

The 21<sup>st</sup> Korean Conference on Semiconductors  
**제21회 한국반도체학술대회**  
February 24–26, 2014 / Hanyang University, Seoul, Korea

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**[WP1] Poster 2**

Date	Feb. 26, 2014 (Wed.)
Place	Room I / 제1공학관 408호 (# 408, Engineering Building I)

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- WP1-1 C/H pattern 의 Photon Shot Noise Effect 정량화를 위한 Stochastic Simulation**  
저자: 김정식<sup>1</sup>, 이재욱<sup>2</sup>, 홍성철<sup>2</sup>, 이승민<sup>2</sup>, 정시준<sup>3</sup>, 안진호<sup>1,2,3</sup>  
소속: <sup>1</sup>한양대학교 나노반도체공학과, <sup>2</sup>한양대학교 신소재공학과, <sup>3</sup>한양대학교 나노융합학과
- WP1-2 The Suggestion of Half-Tone Phase-Shift Mask for High-NA EUVL**  
저자: Seongchul Hong<sup>1</sup>, Seejun Jeong<sup>2</sup>, Jae Uk Lee<sup>1</sup>, Seung Min Lee<sup>1</sup>, Jung Sik Kim<sup>3</sup>, and Jinho Ahn<sup>1,2,3</sup>  
소속: <sup>1</sup>Department of Materials Science and Engineering, Hanyang University, <sup>2</sup>Department of Convergence NanoScience, Hanyang University, <sup>3</sup>Department of Nanoscale Semiconductor Engineering, Hanyang University
- WP1-3 Study of Etching Properties of Nickel Absorber for EUV Mask**  
저자: Seejun Jeong<sup>1</sup>, Seongchul Hong<sup>2</sup>, Jae Uk Lee<sup>2</sup>, Seung Min Lee<sup>2</sup>, Jung Sik Kim<sup>3</sup>, and Jinho Ahn<sup>1,2,3</sup>  
소속: <sup>1</sup>Department of Convergence NanoScience, Hanyang University, <sup>2</sup>Department of Materials Science and Engineering, Hanyang University, <sup>3</sup>Department of Nanoscale Semiconductor Engineering, Hanyang University
- WP1-4 Electron Beam Lithography on Flexible Polymer Substrates using Metal Discharging Layer**  
저자: Joonhyung Cho<sup>1</sup>, Hyungyu Lee<sup>1</sup>, Eunsuk Choi<sup>1</sup>, Soonhyung Hwang<sup>1</sup>, Hyunsuk Chun<sup>1</sup>, and Seung-Beck Lee<sup>1,2</sup>  
소속: <sup>1</sup>Department of Electronic Engineering, Hanyang University, <sup>2</sup>Institute of Nano Science and Technology, Hanyang University
- WP1-5 Comparison of High Density Plasma Etching of MgO Thin Films using Cl<sub>2</sub>, CH<sub>3</sub>OH and CH<sub>4</sub> Plasmas**  
저자: Il Hoon Lee, Su Min Hwang, Adrian Adalberto Garay, Ji Hyun Choi, and Chee Won Chung  
소속: Department of Chemical Engineering, Inha University
- WP1-6 Dry Etching of Magnetic Tunnel Junctions Stacks using a H<sub>2</sub>O/CH<sub>3</sub>OH based Inductively Coupled Plasma**  
저자: Il Hoon Lee, Adrian Adalberto Garay, Su Min Hwang, Ji Hyun Choi, and Chee Won Chung  
소속: Department of Chemical Engineering, Inha University
- WP1-8 Mask Heating량 제어를 통한 Overlay Margin 확보**  
저자: 김장선, 최진필, 강영석, 하현환  
소속: Samsung Electronics Co., Ltd.
- WP1-9 Plasma Enhanced Atomic Layer Deposition of Low Temperature Silicon Nitride using Ultra Conformal Silicon Precursors with New Chemical Structure Design**  
저자: 장세진, 이상도, 김종현, 김도연, 조성우, 석장현, 이상익, 김명운  
소속: (주)디엔에프

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- WP1-10 Analytical Investigation on Electrical Properties of Atomic Layer Deposited Amorphous Zinc Tin Oxide Thin Film**  
저자: Jun Shik Kim, Un Ki Kim, Eun Suk Hwang, Lee Seung-Jun, and Cheol Seong Hwang  
소속: Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University
- WP1-11 Large-Area Fabrication of Vertically Oriented ZnO Hexagonal Nanotube-Rod Hybrids Applying a Two-Step Growth Method**  
저자: Sungwoong Kim, Sun Sang Kwon, Won Woo Lee, and Won Il Park  
소속: Division of Materials Science and Engineering, Hanyang University
- WP1-12 Structural and Perpendicular Magnetic Anisotropy Features of Novel [CoO/Pd]<sub>n</sub>/[Co/Pd]<sub>m</sub> Multilayer Matrix for the STT-MRAM Applications**  
저자: JaBin Lee, GwangGuk An, SeungMo Yang, JaeHong Kim, and JinPyo Hong  
소속: Department of Physics, Hanyang University
- WP1-13 Quality Improvement of Epitaxial Graphene Grown on 4H-SiC Surface by Molybdenum Plate Capping during UHV Annealing**  
저자: Han Byul Jin<sup>1</sup>, Youngeun Jeon<sup>1</sup>, Sungchul Jung<sup>2</sup>, Hun Han Yoon<sup>1</sup>, Hyun Suk Kang<sup>3</sup>, Byung Cheol Lee<sup>3</sup>, Jae-Hyeon Ko<sup>4</sup>, Hyung-Joon Shin<sup>5</sup>, Jung-Woo Yoo<sup>5</sup>, Sung Youb Kim<sup>5</sup>, Soon-Yong Kwon<sup>5</sup>, Daejin Eom<sup>6</sup>, and Kibog Park<sup>1,2</sup>  
소속: <sup>1</sup>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology, <sup>2</sup>Department of Physics, Ulsan National Institute of Science and Technology, <sup>3</sup>Korea Atomic Energy Research Institute, <sup>4</sup>Department of Physics, Hallym University, <sup>5</sup>School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology, <sup>6</sup>Korea Research Institute of Standards and Science
- WP1-14 Role of Oxygen-Doped Ta Spacer on the Enhanced Perpendicular Magnetic Anisotropy Features of CoFeB/MgO Interface for the STT-MRAM Applications.**  
저자: SeungMo Yang, JaBin Lee, GwangGuk An, JaeHong Kim, and JinPyo Hong  
소속: Department of Physics, Hanyang University
- WP1-15 Investigation of Leakage Current Mechanisms for Different Cap Layer on AlGaIn/GaN Schottky Diodes**  
저자: Minjun Kim<sup>1</sup>, Yoonhyung Kim<sup>1</sup>, and Jinsub Park<sup>1,2</sup>  
소속: <sup>1</sup>Department of Electronics and computer Engineering, Hanyang University, <sup>2</sup>Department of Electronic Engineering, Hanyang University
- WP1-16 GaN 열분해 특성을 이용한 자립형 GaN 기판 제작에 관한 연구**  
저자: 김시내<sup>1</sup>, 이현재<sup>2</sup>, 김시영<sup>2</sup>, 구지은<sup>1</sup>, 장지호<sup>1</sup>  
소속: <sup>1</sup>한국해양대학교 응용과학과 반도체물리전공, <sup>2</sup>㈜판크리스탈

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- WP1-17 Enhancement of Light Extraction by Nanostructure Arrays on GaN-Based Vertical Light-Emitting Diode**  
저자: Taejoon Son, Seunghwan Yeon, and Jinsub Park  
소속: Department of Electronics & Computer Engineering, Hanyang University
- WP1-18 Polar and Non-Polar Single InGaN/GaN MQW Nanowire LED**  
저자: Yong-Ho Ra, San Kang, Hee-Il Yoo, Seung-Kyu Lee, Il-Seok Song, and Cheul-Ro Lee  
소속: School of Advanced Materials Engineering, Chonbuk National University
- WP1-19 The Growth of GaSb on Silicon (100) with AlGaSb/GaSb SPS Buffer Layers**  
저자: Kyu-Hyoek Yoen<sup>1,2</sup>, Eun-Hye Lee<sup>2</sup>, Min-Han Bae<sup>2</sup>, Jun-Young Kim<sup>2</sup>, Hye-Joung Jang<sup>3</sup>, and Jin-Dong Song<sup>1,2</sup>  
소속: <sup>1</sup>Nano-electronic Engineering, University of Science & Technology, <sup>2</sup>Center for Opto-Electronic Convergence Systems, Korea Institute of Science and Technology, <sup>3</sup>Advanced Analysis Center, Korea Institute of Science and Technology
- WP1-20 Single Nanowire Diode Fabricated by p-n Junction GaN Nanowire**  
저자: Ji Hyeon Park, Jae Kwan Sim, Yong Hyun Choi, Eun A Cho, Dae Yong Um, and Cheul-Ro Lee  
소속: School of Advanced Materials Engineering, Chonbuk National University
- WP1-21 Defects States and Dark Currents in InAs/GaAs Quantum Dot Solar Cell Grown by Molecular Beam Epitaxy**  
저자: Kyoung Su Lee<sup>1</sup>, Dong Uk Lee<sup>1</sup>, Eun Kyu Kim<sup>1</sup>, and Won Jun Choi<sup>2</sup>  
소속: <sup>1</sup>Quantum-Function Research Laboratory and Department of Physics, Hanyang University, <sup>2</sup> Opto-Electronic Convergence System, Korea Institute of Science and Technology
- WP1-22 Optical Characteristics of Indium Tin Oxide Thin Films Co-Evaporated with Magnesium Fluoride**  
저자: Gyujin Oh and Eun Kyu Kim  
소속: Department of Physics, Hanyang University
- WP1-23 Design and Analysis of Sub-10nm Junctionless Fin-Type Field-Effect Transistors**  
저자: Sung Yoon Kim<sup>1</sup>, Jae Hwa Seo<sup>1</sup>, Gwan Min Yoo<sup>1</sup>, Young Jae Kim<sup>1</sup>, Hye Rim Eun<sup>1</sup>, Hye Su Kang<sup>1</sup>, Young-Woo Jo<sup>1</sup>, Seongjae Cho<sup>2</sup>, Jung-Hee Lee<sup>1</sup>, and In Man Kang<sup>1</sup>  
소속: <sup>1</sup>School of Electronics Engineering, Kyungpook National University, <sup>2</sup>Department of Electronics Engineering, Gachon University
- WP1-24 GOI Improvement of Novel Buried N-Type Capacitor**  
저자: Kyungmin Kim<sup>1,2</sup>, Ilseok Han<sup>1</sup>, Jeongho Cho<sup>1</sup>, Junggoo Park<sup>1</sup>, Sewoon Kim<sup>1</sup>, Jiyoung Huh<sup>1</sup>, Sungyoun Kim<sup>1</sup>, InWha Choi<sup>1</sup>, Sibum Kim<sup>1</sup>, and Hi-Deok Lee<sup>2</sup>  
소속: <sup>1</sup>SMS Product Engineering, Magnachip Semiconductor, <sup>2</sup>Department of Electronics Engineering, Chungnam National University

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- WP1-25 Analysis of 90nm RF CMOS Characteristics by Gate Layout Optimization**  
저자: Jong Keun Kim, Bong Woo Han, Hee Kyeong Yang, Myoung Jun Jang, In Wook Cho, and Kyung Dong Yoo  
소속: Technology Development in Image Development Group, SK hynix,
- WP1-26 Transfer-Printing the Micro-structure Devices on Flexible Substrates**  
저자: Kyu-Bong Choi and Jong-Ho Lee  
소속: Department of ECE and ISRC, Seoul National University
- WP1-27 On-State Resistance Instability of Antifuses during Read Operation**  
저자: Jae Hwan Han<sup>1</sup>, Hyunjin Lee<sup>2</sup>, Wansoo Kim<sup>2</sup>, Gyuhan Yoon<sup>1</sup>, and Woo Young Choi<sup>1</sup>  
소속: <sup>1</sup>Department of Electronic Engineering, Sogang University, <sup>2</sup>SK Hynix
- WP1-28 In-situ Hafnium Capping Process for 0.6 nm EOT on Ge Wafer**  
저자: 정원일<sup>1</sup>, 신윤상<sup>1</sup>, 이충호<sup>2</sup>, 손동균<sup>2</sup>, 조병진<sup>1</sup>  
소속: <sup>1</sup>KAIST 전기전자공학과, <sup>2</sup>삼성전자 S.LSI사업부
- WP1-29 Voltage Scaling of 3-D Stacked NAND Flash String with Vertical Single-Crystal Si Channel Epitaxially Grown on (100) Si-Substrate**  
저자: Wan-Gyu Lee<sup>1</sup>, Ho Seong Jeon<sup>1</sup>, Seung-Dong Yang<sup>2</sup>, Ga-Won Lee<sup>2</sup>, and Jeoung Woo Kim<sup>1</sup>  
소속: <sup>1</sup>Nano- materials and devices, National NanoFab Center, <sup>2</sup>Department of Electronics Engineering, Chungnam National University
- WP1-30 Characterization of Dielectric Relaxation and Reliability of High-k MIM Capacitor**  
저자: Ho-Young Kwak<sup>1</sup>, Seung-Yong Sung<sup>1</sup>, Hyuk-Min Kwon<sup>1</sup>, Sung-Kyu Kwon<sup>1</sup>, Jong-Kwan Shin<sup>1</sup>, Seong-Yong Jang<sup>1</sup>, Sun-Man Hwang<sup>1</sup>, Su Lim<sup>2</sup>, and Hi-Deok Lee<sup>1</sup>  
소속: <sup>1</sup>Department of Electronics Engineering, Chungnam National University, <sup>2</sup>Dongbu HiTek Semiconductor Inc.
- WP1-31 An Experimental Verification of a Scaled RC-Dominant Interconnect Line Model for High-Speed Wireline**  
저자: Jiwon Kim, Taehee Kim, Byungsub Kim, and Jeong-soo Lee  
소속: Department of Electrical Engineering, Pohang University of Technology and Science
- WP1-32 High Performance of Graphene Ion-Sensitive Field-Effect Transistors using a Solution-Processed Al<sub>2</sub>O<sub>3</sub> Sensing Membrane**  
저자: Tae-Eon Bae<sup>1</sup>, Jongwan Jung<sup>2</sup>, and Won-Ju Cho<sup>1</sup>  
소속: <sup>1</sup>Department of Electronic Materials Engineering, Kwangwoon University, <sup>2</sup>Institute of Nano and Advanced Materials Engineering, Sejong University

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- WP1-33 The Stability of Plug and Play Quantum Cryptography System with Double Phase Modulation Method**  
저자: Osung Kwon, Min Ki Woo, Min-Soo Lee, Byung Kwon Park, Il Young Kim, Yong-Su Kim, Sung Moon, and Sang-Wook Han  
소속: Center of Nano & Quantum Information Research, Korea Institute of Science and Technology
- WP1-34 Low Voltage Operation of an Electrostatically Driven Peristaltic Pump**  
저자: Pyohwan Hong<sup>1</sup>, Deaseung Pyo<sup>1</sup>, Jonghyun Lee<sup>1</sup>, Chanseob Cho<sup>1</sup>, and Bonghwan Kim<sup>2</sup>  
소속: <sup>1</sup>School of Eletronics Engineering, Kyungpook National University, <sup>2</sup>Department of Electronics Engineering, Catholic University of Daegu
- WP1-35 Effect of Microwave Annealing for Stability Improvement of Amorphous InGaZnO Thin-Film-Transistor Based SnO<sub>2</sub> Extended-Gate Field-Effect-Transistor**  
저자: In-Kyu Lee and Won-Ju Cho  
소속: Deparment of Electronic Materials Engineering, Kwangwoon University
- WP1-36 The Comparison of Noise Characteristics between Si and Pyrex Substrate in Solid-State Nanopore**  
저자: Kyeong Beom Park, Ashvani Kumar, Hyun-Mi Kim, and Ki-Bum Kim  
소속: Department of Materials Science and Engineering, Seoul National University
- WP1-37 Impedance Characteristics of GSG Electrodes for RLGC Modeling of Cell-Electrode Interface**  
저자: Jongmin Shin and Jong-Ho Lee  
소속: Department of ECE and ISRC, Seoul National University
- WP1-38 High Sensitive Ge Resistance Temperature Device by Adding Transition Metals**  
저자: Jiyoun Choi, Jeongyong Choi, Sungyoul Choi, Yooleemi Shin, and Sunglae Cho  
소속: Department of Physics, University of Ulsan
- WP1-39 An Accurate and Efficient Simulation Technique for FET-Type Biosensors**  
저자: Bongsik Choi, Jieun Lee, Dong Myong Kim, Dae Hwan Kim, and Sung-Jin Choi  
소속: School of Electrical Engineering, Kookmin University
- WP1-40 Characteristics of Robust Infra-Red Photodiode for Harsh Environments**  
저자: Dong-Hwan Jun<sup>1</sup>, Won-Kyu Park<sup>1</sup>, and Jong-In Song<sup>2</sup>  
소속: <sup>1</sup>Korea Advanced Nano-Fab Center, <sup>2</sup>School of Information and Communications, Gwangju Institute of Science and Technology
- WP1-41 The Shear Force Transfer Characteristics Dependent on the Height of Bio-Mimetic Fingerprint Structure for Tactile Sensor**  
저자: Hyunsuk Chun<sup>1</sup>, Eunsuk Choi<sup>1</sup>, Soonhyung Hwang<sup>1</sup>, Joonhyung Cho<sup>1</sup>, Hyungyu Lee<sup>1</sup>, and Seung-Beck Lee<sup>1,2</sup>  
소속: <sup>1</sup>Department of Electronic Engineering, Hanyang University, <sup>2</sup>Institute of Nano Science and Technology, Hanyang University

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- WP1-42 ITO와 금속 격자를 이용한 박막 태양 전지 효율 증대**  
저자: 허형준, 김상인  
소속: 아주대학교 전자공학부
- WP1-43 Influences of Cylindrical Micro-Patterned Ge Substrates on the Characteristics of the Ge Single-Junction Solar Cells**  
저자: Kangho Kim, Youngjo Kim, Nguyen Dinh Lam, and Jaejin Lee  
소속: Department of Electrical and Computer Engineering, Ajou University
- WP1-44 Particle Swarm Optimization of Grating Enhanced CIGS Solar Cell**  
저자: Tran Quyet Thang, Le Duy Khanh, and Sangin Kim  
소속: Department of Electrical and Computer Engineering, Ajou University
- WP1-45 Abnormal Electrical Transport Properties of Ferrocene-Alkanethiolate Molecular Electronic Devices on Rigid and Flexible Substrates**  
저자: Hyunhak Jeong, Dongku Kim, Hanki Lee, Wang-Taek Hwang, and Takhee Lee  
소속: Department of Physics and Astronomy, Seoul National University
- WP1-46 Multi-Level Non-Volatile Polymer Memory with Solution-Blended High k Ferroelectric Polymer Insulators for Low Voltage Operation**  
저자: Sun Kak Hwang, Insung Bae, Kang Lib Kang, Richard Hahnkee Kim, and Cheolmin Park  
소속: Department of Materials Science and Engineering, Yonsei University
- WP1-47 Optical and Electrochemical Properties of Metallic Nanostructured Materials**  
저자: Mi Jung, Chulki Kim, Taikjin Lee, Jae Hun Kim, Seok Lee, and Deokha Woo  
소속: Sensor System Research Center, Korea Institute of Science and Technology
- WP1-48 Hybrid Complementary Inverter Based on Organic / 2D Layered MoS<sub>2</sub> Thin Film Transistors**  
저자: Chulseung Jung, Yeonsung Lee, Junyeon Kwon, Yongbok Lee, and Sunkook Kim  
소속: Department of Electronics and Radio Engineering, Kyung Hee University
- WP1-49 Bistable Switching of Self-Assembled Photonic Crystal Devices**  
저자: Taejoon Park, Sunkak Hwang, Insung Bae, and Cheolmin Park  
소속: Department of Materials Science and Engineering, Yonsei University
- WP1-50 Gas Sensing Properties of Pt Nanoparticles Decorated ZnO-Branched Nanowires**  
저자: Hyoun Woo Kim, Yong Jung Kwon, and Hong Yeon Cho  
소속: Division of Materials Science and Engineering, Hanyang University
- WP1-51 Graphene Nano-Array Fabrication by Mussel-Inspired Directed Block Copolymer Self-Assembly**  
저자: Seokhan Park and Sang Ouk Kim  
소속: Department of Materials Science and Engineering, KAIST

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- WP1-52 Layer-by-Layer Growth of Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub> on h-BN via Van Der Waals Heteroepitaxy**  
저자: Hoseok Heo<sup>1,2</sup>, Kibum Kang<sup>1</sup>, Inchan Hwang<sup>1,3</sup>, and Moon-Ho Jo<sup>1,3</sup>  
소속: <sup>1</sup>Center for Artificial Low Dimensional Electronic Systems, Institute for Basic Science, Pohang University of Science and Technology, <sup>2</sup>Division of Advanced Materials Science, Pohang University of Science and Technology, <sup>3</sup>Department of Materials Science and Engineering, Pohang University of Science and Technology
- WP1-53 Electrical and Optical Properties of 2D Layered MoS<sub>2</sub> Thin Film Transistor**  
저자: Junyeon Kwon<sup>1</sup>, Yeonsung Lee<sup>1</sup>, Minjung Kim<sup>1</sup>, Hyunsung Moon<sup>1</sup>, Woong Choi<sup>2</sup>, and Sunkook Kim<sup>1</sup>  
소속: <sup>1</sup>Department of Electronics and Radio Engineering, Kyung Hee University, <sup>2</sup>School of Advanced Materials Engineering, Kookmin University
- WP1-54 Ultra-Thin Silicon Nanomembrane for Transparent and Flexible Transistor**  
저자: Houk Jang<sup>1,2</sup>, Wonho Lee<sup>2</sup>, and Jong-hyun Ahn<sup>2</sup>  
소속: <sup>1</sup>SKKU Advanced Institute of Nano Technology, Sungkyunkwan University, <sup>2</sup>School of Electrical and Electronic Engineering, Yonsei University
- WP1-55 High Sensitive and Flexible Tactile Sensors with a Driving Circuit for Robotics Application**  
저자: Min Hoon Park<sup>1</sup>, Houk Jang<sup>1</sup>, Han Wook Song<sup>3</sup>, Min Seok Kim<sup>3</sup>, and Jong-Hyun Ahn<sup>2</sup>  
소속: <sup>1</sup>School of Advanced Materials Science and Engineering, Sungkyunkwan University, <sup>2</sup>School of Electrical & Electronic Engineering, Yonsei University, <sup>3</sup>Korea Research Institute of Standards and Science
- WP1-56 Superhydrophobic Structures Fabricated by Texturing and PTFE Coating**  
저자: Deaseung Pyo<sup>1</sup>, Pyohwan Hong<sup>1</sup>, Jonghyun Lee<sup>1</sup>, Bonghwan Kim<sup>2</sup>, and Chanseob Cho<sup>1</sup>  
소속: <sup>1</sup>School of Electronics Engineering, Kyungpook National University, <sup>2</sup>Department of Electronics Engineering, Catholic University of Daegu
- WP1-57 Flexible Non-Volatile Ferroelectric Memory on Metal Wire Substrate**  
저자: Richard Hahnkee Kim, Sunkak Hwang, and Cheolmin Park  
소속: Department of Materials Science and Engineering, Yonsei University
- WP1-58 Enhancing the Electrical Contacts of MoS<sub>2</sub> Field Effect Transistor via Microwave Assisted Ag Nanoparticle**  
저자: Sang Jin Lee, Jong Mok Shin, Jae Sung Kim, and Gyu Tae Kim  
소속: School of Electrical Engineering, Korea University
- WP1-59 Transfer of Graphene Using Au and PMMA and Its Performance**  
저자: Jinwoo Choi, Jaehyun Park, Hyeji Kim, Won-jun Lee, and Jongwan Jung  
소속: Department of Nanotechnology and Advanced Materials Engineering, Sejong University



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- WP1-60    Controlled Growth of Ge/Si<sub>1-x</sub>Ge<sub>x</sub> Core/Shell Nanowires**  
저자: Byongju Kim, Sun-Wook Kim, Hyunchul Jang, Jeong-Hoon Kim, and Dae-Hong Ko  
소속: Department of Materials Science and Engineering, Yonsei University
- WP1-61    Interfacial Charge Density Measurement for Graphene Transistor using Discharge Current Analysis (DCA) Method**  
저자: 이재은<sup>1</sup>, 정욱진<sup>2</sup>, 이병훈<sup>2</sup>  
소속: School of Materials Science and Engineering, Gwangju Institute of Science and Technology
- WP1-62    High-Index Contrast Grating and Its Applications**  
저자: Jun Young Kim<sup>1,2</sup>, Kyu Hyoek Yoen<sup>1</sup>, Jihoon Kyhm<sup>1</sup>, Woon Cho Cho<sup>1</sup>, Hang Kyu Kang<sup>1</sup>, Soo Seok Kang<sup>1</sup>, Young Dong Kim<sup>1,2</sup>, and Jin Dong Song<sup>1</sup>  
소속: <sup>1</sup>Center for Opto-electronic Convergence, Korea Institute of Science and Technology, <sup>2</sup>Nano-optical Properties Laboratory and department of Physics, Kyung Hee University
- WP1-63    Polishing Characteristics of Supercritical Ceria Abrasive for STI CMP**  
저자: Jihoon Seo<sup>1</sup>, Jinok Moon<sup>1</sup>, Kijung Kim<sup>2</sup>, and Ungyu Paik<sup>1,2</sup>  
소속: <sup>1</sup>WCU Department of Energy Engineering, Hanyang University, <sup>2</sup>Department of Nanoscale Semiconductor Engineering, Hanyang University
- WP1-64    Printed Indium-Tin-Oxide Films for Various Sensor Applications**  
저자: Jieun Koo<sup>1</sup>, Youngji Cho<sup>1</sup>, Sangtae Lee<sup>2</sup>, Jung-Yeul Jung<sup>3</sup>, and Jiho Chang<sup>1</sup>  
소속: <sup>1</sup>Department of Applied Science, Korea Maritime and Ocean University, <sup>2</sup>Department of Mechatronics Engineering, Korea Maritime and Ocean University, <sup>3</sup>Ocean Science and Technology School, Korea Maritime and Ocean University
- WP1-66    Effect of Surface Morphology on Nano Embossing Ceria for CMP Performance**  
저자: Young-Hye Son, Hyun-Min Seung, and Jea-Gun Park  
소속: Department of Electronics Computer Engineering, Hanyang University
- WP1-67    Nucleation-Controlled Growth of Monolayer MoS<sub>2</sub> by Vapor Phase Transport**  
저자: SooHo Choi and Woochul Yang  
소속: Department of Physics, Dongguk University
- WP1-68    High Performance Transparent Flexible and Robust Graphene & h-BN Stacked Micro-Heater**  
저자: Tae-ho Kim, Kang Hyuck Lee, and Sang-Woo Kim  
소속: School of Advanced Materials Science and Engineering, Sungkyunkwan University



The 21<sup>st</sup> Korean Conference on Semiconductors  
**제21회 한국반도체학술대회**  
February 24–26, 2014 / Hanyang University, Seoul, Korea

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**[WP1] Poster 2**

<b>Date</b>	Feb. 26, 2014 (Wed.)
<b>Place</b>	Room I / 제1공학관 408호 (# 408, Engineering Building I)

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- WP1-69 Correlation between Structural and Electronic Properties of Grapheme Depending on Substrate Roughness**  
저자: Min Baik, DeukGong Yoon, PooReum Choi, SooHo Choi, Shaolin Zhang, and Woochul Yang  
소속: Department of Physics, Dongguk University
- WP1-70 기계식 박리법으로 분리된 Multilayer MoS<sub>2</sub>의 물리적 및 광학적 특성**  
저자: 추동일, 이동욱, 김은규  
소속: 한양대학교 물리학과
- WP1-71 Improvement in Photoluminescence of Thin-Film Phosphor using Double-Side Patterning**  
저자: Chul-Kyun Park<sup>1</sup>, Ki-Kang Kim<sup>1</sup>, Ki-Young Ko<sup>2</sup>, and Jinho Ahn<sup>1</sup>  
소속: <sup>1</sup>Department of Materials Science and Engineering, Hanyang University, <sup>2</sup>Korea Institute of Patent Information