성되는 자성도메인에 대한 연구** / 강상표, 권희영, 이진혁, 원창연(경희대학교 물리학과)

### P2-D060

**전류 밀도 변화에 따른 MgO/Cr/Pd/FePd/MgO 구조에서의 Rashba 효과** / 이황래, SHIOTA Yoichi<sup>1</sup>, 이규준<sup>2</sup>, 정명화<sup>2</sup>, SUZUKI Yoshishige<sup>1</sup>, 유천열(인하대학교, 물리학과, <sup>1</sup>Division of Materials Physics, Graduate School of Engineering Science, Osaka University, <sup>2</sup>서강대학교, 물리학과)

### P2-D061

**MgO(100)단결정기판위에 증착한 FePt 박막의 증착온도 및 열처리유무에 따른 자기적 특성 연구** / 조신용, 김기연<sup>1</sup>, 최혁철, 이규준<sup>2</sup>, 정명화<sup>2</sup>, 유천열(인하대학교, 물리학과, <sup>1</sup>한국원자력 연구원, 중성자과학 연구부, <sup>2</sup>서강대학교, 물리학과)

### P2-D062

**직교면 유도자기장 방향에 의존하는 GMR-SV 소자의 자기저항특성 연구** / P. Khajidmaa, 박광준, 이장로<sup>1</sup>, 이상석(상지대학교 한방의료공학과, <sup>1</sup>숙명여자대학교 나노물리학과)

### P2-D063\*

**Demonstration of a field-effect transistor (FET) modulated by external electric field and magnetic field based on La<sub>0.85</sub>Sr<sub>0.15</sub>MnO<sub>3</sub>** / LEE keundong, GWON hyojin, BAEK seung-hyub, PARK baeho<sup>1</sup>, LEE suyoun, KIM jin-sang(Electronic Materials Research Center, Korea Institute of Science and Technology, Seoul 136-791, South Korea. Division of Quantum Phase & Devices, School of Physics, Konkuk University, Seoul 143-701, South Korea)

### P2-D064\*

**Distribution of Cobalt Ions on Ferromagnetic Zn(1-x)Co(x)O Films** / PARK Changin, JEONG Eun-Seok, JIN Zhenlan, HAN Sang-Wook, SEO Soo-Young<sup>1</sup>, KWAK Changhan<sup>1</sup>(Chonbuk National University, Department of Physics Education, <sup>1</sup>POSTECH, Department of Materials Science)

### P2-D065\*

**Magnetization Reversal Process of GaMnAs Film Grown on Si Substrate** / JEONG Yujin, WON Jaehyuk, BAC Seulki, YOO Taehee, LEE Sanghoon, LIU X.<sup>1</sup>, FURDYNA J. K.<sup>1</sup>(Physics Department, Korea University, Seoul, <sup>1</sup>Physics Department, University of Notre Dame, Notre Dame)

### P2-D066\*

**Magneto-transport properties of MBE-grown MnP films on GaAs(001)** / DUONG Anh Tuan, SHIN Yooleemi, TRAN Viet Cuong, NGUYEN Van Quang, CHO Sunglae(울산대학교, 물리학과)

### P2-D067\*

**Electron density study to explore magnetic contribution of hydrogen in Co-doped ZnO** / PARK Ji Hun, LEE Seunghun, KIM Bum-Su, KIM Won-Kyung, CHO Yong Chan, MORIYOSHI Chikako<sup>1</sup>, KUROIWA Yoshihiro<sup>1</sup>, JEONG Se-Young(Dept. of Cogno-Mechatronics Engineering, Pusan National University, Miryang 627-706, Republic of Korea, <sup>1</sup>Dept. of Physical Science, Hiroshima University, Higashi-Hiroshima, 739-8526, Japan)

### P2-D068

**Growth Temperature Dependent Ferrimagnetism in Mn<sub>3</sub>Ga Thin**

**Films / SHIN Yooleemi, FENG Wuwei, DUONG Anh Tuan, CHO Sunglae**(울산대학교, 물리학과)

**P2-D069\***

**Electron spin resonance study of ferromagnetism in hydrothermally treated C<sub>60</sub>** / LEE Cheol Eui, KIM Dowan, LEE Kyu Won(Department of Physics and Institute for Nano Science, Korea University)

**P2-D070\***

**Spectroscopic study of highly-oriented pyrolytic graphites modified by deuterium-ion-irradiation** / PARK Jun Kue, LEE Kyu Won, KWEON Jin Jung, LEE Cheol Eui, NOH S. J.<sup>1</sup>, KIM H. S.<sup>1</sup>, LIM S. T.<sup>2</sup>, KIM G. H.<sup>2</sup>(Department of Physics and Institute for Nano Science, Korea University, Seoul 136-713, Republic of Korea. <sup>1</sup>Department of Applied Physics, Dankook University, Yongin 448-701, Republic of Korea. <sup>2</sup>Department of Energy Systems Engineering, Seoul National University, Seoul, Korea)

**P2-D071\***

**Angle Dependence Of Half Metallicity In Bilayer Zigzag Graphene Nanoribbons** / JEON giwan, LEE Kyu Won, LEE Cheol Eui(Department of Physics and Institute for Nano Science, Korea University, Seoul 136-713)

**P2-D072\***

**Ba<sub>x</sub>Co<sub>2-x</sub>Zn<sub>x</sub>Fe<sub>12</sub>O<sub>22</sub> (x = 0, 2)의 외부자기장에 따른 뢰스바우어 분광 연구** / 임정태, 김삼진, 김철성(국민대학교, 물리학과)

**P2-D073\***

**분쇄 조건에 따른 Y-type 육방정 페라이트의 고주파수 특성 연구** / 이찬혁, 조광래, 김철성(국민대학교 물리학과)

**P2-D074**

**Sodium이 결핀된 FeSO<sub>4</sub>F 물질의 자기적 특성 연구** / 이한규, 김희승, 심인보, 김철성(국민대학교, 물리학과)

**P2-D075\***

**Hysteresis of Y-type Hexaferrite using XMCD** / 박재훈, 천세환, 김기훈<sup>1</sup>, 박병규<sup>2</sup>, 김재영<sup>3</sup>, 이한규<sup>2</sup>, 노우석<sup>4</sup>(포스텍, 물리학과. <sup>1</sup>서울대학교, 물리천문학부. <sup>2</sup>포항가속기연구소. <sup>3</sup>포스텍, 물리학과)

**P2-D076\***

**Anisotropic Spin & Angular Moment of d Electron System Caused By Low Symmetry Field - Co<sup>2+</sup>(d<sup>7</sup>) Cluster Calculation** / 박재훈, 김동환(POSTECH, 물리학과)

**P2-D077**

**산소 결함 [RBa][MnFe]O<sub>x</sub> (R=Nd, Pr) 페로브스카이트 산화물의 방사광 분광 연구** / 김대현, 황지훈, 이은숙, 강정수, KOLESNIK S.<sup>1</sup>, DABROWSKI B.<sup>1</sup>, 이한규<sup>2</sup>, 김재영<sup>3</sup>(가톨릭대학교 물리학과. <sup>1</sup>Northern Illinois University. <sup>2</sup>포항가속기연구소)

**P2-D078**

**스피넬 산화물 Ti<sub>x</sub>Fe<sub>3-x</sub>O<sub>4</sub> 박막에서 Ti 성분비 변화에 따르는 전이금속 이온 분포 및 자기적 성질 조사** / 김광주, 고태영, 윤성욱<sup>1</sup>, 김철성<sup>1</sup>, 이영배<sup>2</sup>(건국대학교 물리학과. <sup>1</sup>국민대학교 나노전자물리학과. <sup>2</sup>한중대학교 교양학과)

**P2-D079**

**Observation of out-of-plane exchange bias in BiFeO<sub>3</sub> thin films:** SUNG Kildong, PARK Youngan, HUR Namjung, JUNG JongHoon(인하대학교, 물리학과)

**P2-D080**

**The Electronic and Magnetic Structure of MnTe<sub>2</sub>** / 김준원, 김규, 민병일(포항공과대학교 물리학과)

**P2-D081\***

**Magnon Contribution to The Specific Heat of (Y/Lu)MnO<sub>3</sub> Estimated from Inelastic Neutron Scattering Data** / OH Joosung, JEONG Jaehong, NAKAJIMA Kenji<sup>1</sup>, OHIRA-KAWAMURA Seiko<sup>1</sup>, PARK Je-Geun<sup>2</sup>(IBS Research Center for Functional Interfaces and Correlated Electron Systems, Seoul National University. <sup>1</sup>Materials and Life Science Division, J-PARC Center, Japan Atomic Energy Agency. <sup>2</sup>IBS Research Center for Functional Interfaces and Correlated Electron Systems, Seoul National University)

**P2-D082\***

**Long- and Short-Ranged Structure of Multiferroic Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>** / SIM Hasung, LEE Sanghyun, HONG Kun-Pyo, LEE Seongsu<sup>1</sup>, KAMIYAMA Takashi<sup>2</sup>, OTOMO Toshiya<sup>2</sup>, CHEONG Sang-Wook<sup>3</sup>, PARK Je-Geun(IBM Research Center for Functional Interfaces and Correlated Electron Systems, Seoul National University, Seoul 151-747, Korea. <sup>1</sup>Neutron Science Division, Korea Atomic Energy Research Institute, Daejeon 305-353, Korea. <sup>2</sup>Institute of Materials Structure Science & J-PARC Center, KEK, Tsukuba 305-0801, Japan. <sup>3</sup>Rutgers Center for Emergent Materials and Department of Physics and Astronomy, Rutgers University, Piscataway New Jersey 08854, USA)

**P2-D083**

**Raman scattering studies of LiFe<sub>1-x</sub>Mn<sub>x</sub>PO<sub>4</sub>:** CHUNG Joo-Hee, NGUYEN Thi Minh Hien, CHEN Xiang-Bai<sup>1</sup>, KWON Woo Jun<sup>2</sup>, KIM Chul Sung<sup>2</sup>, YANG In-Sang(Ewha Womans University, Department of Physics. <sup>1</sup>Konkuk University, Department of Applied Physics. <sup>2</sup>Kookmin University, Department of Physics)

P2-D084\*

**Ultrafast Terahertz Transmission Ellipsometry of  $\text{YMn}_2\text{O}_5$  Electromagnons** / KIM Hyosub, YI Minwoo<sup>1</sup>, WANG Xueyun<sup>2</sup>, CHEONG Sang-Wook<sup>2</sup>, AHN Jaewook(Department of Physics, KAIST. <sup>1</sup>국방과학연구소. <sup>2</sup>Rutgers Center for Emergent Materials and Department of Physics and Astronomy, Rutgers University)

P2-D085\*

**Coherent Control of Spin Precession with Terahertz Magnetic Field in  $\text{YFeO}_3$**  / KIM Tae-heon, HAMH Sun Young, HAN Jeong Woo, KANG chul<sup>1</sup>, JUNG Seonghoon<sup>2</sup>, PARK Jaehun<sup>2</sup>, TOKUNAGA Y<sup>3</sup>, TOKURA Y<sup>4</sup>, LEE Jong seok(Department of Physics and Photon Science, Gwangju Institute of Science and Technology(GIST). <sup>1</sup>Advanced Photonics Research Institute(APRI). <sup>2</sup>PAL, POSTECH, Pohang 790-784. <sup>3</sup>CMRG and CERG RIKEN ASI, Japan. <sup>4</sup>Department of Applied Physics, University of Tokyo)

P2-D086

**$\text{Ba}_{1-x}\text{Bi}_x\text{Ti}_{1-y}\text{Fe}_y\text{O}_3$  ( $0 < x < 0.1$ ,  $y = 0.07, 0.1$ )의 다강제적 특성연구** / 김덕현, 이보화, 이민영, 권윤미(한국외국어대학교 물리학과)

P2-D087

**편광의존 연 x-선 방사광 분광법을 이용한  $\text{Mn}_3\text{O}_4$  스피넬산화물의 전자 구조 연구** / 이은숙, 김대현, 황지훈, 김창수<sup>1</sup>, 이순철<sup>1</sup>, 이한구<sup>2</sup>, 김재영<sup>2</sup>, 강정수(가톨릭대학교 물리학과. <sup>1</sup>KAIST 물리학과. <sup>2</sup>포항가속기 연구소)

P2-D088

**Rotational states of a single-molecule magnet in the presence of a magnetic field along the medium** / KIM Gwang-Hee(Sejong Univ., Dept. of Physics)

P2-D089

**High Temperature X-ray Analysis of  $\alpha\text{-HgI}_2$**  / YEO Sunmog, HA Jang Ho, PARK Changyul, KIM Han Soo, KIM Young Soo(KAERI)

P2-D090

**A Study of Magnetic Hysteresis Properties of a Nb Micro-Ring Using Cantilever Magnetometry** / CHOI Heon Hwa, KIM Yun-Won<sup>1</sup>, KIM Mun Seog<sup>1</sup>, LEE Soon-Gul<sup>2</sup>, CHOI Jae-Hyuk(Division of Physical Metrology, Korea Research Institute of Standards and Science, Korea ; Department of Nano Science, University of Science and Technology, Daejeon, Korea. <sup>1</sup>Division of Physical Metrology, Korea Research Institute of Standards and Science, Korea. <sup>2</sup>Department of Display and Semiconductor Physics, Korea University, Korea)

P2-D091

**Low Temperature Thermometry using Magnetic Field Fluctuation**

**Thermometers** / 이혜진, 윤원식, 김건보<sup>1</sup>, 이주영<sup>2</sup>, 이민규<sup>3</sup>, 김용함<sup>3</sup> (University of Science & Technology, 한국표준과학연구원. <sup>1</sup>서울대학교, 한국표준과학연구원. <sup>2</sup>경북대학교, 한국표준과학연구원. <sup>3</sup>한국표준과학연구원)

P2-D092\*

**Threshold for The Formation of Liquid Crystalline Phase of Graphene Oxide in Water** / LEE Kieup, PARK Ji Hyun, JO HyeRan, DERYCKE Vincent<sup>1</sup>, FILORAMO Arianna<sup>1</sup>, CAMPIDELLI Stephane<sup>1</sup>, SCALIA Giusy<sup>2</sup>(Graduate School of Convergence Science and Technology, Seoul National University (Korea). <sup>1</sup>Molecular Electronics Laboratory, Condensed Matter Physics Department, IRAMIS Institute, CEA Saclay(France). <sup>2</sup>Graduate School of Convergence Science and Technology, Seoul National University (Korea), Advanced Institutes of Convergence Technology (AICT))

P2-D093\*

**Chemical and Topological Properties of Surface Modified Parylene-C Films** / BAE Junwan, LEE Injae(Chonbuk National University, Department of Physics)

P2-D094\*

**유기 p-n 접합 반도체와 기능성 CdSe/ZnS 양자점 하이브리드 나노물질의 광전자 나노특성 연구** / 박철준, 이용백, 전수민, 이광섭<sup>1</sup>, 주진수(고려대학교 물리학과. <sup>1</sup>한남대학교 신소재공학과)

P2-D095\*

**Low-temperature photoresponsive characteristics of few layers  $\text{MoS}_2$  transistor** / 조은혜, 김찬중, 정진선, 김선국<sup>1</sup>, 주진수(고려대학교, 물리학과. <sup>1</sup>경희대학교, 전자전파공학과)

P2-D096\*

**Optical and Electrical Characteristics of Poly[diketopyrrolopyrrole-thiophene-thienothiophene-thiophene 2-octyldodecyl] (pDPPT2TT-OD) Nanowires** / 김찬중, 정진선, 주진수, 김봉수(고려대학교 물리학과. <sup>1</sup>한국과학기술연구원)

P2-D097\*

**Negative Differential Resistance of Organic Thin Film Transistor Controlled by Wavelength and Power of Incident Light** / 정진선, 조은혜, 조소영<sup>1</sup>, 김경환<sup>1</sup>, 최동훈<sup>1</sup>, 주진수(고려대학교 물리학과. <sup>1</sup>고려대학교 화학과)

P2-D099\*

**Measuring the fluorescence decay lifetimes of single molecules** / LEE Jaejin, KIM Sung Hyun, KIM Doseok(Department of Physics, Sogang University)

## P2-D100\*

**Electrical Characteristics of Rectifying Molecular Junctions of Alkyl Molecules with Ferrocene End-Group on Rigid and Flexible Substrates** / 정현학, 김동구, 이한기, 이탁희(Department of Physics and Astronomy, Seoul National University)

## P2-D101\*

**고압 브릴루앙 산란법을 이용한 에탄올의 고압 탄성특성 및 굴절률 측정** / 정민석, 이병완, 고재현, 고영호, 김광주'(한림대학교, 전자물리학과, '국방과학연구소, 4본부2부.)

## P2-D102

**Protein Single Crystal Growth and Status of the Neutron Image Plate Diffractometer (Bio-C) at HANARO** / KIM Shin Ae, CHO Sang-Jin, MAGAY Elena, RYU Sun-Young, YOON Tae-Sung', LEE Kye-Hong(Korea Atomic Energy Research Institute, 'Korea Research Institute of Bioscience and Biotechnology)

## P2-D103

**Terahertz Spectroscopy of PDMS Flexible Polymer** / SIM Kyung Ik, LEE Young Ik, HA Tae Woo, CHOI Kyujin, IM Seongil, KIM Jae Hoon(Department of Physics, Institute of Physics and Applied Physics, Yonsei University, Seoul 120-749 Korea)

## SESSION P2

응용물리학분과회  
포스터 발표

2013년 4월 25일 목요일 11:00 - 12:45

장 소 : 포스터발표장

## P2-E027

**Effect of self-assembled monolayer on charge and spin transport in graphene** / YOO Jung-Woo, PARK Jungmin, JIN Mi-Jin, MODEPALLI Vijayakumar, JO Jun-Hyeon(울산과학기술대학교, 기계 및 신소재 공학부)

## P2-E028\*

**Ta capping 층을 이용한 MgO 기반 CoFeB 수직자기이방성 연구** / 이금원, 김동석, 정구열, 장영재, 주성중(고려대학교, 응용물리학과)

## P2-E029

**Implementation of Linear Field Sensor using STT-MTJ** / KIM Sang-Il, LEE Kyung-Jin', PARK Seung-Young(Korea Basic Science Institute, Division of Materials Science, 'Korea University, Department of Materials Science and Engineering)

## P2-E030\*

**Role of Metal Catalyst for Growth of High-Quality Graphene Films** / YANG Jae Hoon, JANG A-Rang, KANG Dae Joon(BK21 Physics Research Division, Department of Energy Science, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Republic of Korea)

## P2-E031\*

**Flexible Nanogenerator Based on ZnO Nanoflakes With Ultra-high Output Voltage** / NGOC Huynh Van, KANG Dae Joon(BK 21 Physics Research Division, Department of Energy Science, Institute of Basic Sciences, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Suwon 440-746, Korea)

## P2-E032\*

**Nickel Cobalt Hydroxide Supported by Ultrathin ZnO Nanoflake Array Grown on Textile Fiber Substrates for High Performance Wearable Energy Storage Devices** / TRANG Nguyen Thi Hong, NGOC Huynh Van, KANG Dae Joon(BK 21 Physics Research Division, Institute of Basic Sciences, SKKU Advanced Institute of Nanotechnology, Department of Energy Science, Sungkyunkwan University, Suwon 440-746, Korea)

## P2-E033\*

**Spatial Mapping of Photovoltage at the Interface between Graphene and TiO<sub>2</sub>** / JANG A-Rang, KIM Kwang Woo', YOON Seong-In',

SHIN Hyeon Suk<sup>1</sup>, KANG Dae Joon(BK 21 Physics Research Division, Department of Energy Science, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Suwon, 440-746 Korea. <sup>1</sup>Interdisciplinary School of Green Energy, Ulsan National Institute of Science and Technology, Ulsan, 689-798 Korea)

#### P2-E034

**Structural and optical properties of ZnO nanorods by the growth temperature** / 서덕민, 권민철<sup>1</sup>, 유대황, 한성홍(울산대학교 물리학과. <sup>1</sup>UNIV-EC)

#### P2-E035

**Photocatalytic Performance of Boron Implanted GO/TiO<sub>2</sub>-B Thin Film** / 이지은, 권민철<sup>1</sup>, 유대황, 한성홍(울산대학교, 물리학과. <sup>1</sup>UNIVAC)

#### P2-E036

**ZnO/Cu<sub>2</sub>O core-shell 구조의 광활성 특성 연구** / 윤영민, 김홍기, 윤종원, 이지은, 서덕민, 김순욱, 유대황, 한성홍, 김현승<sup>1</sup>, 권민철<sup>1</sup>(울산대학교. <sup>1</sup>유니벵)

#### P2-E037\*

**제로-갭 반도체 PbPdO<sub>2</sub> 박막의 열처리 효과 연구** / 정명화, 추성민, 이규준, 박성민, 박광서(서강대학교 물리학과)

#### P2-E038\*

**Atomic Force Microscopy Studies of Charge Transport Properties of Strained and Indented Topological Insulator** / HWANG Jin Heui, KWON Sangku, KIM Jun sung<sup>1</sup>, PARK Jeong Young(KAIST, EEWs Graduate School. <sup>1</sup>POSTECH, Department of Physics)

#### P2-E039

**Resistive switching in the multilayer of ZnO and SnO<sub>2</sub>** / JUNG Ranju, CHOI Jinsung, SONG Hyeon cheol, KIM Yunki(Kwangwoon Univ.)

#### P2-E040

**Effect of Structure-directing Agent Concentration on The Synthesis of Pt Nanoparticles** / YUN Jong Won, KIM Soon Wook, KIM Hong Ki, YOON Young Min, LEE Ji Eun, KWON Min Chul<sup>1</sup>, KIM Hyun Seung<sup>1</sup>, YOO Dae Hwang, HAHN Sung Hong(울산대학교, 물리학과. <sup>1</sup>유니벵)

#### P2-E041\*

**Effects of MWCNT's Concentration in MWCNT-PbTiO<sub>3</sub> Nanocomposites on Electrical and Optical Properties** / 객진호, 최용찬, 한진규, 부상돈(전북대학교, 물리학과)

#### P2-E042

**Analysis of a Spun-CNT Based X-ray Source** / KIM Hyun Suk, EDWARD

JOSEPH D. Castro, HWANG Yong Gyoo, LEE Choong Hun(Wonkwang University)

#### P2-E043

**The Effect Of HCl Etching Agent On The Synthesis Of Ag Nanocube** / 김순욱, 윤영민, 김홍기, 윤종원, DOAN Van Thuan, 유대황, 한성홍(울산대)

#### P2-E044

**Room temperature synthesis of nanoporous anatase and anatase/brookite TiO<sub>2</sub> photocatalysts with high photocatalytic performance** / LEE Hyun Uk, SON Byoungchul<sup>1</sup>, SEO Jung Hye, KIM Hyeran, YUN Hyung Joong, JEON Cheolho, KIM Hae Jin, LEE Jouhahn<sup>1</sup>(Division of Materials Science, Korea Basic Science Institute. <sup>1</sup>Jeonju Center, Korea Basic Science Institute)

#### P2-E046\*

**Formation of large area MoS<sub>2</sub> monolayer via a simple sulfurization process** / HWANG Jae Seok, JANG A-Rang, KANG Dae Joon(BK21 Physics Research Division, Department of Energy Science, Institute of Basic Science, SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Korea)

#### P2-E047\*

**Hierarchical Growth of Selective ZnO Nanowires on Seed Pattern Replicated By Using Electrohydrodynamic Lithography** / LEE Suok, JUNG Sang Hee<sup>1</sup>, MOON Choon Man, LEE Jae Jong<sup>1</sup>, KANG Dae Joon(BK 21 Physics Research Division, Department of Energy Science, Institute of Basic Sciences, Suwon 440-746, Korea. <sup>1</sup>Nanomechanical Systems Research Division, KIMM, Daejeon 171, Korea)

#### P2-E048\*

**Understanding Structural Phase Transition in Strain-Induced VO<sub>2</sub> Nanowires using Raman Spectra and Electrostatic Force Microscopy** / YANG Hyoung Woo, KIM Soo In<sup>1</sup>, YANG Jae Hoon, LEE Chang Woo<sup>1</sup>, KANG Dae Joon(BK 21 Physics Research Division, Department of Energy Science, Institute of Basic Science, Sungkyunkwan University, Suwon 440-746, Korea. <sup>1</sup>Department of Nano & Electronic Physics, Kookmin University, Korea)

#### P2-E049

**Magnetoresistance of a New Copolymer: FeCl<sub>3</sub> Doped Poly(2,5-dioctyloxy-p-phenylene vinylene-alt-3,4-ethylenedioxythienylene vinylene)** / KIM Kyung Ho, PARK Jun-Mo<sup>1</sup>, CHOI Ajeong<sup>2</sup>, HONG Sung Ju, PARK Min, CHOI Tae-Lim<sup>1</sup>, PARK Yung Woo(Seoul National University, Department of Physics and Astronomy. <sup>1</sup>Seoul National University, Department of Chemistry. <sup>2</sup>Korea University, WCU Flexible Nanosystems)



P2-E050\*

**P-type doping of graphene films by hybridization with nickel nanoparticles** / 이수일, 송우석<sup>1</sup>, 김유석, 송인경, 박상은, 차명준, 정대성<sup>2</sup>, 정민욱, 안기석<sup>1</sup>, 박종윤<sup>3</sup>(성균관대학교 물리학과, <sup>1</sup>한국화학연구원 박막재료연구그룹, <sup>2</sup>성균관대학교 에너지과학과, <sup>3</sup>성균관대학교 물리학과, 에너지과학과)

P2-E051

**Proton conduction in KH<sub>2</sub>PO<sub>4</sub> modified by high-energy proton irradiation** / CHANG EUNHYE, KWEON Jin Jung, LEE Cheol Eui(고려대학교 물리학과)

P2-E052

**안정적인 일함수 조절을 위한 용액공정 고분자-그래핀 구조** / 차명준, 김유석, 정대성<sup>2</sup>, 송우석<sup>1</sup>, 정민욱<sup>2</sup>, 이수일, PRASHANTA Adhikari, 안기석<sup>1</sup>, 박종윤(성균관대학교 물리학과, <sup>1</sup>성균관대학교 에너지과학과, <sup>2</sup>한국화학연구원 박막재료연구그룹)

P2-E053

**굴절률이 0인 메타물질에서의 음파의 전파** / 박춘만, 이상훈((주)삼진 R&D 연구소, <sup>1</sup>서남대학교 의료공학과)

P2-E054

**Dual-Modal Waveguiding of Luminescence and Raman Signals using Organic Crystalline Microplate** / 조성기, 박동혁, 김봉기<sup>1</sup>, 이석중<sup>2</sup>, 김정용<sup>3</sup>, 김진상<sup>1</sup>, 주진수(고려대학교, 물리학과, <sup>1</sup>Materials Science and Engineering, Macromolecular Science and Engineering, University of Michigan, <sup>2</sup>고려대학교, 화학과, <sup>3</sup>인천대학교, 물리학과)

P2-E055

**Direct Patterning Growth of Graphene Meshes by Using Silica Sphere** / 이재석, 권순상, 김성웅, 박원일(한양대학교, 신소재공학과)

P2-E056

**In-situ XAFS study of structural properties in catalyst Pt nanoparticles on various supports** / EUN-SUK Jeong, CHING-IN Park, ZHENLAN Jin, S.-W. Han, M.-Y. Kim<sup>1</sup>, J.-S. Choi<sup>1</sup>(Department of Physics Education and Institute of Fusion Science, Chonbuk National University, Jeonju, 561-756, Korea, <sup>1</sup>Oak Ridge National Laboratory, Fuels, Engines and Emissions Research Center, 2360 Cherahala Boulevard, Knoxville, TN 37932-1563, USA)

## SESSION P2

플라스마물리분과회  
포스터 발표

2013년 4월 25일 목요일 11:00 - 12:45

장 소 : 포스터발표장

P2-H001\*

**Experiments on Laser Wakefield Acceleration with a Tapered Capillary by the 20 TW/ 35 fs Laser System** / 석희용, 남인혁, 김민석, 이태희, 손다운, 이승우(광주과학기술원, 물리광과학과)

P2-H002

**10 ns 양성자 빔 펄스 발생 장치 기초 연구** / 김한성, 권혁중, 장지호, 조용섭, 이영욱, 송태영(한국원자력연구원)

P2-H003

**나선형 주름관 상호 작용 회로를 갖는 자이로트론 진행파관 증폭기에 관한 연구** / 이한슬, 정상욱, 신석우, 김상훈, 김보기, 장광호, 최진주, 신진우<sup>1</sup>, 소준호<sup>2</sup>, 원종호<sup>2</sup>(광운대학교 전자융합공학과, <sup>1</sup>국방과학연구소 국방신기술센터 미래기술연구부, <sup>2</sup>LIG 넥스원 전자전 연구센터)

P2-H004\*

**Simulations on Laser Wakefield Acceleration with a Tapered Plasma Density** / SON daeun, NAM inhyuk, KIM minseok, LEE taehee, LEE kibaek, SUK hyeong(Department of Physics and Photon Science, Gwangju Institute of Science and Technology (GIST))

P2-H005\*

**2.45 GHz GaN HEMT 펄스 전력 발진기를 이용한 대기압 펄스 플라즈마 발생에 관한 연구** / 신석우, 김상훈, 김보기, 정상욱, 이한슬, 장광호, 김홍희, 최진주, 최은하<sup>1</sup>(광운대학교 전자융합공학과, <sup>1</sup>광운대학교 플라즈마바이오효과연구센터)

P2-H006\*

**Experimental Study of a TE02 to TE01 Mode Converter at 28 GHz** / CHOI eunmi, CHOE munseok<sup>1</sup>(Ulsan National Institute Science and Technology, School of Electrical and Computer Engineering, <sup>1</sup>Ulsan National Institute Science and Technology, School of Nature Science)

P2-H007

**KOMAC 100MeV 선형 양성자가속기 시운전 현황** / 장지호, 권혁중, 김대일, 김한성, 박범식, 류진영, 설경태, 송영기, 윤상필, 조용섭(KAERI)

P2-H008

**양성자 가속기 공진주파수 제어 시스템 시운전** / 권혁중, 김한성, 설경태, 장지호, 조용섭(KAERI)

## P2-H009\*

**MAGIC2d PIC 코드를 이용한 Ku-대역 고출력 광대역 Gyro-TWT 특성 연구** / 정상욱, 이한슬, 장광호, 신석우, 김상훈, 김보기, 최진주, 홍용준, 신진우<sup>1</sup>, 소준호<sup>1</sup>, 원종효<sup>2</sup>(광운대학교 전자융합공학과, <sup>1</sup>국방과학연구소 미래기술연구부, <sup>2</sup>LIG 넥스원 전자전연구센터)

## P2-H010\*

**Development of the 20TW Ti:sapphire laser system for laser acceleration experiments** / KIM Minseok, NAM Inhyuk, JANG Donggyu, KIM Jomsool<sup>1</sup>, SUK Hyiyong(Gwangju Institute of Science and Technology, <sup>1</sup>Laser Spectronix)

## P2-H011\*

**Comparison between Double Dog-Leg and Chicane Type Emittance Exchange Beam Lines for Bunch Shaping** / HA Gwanghui, POWER John<sup>1</sup>, KIM Kwang-Je<sup>1</sup>, GAI Wei<sup>1</sup>, CHO Moohyun, NAMKUNG Won<sup>2</sup>(POSTECH, <sup>1</sup>Argonne National Laboratory, <sup>2</sup>Pohang Accelerator Laboratory)

## P2-H012\*

**Measurement of the Tapered Plasma Density in a Gas-filled Capillary by Using the Interferometric Method** / LEE Tae-hee, KIM Min-Seok, JANG Dong-Gyu, NAM In-hyuk, LEE Seungwoo, PHUNG Vanessa Ling Jen, SUK Hyiyong(Department of Physics and Photon Science, Gwang-ju Institute of Science and Technology (GIST))

## P2-H013

**The installation of LEBT line of KBSI accelerator** / LEE Byoung-Seob, SHIN Chang Seouk, WON Mi-Sook, CHOI Seyong, BHANG Jung-Bae, PARK Jin Yong, OK Jung-Woo, YOON Jang-Hee(Korea Basic Science Institute)

## P2-H014

**DT 핵융합 반응 생성 알파 입자 모사 시험을 위한 3.5MeV 헬륨 선형 가속기 기초 개념 연구** / 조용섭, 장지호, 권혁중(한국원자력연구원, 양성자가속기연구센터)

## P2-H015

**W-대역 GYROTRON 튜브를 위한 두 개의 애노드를 갖는 Magnetron-Injection-Gun 에 관한 연구** / 장광호, 정상욱, 신석우, 김상훈, 김보기, 이한슬, 최진주, 신진우<sup>1</sup>, 소준호<sup>1</sup>(광운대학교 전파공학과 고출력 전자파 공학 연구실, <sup>1</sup>국방과학연구소)

## P2-H016

**100-MeV 양성자가속기 빔 위치 모니터링을 위한 BPM의 분해능 시험** / 류진영, 권혁중, 장지호, 설경태, 김한성, 조용섭(양성자가속기연구센터, 한국원자력연구원)

## P2-H017

**Analysis of Thickness Dependence for Carbon Foil Lifetimes** / 김재홍, 홍성광, 김종원, 최연경<sup>1</sup>, 김유석<sup>1</sup>(기초과학연구원, 중이온가속기사업단, <sup>1</sup>Department of Nuclear & Energy System Engineering, Dongguk University)

## P2-H018

**전자 빔에 의한 Graphite 회전 표적에 유도되는 열분포 해석** / 홍성광, 황의성, 김도균, 김미정, 김재홍, 김종원(기초과학연구원, 중이온가속기사업단)

## P2-H019

**Numerical studies of mode competition in a Free-electron laser oscillator based on a harmonic wiggler** / KIM Ki-Bum, NAM Soon-Kwon<sup>1</sup>(Cyclotron Research Institute, Kangwon National University, <sup>1</sup>Department of Physics, Kangwon National University)

## P2-H020

**포항방사광가속기-II 4B 빔라인의 X-선 미세 실험을 위한 마이크로빔 집속 및 자동화** / 길계환, 정맹효, 이해철, 최효진, 임재홍, 황정연(포항가속기연구소)

## P2-H021

**Dielectric Wakefield Acceleration of a Relativistic Electron Beam in a Cylindrical Waveguide** / 민선홍, ANIRBAN Bera<sup>1</sup>, 권오준, SATTOROV Matlabjon, RANJAN Barik<sup>1</sup>, 백인근, 김선태, 박건식(서울대학교 물리천문학부, <sup>1</sup>서울대학교 전기전자컴퓨터공학부)

## P2-H022

**ITF(Injector Test Facility)의 pre-injector 고주파 정밀전원장치 설계 및 시험** / 손윤규, 박성주, 고인수(포항가속기연구소)

## P2-H023 초록중복 삭제

## P2-H024\*

**Design of X-Band Side coupled 6MeV LINAC** / 신동원, 허민섭<sup>1</sup>, 전석가<sup>2</sup>, 김정일<sup>2</sup>, 김근주<sup>2</sup>, 김재홍<sup>2</sup>(울산과학기술대학교 전기전자컴퓨터 공학부, 한국전기연구원, <sup>1</sup>울산과학기술대학교 전기전자컴퓨터 공학부, <sup>2</sup>한국전기연구원 첨단로봇기기센터)

## P2-H025

**Characteristics of a multi-frequency multi-harmonic laser in the two-frequency wiggler** / NAM Soon-Kwon, PAIK Eun-Kyoung(Kangwon National University, Department of Physics)

## P2-H026

**PAL 저장링 입사효율측정 프로그램** / 최효진, 김창범, 길계환, 신승환, 황정연(포항가속기연구소)

**P2-H027\***

**Characterization of N2-O2 flowing afterglow by emission spectroscopy** / LEE Jaeyong, KYE Minjun, OH Sooghee, RICARD Andre<sup>1</sup>(Division of Energy Systems Research, Ajou University. <sup>1</sup>University of Toulouse, France)

**P2-H028**

**Probe Diagnostics of negative ion plasmas** / 배민근, 조순국, 김진우, 김형진, 김성철, 정태훈<sup>1</sup>, 정규선(한양대학교, <sup>1</sup>동아대학교)

**P2-H029\***

**Tunable terahertz emission from a laser-induced plasma in a gas cell** / 장도근, 석희용, 김진주(광주과학기술원, 물리광과학과)

**P2-H030\***

**Properties of the Relativistic Terahertz Radiation from the Perturbed Underdense Plasma** / KIM Jinju, JANG Do-Geun, HUR Min-Sup<sup>1</sup>, SUK Hyong(GIST, Department of Physics and Photon Science. <sup>1</sup>UNIST, School of Electrical and Computer Engineering)

**P2-H031**

**접지전극의 구성에 따른 대기압 제트 플라즈마의 특성 변화 연구** / 최원호, 최다빈<sup>1</sup>, 장규영<sup>2</sup>, 박상후, 김기중(KAIST 물리학과, <sup>1</sup>대덕고등학교, <sup>2</sup>용인외국어고등학교)

**P2-H032**

**Temporal and spatial evolution of electron density in laser-produced plasmas** / OH Seong Y., HONG Young Jun<sup>1</sup>, KIM Hee-Jin, LIM Changhwan(Laboratory for Quantum Optics, Korea Atomic Energy Research Institute. <sup>1</sup>Korea Atomic Energy Research Institute, Laboratory for Quantum Optics)

**P2-H033\***

**Measurement and Modeling of High Voltage Sheath Dynamics of Grid Electrodes** / YI Changho, 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 & Division of Advanced Nuclear Engineering, Postech)

**P2-H034\***

**Characteristics of ECR Plasma Sources with Leaky-Wave Antenna and Belt-type Magnet Assembly using Langmuir Probe** / LEE Huijea, KIM Seong Bong<sup>1</sup>, YOO Suk Jae<sup>1</sup>, CHO Moohyun<sup>2</sup>, NAMKUNG Won<sup>3</sup>(POSTECH, Dept. of Physics. <sup>1</sup>National Fusion Research Institute. <sup>2</sup>POSTECH, Dept. of Physics & Division of Advanced Nuclear Engineering. <sup>3</sup>Pohang Accelerator Laboratory)

**P2-H035\***

**Design of quasi-optical system of high power 84GHz gyrotron for plasma breakdown** / CHOI Eunmi, KIM Dongsung<sup>1</sup>, JEONG Jinhyun<sup>2</sup>, JOUNG Mi<sup>2</sup>, HAN Wonsoon<sup>2</sup>, BAE Young-soon<sup>2</sup>(UNIST, School of Electrical and Computer Engineering. <sup>1</sup>UNIST, School of Natural Science, Physics. <sup>2</sup>NFRI)

## SESSION P2

반도체물리학과  
포스터 발표

2013년 4월 25일 목요일 11:00 - 12:45

장 소 : 포스터발표장

### P2-K025\*

**O<sub>2</sub> and air exposure effect on amorphous In-Ga-Zn-O thin film investigated by high-resolution x-ray photoelectron spectroscopy** / KANG SeJun, BAIK Jae Yoon<sup>1</sup>, SHIN Hyun-Joon<sup>2</sup>(POSTECH. Pohang Accelerator Laboratory. <sup>1</sup>Pohang Accelerator Laboratory, POSTECH)

### P2-K026

**다양한 열처리 환경에서 산화물 박막의 특성변화 연구** / 엄영호, 박승민, 신유리미, 황영훈<sup>1</sup>, 조성래(울산대학교, 물리학과. <sup>1</sup>울산대학교, 기초과학연구소)

### P2-K027\*

**ITO 나노결정을 이용한 인쇄전자소자의 성능개선에 대한 연구** / 구지은, 박승환<sup>1</sup>, 조영지, 이상태<sup>2</sup>, 장지호(한국해양대학교, 응용과학과. <sup>1</sup>일본국립재료과학 연구소, 반도체재료센터. <sup>2</sup>한국해양대학교, 해양플랜트운영학과)

### P2-K028\*

**Effect on bias stress instability in amorphous In-Ga-Zn-O thin film transistors with annealing condition** / PARK Jae-gun, LEE Hyoung-rae, KIM Ji-heon, KWON Kyoung-cheol, PARK Joo-hyeong<sup>1</sup>, PARK Jin-seong<sup>1</sup>(한양대학교, 전자컴퓨터통신공학. <sup>1</sup>한양대학교, 정보디스플레이공학)

### P2-K029

**Role of thermally induced metallic filaments in post-annealed tantalum oxide-based TiN/TaO<sub>x</sub>/Pt resistive switching matrix** / BAEK Gwang Ho, BAE Yoon Cheol, LEE Ah Rahm(나노반도체공학과)

### P2-K030\*

**Performance of in-situ remote plasma-treated amorphous multi-layered IGZO thin film transistors** / KIM Taeyoon, KOO Ja hyun, KANG Taesung, HONG JinPyo(Department of Physics, Hanyang University)

### P2-K031

**InGaP/GaN 발광 다이오드 구조의 광여기 C-V 특성** / 유정수, 양제는, 남 윤성, 송정훈, 백경선, 장수경(연세대학교 물리학과. <sup>1</sup>공주대학교 물리학과)

### P2-K032\*

**그래핀 양자점 비휘발성 플래쉬 메모리** / 주송신, 김정길, 강수석, 오시덕, 김성, 최석호(경희대 응용물리학과)

### P2-K033\*

**열처리 온도에 따른 그래핀 트랜지스터의 구조적 및 전기적 특성 변화 연**

구 / 장찬욱, 신동희, 김주환, 김성, 최석호(경희대 응용물리학과)

### P2-K034\*

**그래핀/실리콘 나노선 복합구조를 이용한 웨이퍼 규모 분자센서의 제작 및 특성** / 김정길, 장찬욱, 신동희, 김주환, 이재성, 김성, 최석호(경희대 응용물리학과)

### P2-K036

**반도체 양자점의 표면 플라즈몬 폴라리톤 결합을 위한 구조 제작과 평평한 표면 구현** / 이성완, 장유동, 이동한, 송진동<sup>1</sup>, 이은혜, 배민환(충남대학교, 물리학과. <sup>1</sup>Nano Photonics Research Center, KIST)

### P2-K037

**이방성을 가지는 a-plane GaN 특성 분석** / 서용곤, 신선혜, 김두수, 황성민(전자부품연구원, 광전융합연구센터)

### P2-K038\*

**InAlAs와 InAs 총량 변환에 따른 InAlAs 양자점의 광학적 특성** / 박태윤, 권세라, 류미이, 송진동(강원대학교 물리학과. <sup>1</sup>한국과학기술연구원 다원물질 융합연구소 광전융합시스템연구단)

### P2-K039

**RF-MBE법에 의해 성장된 저온 AlN층이 GaN의 결정성에 미치는 영향** / 노정현, 조한솔, 서의성, 트란녹충, 우현석, 이준호, 한철구(전자부품연구원 광전융합연구센터)

### P2-K040

**태양전지 반사율을 줄이기 위한 반사방지막의 나노패턴 형성** / 서영성, 김효진, 신재철, 이아리, 한석만, 한명수(한국광기술원 광에너지연구센터)

### P2-K041

**Preferred Orientation Selection of GaN Grown on m-plane Sapphire Substrate** / 김진교, 이상화, 윤한섭(경희대학교, 물리학과)

### P2-K042

**The bow measurements of c-plane and a-plane GaN on sapphire by x-ray diffraction** / 신선혜, 황성민, 서용곤, 김두수(전자부품연구원, 광전 융합연구센터)

### P2-K043\*

**InGaP spacer layer의 두께 변화에 의한 InP 양자구조의 광학적 특성** / 변해령, 류미이, 송진동(강원대학교 물리학과, 춘천 200-701. <sup>1</sup>한국과학기술연구원 다원물질융합연구소 광전융합시스템연구단, 서울 136-791)

### P2-K044

**GaAs 태양전지의 성장온도에 따른 광전변환 효율과 결함상태 연구** / 김

민태, 이동욱, 김은규, 최원준<sup>1</sup>(한양대학교 물리학과 양자기능연구실, <sup>1</sup>한국과학기술연구원 광전융합시스템연구단)

**P2-K045**

**SiO<sub>2</sub>, SiN 절연막이 증착된 AlGaIn/GaN 구조의 고온 열처리에 의한 Si 도핑 효과 연구** / 임진홍, 김정진, 심규환, 양전욱(전북대학교 반도체 화학공학부)

**P2-K046**

**Thermal Cycling annealing 방법에 의한 실리콘 기판 위 GaAs 버퍼층의 양질 개발** / 김효진, 서영성, 신재철, 한명수(한국광기술원 광에너지연구센터)

**P2-K047\***

**GaN 저온버퍼와 고온성장한 박막의 결합의 전이 메커니즘에 관한 연구** / 최성국, 정수훈, 장원범, 이정우, 이상태<sup>1</sup>, 장지호(한국해양대학교, 응용과학과, <sup>1</sup>한국해양대학교, 해양플랜트운영학과)

**P2-K048\***

**m면 사파이어 기판의 질화처리 조건 변화에 따른 저온 질화갈륨 완충층의 표면변화에 관한 연구** / 정수훈, 최성국, 장원범, 이정우, 장지호(한국해양대학교 응용과학과)

**P2-K049**

**Effects of AlGaAs Bottom Window on Enhancement of Light Extraction Efficiency in 620nm AlGaInP Light Emitting Diodes** / LEE Hyung Joo, CHO Yong Dae, JANG Eun Jung, KIM Young Jin, JANG In Kyu, SEO Jae Bong, OH Hwa Sub<sup>1</sup>, AHN Su Chang<sup>1</sup>, KIM Jae Hoon<sup>2</sup>(AUK Corporation, <sup>1</sup>Korea Photonic Technology Institute (KOPTI), <sup>2</sup>Next Generation Industrial Radiation Technology)

**SESSION P3**

원자핵물 리본 과학  
포스터 발표

2013년 4월 25일 목요일 14:00 - 15:45

장 소 : 포스터발표장

**P3-C001**

**A discussion of the scalar meson  $f_0(980)$**  / LEE Hee-Jung(충북대학교 물리교육과)

**P3-C002**

**Design and fabrication of a prototype monitor chamber used for the beam monitoring at a radiation generator** / LEE Mu-Jin, LEE Man-Woo, KANG Sang-Koo, MOON Young-Min, KIM Hyo-Jin, LIM Heujin, KANG Yeong-Rok, YANG Kwang-Mo, JEONG Dong-Hyeok(Dongnam Inst. of Radiological & Medical Sciences, Research center)

**P3-C003**

**Effect of the non-locality factor for bound states in  $^{208}\text{Pb}$**  / 소운영, 천명기, 권영신, 김경식(강원대학교 방사선학과, <sup>1</sup>송실대학교 물리학과, <sup>2</sup>한국항공대학교 교양학부)

**P3-C004**

**Fast Local polarimetry analysis results in PHENIX for run13** / KIM Minjung(Seoul National University, Dept. of Physics and Astronomy)

**P3-C005**

**Feasibility of a Compton Suppression System to Quantify the Pu Content in Spent Nuclear Fuel** / LEE Seung Kyu, SEO hee<sup>1</sup>, PARK Se Hwan<sup>1</sup>, SHIN Hee-Sung<sup>1</sup>, KIM Ho-Dong<sup>1</sup>, KIM Yong Kyun<sup>2</sup>(Hanyang University, Department of Nuclear Engineering, <sup>1</sup>Korea Atomic Energy Research Institute, <sup>2</sup>Hanyang University, Department of Nuclear Engineering)

**P3-C006**

**First transport analysis results of KSTAR by using TRANSP / TERZOLO Laurent(국가핵융합연구소, 플라즈마 수송 연구부)**

**P3-C007**

**TR-13 Cyclotron의 방사화된 구성품 및 구조물의 핵종 및 방사능 분석** / 김도윤, 민경주, 박상인, 박태선, 채종서, 함철민, 홍승우(성균관대학교 에너지과학과)

**P3-C008**

**고에너지 우주선 측정을 위한 대면적 광-다이오드 센서 개발** / 가동하, 강국현, 김홍주, 박환배, 배재범, 전혜빈, 현효정(경북대학교, 물리학과)

P3-C009

**Measurement of Pu/U ratio of the spent fuel using XRF method /**  
PARK Se-Hwan, LEE Seung Kyu, SEO Hee, HAN Bo Young, SHIN Hee-Sung,  
SONG Dae Yong(Korea Atomic Energy Research Institute)

P3-C010

**Effects of radiation damage in Silicon photomultiplier (SiPM) and CMOS /** MOON HYEJIN, JEON SANGJUNE, PARK JINHUN, HONG HYUNSEONG, PARK HYEMIN, LIM KISEO, JOO KOANSIK(영지대학교 물리학과)

P3-C011

**편극 헬륨-3 중성자스핀필터를 위한 정자기장케비티 /** 이성만, 김종열, 문명국, 이기홍<sup>1</sup>, 차형기<sup>2</sup>, 이승욱<sup>3</sup>(한국원자력연구원, 양자광학연구부, <sup>1</sup>한국원자력연구원, 중성자과학연구부, <sup>2</sup>한국원자력연구원, 방사선기기연구부, <sup>3</sup>부산대학교, 기계공학부)

P3-C012

**MRPC Test Result with High-Rate Gammas and Neutrons /** MULILO Benard, KIM Hyuncheol, JHANG Genie, LEE Suhyun, LEE Songkyo, JO Mihee, JOO Eunah, LEE Kyong Sei, SHIN Seung Su, SIM Kwang-Souk, KIM Shin Young, PARK Sungkeun, HONG Byungsik, LEE Kisoo, GO Yeonju(고려대학교)

P3-C013

**A study of energy compensation filter for gas detector /** PARK JINHUN, SEO JEONGHO<sup>1</sup>, JEON SANGJUNE, JOO KAONSIK(Department of Physics, Myongji University. <sup>1</sup>Laboratory, CANA incorporation)

P3-C014

**다층 B-10 박막을 이용한 중성자 검출기 효율 비교 /** 임창휘, 문명국, 김현옥, 김종열, 조상진(한국원자력연구원)

P3-C015

**고배율 THGEM 제작과 초기 특성 /** 임창휘, 문명국, 김현옥, 남욱원(한국원자력연구원, <sup>1</sup>한국천문연구원)

P3-C016

**시분해 광 자극 루미네선스를 이용한 석영의 측정온도에 따른 lifetime /** 홍덕균, 정구환, 하종대(강원대, 물리학과)

P3-C017

**Development of a Compact OSL System /** DUK-GEUN Hong, YOUNG-JU Lee(Department of Physics, Kangwon National University)

P3-C018\*

**양성자 빔 조사에 의한 중성자 발생 전산모사 연구 /** HAM Chul Min, SHIN

Jae Won<sup>1</sup>, MIN Kyung Joo, ZHOU yujie, IN Eun jin, HONG Seung-Woo(Department of Energy Science, Sungkyunkwan University, Suwon 440-746, Korea. <sup>1</sup>Department of Physics, Sungkyunkwan University, Suwon 440-746, Korea)

P3-C019\*

**Study of heavy quark production at forward-rapidity in Au+Au collisions at sqrt(sNN)=200 GeV /** 김현중, 강주환, 임상훈, 도재현, 문태봉(연세대학교, 물리학과)

P3-C020\*

**Development of SSD for the Next Experiments at J-PARC /** LEE Jaeyong(Department of Physics and Astronomy, Seoul National University)

P3-C021\*

**비 열적 평형상태 입자를 고려하는 빅뱅 리튬문제 /** MIN Kyungjoo, HONG Seung-Woo<sup>1</sup>, PARK Tea Sun<sup>2</sup>(Department of Energy Science, Sungkyunkwan University. <sup>1</sup>Department of Physics and Department of Energy Science, Sungkyunkwan University. <sup>2</sup>Department of Physics, Sungkyunkwan University)

P3-C022\*

**해석적 풀이가 불가능한 포텐셜이 작용하는 계의 고유 에너지 계산 /** 윤진희, 조소연(인하대학교, 물리학과)

P3-C023\*

**Invariant mass spectroscopy of <sup>17</sup>C via the one-neutron knockout reaction on <sup>18</sup>C /** KIM Sunji, SATOU Y., HWANG J. W., NAKAMURA T.<sup>1</sup>, ISOBE T.<sup>2</sup>, INABE N.<sup>2</sup>, OTSU H.<sup>2</sup>, KAMEDA D.<sup>2</sup>, KANNO D.<sup>1</sup>, KUBO T.<sup>2</sup>, KOBAYASHI T.<sup>3</sup>, KOBAYASHI N.<sup>1</sup>, KONDO Y.<sup>1</sup>, SATO H.<sup>2</sup>, SHIMIZU Y.<sup>2</sup>, SUZUKI H.<sup>2</sup>, TAKAHASHI K.<sup>3</sup>, TAKEUCHI S.<sup>2</sup>, TAKEDA H.<sup>2</sup>, TANAKA R.<sup>1</sup>, OGOSHI S.<sup>1</sup>, TOGANO Y.<sup>1</sup>, NAKASHIMA T.<sup>1</sup>, NAKATSUKA N.<sup>4</sup>, NISHI S.<sup>1</sup>, FUKUDA N.<sup>2</sup>, BABA H.<sup>2</sup>, MINAKATA R.<sup>1</sup>, MUTO K.<sup>3</sup>, MURAI D.<sup>5</sup>, MURAKAMI T.<sup>4</sup>, MOTOBAYASHI T.<sup>2</sup>, YONEDA K.<sup>2</sup>, ACHOURI N. L.<sup>6</sup>, TUFF A. G.<sup>7</sup>, AUMANN T.<sup>8</sup>, DELAUNAY F.<sup>6</sup>, GIBELIN J.<sup>6</sup>, LEE J.<sup>2</sup>, MARQUES M.<sup>6</sup>, NAVIN A.<sup>9</sup>, ORR N. A.<sup>6</sup>, DOORNENBAL P.<sup>2</sup>, LEBLOND S.<sup>6</sup>, VANDEBROUCK M.<sup>6</sup>(Seoul National University. <sup>1</sup>ITech. <sup>2</sup>RIKEN Nishina Center. <sup>3</sup>Tohoku University. <sup>4</sup>Kyoto University. <sup>5</sup>Rikkyo University. <sup>6</sup>LPC-ENSICAEN. <sup>7</sup>University of York. <sup>8</sup>GSI. <sup>9</sup>GANIL)

P3-C024\*

**Determination of absorbed dose conversion factor for a glass dosimeter in the Co-60 beam /** MOON Young Min, KANG Yeong-Rok, LIM Heui jin, LEE Man Woo, JEONG Dong Hyeok, KIM Jeung Kee, RO Tea-Ik<sup>1</sup>(Research center, Dongnam Inst. of Radiological & Medical Sciences. <sup>1</sup>Department of Physics, Dong-A University)

P3-C025\*

**Estimation of the Electron Yield from Charm Hadron Decays Measured with ALICE for pp and Pb-Pb Collisions /** 박찬욱(인하대학교, 물리학과)



P3-C026\*

**Czochralski growth and characterization of lithium fluoride crystals** / KIM H. J., KHAN Sajid, KIM Y. H.<sup>1</sup>(Kyungpook National University, Department of Physics. <sup>1</sup>Korea Research Institute of Standards and Science)

P3-C027\*

**Gd<sub>3</sub>Al<sub>2</sub>Ga<sub>3</sub>O<sub>12</sub>(GAGG) : Ce 결정의 섬광 특성 조사** / 장은정, 김홍주, 김현덕<sup>1</sup>, 이원근<sup>2</sup>, 천종규<sup>2</sup>(경북대학교 물리학과, <sup>1</sup>TPS company, <sup>2</sup>서라벌대학교 방사선과)

P3-C028\*

**컨테이너 검색을 위한 반도체 검출기 특성조사** / 김홍주, 채규한, 문명국<sup>1</sup>, 김현옥<sup>2</sup>(경북대학교 물리학과, <sup>1</sup>원자력연구원 중성자과학연구부)

P3-C029\*

**Crystal Growth and Scintillation Properties of Li<sub>6</sub>Lu(BO<sub>3</sub>)<sub>3</sub>:Ce<sup>+3</sup>** / KIM H. J., ULLAH Fawad, PARK H, KIM Sunghwan<sup>1</sup>, CHEON Jong Kyu<sup>2</sup>(Department of Physics, Kyungpook National University. <sup>1</sup>Department of Radiological Science, Cheongju University. <sup>2</sup>Department of Radiation, Sorabol College)

P3-C030\*

**Synthesis and Luminescence Characterization of Gd<sub>3</sub>Ga<sub>2</sub>Al<sub>3</sub>O<sub>12</sub>: Ce<sup>3+</sup>, Eu<sup>3+</sup> Phosphors for X-ray Imaging** / OH Myeongjin, KIM H.J<sup>1</sup>, KIM Sunghwan<sup>2</sup>, LEE Wongun<sup>3</sup>, KIM Heunduk<sup>3</sup>(Department of Physics, Kyungpook National University, Department of Radiology, Daegu Heath College. <sup>1</sup>Department of Physics, Kyungpook National University. <sup>2</sup>Department of Radiological Science, Cheongju University. <sup>3</sup>TPS inc.)

P3-C031\*

**고에너지 우주선 측정을 위한 대면적 광-다이오드 센서의 최적화 및 전기적 특성 연구** / 전혜빈, 가동하, 강국현, 김태훈, 김홍주, 배재범, 박환배, 서제훈, 현효정(경북대학교, 물리학과)

P3-C032\*

**반도체 기반의 중성자 검출기 개발을 위한 Geant4 시뮬레이션 연구** / 강국현, 박환배, 가동하, 현효정, 배재범, 전혜빈(경북대학교 물리학과)

P3-C033\*

**Measurement of energy spectrum for X-rays from the micro-CT using a CdTe detector** / KIM Hyo Jin, 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>, KANG Sang-Koo<sup>1</sup>, LIM Heuijin<sup>1</sup>(Dong-A University, Department of Physics. <sup>1</sup>Research center, Dongnam Inst. of Radiological & Medical Sciences)

P3-C034\*

**Luminescence Property of Gadolinium-Calcium-Silicoborate Glasses with Different Doping Agent Concentration** / PARK J. M., KIM H. J., PARK H., KAEWJEANG S.<sup>1</sup>, MAGHANEMI U.<sup>1</sup>, KAEWKHAO J.<sup>2</sup>(Department of Physics, Kyungpook National Univ. <sup>1</sup>Department of Radiologic Technology, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, 50200, Thailand. <sup>2</sup>Center of Excellence in Glass Technology and Materials Science (CEGM), Nakhon Pathom Rajabhat University, Nakhon Pathom, Thailand, 73000)

P3-C035\*

**A study of multi-layer film reflector for scintillation crystal arrays** / JEON Sang June, KIM Myongsun<sup>1</sup>, YOO Wonsik<sup>1</sup>, KIM Dongwan<sup>2</sup>, BEACK Seung Hwa<sup>2</sup>, JOO Koan Sik(Department of Physics, Myongji University. <sup>1</sup>Advanced Microwave Technology. <sup>2</sup>Department of information and communication engineering, Myongji University)

## SESSION P3

응집물질물리학과 포스터 발표  
유전체, 초전도

2013년 4월 25일 목요일 14:00 - 15:45

장소: 포스터발표장

진행: 고재현(한림대), 심지훈(포스텍)

### P3-D104\*

**The resistive switching effect in BiFeO<sub>3</sub> nanoisland on Nb:SrTiO<sub>3</sub> /** 전지훈, 최택집, 주호영<sup>1</sup>, 이호상<sup>1</sup>, 황인록, 박배호(Division of Quantum Phases & Devices, School of Physics, Konkuk University, Seoul, Korea. <sup>1</sup>Department of Nano Technology and Advanced Materials Engineering, Sejong University, Seoul, Korea)

### P3-D105\*

**Mn modified BiFeO<sub>3</sub>-BaTiO<sub>3</sub> ceramics with high Curie temperature and their piezoelectric properties /** KIM Dajeong, LEE MYANGHWAN, PARK Jinsu, KIM Myongho, SONG Taekwon, KIM Sangwook, KIM Sangsoo, KIM Wonjeong, DO Dalhyun(School of Nano & Advanced Mat. Eng., Changwon Nat' l Univ., Gyeongnam 641-773, Korea)

### P3-D106\*

**Coherence of structural and electrical properties of (1-x)(Bi<sub>0.5</sub>Na<sub>0.5</sub>)TiO<sub>3</sub>-xSrTiO<sub>3</sub> ceramics /** KIM Sangwook, CHOI Haein, KIM Won-jeong, KIM Dajeong<sup>1</sup>, PARK Jinsu<sup>1</sup>, LEE Myanghwan<sup>1</sup>, JINSU Kim<sup>1</sup>, KIM Myong-ho<sup>1</sup>, SONG Taekwon<sup>1</sup>, DO Dalhyun<sup>2</sup>(Department of Physics, Changwon National University, Changwon 641-773, Korea. <sup>1</sup>School of Nano & Advanced Materials Engineering, Changwon National University, Changwon 641-773, Korea. <sup>2</sup>Department of Advanced Materials Engineering, Keimyung University, Daegu 704-701, Republic of Korea)

### P3-D107\*

**Ferroelectric and Piezoelectric Properties of 0.67BiFeO<sub>3</sub> - 0.33BaTiO<sub>3</sub> Solid Solution Bulk Ceramic and Thin Films /** 이명환, 김 다정, 박진수, 김명호, 송태권, 김상욱, 김원정, 김상수<sup>1</sup>, 도달현<sup>2</sup>, 김훈호<sup>3</sup>, 황인록<sup>4</sup>, 박배호<sup>5</sup>(국립창원대학교 세라믹공학과. <sup>1</sup>국립창원대학교 물리학과. <sup>2</sup>계명대학교 신소재공학과. <sup>3</sup>서울대학교 물리학과. <sup>4</sup>건국대학교 물리학과)

### P3-D108\*

**Non-volatile memory device using ferroelectric polymer nanodot and carbon nanotube /** 서정대, 손종역, 신영한, 장현명(경희대학교, 응용 물리학과. <sup>1</sup>울산대학교, 물리학과. <sup>2</sup>포항공과대학교, 신소재공학과)

### P3-D109\*

**Tunnel Resistance in Edge Metal-Insulator-Metal Junctions Modulated by Underlying Ferroelectric Polarization Switching /**

JUNG Sungchul, JEON Youngeun, JIN Han Byul, KO Jae-Hyeon<sup>1</sup>, KIM Nam<sup>2</sup>, EOM Daejin<sup>3</sup>, PARK Kibog(School of Electrical and Computer Engineering, KIER-UNIST Advanced Center for Energy, Ulsan National Institute of Science and Technology. <sup>1</sup>Department of Physics, Hallym University. <sup>2</sup>Division of Convergence Technology, Korea Research Institute of Standards and Science. <sup>3</sup>Korea Research Institute of Standards and Science)

### P3-D110\*

**Influence of work-function with different top electrodes on the photovoltaic effect of Bi-layered (Na<sub>0.82</sub>K<sub>0.18</sub>)<sub>0.5</sub>Bi<sub>4.5</sub>Ti<sub>4</sub>O<sub>15</sub> thin films /** 김일원, 우원석, 원성식, 안창원, 채송아(울산대학교 물리학과, EHSRC)

### P3-D111\*

**Amorphous Oxide Films Synthesized by Laser Annealing /** 김혁진, 권지환, 장승훈, 유광남, 김지호, 주범수, 한문섭, 최은집, 박종학<sup>1</sup>, 장영준(서울 시립대학교, 물리학과. <sup>1</sup>서울대학교, 물리학과. <sup>2</sup>ETRI)

### P3-D112\*

**Optical characterization on the Pb(Zr,Ti)O<sub>3</sub> nanotubes synthesized with porous alumina membrane /** JEON Chang Hyun, KIM Dong Hwan, LEE Yun Sang, SHIN Hae Young<sup>1</sup>, YOON Seok Hyun<sup>1</sup>, CHOI Yong Chan<sup>2</sup>, HAN Jin Kyu<sup>2</sup>, BU Sang Don<sup>2</sup>(Department of Physics, Soongsil University, Seoul 156-743. <sup>1</sup>Department of Physics, Ewha Womans University, Seoul 120-750. <sup>2</sup>Department of Physics, Chonbuk National University, Jeonju 561-756)

### P3-D113\*

**Effect of depolarization field in chemically modified bilayer hexagonal Boron Nitride /** 신영한, NOOR-A-ALAM Md, 김혜정(울산대학교, 물리학과)

### P3-D114\*

**Phase field simulations of two-dimensional ferroelectrics /** 신영한, 송화철, 김혜정(울산대학교, 물리학과)

### P3-D115\*

**Large Electric Field-Induced Strain in Nb-Doped Bi<sub>1/2</sub>(Na<sub>0.84</sub>K<sub>0.16</sub>)<sub>1/2</sub>TiO<sub>3</sub>-SrTiO<sub>3</sub> Ceramics /** MALIK Rizwan Ahmed, 강진규, 이재신, 안창원<sup>1</sup>, 김일원<sup>2</sup>(울산대 첨단소재공학부. <sup>1</sup>울산대 물리학과)

### P3-D116\*

**Structural and Electrical Properties of (La<sup>3+</sup> and V<sup>5+</sup>)-doped Bi<sub>6</sub>Fe<sub>2</sub>Ti<sub>3</sub>O<sub>18</sub> Thin Films /** 김상수, 김은주, 김진원, RAGHAVAN Cinnambedu Murugesan, 김해진, 최지아(창원대학교, 물리학과)

### P3-D117\*

**Effects of Acceptor-doping on Electrical Properties of**

**Na<sub>0.5</sub>Bi<sub>4.5</sub>Ti<sub>4</sub>O<sub>15</sub> Thin Film Prepared by Chemical Solution Deposition Process** / 김상수, 최지아, 김진원, RAGHAVAN Chinnambedu Murugesan, 김해진, 김은주(창원대학교, 물리학과)

**P3-D118\***  
**The Growth Of Anatase (or Rutile) TiO<sub>2</sub> Phase Using RF Magnetron Sputter** / 임지천, 이경화, 송규정(전북대학교, 과학교육학부)

**P3-D119\***  
**Al doped ZnO 투명전극을 이용한 저항변화 소자의 특성연구** / 이상익, 황인록, 윤찬수, 남윤승, 이근동, 김연수, 박배호(건국대학교 물리학과)

**P3-D120**  
**Nanoprobng of Friction and Charge Transport Properties of Vanadium Dioxide under Metal-Insulator Transition** / KIM Jong Hun, WU Junqiao', JEONG YOUNG Park(KAIST, EEWS Graduate School. 'University of California, Berkeley, Department of Materials Science and Engineering)

**P3-D121**  
**Piezoelectric properties of single crystalline LiNbO<sub>3</sub> nanowire** / 정종훈, 윤병길, 박용근(인하대학교, 물리학과)

**P3-D122**  
**Dielectric Properties of Antimony Doped Barium Titanate (Ba<sub>0.95</sub>Sb<sub>0.05</sub>TiO<sub>3</sub>) Ceramics** / LEE ju ho, KIM Yeon Jung, HYUN June Won(Dankook University, Department of Applied Physics)

**P3-D123**  
**환원분위기에서 Ga를 첨가한 ZnO 세라믹스의 제조** / 전병억, 정종원, 최문석', 이종림(한국과학영재학교, 물리지구과학부. '한국과학영재학교)

**P3-D124**  
**Dispersion of the dielectric constant of water in Nafion** / LEE Cheol Eui, HAN Jun Hee, KIM Se Hun'(Department of Physics and Institute for Nano Science, Korea University, Seoul, Republic of Korea. 'Faculty of Science Education, Jeju National University, Jeju, Republic of Korea)

**P3-D125**  
**Photoelectrochemical performance of PbTiO<sub>3</sub> nanotubes** / 김일원, 원성식, 안창원(울산대학교 물리학과, EHSRC)

**P3-D126**  
**Sol-gel synthesis and characterization of the Bi<sub>0.5</sub>(Na<sub>0.82</sub>K<sub>0.18</sub>)<sub>0.5</sub>(Ti<sub>1-x</sub>Mn<sub>x</sub>)O<sub>3</sub> piezoelectric thin films** / 김일원, 채송아, 원성식, 안창원(울산대학교 물리학과, EHSRC)

**P3-D127**  
**Cu를 도핑하여 제작한 SrZrO<sub>3</sub>의 광학적 특성 연구** / 이동재, 김동환, 이운상(송실대학교 물리학과)

**P3-D128**  
**Structural properties of mixed crystals (NH<sub>4</sub>)<sub>2-x</sub>Rb<sub>x</sub>ZnCl<sub>4</sub> (x=0, 1, and 2) studied by <sup>1</sup>H and <sup>87</sup>Rb nuclear magnetic resonance** / 임애란, 임계영', 김태홍(전주대학교, 과학교육과. '한국산업기술대학교, 에너지 전기공학과)

**P3-D129**  
**Characteristic features of the structural properties, phase transitions, and ferroelastic properties in LiK<sub>1-x</sub>Rb<sub>x</sub>SO<sub>4</sub> (x=0, 0.2, and 1) crystals** / 임애란, 김호현', 이무희(전주대학교, 과학교육과. '건국대학교, 물리학과)

**P3-D130**  
**Effects of La<sup>3+</sup> and V<sup>5+</sup> Doping on Electrical Properties of Bi<sub>5</sub>FeTi<sub>3</sub>O<sub>15</sub> Thin Films Prepared by Chemical Solution Deposition** / 김상수, 김해진, 김진원, 최지아, 김은주, RAGHAVAN Chinnambedu Murugesan(창원대학교, 물리학과)

**P3-D131**  
**Structure and Electrical Properties of (Dy, Zn) co-doped BiFeO<sub>3</sub> Thin Films Prepared by a Chemical Solution Deposition** / 김상수, RAGHAVAN Chinnambedu Murugesan, 김진원, 김해진, 최지아, 김은주(창원대학교, 물리학과)

**P3-D132**  
**Optical Properties of ZnO Powder Prepared by Using a Proteic Sol-gel Process** / KWON Bong-Joon, WOO Hyun-Joo, PARK Ji-Yeon, JANG Kiwan, LIM Seung-Hyuk', CHO Yong-Hoon'(Changwon National University, Research Institute of Basic Sciences. 'Graduate School of Nanoscience and Technology (WCU), KAIST Institute for the NanoCentury, KAIST, and Department of Physics)

**P3-D133**  
**The Physical Properties of Pulsed Laser Ablated Cu<sub>2</sub>ZnSnS<sub>4</sub> Thin Films As a Function of Deposition Time** / 배종성, 변미량, 강보배, 홍태은, 정의덕, 김신호', 김양도', 박성균', 오원태'(한국기초과학지원연구원, 하이테크소재연구부. '부산대학교, 재료공학부. '부산대학교, 물리학과. '동의대학교, 융합부품공학과)

**P3-D134\***  
**Orbital studies on LaFeAsO, SmFeAsO with XAS** / 서정진, 김용관, 고윤영, 경원식, 정원식, 김범영, 한가람, 조수현, 김창영(연세대학교, 물리학과)

## P3-D135\*

**3D electronic structure of CaC6** / 경원식, 김용관, 한가람, 임춘식, 김철, 송동준, 정원식, 고윤영, 김범영, 서정진, 조수현, 김영욱, 김준성, 김창영(연세대학교, 물리학과, <sup>1</sup>포항공과대학교, 물리학과)

## P3-D136\*

**Temperature dependent evolution of the electronic structure of Ba(Fe<sub>1-x</sub>Ru<sub>x</sub>)<sub>2</sub>As<sub>2</sub>** / 고윤영, 김용관, 송동준, 정원식, 한가람, 김범영, 서정진, 경원식, 조수현, 엄만진, 김준성, 김창영(연세대학교 물리학과, <sup>1</sup>포항공과대학교 물리학과)

## P3-D137\*

**High-pressure studies of the quasi 1-D superconductor Nb<sub>2</sub>Pd<sub>2</sub>Se<sub>5</sub> and the transparent semiconducting oxide Ba(Sn,Sb)O<sub>3</sub> with high-mobility** / 장동현, 김승현, 김형준, 김기훈(서울대학교, 물리천문학부)

## P3-D138\*

**Development of frequency-multiplexed superconducting resonators for detectors and quantum information applications** / KIM Seon Hoo, HA Dong Gwang, JUN So Yeon, CHOI Jiman, PARK Jung Hwan, PARK Gwan Yeol, IM Hyunsik<sup>1</sup>, KIM Hyungsang<sup>1</sup>, LEE Soon Gul<sup>2</sup>, SONG Woon, CHONG Yonuk(KRISS, <sup>1</sup>Dongguk University, <sup>2</sup>Korea University)

## P3-D139\*

**Emerging Magnetism in La-doped Sr<sub>2</sub>RhO<sub>4</sub>** / LEE Kwan-Woo, AHN Kyo-Hoon, KUNES Jan<sup>1</sup>(Department of Display and Semiconductor Physics, Korea University, Sejong, <sup>1</sup>Institute of Physics, Academy of Sciences of the Czech Republic, Cukrovarnická 10, Praha 6, 162 53, Czech Republic)

## P3-D140\*

**Nature of Superconductivity in Intermetallic LaMBN(M=Ni, Pt)** / LEE Kwan-Woo, JUNG Myung-Chul, KANG Chang-Jong<sup>1</sup>, MIN B.I.<sup>1</sup>(고려대학교, 디스플레이-반도체물리학과, <sup>1</sup>POSTECH, 물리학과)

## P3-D141\*

**Development of Low Temperature Calorimeter for Measuring Specific Heat below 0.1 K** / JEON Byung-Gu, KHIM Seunghyun, LEE Bumsung, STEWART Gregory R.<sup>1</sup>, KIM Kee Hoon(CeNSCMR, Department of Physics and Astronomy, Seoul National University, <sup>1</sup>Department of Physics, University of Florida)

## P3-D142

**Growth of copper oxide thin films on MgO (100) by Laser MBE** / 송중현, JEFFREY C. De VERO(충남대학교 물리학과)

## P3-D143

**Optical Properties of BaFe<sub>2-x</sub>Ni<sub>x</sub>As<sub>2</sub>** / 이석배, 황정식, 최기영(성균관대학

교, 물리학과, <sup>1</sup>서울대학교, 물리학과)

## P3-D144

**초전도체 에너지 틈에서의 다양한 비등방성 특성** / 정현희, 김남미, 김희상(송실대학교 물리학과)

## P3-D145

**(Ru,Nb)Sr<sub>2</sub>(Gd,R,Ce)<sub>2</sub>Cu<sub>2</sub>O<sub>z</sub> (R = Nd, Gd, Tb)계의 구조 및 자기적 특성 연구** / 김가원, 이만석, 이호근, 김용일(강원대, <sup>1</sup>한국표준과학연구원)

## P3-D146

**Critical current density and vortex pinning properties in iron based Ca<sub>10</sub>(Pt<sub>4-d</sub>As<sub>8</sub>)(Fe<sub>2-x</sub>Pt<sub>x</sub>As<sub>2</sub>)<sub>5</sub> single crystal** / DAWOOD Ahmad, MIN B. H., LEE J. H.<sup>1</sup>, KIM Y. C.<sup>1</sup>, KWON Y. S.(Department of Emerging Materials Science, DGIST, <sup>1</sup>Department of Physics, Pusan National University)

## P3-D147

**Terahertz Transmission Time-domain Spectroscopy of Superconducting NbTiN thin film** / HONG Taeyoon, YAMAMORI Hirotake<sup>1</sup>, CHOI Kyujin, PARK Byoung-Cheol, HA Taewoo, SIM Kyung Ik, KIM Jae Hoon(Department of Physics, Yonsei University, Seoul 120-749, Korea, <sup>1</sup>National Institute of Advanced Industrial Science and Technology, 1-1-1 Umezono, Tsukuba 305-8568, Japan)

## P3-D148

**Local investigation of superconducting properties in ReBCO (RE=Y, Gd, Sm) coated conductor** / RI HYEONG-CHEOL, PARK HEEYEON, PARK Sangkook, KIM MuYong(Kyungpook National University)

## P3-D149

**Electronic structure and magnetism of superconducting BaFe<sub>2</sub>As<sub>2</sub> from first-principles study** / YUN Won Seok, LEE J. D., HONG Soon Cheol<sup>1</sup>(Dept. of Emerging Materials Science, DGIST, <sup>1</sup>Dept. of Physics & EHSRC, University of Ulsan)

## P3-D150

**Transition properties of superconducting YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> nanobridges with and without a twin boundary** / LEE Soon-Gul, LEE Sung Hoon, HONG Sung-Hak(Department of Display and Semiconductor Physics, Korea University)

## P3-D151

**Construction of the helium liquefier system at Seoul Nation University** / 장동현, 유경준, 김찬희, 김기훈, 조운양(서울대학교, 물리천문학부)

## P3-D193

**Cuprate 고온초전도체 혼합물에서 나타나는 상 분리와 임계온도의 변화** / 정민상, 조광희, 허남정, 박순용(중앙대학교, 물리학과, <sup>1</sup>인하대학교, 물리학과)

2013년 4월 25일 목요일 14:00 - 15:45

장 소 : 포스터발표장

## P3-E057

**CaWO<sub>4</sub>:Er<sup>3+</sup>/Yb<sup>3+</sup>와 CaMoO<sub>4</sub>:Er<sup>3+</sup>/Yb<sup>3+</sup>형광체에 첨가된 Li<sup>+</sup> 이온이 Upconversion 형광에 미치는 영향** / 김중환, 최혜영, 성삼식, 정중현<sup>1</sup>, 문병기<sup>1</sup>, 노현미<sup>1</sup>, 김병국(동의대학교 물리학과, <sup>1</sup>부경대학교 물리학과)

## P3-E058

**Surfactant Effect of Sodium Citrate on the Formation of Calcium Tungstate Nanoparticles via Hydrothermal Process** / CHEN Yeqing, MOON Byung Kee, CHOI Byung Chun, JEONG Jung Hyun(Department of Physics, Pukyong National University)

## P3-E059

**Er<sup>3+</sup>과 Yb<sup>3+</sup>를 복합첨가한 oxyfluoride glass의 up-conversion 형광특성** / OH Ju Hyun, MOON Byung Kee, CHOI Byung Chun, JEONG Jung Hyun, KIM Jung Hwan<sup>1</sup>(Department of Physics, Pukyong National University, <sup>1</sup>Department of Physics, Dong-eui University)

## P3-E060

**A comparative study of crystal growth and laser properties of Nd:GdVO<sub>4</sub>, Nd:YVO<sub>4</sub> micro-rod** / YANG Hyun Kyoung, NOH Hyeon Mi<sup>1</sup>, MOON Byung Kee<sup>1</sup>, JEONG Jung Hyun<sup>1</sup>(Jeju Global Research Center, Korea Institute of Energy Research, <sup>1</sup>Department of Physics, Pukyong National University)

## P3-E061

**Tunable luminescence through the energy transfer of Tb<sup>3+</sup> - Tb<sup>3+</sup> ions in GdSr<sub>2</sub>AlO<sub>5</sub>:Tb<sup>3+</sup> phosphors** / PARK Jin Young, SHIM Kyoo Sung<sup>1</sup>, MOON Byung Kee, OH Ki Dong, JEONG Jung Hyun, KIM Jung Hwan(Department of Physics, Pukyong National University, <sup>1</sup>Cooperative Laboratory Center)

## P3-E062

**활성제 이온의 몰 비에 따른 ZnAl<sub>2</sub>O<sub>4</sub>: RE<sup>3+</sup> (RE=Tb, Tm) 형광체 분말의 특성** / 이승진, 조신희(신라대학교 신소재공학과)

## P3-E063

**CaAl<sub>2</sub>O<sub>4</sub>: RE<sup>3+</sup> (RE=Tb, Ce) 형광체의 발광 특성** / 강민지, 조신희(신라대학교 신소재공학과)

## P3-E064

**Probing dual mode emission of Eu<sup>3+</sup> in garnet phosphor** / 노준철,

SINGH S. K.<sup>1</sup>, 이성수<sup>1</sup>, 이성수, 장기완, 정중현<sup>2</sup>(신라대학교, 신소재공학과, <sup>1</sup>창원대학교, 물리학과, <sup>2</sup>부경대학교, 물리학과)

## P3-E065

**NIR to VIS frequency upconversion properties of Er<sup>3+</sup> doped LaPO<sub>4</sub> phosphors** / 이동기, KESAVULU C.R., 이성수, 장기완(신라대학교, 신소재공학과, <sup>1</sup>창원대학교, 물리학과)

## P3-E066

**Structural and red luminescent properties of AMoO<sub>4</sub>:Eu<sup>3+</sup> (A=Mg, Ca, Sr and Ba) phosphors** / KWON Sook Hyun, SEO Yeon Woo, MOON Byung Kee, CHOI Byung Chun, JEONG Jung Hyun(Department of Physics, Pukyong National University)

## P3-E067

**Crystal structure, electronic structure and photoluminescence properties of SrMoO<sub>4</sub>:Tb<sup>3+</sup> phosphors** / PARK Sung Wook, KIM Eun Ock, MOON Byung Kee, CHOI Byung Chun, JEONG Jung Hyun, BAE Jong Seong<sup>1</sup>(Department of Physics, Pukyong National University, <sup>1</sup>Nano Surface Technology Research Laboratory, Korea Basic Science Institute)

## P3-E068

**Photoluminescence characteristics of Sm<sup>3+</sup> doped Ba<sub>3</sub>La(PO<sub>4</sub>)<sub>3</sub> as new orange-red emitting phosphors** / YU Ruijin, NOH Hyeon Mi, MOON Byung Kee, CHOI Byung Chun, JEONG Jung Hyun, LEE Ho-Sueb<sup>1</sup>, JANG Kiwan<sup>1</sup>, YI Soung Soo<sup>2</sup>(Department of Physics, Pukyong National University, <sup>1</sup>Department of Physics, Changwon National University, <sup>2</sup>Department of Electronic Material Engineering, Silla University)

## P3-E069

**The upconversion properties on Y<sub>2</sub>O<sub>3</sub>:Er<sup>3+</sup>, Yb<sup>3+</sup> phosphors with different Yb<sup>3+</sup> concentration** / NOH Hyeon Mi, YEON Woo Seo, MOON Byung Kee, CHOI Byung Chun, JEONG JUNG HYUN, KIM Jung Hwan(Department of Physics, Pukyong National University)

## P3-E070

**다양한 분압조건에서 촉매화확증착법(Cat-CVD)으로 성장시킨 PTFE(polytetrafluoroethylene)박막 표면의 소수성 변화** / 임경철, 이준행, 박소라, 여승준, 박규창, 안정선(경희대학교, 물리학과, <sup>1</sup>경희대학교, 정보디스플레이학과)

## P3-E071

**Magnetic and electric properties of Ni-doped BiFeO<sub>3</sub> compounds** / Y. J. Yoo, J. S. Hwang, J. S. Park<sup>1</sup>, J. H. Kang<sup>2</sup>, K. H. Lee<sup>3</sup>, B. W. Lee<sup>3</sup>, Y. P. Lee(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>Hankuk University of Foreign Studies, Yongin 449-791)

### P3-E072\*

**Improved multiferroic properties of  $\text{Bi}_{0.9}\text{Dy}_{0.1}\text{Fe}_{0.97}\text{Co}_{0.03}\text{O}_3$  ceramics** / Y. J. Yoo, J. S. Hwang, J. S. Park<sup>1</sup>, Y. P. Lee, J. H. Kang<sup>2</sup>, K. H. Lee<sup>3</sup>, B. W. Lee<sup>3</sup>, Y. P. Lee(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)

### P3-E073

**The Influence of  $\text{V}_2\text{O}_5$  on Dielectric Properties of  $\text{BaO-B}_2\text{O}_3\text{-V}_2\text{O}_5$**  / 노태호, 김영훈, 최덕, 송승기(명지대학교 물리학과)

### P3-E074\*

**$\text{TiO}_2$ -nanotube/metal particle 복합체의 광학적 특성** / 김흥기, 김순옥, TRI KHOA Nguyen, VAN THUAN Doan, 유대환, 한성홍, 김현승, 권민철(울산대학교 물리학과, <sup>1</sup>(주)UNIVAC)

### P3-E075

**나노 구조의 PTFE 박막을 이용한 Photo-polymerized Fullerene( $\text{C}_{60}$ ) 생성에 관한 연구** / 여승준, 임경철, 박소라, 박규창, 안정선(경희대학교, 물리학과, <sup>1</sup>경희대학교, 정보디스플레이학과)

### P3-E076\*

**High temperature hall measurements on  $(\text{Ba},\text{La})\text{SnO}_3$  (001) films grown on the  $\text{SrTiO}_3$  (001) substrate** / 이웅재, 김형준, 문효식<sup>1</sup>, 손이곤, 김훈민<sup>1</sup>, 박철권<sup>1</sup>, 김태훈, 차국린<sup>1</sup>, 김기훈(CeNSCMR, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, S. Korea. <sup>1</sup>MDPL, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, S. Korea)

### P3-E077\*

**Raman Study on the Secondary Phases in CZTS Thin Films Prepared by RTA** / NAM Dahyun, GANSUKH Mungunshagai, GWAK Jihye<sup>1</sup>, YUN Jae Ho<sup>1</sup>, KEE SHIK Shin<sup>1</sup>, CHEONG Hyeonsik(Sogang University, Department of Physics. <sup>1</sup>Korea Institute of Energy Research)

### P3-E078\*

**Characteristics of CdS thin films grown by chemical bath deposition(CBD) techniques onto different molar fraction and pH conditions** / 강고루, 박환열, 안종기, 차덕준, 김진태<sup>1</sup>, 윤주영<sup>1</sup>(군산대학교 물리학과, <sup>1</sup>한국표준과학연구원 진공센터)

### P3-E079\*

**Microstructure and Nanostructure on Si Formed by Nanosecond**

**and Femtosecond Laser Pulses** / NOH Do Young, CHOI Jungwon<sup>1</sup>, KANG Hyon Chol<sup>2</sup>, SON Joon-Gon(광주과학기술원, 물리 광학과. <sup>1</sup>광주과학기술원, 신소재공학부. <sup>2</sup>조선대학교, 신소재공학과)

### P3-E080\*

**CZTSSe Thin Films Grown from Metal Stacked Precursors at Different Selenization Temperatures** / GANSUKH Mungunshagai, NAM Dahyun, SON Dae-Ho<sup>1</sup>, KIM Dae-Hwan<sup>1</sup>, YANG Kee-Jeong<sup>1</sup>, KANG Jin-Kyu<sup>1</sup>, CHEONG Hyeonsik(Sogang University, Department of Physics. <sup>1</sup>DGIST, Green Energy Research Division)

### P3-E081\*

**Transmission of Light Through a Plasmonic Bull's Eye with an Elliptical Aperture** / POURNOURY Marzieh, 조항은<sup>1</sup>, NAZARI Tavakol, 조항은<sup>1</sup>, 박지훈<sup>2</sup>, 성영모<sup>2</sup>, 민병권<sup>2</sup>, 김동호<sup>2</sup>, 오경환(연세대학교 물리학과, <sup>1</sup>연세대학교 기계공학, <sup>2</sup>연세대학교 화학과)

### P3-E082

**Growth of GaN on Amorphous Substrates and the Degree of Long Range Ordering** / 김진교, 주미연, 이우영(경희대학교, 물리학과)

### P3-E083

**Fabrication process of silicon-based micro grid for field emission applications** / 전석기, 김재홍, 김정일, 김근주, 신동원(한국전기연구원)

### P3-E084

**Growth of InN on Various Substrates** / 김진교, 이혜미, 오소영(경희대학교, 물리학과)

### P3-E085\*

**PDMS Film Prepared by Contact-printing Probed by Surface Sensitive Nonlinear Optical Measurement** / AVAZBAEVA ZAURE, SUNG Woongmo, KIM Doseok, CHAE Soosang<sup>1</sup>, BAIK HongKoo<sup>1</sup>(Department of Physics, Sogang University. <sup>1</sup>Department of Materials Science and Engineering, Yonsei University)

### P3-E086

**Graded Reflective index를 갖는 다층 Indium Tin Oxide 박막의 성장과 광학적 특성** / 오규진, 이경수, 김은규(Department of Physics, Hanyang University)

### P3-E087\*

**Investigation of the Formation of Schottky Junction at  $\text{LaNiO}_3/\text{Nb:SrTiO}_3$  Interface** / YANG KEUN Yoo, YOUNG JUN Chang<sup>1</sup>, MINU Kim, LUCA Moreschini<sup>2</sup>, YONG SU Kim, AARON Bostwick<sup>2</sup>, ELI Rotenberg<sup>2</sup>, TAE WON Noh(Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science, and Department of Physics &



## SESSION P3

물리교육분과회  
포스터 발표

2013년 4월 25일 목요일 14:00 - 15:45

장 소 : 포스터발표장

### P3-G001\*

동료교수법의 토론 과정에서 나타나는 유추 분석 / 이지원, 박해정, 김중복  
(한국교원대학교)

### P3-G002

**Shadow Size in Science Curriculum of Primary School / KIM Taekyu**(Jeonju National University of Education, Department of Science Education)

### P3-G003

**Difference between Theory and Experiments in Primary School Science / KIM Taekyu**(Jeonju National University of Education, Department of Science Education)

### P3-G004\*

고등학교 물리 교사들의 탐구에 대한 인식과 탐구 수업의 실태 조사 / 이은미, 강남화(한국교원대학교, 물리교육과)

### P3-G005

과학영재의 창의적 인성 분석 / 최재혁(전남대학교, 물리교육과)

### P3-G006\*

7차 교육과정과 2009개정 교육과정 고등학교 물리(Ⅰ, Ⅱ) 교과서의 시 각자료 제시형태 분석 / 최준영, 조현국, 송진웅(서울대학교 물리교육과, <sup>1</sup>단국대학교 교양기초교육원)

### P3-G007

초등학교 및 중학교에서 '자기장' 개념 학습에 대한 논의 / 박상우, 신정윤  
(청주교육대학교 과학교육과, <sup>1</sup>대전두리초등학교)

### P3-G008

**The relation of creation education and human nature schooling / BAEK EUN HEE, JEONG Jin<sup>1</sup>**(Department of Home Economics-Technology Education, Munjeong Girls Highschool. <sup>1</sup>Department of Physics, Chosun University)

### P3-G009

**A Study of Science and Technology for STEAM Education / BAEK Eun Hee, JEONG Jin<sup>1</sup>**(Department of Home Economics-Technology Education, Munjeong Girls Highschool. <sup>1</sup>Department of Physics, Chosun University)

### P3-G010

**Freshman awareness for STEAM education** / BAEK Eun Hee, JEONG Jin<sup>1</sup>(Department of Home Economics-Technology Education, Munjeong Girls Highschool. <sup>1</sup>Department of Physics, Chosun University)

## SESSION P3

광학 및 양자전자학분과회  
포스터 발표

2013년 4월 25일 목요일 14:00 - 15:45

장 소 : 포스터발표장

### P3-I001\*

**Fiberized light emission device with quantum dot solution** / HWANG ji hyun, KIM Jongki, PARK Jiyoung, OH Kyunghwan(연세대학교, 물리학과)

### P3-I002

**Improved Simulation of Computer-Generated Holograms by Applying a Variety of Factors** / 이휘형, 박상우, 공홍진(KAIST, Department of Physics)

### P3-I003

**이산화탄소 레이저를 이용한 유리 내부에서의 나노결정 형성과 형광특성** / 김동선, 정홍명, 송수아, 임기수(충북대학교 물리학과)

### P3-I004

**광 호모다인 검파 방법을 이용한 이터븀 첨가 광섬유 레이저의 coherent beam combining 실험** / 정윤섭, 김중기, 오경환(연세대학교 물리학과)

### P3-I005\*

**유전체로 이루어진 마이크로 공명 구조에서 나타나는 빛의 모멘텀 효과 계산과 측정** / 최홍구, 오경환, 이성래(연세대학교 물리학과)

### P3-I006\*

**Reconstruction of the light wavefront using oversampling phase retrieval algorithm** / LEE A Young, KIM Yoonhee, KIM Chan<sup>1</sup>, NOH Do Young<sup>1</sup>(School of Materials Science and Engineering, Gwangju Institute of Science and Technology, 123 Cheomdan-gwagiro, Buk-gu, Gwangju 500-712, Korea. <sup>1</sup>Department of Physics and Photon Science, Gwangju Institute of Science and Technology, 123 Cheomdan-gwagiro, Buk-gu, Gwangju 500-712, Korea)

### P3-I007\*

**TiO<sub>2</sub>/SiO<sub>2</sub> 일차원 광자 결정 메타구조의 복굴절 특성** / 김은선, 최은영, 이연의, 우제훈, 우정원(이화여자대학교, 물리학과)

### P3-I008\*

**Rigorous Coupled-Wave Theory on a Beam Combination using a Volume Bragg Grating** / KONG Hong Jin, PARK Sangwoo(KAIST, 물리학과)

### P3-I009

**Time-resolved measurement of insulator-metal transition in VO<sub>2</sub>** /

이근행, 김봉준<sup>1</sup>, 김현택<sup>2</sup>, 이기주(충남대학교, 물리학과, <sup>1</sup>전자통신연구원(ETRI))

#### P3-I010\*

**Near field enhancement of electric field by finite-numbered non-periodic slits in metal** / LEE Seojoo(Korea University, Department of Physics)

#### P3-I011

**레이저-유도 경액션 발생을 위한 테이프 타깃 시스템** / 이성만, 이기태<sup>1</sup>, 차형기<sup>2</sup>(한국원자력연구원, 양자광학연구부, <sup>1</sup>한국원자력연구원, 양자빔기반방사선 연구센터, <sup>2</sup>한국원자력연구원, 방사선기기연구부)

#### P3-I012\*

**Terahertz optical properties of Minerals and Mineral compounds** / HAN Daehoon, LEE Kanghee, LIM Jongseok, AHN Jaewook(KAIST, Department of Physics)

#### P3-I013

**The morphology of poly-(lactic acid) films studied by polarizing optical microscopy** / 민해식, 김도석, 황성태(서강대학교, 물리학과, <sup>1</sup>한성대학교, 공과대학)

#### P3-I014\*

**Design of a Parabolic mirror condenser for a Hear storage system** / 김서현, 공홍진(한국과학기술원, 물리학과)

#### P3-I015

**Au 나노입자가 얹어진 ZnO 나노구조물의 광학적 특성** / 김원영, 김태영, 임재동, 김현지, BADSHA Md.Alamgir, 황보창권(인하대학교, 물리학과)

#### P3-I016\*

**경사입사방법을 이용한 다층 비등방 TiO<sub>2</sub>으로 근사된 네마틱 박막의 광학적 특성** / 김태영, 김원영, 임재동, 김현지, 김진주, 황보창권(인하대학교, 물리학과)

#### P3-I017

**ZnTe를 기반으로 하는 극자외선 노광공정용 이진 마스크의 비금속 이층 흡수체 구조 연구** / 임재동, 김태영, 김원영, 김현지, 황보창권(인하대학교 물리학과)

#### P3-I018\*

**저파장 금속 나노 격자의 물리적, 광학적 특성 연구** / 김진주, 김태영, 황보창권(인하대학교, 물리학과)

#### P3-I019\*

**Fiber-based two beam combination using locking of optical**

**coherence by single detector electronic tagging (LOCSET) technology** / KONG HONG JIN, AHN HEE KYUNG, PARK SANG WOO, JEON BYOUNG GOO(KAIST, Department of Physics)

#### P3-I020\*

**조명용 LED 반사경의 자유곡면 설계 연구** / 김현지, 강은경, 이규항, 김태영, 임재동, 김원영, 황보창권(인하대학교 물리학과)

#### P3-I021\*

**Deposition of MoS<sub>2</sub> onto Fiber End-faces by using High Power Fiber Laser** / KHAZAEINEZHAD Reza, HOSSEINZADEH KASSANI Sahar, NAZARI Tavakol, KIM Jongki, CHOI Kyujin, KIM Jae Hoon, OH Kyunghwan(연세대학교 물리학과)

#### P3-I022\*

**Enhancement of visible emission by Infrared laser excitation in Atmospheric-Pressure Microplasma jet** / HOSSEINZADEH KASSANI Sahar, KHAZAEINEZHAD Reza, NAZARI Tavakol, LEE Chan Young, CHOE Wonho, OH Kyunghwan(Yonsei University, Physics department)

#### P3-I023\*

**반사식 전방위 광학계 설계** / 서현진, 조재홍, 이상은, 김준모, 이정환(한남대학교 광전자물리학과)

## SESSION P3

### 원자 및 분자물리학분과회 포스터 발표

2013년 4월 25일 목요일 14:00 - 15:45

장 소 : 포스터발표장

#### P3-J001

포획된 원자의 광이온화 시간비행 질량분석 / 고광훈, 김용희, 장규하, 김택수, 이림, 박현민, 임권, 차용호, 박건식, 정도영(한국원자력연구원, '서울대학교)

#### P3-J002

**Photoionization leading to the final photo-ionic  $S^{5+}$  4l states from the Mg-like  $S^{4+}$  ion** / 김대성, 권덕희(경기과학기술대학 e-비즈니스과, '원자력연구원 핵데이터센터)

#### P3-J003

**Electron-impact ionization for P-like ions from P to Zn** / KWON Duck-Hee(Korea Atomic Energy Research Institute, Nuclear Data Center)

#### P3-J004\*

**Simple Technique to Obtain Modulation-Free Dispersion Signals at Detuned Frequencies** / KIM Jungbog, KIM Seungjin, YU Hoon, MOON Yelin(Korea National University of Education)

#### P3-J005

이중 주파수 포화 흡수 분광학 / 정택, 문한섭(부산대학교, 물리학과)

#### P3-J006

이중 램다구조에서 서로 다른 파장을 갖는 두 펄스의 스위칭 현상 / 오차환, 김봉준, 강훈수(한양대학교, 물리학과, 'GIST, 고등광기술연구소)

#### P3-J007

**Analytical Calculation of the Susceptibility for Doppler-Broadened Three-Level Atomic Systems Using a Diagrammatic Method** / NOH Heung-Ryoul, MOON Han Seb(전남대학교, 물리학과, '부산대학교, 물리학과)

#### P3-J008

**Effect of magnetic field on polarization self-rotation in Rb vapor** / CHA Eun hyun, PARK Jung Min, NOH Heung-Ryoul(Chonnam National University)

#### P3-J009

**An experimental and calculated spectra of EIT and EIA of  $^{85}\text{Rb}$  with respect to the polarization changes of the coupling and probe beams** / MUHAMMAD Adnan, REHMAN Hafeez Ur, 노홍렬, 김진

태(조선대학교 광기술공학과, '전남대학교 물리학과)

#### P3-J010

**Ultrafast Quantum Gates on Coherent Optical Memory of Cold Atoms** / LIM Jongseok, LEE Han-gyeol, AHN Jaewook(KAIST, Dept. of Physics)

#### P3-J011\*

**트랩된 비극성 분자이온의 회전상태를 이용한 양자컴퓨터** / 윤상재, 남창희(Department of Physics, KAIST, 'Center for Relativistic Laser Science, IBS; Department of Physics and Photon Science, GIST)

#### P3-J012\*

**Bell and non-contextual inequalities without measurement independence assumption** / KIM Minsu, KIM Sang Wook'(부산대학교 물리학과, '부산대학교 물리교육과)

#### P3-J013

**Minimum-error quantum state discrimination을 위한 optimality conditions** / 권영현, 하동훈(한양대학교 응용물리학과)

#### P3-J014\*

**Quantification of macroscopic quantum superpositions for spin systems** / 정현석, 강민수, 이창우<sup>1</sup>, 방정호, 이승우<sup>2</sup>(서울대학교 물리천문학부, 'Texas A&M University at Qatar, Department of Physics, 'Dartmouth College, Harnover, Department of Physics)

#### P3-J015\*

**Using Macroscopic Entanglement To Overcome Detection-loop-hole In Bell Test** / 정현석, 임영룡, MAURO Paternostro<sup>1</sup>, 강민수, 이진형<sup>2</sup>(서울대학교 물리천문학부, 'Queen's University Belfast, Center for theoretical atomic, molecular and optical physics, '한양대학교 물리학과)

#### P3-J016\*

**Bell-nonlocality tests with an entangled atom-cavity state** / 정현석, 박진우, SAUNDERS Mark, 신용일, 안경원(서울대학교, 물리천문학부)

#### P3-J017\*

**Additivity relations for quantum correlations; Is Discord additive?** / 손원민, 정현석<sup>1</sup>, 양승호<sup>2</sup>(서강대학교 물리학과, '서울대학교 물리천문학부)

#### P3-J018\*

**Experimental Apparatus for Ultracold Ytterbium Atoms** / 김민석, 이무송, 한정호, 신용일(서울대학교 물리천문학부)

P3-J019\*

**Strongly Interacting Atomic Fermi Gas** / 권우진, 강세지, 최재윤, 서상원, 신용일(서울대학교 물리천문학부 양자기체 연구실)

P3-J020

**Collimated two-photon generation at 611.3 nm and 555.8 nm from Yb atoms** / SONG Minsoo, YOON Tai Hyun(Korea University, Department of Physics)

P3-J021\*

**이중슬릿을 이용한 결맞음 광원의 거리에 따른 간섭무늬 측정** / 권소라, 문한섭(부산대학교 물리학과)

P3-J022\*

**레이저와 준열광원의 섞임 광원을 이용한 고스트 이미징** / 이그림, 이희정, 문한섭(부산대학교)

P3-J023

**Optical Trapping of a Sub-microscopic Particle in the Air Using a Spraying Method** / CHOI Jai-Min(Department of Science Education, Chonbuk National University)

P3-J024

**Generation of an axial optical vortex beam by using two phase ramps with a spatial light modulator** / KHOROSHUN A. N., CHERNYKH A. V., TSIMBALUK A. N., KIRICHENKO J. A., YEZHOF P. V.<sup>1</sup>, KIM J. T.<sup>2</sup>(Department of Physics, East-Ukrainian National University, Molodizhny Kvartal, 20a 91034, Luhans'k, Ukraine. <sup>1</sup>Institute of Physics of NAS of Ukraine, 46, Pr. Nauky, 46, 03028, Kyiv, Ukraine & International Center "Institute of Applied Optics" of NAS of Ukraine, 10G, Str., Kudryavskaya, 04053, Kyiv, Ukraine. <sup>2</sup>Department of Photonic Engineering, College of Engineering, Chosun University, 309 Pilmun-daero Dong-gu, Gwangju 501-759, Korea)

## SESSION P4

응집물질물리학분과회 포스터 발표  
강상관계, 계산과학

2013년 4월 26일 금요일 11:00 - 12:45

장소: 포스터발표장

진행: 송중현(충남대), 김종훈(카이스트)

P4-D152\*

**Origin of Electromagnon Resonance in Magnetoelectric Materials Co<sub>2</sub>Z-type Hexaferrite** / SHIN KwangWoo, CHUN Sae Hwan, KIM Hyung Joon, PARK Young Mi<sup>1</sup>, PARK Hyeong Ryeol<sup>1</sup>, KYOUNG Ji Soo<sup>1</sup>, KIM Dai-Sik<sup>1</sup>, CHOI Da-Hye<sup>2</sup>, PARK Gun-Sik<sup>2</sup>, KIM Kee Hoon(CeNSCMR, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea. <sup>1</sup>Nano Optics Group, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea. <sup>2</sup>Center for THz-Bio Application Systems, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea.)

P4-D153\*

**Observation of Interface-induced Tunneling Electroresistance Effect in SrRuO<sub>3</sub>/BaTiO<sub>3</sub>/SrRuO<sub>3</sub> Ferroelectric Tunneling Junction** / SHIN Y. J., KWON J. H., KIM H. H., KIM Y. S., LEE S. R., YANG S. M., JEON B. C., SINN S, YOON J.-G., YOON J.-G.<sup>1</sup>, CHUNG J.-S.<sup>2</sup>, NOH T. W.(Center for Functional Interfaces of Correlated Electrons Systems, Institute for Basic Science, and Department of Physics & Astronomy, Seoul National University, Seoul 151-747, Korea. <sup>1</sup>Department of Physics, University of Suwon, Hwaseong, Gyeonggi-do 445-743, Korea. <sup>2</sup>Department of Physics, Soongsil University, Seoul 156-743, Korea)

P4-D154

**Growth of Orthorhombic Perovskite SrIrO<sub>3</sub> Thin Film and its Electrical Properties** / PARK Jae-Hoon, LEE Doopyo<sup>1</sup>, PARK Jun-Ho<sup>2</sup>, SONG Jong-Hyun<sup>3</sup>, SHIN HyunSeop<sup>3</sup>(POSTECH, Advanced Materials Science. <sup>1</sup>POSTECH, Department of Physics. <sup>2</sup>POSTECH, Department of Physics. <sup>3</sup>CNU, Department of Physics)

P4-D155\*

**Temperature Dependent Metal Insulator Transition on NiS<sub>1.5</sub>Se<sub>0.5</sub>** / 한가람, 김용관, 고윤영, 김범영, 경원식, 송동준, 서정진, 이경동<sup>1</sup>, 김창영(연세대학교, 물리 및 응용물리학과. <sup>1</sup>인하대학교, 물리학과)

P4-D156\*

**터븀 망간 산화물에서의 철 도핑에 의한 물성변화** / 성기연, 조광희, 박순용, 허남정(중앙대학교 물리학과. <sup>1</sup>인하대학교 물리학과)

P4-D157\*

**Structural, electrical, and magnetic properties of Mn doped dysprosium orthoferrite** / 조광희, 허남정<sup>1</sup>, 박순용(중앙대학교, 물리학과. <sup>1</sup>인하대학교, 물리학과)

P4-D158\*

**Optical properties of  $\text{Ba}_{0.96}\text{La}_{0.04}\text{SnO}_3$  and  $\text{Ba}_{0.95}\text{Sb}_{0.05}\text{SnO}_3$  thin films with perovskite structure** / HA Taewoo, KIM Useong<sup>1</sup>, CHAR Kookrin<sup>1</sup>, KIM Jae Hoon(Institute of Physics and Applied Physics, Department of Physics, Yonsei University, Seoul 120-749 Korea. <sup>1</sup>Center for Strongly Correlated Materials Research, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Republic of Korea)

P4-D159\*

**Optical study of oxygen plasma-treated graphene** / CHOI Kyujin, LIM Juhwan<sup>1</sup>, RANI J. R.<sup>1</sup>, YOON Hyung Seo<sup>1</sup>, OH Juyeong<sup>1</sup>, HONG Taeyoon, HA Taewoo, PARK Byung Cheol, SIM Kyung Ik, JUN Seong Chan, KIM Jae Hoon(Department of Physics and Institute of Physics & Applied Physics, Yonsei University, Seoul 120-749 Korea. <sup>1</sup>Department of Mechanical Engineering, Yonsei University, Seoul 120-749 Korea)

P4-D160\*

**A Study of Kondo Insulator  $\text{SbB}_6$  via Low Temperature Terahertz Time-Domain Reflection Spectroscopy** / PARK Byung Cheol, CHOI Kyu Jin, KANG Bo Youn<sup>1</sup>, CHO Beong Ki<sup>1</sup>, KIM Jae Hoon(Department of Physics and Institute of Physics and Applied Physics, Yonsei University, Seoul 120-749 Korea. <sup>1</sup>Nano Spintronics and Magnetic Materials Lab., School of Materials Science and Engineering, GIST, Gwangju 500-712 Republic of Korea)

P4-D161\*

**Phase Transitions in the Two-Orbital Hubbard Model depending on Orbital Anisotropy** / KIM Aaram Joo, JEON Gun Sang<sup>1</sup>, CHOI MooYoung(Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University. <sup>1</sup>Department of Physics, Ewha Womans University)

P4-D162\*

**Staggered sublattice potential in the Hubbard model on a honeycomb lattice** / LEE Hyeong Jun, JEON Gun Sang<sup>1</sup>, CHOI MooYoung(Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University. <sup>1</sup>Department of Physics, Ewha Womans University)

P4-D163\*

**Adsorption of  $^4\text{He}$  on hydrogen-prelabeled  $\text{C}_{20}$  : Path-integral Monte Carlo Study** / KWON Yongkyung, PARK Sungjin, SHIM Soomin(건국대학교 물리학과)

P4-D164\*

**An intriguing ground state of  $S=1/2$  2D triangular antiferromagnet  $\text{Ba}_3\text{CuSb}_2\text{O}_9$**  / CHOI K.-Y., DO S.-H., ZHOU H.<sup>1</sup>, LEMMENS P.<sup>2</sup>, TOL J.

van<sup>3</sup>(Dept. Physics, Chung-Ang Univ. <sup>1</sup>Dept. Physics, UT, USA. <sup>2</sup>ICMP, TU Braunschweig, Germany. <sup>3</sup>NHMFL, USA)

P4-D165\*

**Phonon softening with Correlation and the Mott-spin-Peierls Transition in  $\text{VO}_2$**  / KIM Sooran, KIM Kyoo, KANG Chang-Jong, MIN B.I.(POSTECH, 물리학과)

P4-D166\*

**High field Shubnikov-de Haas effects in  $\text{SrMnSb}_2$  single crystal** / YOU Jungsang, PARK Joonbum, EOM Manjin, LEE Geunsik<sup>1</sup>, JO YounJung<sup>2</sup>, CHOI EunSang<sup>3</sup>, SHIM JiHoon<sup>1</sup>, KIM JunSung(POSTECH, Department of Physics. <sup>1</sup>POSTECH, Department of Chemistry. <sup>2</sup>Kyungpook National University, Department of Physics. <sup>3</sup>Florida State University, National High Magnetic Field Laboratory)

P4-D167

**Controlling Metal-insulator Transition in  $\text{VO}_2$  Grown on  $\text{TiO}_2$  Substrates of Various Orientations** / DHO Joonghoe, LI Jian, KI Sanghoon(Department of Physics, Kyungpook National University)

P4-D168

**The study on a magnetic ordering transition of Co Z-type hexaferrite by using soft x-ray resonant scattering** / YANG donghyuk(포스텍, 물리학과)

P4-D169

**Dielectric Properties of  $\text{BiFe}_{1-x}\text{Mn}_x\text{O}_3$  ceramics** / 전병익, 엄성문<sup>1</sup>, 이수열<sup>1</sup>, 김동진<sup>1</sup>(한국과학영재학교, 물리지구과학부. <sup>1</sup>한국과학영재학교. <sup>2</sup>부산대학교, 물리학과)

P4-D170

**Multiferroic Properties of  $\text{Bi}(\text{Fe}_x\text{Mn}_{1-x})\text{O}_3$  Thin Films** / DO Dalhyun, LEE Myang Hwan<sup>1</sup>, SONG Tae Kwon<sup>1</sup>, KIM Myong-Ho<sup>1</sup>, KIM Sang Wook<sup>2</sup>, KIM Won Jeong<sup>2</sup>(Keimyung University, Department of Advanced Materials Engineering. <sup>1</sup>Changwon National University, School of Nano and Advanced Materials Engineering. <sup>2</sup>Changwon National University, Department of Physics)

P4-D171

**$\mu\text{SR}$  studies of two quantum magnets  $\text{CdCu}_2(\text{BO}_3)_2$  and  $\text{Ba}_3\text{RuTi}_2\text{O}_9$**  / CHOI K.-Y., LEE W.-J., DO S.-H., SUH B. J.<sup>1</sup>, YOON S.W.<sup>1</sup>, JANG Z.H.<sup>2</sup>, LUETKEN H.<sup>3</sup>, KLAUSS H.-H.<sup>4</sup>(Dept. Physics, Chung-Ang Univ. <sup>1</sup>Dept. Physics, The Catholic Univ. <sup>2</sup>Dept. Physics, Kookmin Univ. <sup>3</sup>PSI, Switzerland. <sup>4</sup>ISSP, TU Dresden, Germany)

P4-D172

**Formation of density wave like feature in  $\text{SrMnBi}_2$**  / HYUN JU Park,



DA WOON JEONG, CHANG HEE Sohn, JOONBUM Park<sup>1</sup>, J.S. Kim<sup>1</sup>, J.H. Shim<sup>2</sup>, K.W. Kim<sup>3</sup>, S.J. Moon<sup>4</sup>, DEOK-YONG Cho, TAE DONG Kang, T. W. Noh(Center for Functional Interfaces of Correlated Electrons Systems, Institute for Basic Science, and Department of Physics & Astronomy, Seoul National University, Seoul 151-747, Korea. <sup>1</sup>Department of Physics, Pohang University of Science and Technology, Pohang 790-784, Korea. <sup>2</sup>Department of Physics, Pohang University of Science and Technology, Pohang 790-784, Korea/Department of Chemistry, Pohang University of Science and Technology, Pohang 790-784, Republic of Korea. <sup>3</sup>Department of Physics, Chungbuk National University, Cheongju 361-763, Korea. <sup>4</sup>Department of Physics, Hanyang University, Seoul 133-791, Korea)

P4-D173

**Matrix Product States for Quantum Many-Fermion Systems / 정명훈(홍익대, 세종캠퍼스)**

P4-D174

**Effect of Structural Distortion on Magnetic Order in (Lu,Sc)Fe<sub>2</sub>O<sub>4</sub> / JEONG Jinwon, NOH Han-Jin, KIM Sung Baek<sup>1</sup>, KIM Jae-Young<sup>2</sup>(Dep. of Physics, Chonnam National University. <sup>1</sup>ACE center, Konyang University. <sup>2</sup>Pohang Accelerator Laboratory, POSTECH)**

P4-D175\*

**Electronic and Thermal Properties of T- and TY-Carbon Structures and Their Hydrogen Stroage Application / KWON Young-Kyun, KANG Seoung-Hun, CHOI Ho-Sik(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)**

P4-D176\*

**Exotic Geometrical and Electronic Properties in Hydrogenated Graphyne / KOO Jahyun, HWANG Hojun, HUANG Bing<sup>1</sup>, LEE Hunpyo, LEE Hosik<sup>2</sup>, PARK Minwoo, KWON Yongkyung, WEI SuHuai<sup>1</sup>, LEE Hoonkyung(Division of Quantum Phases & Devices, School of Physics, Konkuk University, Seoul 143-701, Korea. <sup>1</sup>National Renewable Energy Laboratory, 1617 Cole Boulevard, Golden, CO 80401, USA. <sup>2</sup>School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan 689-798, Korea)**

P4-D177\*

**Multilayer Graphynes for Lithium Ion Battery Anode / HWANG Ho Jun, KOO Jahyun, PARK Minwoo, PARK Noejung<sup>1</sup>, KWON Yongkyung, LEE Hoonkyung(School of Physics, Konkuk University, Division of Quantum Phases & Devices. <sup>1</sup>Ulsan National Institute of Science and Technology(UNIST), Interdisciplinary School of Green Energy and Low Dimensional Carbon Materials)**

P4-D178\*

**Electronic structures and magnetic properties of thin films of a**

**magnetocaloric material FeRh / JEKAL soyoung, KWON oryong, HONG soon cheol(University of Ulsan, Department of Physics)**

P4-D179\*

**Consecutive Bifurcations of Wrinkled Graphene on PDMS Substrates / JUNG Jong Hyun, BAE Jaehyun, MOON Myoung-Woon<sup>1</sup>, KIM Kyung-Suk<sup>2</sup>, IHM Jisoon(Dept. of Physics and Astronomy, Seoul National University, Seoul, Korea. <sup>1</sup>Inst. Multidisciplinary and Convergence Matters, Korea Institute of Science and Technology, Seoul, Korea. <sup>2</sup>School of Engineering, Brown University, RI, USA)**

P4-D180\*

**First-principles study of substrates effect in iron nanoparticle catalyst / 김솔, 지승훈(POSTECH, 물리학과)**

P4-D181\*

**Investigation of Insulating Substrate for Silicene / CHOI KEUNSU, HWANG JEONGWOON, KIM DONGWOOK, IHM JISOON(Seoul National University, Department of Physics and Astronomy)**

P4-D182\*

**Self-consistent GW Calculation for Correlated Transition Metal Oxides / KANG Gijae, HAN Seungwu(Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)**

P4-D183\*

**Self-Consistent Quasi-Particle GW Calculation for the Post-Transition-Metal Oxides / KANG Youngho, KIM Kye Yeop, HAN Seungwu(Department of Materials Science and Engineering and Research Institute of Advanced Materials, Seoul National University)**

P4-D184\*

**Dispersion-Corrected Density Functional Theory Study of Electronic Structure of Graphene/SiO<sub>2</sub> Interfaces / LEE JINHEE(광주과학기술원, 신소재공학과)**

P4-D185

**CoFe 박막의 자기이방성에 미치는 응력의 영향에 대한 제일원리계산 / 김은구, 권오룡, 홍순철(울산대학교 물리학과)**

P4-D186

**Binary B-N / P-N / B-P Doping of Graphene Nanoribbons : A 1<sup>st</sup>-Principles Study / KIM YongHoon, KIM SeongSik, KIM HanSeul, KIM HyoSeok(Graduate School of EEWS, KAIST)**

P4-D187

**Binary Doping of N-B and N-P into Graphene: Structural, Electronic, and Transport properties** / KIM Yong Hoon, KIM Hyo Seok<sup>1</sup>, KIM Han Seul<sup>1</sup>, KIM Seoung Sik<sup>1</sup>(KAIST, Graduate School of EEWS, KAIST Institute for the NanoCentury. <sup>1</sup>KAIST, Graduate School of EEWS)

P4-D188

**On the Origin of Multiple Conductance Peaks in Single-Molecule Junction Experiments** / KIM Yong-hoon, KIM Hu Sung, PARK Min Kyu<sup>1</sup>(Korea Advanced Institute for Science and Technology, Graduate School of EEWS. <sup>1</sup>Division of Industrial Metrology Korea Research Institute of Standard and Science)

P4-D189

**First-principles study of electronic, magnetic and Li-ion diffusion properties of LiFeSO<sub>4</sub>F and FeSO<sub>4</sub>F** / TUMURBAATAR tselmaa, KWON oryong, NAMSRAI Tsogbadrakh, HONG soon cheol(University of Ulsan, Department of Physics)

P4-D190

**Magnetocrystalline anisotropy of 3d – transition metal overlayers on Ta(001) and Pt(001) surfaces by first principles study** / TAIVANSAlKHAN Purev, ODKHUU Dorj, KWON Oryong, TSOGBADRAXH Namsrai, HONG Soon Cheol(University of Ulsan, Department of Physics)

P4-D191

**Topological Phases under Structural Inversion Asymmetry in Sb<sub>2</sub>Te<sub>3</sub> Films** / MINSUNG KIM, CHOONG H. KIM, HEUNGSIK KIM, JONG HYUN JUNG, JISOON IHM(Department of Physics and Astronomy, Seoul National University)

P4-D192

**Pt<sub>3</sub>M (M=Co, Fe) 촉매반응성과 자성과의 상관관계: 밀도범함수 이론 / 권오룡, 홍순철(울산대학교, 물리학과)**

## SESSION P4

응용 물리학과  
포스터 발표

2013년 4월 26일 금요일 11:00 – 12:45

장 소 : 포스터발표장

P4-E088\*

**Mn이 도핑된 Bi<sub>2</sub>Se<sub>3</sub>로 구성된 열전 특성 연구** / 정명화, 김충만, 김수현, 최영하, 조나현, KAJINO J<sup>1</sup>, TAKABATAKE T<sup>1</sup>(서강대학교 물리학과. <sup>1</sup>히로시마 대학 물리학과)

P4-E089\*

**PbPdO<sub>2</sub>의 Mn 및 Co 도핑에 의한 물성 변화** / 정명화, 이규준, 추성민, 황지훈<sup>1</sup>, 강정수<sup>2</sup>(서강대학교, 물리학과. <sup>1</sup>카톨릭대학교, 물리학과)

P4-E090

**CNT-ZnO 가스센서의 제조와 탄화수소계 가스에 대한 특성 연구** / 윤소진, 유일(동의대학교 물리학과)

P4-E091\*

**Characterization of Raman Spectrum of Graphene on Hexagonal Boron Nitride Substrate** / CHEONG Hyeonsik, CHOI Sun Keun, KIM Minjung(Sogang University, Department of Physics)

P4-E092

**Synthesis and Optical Characteristics of Dy<sup>3+</sup> in Calcium Silicate Phosphors** / 정재선, 한경림, 하명규, 양호순<sup>1</sup>, 홍경수(한국기초과학지원연구원 부산센터. <sup>1</sup>부산대학교 물리학과)

P4-E093

**Characteristics of Sm<sup>3+</sup>-doped Ca<sub>2</sub>SiO<sub>4</sub> Phosphors for Photonic Application** / 한경림, 정재선, 하명규, 양호순<sup>1</sup>, 홍경수(한국기초과학지원연구원 부산센터. <sup>1</sup>부산대학교 물리학과)

P4-E094

**Effects of Alkali Metal-Incorporation in Sr<sub>2</sub>SiO<sub>4</sub>:Sm<sup>3+</sup> Ceramics** / 정재선, 한경림, 하명규, 양호순<sup>1</sup>, 홍경수(한국기초과학지원연구원 부산센터. <sup>1</sup>부산대학교 물리학과)

P4-E095\*

**Giant Concentration by Extraordinary Acoustic Transmission in Zero-Mass Metamaterials** / LEE Sam Hyeon, PARK Jong Jin, LEE K. J. B.<sup>1</sup>, WRIGHT Oliver B.<sup>2</sup>, JUNG Myoung Ki(Institute of Physics and Applied Physics, Yonsei University. <sup>1</sup>Department of Physics, Ewha Womans University. <sup>2</sup>Division of Applied Physics, Faculty of Engineering, Hokkaido University)

P4-E096

**A Stereotactic Device for In Vitro Experiment Using Gamma Knife Perfexion Model** / LIM SA-HOE, JUNG SHIN, KIM IN-YOUNG, JUNG TAE-YOUNG, MOON KYUNG-SUB, JANG WOO-YOUL, PARK SEUNG-JIN<sup>1</sup>(Chonnam National University Hwasun Hospital, Department of Neurosurgery. <sup>1</sup>Chonnam National University Hospital, Department of Biomedical Engineering)

P4-E097

**LabVIEW 기반 고자기장 극저온 환경에서의 물성측정 시스템 구현** / 이윤아, 김동락, 최연석(한국기초과학지원연구원 물성과학연구부)

P4-E098

**수직자기방생(PMA)을 지닌 비결정질 [CoSiB/Pt]<sub>N</sub> 다층박막에서의 자성** / 유우석, 이규준, 정명화, 박인성<sup>1</sup>, 김태완<sup>1</sup>, HEIJDEN E.h.m<sup>2</sup>, SWAGTEN H.j.m<sup>2</sup>(서강대학교 물리학과. <sup>1</sup>세종대학교 물리학과. <sup>2</sup>Dept of Applied Physics, Eindhoven University of Technology, Netherlands)

P4-E099\*

**Punctured Nanotube Device Channels for Device Performance Enhancement: Model Simulations** / LEE Chang-Sun, KWON Young-Kyun(Department of Physics and Research Institute for Basic Sciences, Kyung Hee University)

P4-E100

**비례제어 액추에이터를 위한 다기능 컨트롤 시스템 개발. Development of a proportional actuator control system for Industrial site** / 박한영, 강준희, 김진영<sup>1</sup>, 조장호<sup>1</sup>, 전일태<sup>1</sup>(인천대학교, 물리학과. <sup>1</sup>이도씨앤에스)

P4-E101\*

**항색 형광체의 종류에 따른 백색 LED 광원의 발광 특성 분석** / 최현우, 고재현(한림대학교, 전자물리학과)

P4-E102

**An Electro-Mechanical Switching Device Based On ZnO Microwire** / YOON Ho ang, KIM Hak Seong, LEE Sang Wook(Division of Quantum Phases & Devices, School of Physics, Konkuk University, Seoul, Hwayang-dong Gwangjin-Gu 143-701, Korea)

P4-E103\*

**UV 노출시간에 따른 RR-P3BT 박막의 유전율 함수 변화 연구** / 최준호, 김태중, 변준석, DIWARE Mangesh, 김준영, 강유리, 김영동(경희대학교 물리학과 및 나노광물성 연구실)

P4-E104\*

**고선량 방사선 측정용 실리콘 PIN 다이오드 검출기 연구** / 김중국, 전상준,

정영준<sup>2</sup>, 김종만<sup>3</sup>, 이교철, 김정영, 이철수<sup>3</sup>, 주관식<sup>4</sup>, 김경민(한국원자력의학원 분자영상연구부. <sup>1</sup>명지대학교 물리학과, 한국원자력의학원 분자영상연구부. <sup>2</sup>고려대학교 방사선학과. <sup>3</sup>서강미래기술연구원. <sup>4</sup>영지대학교 물리학과)

P4-E105\*

**Thermally induced charge tunneling into graphene** / YOO Jung-woo, JIN Mi-Jin, JO Jun-Hyeon, MODEPALLI Vijaykumar, PARK Jungmin(울산과학기술대학교, 기계신소재공학부)

P4-E106\*

**온도범위 31 - 675 K에서 InSb 유전율 함수의 변수화 연구** / 박한결, 김태중, 황순용, 박재찬, BARANGE Nilesh S., 김영동(경희대학교 물리학과 및 나노광물성 연구실)

P4-E107

**Tri-stable memristive switching at pristine state of a Cu/TaO<sub>x</sub>/Pt cell** / KURNIA Fran, CHANG UK Jung, LIU Chunli(Department of Physics, Hankuk University of Foreign Studies)

P4-E108\*

**A study on mobility degradation in graphene field effect transistor (GFET)** / YOO Jung-woo, MODEPALLI Vijaykumar, JIN Mi-Jin, PARK Jungmin, JO Jun-Hyeon(울산과학기술대학교, 기계신소재공학부)

P4-E109

**광자극발광 분광 측정 장치의 개발** / 박창영, 정기수, 장인수<sup>1</sup>, 이정일<sup>1</sup>, 김장렬<sup>1</sup>(경상대학교, 물리학과. <sup>1</sup>한국원자력연구원)

P4-E110

**The Electrical Properties of Thermally Reduced Multilayer Graphene Oxide** / BAEK Seung Jae, PARK Min, KIM Byung Hoon<sup>1</sup>, PARK Yung Woo(Seoul National University. <sup>1</sup>Incheon University)

P4-E111\*

**Weak localization effect in chemical vapor deposited graphene** / 김남희, 박세란<sup>1</sup>, 이준성, 이상준, 김홍석, 이정오<sup>1</sup>, 도용주(고려대학교, 디스플레이 이반도체물리학과. <sup>1</sup>한국화학연구원)

P4-E112\*

**Impedance Spectroscopy Analysis of the Switching Mechanism of Graphene Oxide Resistive Switching Memory** / HO NHU Thuy, YONG SOO Kim(Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan)

P4-E113\*

**Free-sanding rugate 다공성 실리콘을 이용한 수증 용존기체량 감지 센서의 제작과 특성** / 이용배, 김혁기, 이주현, 이기원(공주대학교, 물리학과)

P4-E114\*

**Searching for the Possibility of Optical Investigation on Electric-Double-Layer Transistors** / OH Ji Seop, KIM Minu, SOHN Chang Hee, NOH Tae Won(Center for Functional Interfaces of Correlated Electron Systems, Institute for Basic Science, and Department of Physics & Astronomy, Seoul National University, Seoul 151-747. Korea)

P4-E115\*

**Photocurrent spectroscopy of resistive switching Pt/Nb : STO Schottky junction** / 김윤정, 김해리, 이은송이, 김동욱(이화여자대학교, 물리학과)

P4-E116\*

**Reversible p-doping of graphene activated by deep ultraviolet light** / IQBAL Muhammad Zahir, IQBAL Muhammad Waqas, 엄종화(세종대학교, 물리학과)

P4-E117\*

**Reversible p-type doping of lithographically patterned nanoconstriction graphene devices** / IQBAL Muhammad Waqas, IQBAL Muhammad Zahir, 엄종화(세종대학교, 물리학과)

## SESSION P4

플라스마물리학분과회  
포스터 발표

2013년 4월 26일 금요일 11:00 - 12:45

장소: 포스터발표장

P4-H036

**DPA and Gas Production Rate for the D-D Nuclear Fusion Reaction in the PFC** / LEE Bo-Young, OH Joo-Hee<sup>1</sup>, KIM Dong-Woo, KO Seung-Kook, LEE Hee-Seock<sup>1</sup>(Department of Physics, University of Ulsan. <sup>1</sup>Pohang Accelerator Laboratory, POSTECH)

P4-H037\*

**Parameter dependency of pinch in toroidal momentum transport of tokamaks** / YANG SeongMoo, NA D.H., YOON E.S.<sup>1</sup>, HAHM T.S., NA Yong-Su(Seoul National University, Seoul, Korea. <sup>1</sup>Korea Advanced Institute of Science and Technology, Daejeon, Korea)

P4-H038

**Development of a Doppler Reflectometer for the Density Fluctuation Diagnostics at KSTAR** / LEE Kyu-Dong, SEO Seong Heon, PARK Jin Hyung, XIAO Weiwen, KIM Yong Seon, KIM Jayhyun(National Fusion Research Institute)

P4-H039

**Real Time Polarization Monitoring System for KSTAR 170 GHz ECRH/ECCD Wave** / JOUNG Mi, KUBO Shin<sup>1</sup>, JEONG jinhyun, HAN Wonsoon, RHEE inhyuk, BAE young-soon(국가핵융합연구소, <sup>1</sup>NIFS)

P4-H040

**Motional Stark Effect diagnostics for KSTAR** / CHUNG Jinil, KO J., HOWARD J.<sup>1</sup>, MICHAEL C.<sup>1</sup>, DE BOCK M.<sup>2</sup>(National Fusion Research Institute. <sup>1</sup>Australian National University. <sup>2</sup>Eindhoven University of Technology)

P4-H041

**Tearing and Locked mode Evolutions in KSTAR** / LEE Sang Gon, YOO Jeong Won(연립대학원대학교, 국가핵융합연구소, 핵융합 및 플라스마 학과)

P4-H042

**자기장 재결합에서 전기장의 생성 요소 분석** / 민병훈, 김창배(송실대학교)

P4-H043

**High-Power Long-Pulse Operation of KSTAR Klystron** / 김지현, 박승일<sup>1</sup>, 배영순<sup>1</sup>, 남궁원, 조무현(PAL. <sup>1</sup>NFRI)

P4-H044\*

**Detachment Modelling using SOLPS4.3 for the heat flux**

**mitigation** / SHIM Seung-Bo, AHN Joon-Wook<sup>1</sup>, KOTOV Vladislav<sup>2</sup>, REITER Detlev<sup>3</sup>, HAN Hyunsun<sup>3</sup>, KIM Jin Yong<sup>3</sup>, HONG Suk-Ho<sup>3</sup>, LEE Hae June(Pusan National University, <sup>1</sup>Oak Ridge National Laboratory, <sup>2</sup>Fz-Juelich, <sup>3</sup>NFRI)

#### P4-H045

**핵융합재료내의 기체정량해석을 위한 Thermal Desorption Analyser 제작과 기초실험** / 김희수, 이석관, 온연길, 변재덕, 노승정, 권진중<sup>1</sup>, 박준규, 이철의(단국대학교 죽전 센트로 캠퍼스 응용물리학과, 용인 448-701, <sup>1</sup>고려대학교 안암캠퍼스 물리학과, 서울 136-701)

#### P4-H046

**Behavior of Mobilizable Dust Particles and Prediction for ITER** / KIM Kyung-Rae, HONG Suk-Ho<sup>1</sup>, NAM Yong-Un<sup>2</sup>, JUNG JinIl<sup>2</sup>, KIM Woong-Chae<sup>2</sup>(National Fusion Research Institute (NFRI) & University of Science and Technology (UST), <sup>1</sup>National Fusion Research Institute (NFRI) & Hanyang University, Department of Electrical Engineering & University of Science and Technology (UST), Department of Nuclear Fusion and Plasma Science, <sup>2</sup>National Fusion Research Institute (NFRI))

#### P4-H047\*

**Ni에 대한 수소 및 중수소 누설거동 기초실험** / 온연길, 이석관, 이주호, 김희수, 노승정(단국대학교 죽전 센트로 캠퍼스 응용물리학과, 용인 448-701)

#### P4-H048

**Pedestal profile evolution at the LH transition in KSTAR** / KO Won-Ha, SEO S.H., LEE J.H., LEE K.D., NAM Y.U., LEE H., OH S., JEON Y.M., YOON S.W., KIM J.Y., BAE Y.S., KO S.H., DIAMOND P.H.<sup>1</sup>, KWON J.M.<sup>2</sup>, IDA K.<sup>3</sup>(NFRI, <sup>1</sup>WCI center in NFRI, CMTFO and CASS, UCSD, USA, <sup>2</sup>WCI center in NFRI, <sup>3</sup>NIFS)

#### P4-H049

**KSTAR에서 IRVB 진단장치의 설치 및 첫 결과** / SEO dongcheol, PETERSON Byron J.<sup>1</sup>, MUKAI Kirofumi<sup>1</sup>, SANO Ryuichi<sup>2</sup>(국가핵융합연구소, <sup>1</sup>National Institute for Fusion Science, <sup>2</sup>Graduate school of engineering, Kokkaido University)

#### P4-H050

**분자 효과가 고려된 중수소 Collisional-Radiation model을 이용한 플라즈마 물질 진단** / 박경득, 최영선, 이원욱, 오차환, 손수환<sup>1</sup>, 나훈균<sup>2</sup>(한양대학교 물리학과, <sup>1</sup>한양대학교 자연과학연구소, <sup>2</sup>한국핵융합연구소)

#### P4-H051

**KSTAR Thomson scattering measurement result in 2012** / LEE J.H., OH S, LEE K.D., KIM K.P., KO J.S., WI H.M., KIM Y.S., YAMADA I.<sup>1</sup>, YASUHARA R.<sup>1</sup>, NARIHARA K.<sup>1</sup>, HATAE T.<sup>2</sup>, ONO T.<sup>3</sup>, KSTAR Team<sup>4</sup>(National Fusion Research Institute (NFRI), <sup>1</sup>National Institute for Fusion Science (NIFS),

<sup>2</sup>Japan Atomic Energy Agency (JAEA), <sup>3</sup>Japan Atomic Energy Agency(JAEA).

<sup>4</sup>National Fusion Research Institute(NFRI))

#### P4-H052\*

**Proton-aided light ion generation for fast ignition via short-pulse laser interaction with a coupled plasma target** / SHIN SangYun, SEO JuTae, HAHN SangJune(Department of Physics, Chung-Ang University, Seoul 156-756, Republic of Korea)

#### P4-H053

**액체 내에 적용 가능한 바이오 플라즈마 소스 개발과 특성 연구** / 임승주, 민부기, 오현주<sup>1</sup>, 김성희<sup>1</sup>, 이종용<sup>2</sup>, 강승언<sup>1</sup>, 최은하(광운대학교 플라즈마바이오 디스플레이학과, <sup>1</sup>광운대학교 전자물리학과, <sup>2</sup>광운대학교 교양학부)

#### P4-H054\*

**대기압 플라즈마에 의한 H460 (Lung Cancer Cell)의 광학적 특성 측정** / 박대훈, 김용희, 유영호, 백구연, 심건보, 엄환섭, 최은하(광운대학교 대학원 전자물리학과)

#### P4-H055

**생물분야 적용위한 플라즈마 집속장치의 기체압력별 극자외선 특징 분석** / 김진한, 이진영, 김성희, 최은하(광운대학교, 전자물리학과)

#### P4-H056

**산화물 TFT 박막 증착을 위한 ECR 플라즈마 기반 스퍼터 장비 개발** / 김성봉, 유석재, 이희재<sup>1</sup>, 조무현<sup>1</sup>, 안병철<sup>2</sup>, 노용석<sup>2</sup>(국가핵융합연구소, <sup>1</sup>포항공과대학교, <sup>2</sup>아바코)

#### P4-H057\*

**저온 대기압 플라즈마 제트를 이용한 미백효과** / 심건보, 김용희, 박대훈, 이채복, 최혜숙<sup>1</sup>, 김경남<sup>1</sup>, 엄환섭, 최은하(광운대학교, <sup>1</sup>연세대학교)

#### P4-H058

**Study of Plasma Generation and Optical Diagnostics in Liquid by High Voltage Pulse System** / PARK Ji hoon, HONG Young June<sup>1</sup>, KIM Yong hee, PARK Bong sang<sup>2</sup>, JEON Su nam<sup>2</sup>, CHOI Eun ha<sup>3</sup>(Department of Electrophysics, Kwangwoon University, <sup>1</sup>Korea Atomic Energy Research Institute, <sup>2</sup>PDP Research Center, Kwangwoon University, <sup>3</sup>Department of Electrophysics, Kwangwoon University)

#### P4-H059

**알루미늄이 첨가된 산화카드뮴의 입자성장에 관한 연구** / 이봉주, 양소명, 정진(조선대학교 물리학과)

#### P4-H060

**Generation of OH Radicals by using Hydrogen Peroxide in**

**underwater Capillary Discharge** / AHMED MUHAMMAD WAQAR(JEJU NATIONAL UNIVERSITY, DEPT. OF NUCLEAR AND ENERGY ENGINEERING)

**P4-H061**

**Microwave Plasma Torch Abatement of NF3** / KANG Min Ho, NA Young Ho, UHM Han Sup(Department of Electrophysics, Kwangwoon University)

**P4-H062**

**Heat Flux of PFC during 2010~2012 KSTAR Campaign** / BANG Eunnam, HONG Sukho, KIM Kyungmin, KIM Hongtack, KIM Hakkun, LEE Kunsu, YANG H.Y.(NTRI)

**P4-H063\***

**Comparative study of argon/helium slit-type microwave atmospheric pressure plasma devices** / 강성길, 이현욱, 김명수, 최정해, 이재구(포항공과대학교)

**P4-H064**

**Abnormally High Electron Heating in Pulsed Radio Frequency Atmospheric Microplasmas** / 권형철, 원임희, 김호영, 강성길, 이현우, 이재구(포항공과대학교)

**P4-H065**

**Electrical and structural properties of Al-doped zinc oxide films** / LEE Bong Ju, JEONG Jin(Department of Physics, Chosun University)

**P4-H066**

**A STUDY OF ABNORMAL GRAIN GROWTH FOR SnO<sub>2</sub> THIN FILMS** / JEONG Jin, LEE Bong Ju(Department of Physics, Chosun University)

## SESSION P4

광학 및 양자전자학분과회  
포스터 발표

2013년 4월 26일 금요일 11:00 - 12:45

장 소 : 포스터발표장

**P4-I024\***

**Free-Form Lens Design for Rectangular Illuminance Distribution** / 강은경, 김현지, 황보창권(인하대학교, 물리학과)

**P4-I025\***

**생물 세포의 1차원 기하구조 변화를 유도하는 광학 랩온어칩 시스템** / 이성래, 전표진, 임성일, 오경환(연세대학교 물리학과)

**P4-I026\***

**Effect of laser pulse duration on the laser-induced breakdown detection of nanoparticles in aqueous solution** / 허선우, 조혜륜, 정의창, 고도경(Department of Physics and Photon Science, GIST, 'Nuclear Chemistry Research Division, KAERI)

**P4-I027**

**Mixing 성능향상을 위한 Lensed rod** / 이규형, 강은경, 김현지(인하대학교)

**P4-I028**

**2-파장 DHM 을 이용한 비구면 렌즈의 3차원 측정 연구** / 유영훈, 신상훈(제주대학교, '(주) 미토스)

**P4-I029**

**Luminous Efficiency in Phosphor-Converted White-light-emitting Diodes Fabricated Using Open Remote Method** / BARK Minyoung, HAN Sangwook, JEONG Junho(Dong-A University, Department of Materials Physics)

**P4-I030\***

**High ellipticity와 high effective index contrast 유도 기반 highly birefringent microfiber 연구** / 윤민석, 신명준, 한영근(한양대학교, 물리학과)

**P4-I031\***

**Switchable dual wavelength erbium-doped fiber laser with ultra wide switching range covered in C- and L-band** / 안승빈, 김현주, 한영근(한양대학교, 물리학과)

**P4-I032\***

**이중 편광 시간지연 효과 기반 초고속 주파수 가변 마이크로파 포토닉 필터** / 김선덕, 윤민석, 김성재, 한영근(한양대학교, 물리학과)

P4  
포  
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세  
션



P4-I033\*

**Polarization Dependence Enhanced Optical Transmission through Polygonal Plasmonic Apertures** / NAZARI tavakol, HOSSEINZADEH KASSANI Sahar, KHAZAEINEZHAD Reza, OH Kyunghwan(연세대학교 물리학과)

P4-I034

**Fabrication and characterization of TiO<sub>2</sub> Inverse Opal structured 3D Photonic crystal** / 한철웅, 오차환(한양대학교)

P4-I035

**GaN 기반 발광다이오드의 온도에 따른 효율 특성 측정 및 분석** / 류근환, 김현중, 양원보, 류한열(인하대학교 물리학과)

P4-I036

**InGaN 기반 청색 및 녹색 발광다이오드의 광기전력 효과 특성 측정 및 분석** / 김현중, 류근환, 양원보, 류한열(인하대학교 물리학과)

P4-I037\*

**FRET 현상을 통한 이온 (K<sup>+</sup>, Mg<sup>2+</sup>)의 종류에 따른 G-사중체(G-quadruplex) 구조 형성 및 분석** / 구분홍, 김수용, 김석원(KAIST, 물리학과, <sup>1</sup>울산대, 물리학과)

P4-I038\*

**FCS를 이용한 DNA의 구조 변화에 따른 확산 계수 변화에 관한 연구** / 김만중, 김수용, 김석원(KAIST, 물리학과, <sup>1</sup>울산대, 물리학과)

P4-I039\*

**FCS를 이용한 환경변화에 따른 Quadruplex의 정량적 성질 변화 측정** / 이동근, 김수용, 김석원(KAIST, 물리학과, <sup>1</sup>울산대, 물리학과)

P4-I040\*

**Long Working Distance Thermal Lensing Imaging \_ a Feasibility Study** / JUNG SeokHyun, KIM Soo Yong, KIM Sok Won<sup>1</sup>, KAO Fu-Jen<sup>2</sup>(KAIST, Department of Physics. <sup>1</sup>University of Ulsan, Department of Physics. <sup>2</sup>Yang-Ming University, Institute of Biophotonics)

P4-I041\*

**Coherent anti-Stokes Raman scattering (CARS) 분광 현미경과 Second harmonic generation (SHG) 현미경을 이용한 간 섬유화(hepatic fibrosis) 진단 연구** / 이장혁, 김진선, 김종철<sup>1</sup>, 태기웅<sup>1</sup>, 오명규<sup>2</sup>, 고도경(광주과학기술원, 물리광과학과, <sup>1</sup>광주과학기술원, 신소재공학부, 나노바이오 재료전자공학과, <sup>2</sup>광주과학기술원, 고등광기술연구소)

P4-I042

**회절격자 기반의 광단층영상기법 성능 향상을 위한 Background noise**

**제거방법: Proof-Of-Concept 실험** / 최은서, 이승석, 김주하, 김현식, 박형주(<sup>1</sup>조선대학교, 물리학과, <sup>2</sup>전남대학교 의공학협동과정)

P4-I043

**측광방식의 LED조명시스템에서 도광판의 산란패턴** / 신용진, 이승석, 최은서(<sup>1</sup>조선대학교, 물리학과)

P4-I044\*

**Development of 1-kHz High-order Harmonic Soft X-ray Source for Coherent Diffraction Imaging** / SON Joon-Gon, IQBAL Mazhar, SEO Okkyun<sup>1</sup>, CHOI Jungwon<sup>1</sup>, KIM Hyung Taek<sup>2</sup>, KANG Hyon Chol<sup>3</sup>, NOH Do Young(Department of Physics and Photon Science, GIST, Gwangju, Korea. <sup>1</sup>School of Materials Science and Engineering, GIST, Gwangju, Korea. <sup>2</sup>Ultra-Intense Laser Laboratory, Advanced Photonics Research Institute, GIST, Korea. <sup>3</sup>Department of Advanced Materials Engineering, Chosun University, Gwangju, Korea)

P4-I045\*

**탄소나노튜브 네트워크 박막을 이용한 테라헤르츠파 메타물질 제작** / 홍정택, 박세준, 박지용, 이순일, 안영환(아주대학교 물리학과)

P4-I046\*

**테라헤르츠파 메타물질을 이용한 고감도 미생물 검출법** / 박세준, 홍정택, 손병희, 안영환(아주대학교 물리학과)

2013년 4월 26일 금요일 11:00 - 12:45

장소: 포스터발표장

## P4-K050

**Syudy on exciton-phonon coupling and free excitons energy of CdS/GaAs epilayers grown by hot wall epitaxy / HONG Kwangjoon**(Department of Physics, Chosun University)

## P4-K051

**Optimum conditions of growth on p-type photoconductive CuInSe<sub>2</sub> layers and their application in n-CdS/p-CuInSe<sub>2</sub> solar-cells / HONG Kwangjoon**(Department of Physics, Chosun University)

## P4-K052

**Optical and photocurrent spectroscopy properties of photoconductive CdGa<sub>2</sub>Se<sub>4</sub> layers / HONG Kwangjoon**(Department of Physics, Chosun University)

## P4-K053

**Crystal field splitting and energy bandgap energy from photocurrent signal in CdIn<sub>2</sub>S<sub>4</sub> epilayers / HONG Kwangjoon**(Department of Physics, Chosun University)

## P4-K054

**Lattice constants and mobility properties for MgGa<sub>2</sub>Se<sub>4</sub> epilayers / HONG Kwangjoon**(Department of Physics, Chosun University)

## P4-K055

**Free excitation energy obtained from photoluminescence measurement for CuAlSe<sub>2</sub> epilayers / YOU Sangha, HONG Kwangjoon**(Department of Physics, Chosun University)

## P4-K056

**Studies on Optimum conditions of growth and temperature dependence of mobility for ZnGa<sub>2</sub>Se<sub>4</sub> epilayers / HONG Kwangjoon**(Department of Physics, Chosun University)

## P4-K057

**DLTS 및 AS를 이용한 CIGS의 defect level 연구 / 양제은, 유정수, 박효원, 정인승, 남윤성, 정광호, 백경선, 장수경**(연세대학교 물리학과)

## P4-K058\*

**Dielectric Function and Transition Energy of Amorphous and Crystalline Ge<sub>1-x</sub>Te<sub>x</sub> Thin Films / 박준우, 소현선, 임형광, 정두석, 정병**

기, 이호선(경희대학교 응용물리학과, 한국과학기술연구원)

## P4-K075\*

**AgNO<sub>3</sub>를 도핑하여 제작한 n형 그래핀의 구조적 및 광학적 특성 연구 / 신동희, 이재성, 김종민, 김주환, 이경원, 김성, 최석호**(경희대 응용물리학과)

## P4-K059\*

**Structural and Optical Properties of ZnO-ZnS Alloying Thin Films by Pulsed Laser Deposition / CHOI Hai In, KIM Sang Wook, KIM Won Jeong, LEE Myang Hwan<sup>1</sup>, KIM Da Jeong<sup>1</sup>, LEE Woong<sup>1</sup>, SONG Tae Kwon<sup>1</sup>, KIM Myong-Ho<sup>1</sup>, DO Dalhyun<sup>2</sup>**(Changwon National University, Department of Physics. <sup>1</sup>Changwon National University, School of Nano & Advanced Material Engineering. <sup>2</sup>Keimyung University, Department of Advanced Materials Engineering)

## P4-K060

**SnS 촉매를 이용한 CdS 나노선의 성장 / 송만석, 임용진, 김용**(동아대학교 신소재물리학과)

## P4-K061

**Optical and electrical properties of the p-type Li-doped ZnO thin films / GUOJIE LI, JOO HYUN LEE, SAES BYUL KIM, JUNG HYUN JEONG, BYUNG CHUN CHOI**(부경대학교 물리학)

## P4-K062

**Dy<sup>3+</sup> 이온이 도핑된 ZnWO<sub>4</sub> 분말과 박막의 제조와 특성 / 전용일, 조신희**(신라대학교 신소재공학과)

## P4-K063

**진공증착법으로 제작한 ZnTe<sub>0.37</sub>Se<sub>0.63</sub> 박막의 구조 및 광학적 특성 / 이정주, 윤은정, 한동헌, 김건호, 박창영**(경상대학교, 물리학과)

## P4-K064

**Properties of gold and aluminum cantacts for CdMnTe crystals / KIM Jaehak, PARK Seungmin, AHN Heejin, HWANG younghun<sup>1</sup>, UM youngho**(Department of Physics, University of Ulsan, Ulsan 680-749, Korea. <sup>1</sup>Basic Science Research Institute, Ulsan, Ulsan 680-749, Korea)

## P4-K065\*

**Pressure dependence on the energy band gap of gamma-In<sub>2</sub>Se<sub>3</sub> / PARK Hyeonjeong, CHOI In Hwan**(Department of Physics, Chung-Ang University)

## P4-K066

**Substrate effect on structural properties for CdMnTe thin films grown by magnetron co-sputtering / AHN Heejin, PARK Seungmin,**

UM youngho(Department of Physics, University of Ulsan, Ulsan 680-749, Korea)

**P4-K067**

**Mn-doped ZnS 단결정의 광학적 특성 /** 최성휴, 방태환, 서동주<sup>1</sup>(조선대학교, 물리학과, <sup>1</sup>조선대학교, 물리교육학과)

**P4-K068\***

**Study on the properties of ZnO:B/p-Si structured heterojunction diode as a photodetector /** LEE Sanghyup, CHOI In-Hwan(Chung-Ang University , Department of Physics)

**P4-K069**

**Temperature dependence of radiative recombination time in ZnO nanorods /** 김광석, 이우진, 박성호<sup>2</sup>, KIBA Takayuki<sup>3</sup>, MURAYAMA Akihiro<sup>3</sup>(부산대학교, 물리교육과, <sup>1</sup>부산대학교, 물리학과, <sup>2</sup>부산대학교, 첨단소재물성협동과정, <sup>3</sup>Hokkaido University, Graduate School of Information Science and Technology)

**P4-K070**

**Transmission Electron Microscopy of ZnO Thin Films Grown at RT /** JANG Young rae(Korea Atomic Energy Research Institute, Neutron Science Division)

**P4-K071\***

**Dopant activation analysis of Lithium-doped ZnO nanowires prepared by Hydro-thermal process /** LEE Sanghyo, KO Wonbae, HONG Jinpyo(Department of Physics, Hanyang University)

**P4-K072**

**Electrical properties of ZnO film with In<sub>2</sub>O<sub>3</sub> nanoparticles during 0.2 MeV electron beam irradiations /** LEE Dong Uk, KIM Dongwook, KIM Eun Kyu, PAK Hyung Dal<sup>1</sup>, LEE Byung Cheol<sup>1</sup>(Department of Physics and Quantum-Function Research Laboratory, Hanyang University, Seoul 133-791. <sup>1</sup>Radiation Instrumentation Research Division, Korea Atomic Energy Research Institute, Daejeon 305-353)

**P4-K073**

**Negative Photoresponse Related with Defect States in n-ZnO/p-Si Heterojunction /** 조성국, 이동욱, 전지아, 김은규(한양대학교, 물리학과)

**P4-K074\***

**Recombination dynamics of localized excitons in self-assemble CdTe/ZnTe quantum dots /** MAN Minh Tan, 임상엽<sup>1</sup>, 이홍석(제주대학교, 물리학과, <sup>1</sup>광주과학기술원, 고등광기술연구소)