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논문발표

[WP1] Poster 2

2017년 2월 15일 (수), 14:25-15:25  
Room 1 (다이아몬드 2, 3층)

[WP1] Poster 2

WP1-1	<p><b>벤젠을 이용한 그래핀의 저온 합성 및 구리/그래핀 배선 특성</b> 정윤빈, 손명우, 김기현, 함문호 광주과학기술원 신소재공학부</p>
WP1-2	<p><b>Improvell Thermal Stability of Ni Germanide with Ni-Ti Alloy on Ge-on-Si Substrate</b> Han-Soo Jang, Yeon-Ho Kil, and Chel-Jong Choi <i>School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University</i></p>
WP1-3	<p><b>Mechanical Property of the Epoxy-Contained Sn-Bi Solder Joints Under Thermal Cycling</b> Yong-Gue Sung<sup>1</sup>, Woo-Ram Myung<sup>2</sup>, Haksan Jung<sup>1</sup>, Kyung-Yeol Kim<sup>1</sup>, and Seung-Boo Jung<sup>1</sup> <sup>1</sup><i>School of Advanced Materials Science &amp; Engineering, Sungkyunkwan University, </i><sup>2</sup><i>SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University</i></p>
WP1-4	<p><b>The Silicon Optical Switch Using Three-Waveguide Directional Coupler</b> Muhyun Jin, Jong-Hun Kim, Seong-Hwan Kim, Sanggu Yeo, and Hyo-Hoon Park <i>School of Electrical Engineering, KAIST</i></p>
WP1-5	<p><b>A Method for Reducing Void in FOD Structure by Shifting Die Position</b> Sukwon Lee, Bokgyu Min, Jungyong Shin, Kangwon Lee, and Jaemyun Kim <i>NAND Package Development, SK Hynix Inc.</i></p>
WP1-6	<p><b>Micro-Fabrication of Si Liquid Cooling Structure and its Thermal Characteristic Analysis</b> Yonghyun Won<sup>1</sup>, Sungdong Kim<sup>2</sup>, and Sarah Eunkyung Kim<sup>1</sup> <sup>1</sup><i>Graduate School of Nano-IT Design, Seoul National University of Science and Technology, </i><sup>2</sup><i>Department of Mechanical System Design Engineering, Seoul National University of Science and Technology</i></p>
WP1-7	<p><b>CTE Mismatch Originated Failure of Power Semiconductor and Failure Monitoring Method</b> 최성순, 이우영, 노성대, 이관훈 전자부품연구원 신뢰성연구센터</p>
WP1-8	<p><b>Chemical Welding of Ag NWs through Strong Alkali Treatment</b> Sunho Kim and Hoo-Jeong Lee <i>School of Advanced Materials Science &amp; Engineering, Sungkyunkwan University</i></p>

WP1-9	<p><b>흡습 기인성 Chip Delamination 해석적 연구</b></p> <p>강민규, 박민수, 손재현, 권영건, 김남석  <i>Packaging &amp; TEST center, SK Hynix Inc.</i></p>
WP1-10	<p><b>PVP/GO:Graphene/Polymer Composite Film as A Cu Diffusion Barrier</b></p> <p>Jae Hwan Kim<sup>1</sup>, Seong Jun Yoon<sup>1</sup>, Jae Hoon Bong<sup>1</sup>, Alexander Yoon<sup>2</sup>, and Byung Jin Cho<sup>1</sup>  <sup>1</sup><i>School of Electrical Engineering, KAIST, <sup>2</sup>LAM Research Corporation, Fremont</i></p>
WP1-11	<p><b>PKG Ball-Map 구조에 따른 SI Coupling 기인 성 연구</b></p> <p>윤지영, 임상준, 김남석  <i>SK Hynix IPT Development Project</i></p>
WP1-12	<p><b>UV 조사법을 통한 CNT-고분자 기반 유연/신축 전극의 신뢰성 향상</b></p> <p>So-Young Lee, Hyung Cheoul Shim, Seungmin Hyun, and Hoo-Jeong Lee  <i>School of Advanced Materials Science and Engineering, Sungkyunkwan University</i></p>
WP1-13	<p><b>Modeling and Analysis of Silicone Rubber Socket for Package Test</b></p> <p>Hyesoo Kim, Junyong Park, Jonghoon J. Kim, Dongho Ha, Michael Bae, and Joungho Kim  <i>Department of Electrical Engineering, KAIST</i></p>
WP1-14	<p><b>Mechanical Property of Epoxy-Contained SAC305 Solder with Various Surface Finish</b></p> <p>Haksan Jeong<sup>1</sup>, Woo-Ram Myung<sup>2</sup>, Yong-Gue Sung<sup>1</sup>, Yongil Kim<sup>2</sup>, and Seung-Boo Jung<sup>1</sup>  <sup>1</sup><i>Department of Advanced Materials Science &amp; Engineering, Sungkyunkwan University, <sup>2</sup>SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University</i></p>
WP1-15	<p><b>Module T/C 강화를 위한 EMC 물성의 영향성 연구</b></p> <p>한윤종  <i>SK Hynix P&amp;T 기술그룹</i></p>
WP1-16	<p><b>Die Attach Film(WBL) 물성에 따른 흡습 신뢰성 영향 연구</b></p> <p>김미영  <i>혁신소재</i></p>
WP1-17	<p><b>Cyclic Plasma Cleaning Process of SiO<sub>2</sub> Layers Using Surface Fluorination</b></p> <p>Kyongbeom Koh<sup>1</sup>, Duhyeon Ka<sup>2</sup>, Hongrae Shin<sup>3</sup>, Haegy Jang<sup>2</sup>, and Heeyeop Chae<sup>1,2</sup>  <sup>1</sup><i>School of Chemical Engineering, Sungkyunkwan University, <sup>2</sup>SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, <sup>3</sup>School of Semiconductor and Display Engineering, Sungkyunkwan University</i></p>
WP1-18	<p><b>Block Copolymer Self-Assembly Using Laser Writing on Graphene</b></p> <p>Jin Young Choi, Hyeong Min Jin, Seung Hyun Lee, Ju Young Kim, Seung Keun Cha, and Sang Ouk Kim  <i>National Creative Research Initiative Center for Multi-Dimensional Directed Nanoscale Assembly, Department of Materials Science and Engineering, KAIST</i></p>
WP1-19	<p><b>Effects for Lens Aberration on Extreme Illumination Condition</b></p> <p>Jeonghun Kim, Joonghoon Choe, Choidong Kim, Tae-Seung Eom, and Youngsik Kim  <i>Research &amp; Development Division, SK Hynix Inc.</i></p>



WP1-20	<p><b>Model-Based CDC-Ratio Calculation in Memory Devices</b></p> <p>Jongwon Jang, Sungwoo Ko, Sookyeong Jeong, Jungchan Kim, Juntaek Park, Cheolkyun Kim, and Hyunjo Yang <i>R&amp;D Division, SK Hynix Semiconductor Inc.</i></p>
WP1-21	<p><b>The Physical Properties and Characteristics of the Low-Temperature SOC</b></p> <p>Doyong Kwak, Jaeyoul Kim, Jihoon Park, Sungkoo Lee, and Hyeongsoo Kim <i>R&amp;D Division, SK Hynix Inc.</i></p>
WP1-22	<p><b>Model-Based CDC-Ratio Calculation in Memory Devices</b></p> <p>Jongwon Jang, Sungwoo Ko, Sookyeong Jeong, Jungchan Kim, Juntaek Park, Cheolkyun Kim, and Hyunjo Yang <i>R&amp;D Division, SK Hynix Semiconductor Inc.</i></p>
WP1-23	<p><b>OPC Verify를 통한 Ion Implant Layer의 Weak Point 검출 방법</b></p> <p>Taehyeong Lee, Seyoung Oh, Hyoungsoon Yune, Doyoun Kim, Joohong Jeong, Mingu Kim, Chanha Park, and hyunjo Yang <i>Research &amp; Development Division, SK Hynix Inc.</i></p>
WP1-24	<p><b>전자 빔 조사를 통한 MoTe<sub>2</sub>의 전하 밀도와 극성 조절</b></p> <p>이명진, 최민섭, 문인용, 유원중 <i>SKKU Advanced Institute of Nano-Technology, Sungkyunkwan University</i></p>
WP1-25	<p><b>Highly Ordered 3D-Nanostructures Gas Sensors Fabricated via Nanotransfer Printing</b></p> <p>Hyeuk Jin Han, Jong Min Kim, Yoon Hyung Hur, and Yeon Sik Jung <i>Department of Materials Science and Engineering, KAIST</i></p>
WP1-26	<p><b>Improvement of Gas Sensing Characteristics by Plasma-Assisted Preparation of Metal Nanoparticles on Branched Nanowires</b></p> <p>Hyoun Woo Kim<sup>1,2</sup>, Yong Jung Kwon<sup>1</sup>, Sung Yong Kang<sup>1</sup>, Myung Sik Choi<sup>1</sup>, Jae Hoon Bang<sup>1</sup>, and Ali Mirzaei<sup>2</sup> <i><sup>1</sup>Division of Materials Science and Engineering, Hanyang University, <sup>2</sup>The Research Institute of Industrial Science, Hanyang University</i></p>
WP1-27	<p><b>Fabrication of High-Density Plasmonic Nanohole Array via Replication of Block Copolymer Template and Transfer</b></p> <p>Soonmin Yim and Yeon Sik Jung <i>Department of Materials Science and Engineering, KAIST</i></p>
WP1-28	<p><b>Surface Enhanced Raman Spectroscopy of Two-Dimensional Semiconductor Materials: MoS<sub>2</sub>, WS<sub>2</sub> and MoTe<sub>2</sub></b></p> <p>Kwang Min Baek and Yeon Sik Jung <i>Department of Material Science and Engineering, KAIST</i></p>
WP1-29	<p><b>Pattern Classification and Clustering for DFM Hotspot Simulation</b></p> <p>신병철, 김재환, 강재현, 김남재, 백승원 <i>삼성전자</i></p>

<p><b>WP1-30</b></p>	<p><b>새로운 EUV Mask 오염방지 기술 : Shielded Reticle Mini Environment</b>                  김정환<sup>1</sup>, 홍성철<sup>1</sup>, 안진호<sup>1</sup>, 오혜근<sup>2</sup>  <sup>1</sup>한양대학교 신소재공학과, <sup>2</sup>한양대학교 응용물리학과</p>
<p><b>WP1-31</b></p>	<p><b>이미징 퍼포먼스를 향상시키는 High NA 시스템용 EUV PSM 연구</b>                  김정식<sup>1</sup>, 홍성철<sup>2</sup>, 장용주<sup>1</sup>, 안진호<sup>1,2</sup>  <sup>1</sup>한양대학교 나노반도체공학과, <sup>2</sup>한양대학교 신소재공학과</p>
<p><b>WP1-32</b></p>	<p><b>Improvement of CD Error in Local Pattern Area by Optimizing Develop Loading Condition</b>                  Jong Hoon Lim, Kang Joon Seo, Jea Young Jun, Mun Sik Kim, Tae Joong Ha,                  and Hyun Jo Yang  <i>MASK Development Team, Mask Infrastructure Technology Group, SK Hynix Inc.</i></p>
<p><b>WP1-33</b></p>	<p><b>Photoresist Mask를 이용한 알루미늄 배선 패터닝 기술</b>                  Jae-Sung Youn, Bon-Wang Koo, Sang-Soo Park, Dong-Goo Choi, Jung-Taik Cheong,                  and Chang-Rock Song  <i>R&amp;D Division, SK Hynix Inc.</i></p>
<p><b>WP1-34</b></p>	<p><b>Reduction of PR Residual-Induced Defects on Half-Tone Phase Shift Mask</b>                  Byung Ju Kim, Ho Yong Jung, Sang Pyo Kim, and Hyun Jo Yang  <i>SK Hynix Inc.</i></p>
<p><b>WP1-35</b></p>	<p><b>Effects of Residual Photo Resist on Phase Shift Mask Surface Properties in the O<sub>2</sub> Plasma Treatment Process</b>                  Ji Cheol Kim, Hyun Duck Shin, Choong Han Ryu, Ho Yong Jung, Sang Pyo Kim,                  and Hyun Jo Yang  <i>SK Hynix Inc.</i></p>
<p><b>WP1-36</b></p>	<p><b>CIS(CMOS Image Sensor) Micro-Lens의 구조와 Patterning에 대한 연구</b>                  Jaehyun Park<sup>1</sup>, Jonghyun,Je<sup>1</sup>, Seoik Hong<sup>2</sup>  <sup>1</sup>Research &amp; Development Division, SK Hynix Inc., <sup>2</sup>Etching Systems Process Department,                  Tokyo Electron Korea Ltd.</p>
<p><b>WP1-37</b></p>	<p><b>PS-b-PMMA Block Copolymer Lithography을 이용한 중성빔 식각연구</b>                  박진우, 김두산, 이원오, 김도한, 염근영  <i>성균관대학교 신소재공학과</i></p>
<p><b>WP1-38</b></p>	<p><b>Photocatalysis of Ag-TiO<sub>2</sub> nanotubes fabricated by BCP lithography</b>                  Da In Sung<sup>1</sup>, Do Han Kim<sup>1</sup>, Ji Soo Oh<sup>1</sup>, Jong Sik Oh<sup>1</sup>, Won Kyun Yeom<sup>2</sup>,                  and Geun Young Yeom<sup>1,2</sup>  <sup>1</sup>School of Advanced Materials Science and Engineering Sungkyunkwan University (SKKU),  <sup>2</sup>SKKU Advanced Institute of Nano Technology (SAINT) Sungkyunkwan University</p>
<p><b>WP1-39</b></p>	<p><b>Effect of Non-Corrosive Gas Mixture on Properties of Etched CoFeB Alloys Using Inductively Coupled Plasma Reactive Ion Etching</b>                  Jae Yong Lee<sup>1</sup>, Jae Sang Choi<sup>1</sup>, Doo Hyeon Cho<sup>1</sup>, Seung Young Park<sup>1</sup>, and Chee Won Chung<sup>2</sup>  <sup>1</sup>Spin Engineering Physics Team, Korea Basic Science Institute, <sup>2</sup>Department of Chemistry                  and Chemical Engineering, Center for Design and Applications of Molecular Catalysts, Inha                  University</p>

<b>WP1-40</b>	<b>Novel High Aspect Ratio Etch Profile Engineering in Next Generation 3D Structure FinFET Devices</b> Hyunho Jung, Jeongyun Lee, Tae-Soon Kwon, Seung-soo Hong, Kyung-seok Min, Geumjung Seong, Bora Lim, Ahreum Ji, Youngmook Oh, and Kyoungsub Shin <i>Samsung Electronics Co., Ltd.</i>
<b>WP1-41</b>	<b>Etch Characteristics of Nanometer Scale Masked MTJ stacks Using Pulse Modulated Plasmas</b> Jae Sang Choi, Jae Yong Lee, Doo Hyeon Cho, and Chee Won Chung <i>Department of Chemistry and Chemical Engineering, Center for Design and Applications of Molecular Catalysts, Inha University</i>
<b>WP1-42</b>	<b>Investigation on Etch Characteristics of Nanometer-Scale Patterned CoFeB Thin Films Using Pulse Modulated Plasma</b> Doo Hyeon Cho, Jae Yong Lee, Jae Sang Choi, Tae Woo Lee, and Chee Won Chung <i>Department of Chemistry and Chemical Engineering, Center for Design and Applications of Molecular Catalysts, Inha University</i>
<b>WP1-43</b>	<b>Low-k Dielectric의 Plasma Ashing Damage 개선 방법 연구</b> Minwoo Ha and Jonghyun.Je <i>Research &amp; Development Division, SK Hynix Inc.</i>
<b>WP1-44</b>	<b>Straining Mechanism in Epitaxial Silicon Films with Highly Doped Phosphorus</b> Minhyeong Lee, Eunjung Ko, and Dae-Hong Ko <i>Yonsei University</i>
<b>WP1-45</b>	<b>Chemical Analysis of Highly Phosphorus-Doped Epitaxial Silicon Films Grown on Si (100) with XPS</b> Sung-Tae Kim, Donghyuk Shin, Minhyeong Lee, and Dae-Hong Ko <i>Department of Materials Science and Engineering, Yonsei University</i>
<b>WP1-46</b>	<b>Exciton-Phonon Coupling Channels in a Strain-Free GaAs Droplet Epitaxy Single Quantum Dot</b> Inah Yeo <sup>1</sup> , Song Ee Lee <sup>2</sup> , Kyu Tae Lee <sup>2</sup> , Il Ki Han <sup>2</sup> , Kyung Soo Lee <sup>3</sup> , and Jin Dong Song <sup>1</sup> <sup>1</sup> <i>Post-Silicon Semiconductor Institute, Korea Institute of Science and Technology,</i> <sup>2</sup> <i>Nanophotonics Research Center, Korea Institute of Science and Technology,</i> <sup>3</sup> <i>Department of Physics, Pusan National University</i>
<b>WP1-47</b>	<b>Evaluation of SnO<sub>2</sub> Thin Films to Suppress Reduction of RuO<sub>2</sub> Electrode During Atomic Layer Deposition of Rutile Structured TiO<sub>2</sub> Films</b> Hoju Song <sup>1,2</sup> , Cheol Hyun An <sup>1</sup> , Younjin Jang <sup>1</sup> , Jun Shik Kim <sup>1</sup> , Sang Hyeon Kim <sup>1,2</sup> , Dae Seon Kwon <sup>1</sup> , and Cheol Seong Hwang <sup>1</sup> <sup>1</sup> <i>Department of Materials Science and Engineering, Seoul National University,</i> <sup>2</sup> <i>DRAM Process Integration Engineering Group, Memory Division, Samsung Electronics Co. Ltd</i>
<b>WP1-48</b>	<b>Ultra-Fast Growth of Multilayer Graphene by Xenon Flash Lamp</b> Mina Kim and Keon Jae Lee <i>Department of Materials Science and Engineering, KAIST</i>

<b>WP1-49</b>	<p><b>Epitaxial Growth of GeSn on 8-inch Si (100) Substrate Using RTCVD</b></p> <p>Yeon-Ho Kil<sup>1</sup>, Sim-Hoon Yuk<sup>1</sup>, Han-Soo Jang<sup>1</sup>, Chel-Jong Choi<sup>1</sup>, See-Jong Leem<sup>2</sup>, and Kyu-Hwan Shim<sup>1,3</sup></p> <p><sup>1</sup><i>School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University, <sup>2</sup>Department Energy and Electrical Engineering, Korea Polytechnic University, <sup>3</sup>R&amp;D Center, Sigetronics, Inc.</i></p>
<b>WP1-50</b>	<p><b>Strain Engineering of GaAs/AlGaAs Quantum Dots Grown by Droplet Epitaxy</b></p> <p>Song-ee Lee<sup>1,4</sup>, Inah Yeo<sup>2</sup>, Kyu Tae Lee<sup>1</sup>, Jihoon Kyhm<sup>2</sup>, Kyung Soo Yi<sup>3</sup>, Tae Geun Kim<sup>4</sup>, Il Ki Han<sup>1</sup>, and Jin Dong Song<sup>2</sup></p> <p><sup>1</sup><i>Nanophotonics research center, Korea Institute of Science and Technology, <sup>2</sup>Center of opto-electronic materials and devices, Korea Institute of Science and Technology, <sup>3</sup>Department of physics, Pusan National University, <sup>4</sup>School of Electrical Engineering, Korea University</i></p>
<b>WP1-51</b>	<p><b>Carbon Nanotube and MoS<sub>2</sub> Hybrid Film for High Performance Flexible Gas Sensor</b></p> <p>Sung Ho Kim, Sung Myung, Wooseok Song, Jongsun Lim, Sun Sook Lee, and Ki-seok An</p> <p><i>Thin Film Materials Research Center, Korea Research Institute of Chemical Technology</i></p>
<b>WP1-52</b>	<p><b>Fabrication of In-Rich(&gt;0.53) InGaAs-OI on Si by Novel Epitaxial Lift-Off</b></p> <p>Seong Kwang Kim<sup>1,2</sup>, Jae-Phil Shim<sup>1</sup>, Dae-Myeong Geum<sup>1,3</sup>, Chang Zoo Kim<sup>4</sup>, Han-Sung Kim<sup>1</sup>, Yeon-Su Kim<sup>1</sup>, Hang-Kyu Kang<sup>1</sup>, Jin-Dong Song<sup>1</sup>, Sung-Jin Choi<sup>2</sup>, Dae Hwan Kim<sup>2</sup>, Won Jun Choi<sup>1</sup>, Hyung-jun Kim<sup>1</sup>, Dong Myong Kim<sup>2</sup>, and SangHyeon Kim<sup>1</sup></p> <p><sup>1</sup><i>Korea Institute of Science and Technology, <sup>2</sup>School of Electrical Engineering, Kookmin University, <sup>3</sup>Department of Materials Science and Engineering, Seoul National University, <sup>4</sup>Korea Advanced Nano Fab Center, Korea</i></p>
<b>WP1-53</b>	<p><b>Optical and Chemical Properties of Nano-Diamond(ND) doped Amorphous Carbon Layer(ACL) Films prepared by PECVD</b></p> <p>Hyojun Jung, Sanghak Yeo, Sungwoo Lee, Jaeyoung Yang, UYoung Lee, Keunoh Park, and Gieung Hur</p> <p><i>Research &amp; Development, TES. Co. Ltd.</i></p>
<b>WP1-54</b>	<p><b>Surface Smoothness Improvement of Atomic Layer deposited HfO<sub>2</sub> Film via Inserting Al<sub>2</sub>O<sub>3</sub> Thin Film with Layer-by-Layer</b></p> <p>Bo Li<sup>1</sup>, Yong Chan Jung<sup>2</sup>, Sejong Seong<sup>2</sup>, Taehoon Lee<sup>2</sup>, In-Sung Park<sup>2,3</sup>, and Jinho Ahn<sup>2,3</sup></p> <p><sup>1</sup><i>Department of Convergence Nanoscience, Hanyang University, <sup>2</sup>Department of Materials Science and Engineering, Hanyang University, <sup>3</sup>Institute of Nano Science and Technology, Hanyang University</i></p>
<b>WP1-55</b>	<p><b>Evaluation of Field-Effect Mobility of Graphene Devices Considering the Effect of Field-Induced Contact Resistance Modulation</b></p> <p>Chang-Ju Lee, Honghwi Park, and Hongsik Park</p> <p><i>School of Electronics Engineering, Kyungpook National University</i></p>
<b>WP1-56</b>	<p><b>Property of Epitaxial Si<sub>1-x</sub>C<sub>x</sub> Layer on Si (100) Substrate after Post Annealing Process: Rapid Thermal Annealing (RTA) and Eximer Laser Annealing (ELA)</b></p> <p>Jiwoo Park, Youngmo Kim, Dayoon Lee, and Hyunchul Sohn</p> <p><i>Department of Materials Science and Engineering, Yonsei University</i></p>



WP1-57	<b>Simulative Study on Vaporization Condition of OMCTS by COMSOL Software for SiO<sub>2</sub> Clean Production</b> Jun Ho Lee and Sung Jin An <i>School of Advanced Materials and System Engineering, Kumoh National Institute of Technology</i>
WP1-58	<b>Optimization of Highly Efficient GaAs Thin-Film Solar Cell by a Back Reflector</b> Sunghyun Moon, Kangho Kim, Yeojun Yun, Minhyung Lee, Junseok Heo, and Jaejin Lee <i>Department of Electrical and Computer Engineering, Ajou University</i>
WP1-59	<b>Ge Nano Solar Cells by Metal-Assisted Chemical (MAC) Etching with Spherical-Lens Photolithography</b> Yeojun Yun, Kangho Kim, Sunghyun Moon, Minhyung Lee, and Jaejin Lee <i>Department of Electrical and computer Engineering, Ajou University</i>
WP1-60	<b>Wafer-Scale, Uniform Growth of Atomically Thin 2D Semiconductors by MOCVD</b> Hee Seong Kang, Gwan-Jin Ko, Jun-Whan Shin, Suk-Won Hwang, and Chul-Ho Lee <i>KU-KIST Graduate School of Converging Science and Technology, Korea University</i>
WP1-61	<b>Growth of High Quality AlN Grown by High Temperature Metal Organic Vapor Phase Epitaxy for Applications in Deep Ultraviolet</b> Joocheol Jeong, Ji won Jeong, Shi honn Kim, Yun sung No, and Joo Jin <i>Department of UV-Sensor Lab, Genicom</i>
WP1-62	<b>Effect of Ar for Spinnable CNT Forest Growth</b> Deukhyeon Nam, Moonyoung Jung, Youngji No, and Seung-eon Ahn <i>Department of Nano-Optical Engineering, Korea Polytechnic University</i>
WP1-63	<b>Epitaxial Growth of Strained Germanium Using In<sub>x</sub>Al<sub>1-x</sub>As Buffer Layer for GeOI</b> Han-Sung Kim <sup>1,2</sup> , Yeon-Su Kim <sup>1,2</sup> , Hee-Jeong-Lim <sup>1,3</sup> , Jaephil Shim <sup>1</sup> , Seong Kwang Kim <sup>1,4</sup> , SangHyeon Kim <sup>1</sup> , and Hyung-Jun Kim <sup>1</sup> <sup>1</sup> Korea Institute of Science and Technology, <sup>2</sup> KU-KIST Graduate School of Converging Science and Technology, <sup>3</sup> Department of Electrical Engineering, Korea University, <sup>4</sup> Department of Electrical Engineering, Kookmin University
WP1-64	<b>Growth Temperature Dependent Ge Epitaxy on GaAs(100) Substrates</b> Hee-Jeong Lim <sup>1,2</sup> , Han-Sung Kim <sup>1,3</sup> , Yeon-Su Kim <sup>1,3</sup> , Jaephil Shim <sup>1</sup> , Seong Kwang Kim <sup>1,4</sup> , SangHyeon Kim <sup>1</sup> , Byeong-Kwon Ju <sup>2</sup> , and Hyung-Jun Kim <sup>1</sup> <sup>1</sup> Korea Institute of Science and Technology, <sup>2</sup> Department of Electrical Engineering, Korea University, <sup>3</sup> KU-KIST Graduate School of Converging Science and Technology, <sup>4</sup> Department of Electrical Engineering, Kookmin University
WP1-65	<b>Correlation between Light-Extraction and Crystal Quality of InGaN-based LED grown on SiC Substrate with Different Transmittance</b> Taemyung Kwak, Byeongchan So, Daehong Min, Donghwy Park, Kyungjae Lee, Kwangse Ko, and Okhyun Nam <i>Convergence Center for Advanced Nano Semiconductor, Department of Nano-Optical Engineering, Korea Polytechnic University</i>

WP1-66	<p><b>Evaluation of Uniform Strain in AlGaSb/ InGaSb/AlGaSb Quantum Well on GaAs Substrates for High Hole Mobility Transistor</b></p> <p>Il-Pyo Roh<sup>1,2</sup>, SangHyeon Kim<sup>2</sup>, YunHeub Song<sup>1</sup>, and Jin-Dong Song<sup>2</sup>  <sup>1</sup>Department of Electronics and Communications Engineering, Hanyang University, <sup>2</sup>Center for Opto-Electronic Materials and Devices, Korea Institute of Science and Technology</p>
WP1-67	<p><b>Investigation of CVD Mechanism of Pt-Co Alloy Nanoparticles</b></p> <p>Dong Sung Choi<sup>1</sup>, Sang Ouk Kim<sup>1</sup>, and Heeyeon Kim<sup>2</sup>  <sup>1</sup>Department of Materials Science &amp; Engineering, KAIST, <sup>2</sup>Energy Materials Laboratory, Korea Institute of Energy Research</p>
WP1-68	<p><b>Low Resistivity Ni-InGaAs Ohmic Contacts with and without InAs Capping Layer</b></p> <p>Sim-Hoon Yuk, Jong-Hee Kim, Yeon-Ho Kil, Kyu-Hwan Shim, and Chel-Jong Choi  School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University</p>
WP1-69	<p><b>Improved Pulse Response of AlGaIn/GaN Heterostructure Schottky Barrier Diode Using CYTOP Passivation</b></p> <p>Minwoo Kong<sup>1</sup>, Raseong Ki<sup>1</sup>, Hoyoung Cha<sup>2</sup>, and Kwangseok Seo<sup>1</sup>  <sup>1</sup>Department of Electrical and Computer Engineering, Seoul National University, <sup>2</sup>Department of Electronic and Electrical Engineering, Hongik University</p>
WP1-70	<p><b>LPCVD Si<sub>3</sub>N<sub>4</sub> Gate Dielectric를 적용한 대면적 GaN Cascode MISFET</b></p> <p>이현수, 박영락, 고상춘, 김민기, 장현규, 전치훈, 정동윤, 이형석, 김진식, 문재경  한국전자통신연구원 ICT소재부품연구소 IT부품산업기술연구부 GaN전력소자연구실</p>
WP1-71	<p><b>Surge Current Capacity of 4H-SiC Merged PiN Schottky Diode</b></p> <p>Junbo Park, Kun-Sik Park, Jong-il Won, Sang-gi Kim, Jae-Kyoung Mun  Electronics and Telecommunications Research Institute</p>
WP1-72	<p><b>GaN HEMT Device Modeling and MMIC for Ka-Band Applications</b></p> <p>김성일<sup>1,2</sup>, 임종원<sup>2</sup>, 이기준<sup>1</sup>  <sup>1</sup>충남대학교 전자전파정보통신공학과, <sup>2</sup>한국전자통신연구원</p>
WP1-73	<p><b>대면적 질화갈륨 이중접합 전계효과 트랜지스터의 동적 저항 측정 방법</b></p> <p>김민기, 정동윤, 장현규, 박준보, 이현수, 전치훈, 고상춘, 문재경  한국전자통신연구원, ICT소재부품연구소, GaN전력소자연구실</p>
WP1-74	<p><b>질화갈륨 전력소자를 이용한 벅 컨버터 설계</b></p> <p>장현규, 김민기, 정동윤, 전치훈, 이현수, 고상춘, 문재경  한국전자통신연구원 ICT소재부품연구소 GaN전력소자연구실</p>
WP1-75	<p><b>다층 세라믹 기판을 활용한 전력반도체 Discrete 소자 성능 분석</b></p> <p>정동윤, 장현규, 전치훈, 김민기, 이현수, 고상춘  한국전자통신연구원 ICT소재부품연구소</p>
WP1-76	<p><b>Fabrication of Schottky Barrier Diode Using Single Crystal <math>\beta</math>-Ga<sub>2</sub>O<sub>3</sub> Material</b></p> <p>Min-Gi Jo, Hyun-Seop Kim, and Ho-Young Cha  School of Electrical and Electronic Engineering, Hongik University</p>





WP1-77	<p><b>GaAs의 표면 처리시 H<sub>2</sub>O<sub>2</sub>가 미치는 영향 연구</b></p> <p>이진훈, 나지훈, 임상우 <i>연세대학교 화공생명공학과</i></p>
WP1-78	<p><b>Sputtered-SiO<sub>2</sub> 박막이 적용된 AlGaIn/GaN MOSHFET 소자 특성연구</b></p> <p>조문욱<sup>1</sup>, 오승규<sup>1,3</sup>, 김태경<sup>1</sup>, 홍인열<sup>1</sup>, 오세준<sup>2</sup>, 장태훈<sup>2</sup>, 곽준섭<sup>1</sup> <i><sup>1</sup>순천대학교 인쇄전자공학과, <sup>2</sup>전북대학교 반도체물성연구소, <sup>3</sup>휴스턴대학교 기계공학과</i></p>
WP1-79	<p><b>Oxidation Characteristics of the InAs Surface in Various Solutions</b></p> <p>Jihoon Na, Jinhoon Lee, Junwoo Lee, and Sangwoo Lim <i>Department of Chemical and Biomolecular Engineering, Yonsei University</i></p>
WP1-80	<p><b>Comparison of Post-Metallization Annealing and Post-Deposition Annealing and Investigation of PMA Effect with Different Gate Metal Stacks</b></p> <p>Seung-Hyun Roh, Su-Keun Eom, and Kwang-Seok Seo <i>Department of Electrical and Computer Engineering, Inter-university Semiconductor Research Center, Seoul National University</i></p>
WP1-81	<p><b>1200V 10A 급 SiC DMOSFET 소자의 Activation Anneal 공정 및 동작특성</b></p> <p>이정윤, 강민재, 이원범, 김수곤, 기종, 김동현, 최경근 <i>Process Development Team, National Institute for Nanomaterials Technology</i></p>
WP1-82	<p><b>Absorption Layer Removed Flip Chip for High Power GaN-Based Ultraviolet LED</b></p> <p>Seong-Yong Eom, Anil Kawan, Jong-Min Park, and Soon-Jae Yu <i>Department of Electronic Engineering, SunmoonUniversity</i></p>
WP1-83	<p><b>AlGaIn/GaN MIS-HEMTs 소자의 알파선 조사 효과에 관한 연구</b></p> <p>금동민, 조근호, 조희형, 정구혁, 김형탁 <i>Department of Electronics and Electrical Engineering, Hongik University</i></p>
WP1-84	<p><b>Reduction of the Leakage Current in AlGaIn/GaN HEMTs by Gate Recess Process</b></p> <p>Yumin Koh, Chu-Young Cho, Do-Kywn Kim, Hyeong-Ho Park, Won-Kyu Park, and Kyung-Ho Park <i>Device Platforms Lab., Korea Advanced Nano Fab Center</i></p>
WP1-85	<p><b>Normally-off AlGaIn/GaN Field Effect Transistors with Recessed Gate Using Ultra-low Rate Dry Etching Conditions</b></p> <p>Zin-Sig Kim, Hyung-Seok Lee, Jeho Na, Sung-Bum Bae, Eunsoo Nam, and Jong-Won Lim <i>ICT Materials &amp; Components &amp; Research Laboratory, Electronics and Telecommunications Research Institute</i></p>
WP1-86	<p><b>Recessed Gate AlGaIn/GaN MOS-HFET on Si(110) Substrate Grown by NH<sub>3</sub> MBE</b></p> <p>Sang-Woo Han<sup>1</sup>, Youngkyun Noh<sup>2</sup>, Min-Gi Jo<sup>1</sup>, Jae-Eung Oh<sup>3</sup>, Kwang-Seok Seo<sup>4</sup>, and Ho-Young Cha<sup>1</sup> <i><sup>1</sup>School of Electronic and Electrical Engineering, Hongik University, <sup>2</sup>IV Works Co., Ltd., <sup>3</sup>School of Electrical Engineering, Hanyang University, <sup>4</sup>Department of Electrical and Computer Engineering, Seoul National University</i></p>

<b>WP1-87</b>	<p><b>Finger Dimension Dependent Optoelectrical Properties of Metal-Semiconductor-Metal Photodetectors Fabricated on Ge Epilayer Grown on (100) Si Substrate</b></p> <p>M. Zumuukhorol<sup>1</sup>, Z. Khurelbaatar<sup>1</sup>, Yeon-Ho Kil<sup>1</sup>, Kyu-Hwan Shim<sup>1,2</sup>, and Chel-Jong Choi<sup>1</sup>  <sup>1</sup><i>School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University, <sup>2</sup>R&amp;D Division, Sigetronics, Inc.</i></p>
<b>WP1-88</b>	<p><b>1/f Noise Characteristics of AlGaIn/GaN FinFET and Planar MIS-HFET</b></p> <p>Sindhuri Vodapally<sup>1</sup>, Ki-Sik Im<sup>1,2</sup>, and Jung-Hee Lee<sup>1</sup>  <sup>1</sup><i>School of Electronics Engineering, Kyungpook National University, <sup>2</sup>Institute of Semiconductor Fusion Technology, Kyungpook National University</i></p>
<b>WP1-89</b>	<p><b>Thin Body P-GaAs Junctionless FET on Si via Wafer Bonding and Epitaxial Lift-off Technology</b></p> <p>Jae-Phil Shim<sup>1</sup>, Seong Kwang Kim<sup>1,2</sup>, Han-Sung Kim<sup>1,3</sup>, Yeon-Su Kim<sup>1,3</sup>, Heejeong Lim<sup>1,3</sup>, SangHyeon Kim<sup>1</sup>, and Hyung-jun Kim<sup>1</sup>  <sup>1</sup><i>Korea Institute of Science and Technology, <sup>2</sup>School of Electrical Engineering, Kookmin University, <sup>3</sup>KU-KIST Graduate School of Converging Science and Technology Korea University</i></p>
<b>WP1-90</b>	<p><b>GaAs Pin Photodetector Array on Si Using Wafer Bonding and Epitaxial Lift-off</b></p> <p>SangHyeon Kim, Dae-Myeong Geum, Min-Su Park, Ho-Sung Kim, Jin Dong Song, and Won Jun Choi  <i>Korea Institute of Science and Technology</i></p>
<b>WP1-91</b>	<p><b>Comparative Analysis on Mobility Extraction of Normally-Off AlGaIn/GaN Gate-Recessed MISHFETs for High Voltage Operation</b></p> <p>Geunho Cho<sup>1</sup>, Dongmin Keum<sup>1</sup>, Il-hwan Hwang<sup>2</sup>, Kwang-seok Seo<sup>2</sup>, Ho-young Cha<sup>1</sup>, and Hyungtak Kim<sup>1</sup>  <sup>1</sup><i>School of Electronic and Electrical Engineering, Hongik University, <sup>2</sup>Electrical Engineering and Computer Science, Seoul National University</i></p>
<b>WP1-92</b>	<p><b>Suppression of Current Collapse by AlON Gate Insulator on AlGaIn/GaN Recessed MIS-HEMTs for RF Application</b></p> <p>Jun-Seok Jeong, Dong-Hwan Kim, and Kwang-Seok Seo  <i>Electrical Engineering and Computer Science, Seoul National University</i></p>
<b>WP1-93</b>	<p><b>Effects of Zn Surface Treatments on Sulfur-Passivated In<sub>0.53</sub>Ga<sub>0.47</sub>As with High-K Gate Oxide</b></p> <p>Jae-Gil Lee<sup>1</sup>, Young-Chul Byun<sup>1</sup>, Young Jun Oh<sup>1</sup>, Antonio T. Lucero<sup>1</sup>, Hyounsub Kim<sup>2</sup>, Kyeongjae Cho<sup>1</sup>, and Jiyoung Kim<sup>1</sup>  <sup>1</sup><i>Department of Materials Science and Engineering, The University of Texas at Dallas, <sup>2</sup>School of Advanced Materials Science &amp; Engineering, Sungkyunkwan University</i></p>
<b>WP1-94</b>	<p><b>Re-Examination of Fermi Level De-Pinning for GaSb</b></p> <p>Dae-Myeong Geum<sup>1,4</sup>, Seong Kwang Kim<sup>2,4</sup>, Hang-Kyu Kang<sup>2,4</sup>, Min Baik<sup>2,4</sup>, Giwoong Kim<sup>1</sup>, Sang Hyeon Kim<sup>4</sup>, Jin Dong Song<sup>4</sup>, Won Jun Choi<sup>4</sup>, and Euijoon Yoon<sup>1</sup>  <sup>1</sup><i>Department of Materials Science and Engineering, Seoul National University, <sup>2</sup>School of Electrical Engineering, Kookmin University, <sup>3</sup>Department of Physics, Yonsei University, <sup>4</sup>Center for Opto-Electronic Materials and Devices, Korea Institute of Science and Technology (KIST)</i></p>



WP1-95	<p><b>음성 대역 생체 모사 압전 마이크로폰의 제작</b></p> <p>양기동 <i>한국전기연구원 융복합의료기기연구센터</i></p>
WP1-96	<p><b>Silicon-on-Insulator based Dual-Gate Ion-Sensitive Field Effect Transistor with Paper Based Extended-Gate</b></p> <p>Cheol-Min Lim and Won-Ju Cho <i>Department of Electronic Materials Engineering, Kwangwoon University</i></p>
WP1-97	<p><b>Fabrication of Multi-height Silicon Microtip Array Using Photoresist Grid Mask</b></p> <p>Joon-Geun Ha<sup>1</sup>, Yong-Kweon Kim<sup>1</sup>, and Jae-Hyoung Park<sup>2</sup> <i><sup>1</sup>Department of Electrical and Computer engineering, Seoul National University, <sup>2</sup>School of Electronic and Electrical Engineering, Dankook University</i></p>
WP1-98	<p><b>Fabrication Method of Micro Probe Structure Using Multi DRIE &amp; RIE Process</b></p> <p>Young-min Shin<sup>1</sup>, Yong-Kweon Kim<sup>1</sup>, Seung-Ki Lee<sup>2</sup>, and Jae-Hyoung Park<sup>2</sup> <i><sup>1</sup>Department of Electrical Engineering and Computer Science, Seoul National University, <sup>2</sup>Department of Electronics and Electrical Engineering, Dankook University</i></p>
WP1-99	<p><b>Enhancement the Gas Detecting Performances of Porous Silicon Nanostructure</b></p> <p>Yong Jung Kwon<sup>1</sup>, Sung Yong Kang<sup>1</sup>, Myung Sik Choi<sup>1</sup>, Jae Hoon Bang<sup>1</sup>, Ali Mirzaei<sup>2</sup>, and Hyoun Woo Kim<sup>1,2</sup> <i><sup>1</sup>Division of Materials Science and Engineering, Hanyang University, <sup>2</sup>The Research Institute of Industrial Science, Hanyang University</i></p>
WP1-100	<p><b>A Physically Transient Form of Highly Sensitive Biocompatible Dopamine Sensor</b></p> <p>Hyun-Seung Kim and Suk-Won Hwang <i>KU-KIST Graduate School of Converging Science and Technology, Korea University</i></p>
WP1-101	<p><b>High Performance Flexible and Stretchable Gas Sensors based on Single Crystal Si Nanomembranes</b></p> <p>Gwan-Jin KO, Soo Deok Han, Chong-Yun Kang, and Suk-Won Hwang <i>KU-KIST Graduate School of Converging Science and Technology, Korea University</i></p>
WP1-102	<p><b>Method for Canceling the Effects of Parasitic Electric Fields from Crosstalks in Ion Traps</b></p> <p>Minjae Lee<sup>1</sup>, Yunjae Park<sup>1</sup>, Seokjun Hong<sup>1</sup>, Changhyun Jung<sup>1</sup>, Yeong-Dae Kwon<sup>1</sup>, Jun Sik Ahn<sup>2</sup>, Taehyun Kim<sup>2</sup>, and Dong-il “Dan” Cho<sup>1</sup> <i><sup>1</sup>ASRI/ISRC and Department of Electrical and Computer Engineering, Seoul National University, <sup>2</sup>Quantum Tech. Lab., SK Telecom</i></p>
WP1-103	<p><b>A Polyimide Sacrificial Process to Fabricate Silicon-Oxide Pillars with Overhang Structures</b></p> <p>Changhyun Jung<sup>1</sup>, Seokjun Hong<sup>1</sup>, Minjae Lee<sup>1</sup>, Yunjae Park<sup>1</sup>, Yeong-Dae Kwon<sup>1</sup>, Jun Sik Ahn<sup>2</sup>, Taehyun Kim<sup>2</sup>, and Dong-il “Dan” Cho<sup>1</sup> <i><sup>1</sup>ASRI/ISRC and Department of Electrical and Computer Engineering, Seoul National University, <sup>2</sup>Quantum Tech. Lab., SK Telecom</i></p>
WP1-104	<p><b>Lab-on-a-chip Device for Total-Phosphorus Analysis Using a Photocatalytic Reaction</b></p> <p>Dong Geon Jung, Soon Yeol Kwon, Young Chan Choi, Jun Yeop Lee, and Seong Ho Kong <i>Graduate School of Electronics Engineering, Kyungpook National University</i></p>

<b>WP1-105</b>	<p><b>Dielectrophoretic Integration of Functional Nanodevice Array for On-Chip Sensing Applications</b></p> <p>Hobyung Kim, Gahee Jeong, and Jaekyun Kim  <i>Department of Materials Science Engineering, Hanbat National University</i></p>
<b>WP1-106</b>	<p><b>High Sensitivity pH-Sensor based on Cascoded Compatible Lateral Bipolar Transistor (C-CLBT)</b></p> <p>Hyun-Min Jeong, Hyurk-Choon Kwon, Jin-Bum Kwon, Sae-Wan Kim, Ju-Seong Kim, Binrui Xu, and Shin-Won Kang  <i>School of Electronics Engineering, College of IT Engineering, Kyungpook National University</i></p>
<b>WP1-107</b>	<p><b>Opto-Electrical Properties of Organic Photodiodes based on Polymer: Fullerene Derivative</b></p> <p>Il Ku Kim and Young Jin Choi  <i>Department of Nanotechnology and Advanced Materials Engineering, Sejong University</i></p>
<b>WP1-108</b>	<p><b>Comparative Study on the Structural Dependence of the Sensitivity InGaZnO Photosensors</b></p> <p>Daehyun Ko, Jun Tae Jang, Sungju Choi, Hara Kang, Jaeyoung Kim, Hye Ri Yu, Geumho Ahn, Jihyun Lee, Sung-Jin Choi, Dong Myong Kim, and Dae Hwan Kim  <i>School of Electrical Engineering, Kookmin University</i></p>
<b>WP1-109</b>	<p><b>Characteristics of Hydrogen Ion Sensitive Transistor Fabricated on University CMOS Fab</b></p> <p>Hyurk-choon Kwon, Hyun-min Jeong, and Shin-won Kang  <i>School of Electronics Engineering, College of IT Engineering, Kyungpook National University</i></p>
<b>WP1-110</b>	<p><b>The Electrical Characteristics of Pentacene Barristor with Graphene Electrode</b></p> <p>Wang-Taek Hwang, Hyunhak Jeong, Dongku Kim, Yeonsik Jang, Jun-Woo Kim, and Takhee Lee  <i>Department of Physics and Astronomy, Seoul National University</i></p>
<b>WP1-111</b>	<p><b>Ultra-Flexible High Performance FDSOI Transistor for IOT Applications</b></p> <p>Seung-Yoon Kim<sup>1</sup>, Jae Hoon Bong<sup>1</sup>, Cheolgyu Kim<sup>2</sup>, Taek-Soo Kim<sup>2</sup>, Wan Sik Hwang<sup>3</sup>, and Byung Jin Cho<sup>1</sup>  <sup>1</sup><i>School of Electrical Engineering, KAIST</i>, <sup>2</sup><i>Department of Mechanical Engineering, KAIST</i>, <sup>3</sup><i>Department of Materials Engineering, Korea Aerospace University</i></p>
<b>WP1-112</b>	<p><b>Size-Dependent N Doping and Oxygen Reduction Catalysis of Large-Size Graphene Oxide in Liquid Crystal State by Size Selection</b></p> <p>Hong Ju Jung, Kyung Eun Lee, Joonwon Lim, Taeyeong Yun and Sang Ouk Kim  <i>Department of Materials Science and Engineering, KAIST</i></p>
<b>WP1-113</b>	<p><b>Transformation of 2D Block-Copolymer Pattern to Multiple 3D Morphology by Chemically Modified Graphene Modulation</b></p> <p>Jang Hwan Kim, Ju Young Kim, Joonwon Lim, Hyeong Min Jin, and Sang Ouk Kim  <i>Department of Materials Science and Engineering, KAIST</i></p>
<b>WP1-114</b>	<p><b>Viscosity Increase of Graphene Oxide Aqueous Suspension after Electrophoretic Deposition</b></p> <p>Seong Gyu Park, Jun Ho Lee, and Sung Jin An  <i>Department of Materials Science and Engineering, Kumoh National Institute of Technology</i></p>

<b>WP1-115</b>	<b>Fabrication of Resistive Switching Memory Devices Using Electrochemical Deposition for High-Density Memory Applications</b> Youngdae Seo, Ji-Min Song, Min-Kyu Kim, Youngjun Park, and Jang-Sik Lee <i>Department of Materials Science and Engineering, Pohang University of Science and Technology (POSTECH)</i>
<b>WP1-116</b>	<b>Improved Leakage Current of Ion Gel Dielectrics for 2D Thin Film Transistor Using Al<sub>2</sub>O<sub>3</sub> Passivation</b> Hyun-Jin Jo, Cheol-Min Hyeon, Jeong-Hun Choi, and Ji-Hoon Ahn <i>Department of Electronic Material Engineering, Korea Maritime and Ocean University</i>
<b>WP1-117</b>	<b>Chemical Gas Sensors based on 2D Materials with 3D Morphology Fabricated by Electrode First Process</b> Jun-Cheol Park <sup>1</sup> , Chaeun Kim <sup>1</sup> , Tae Young Kim <sup>1</sup> , Jin Park <sup>1</sup> , Sun Young Choi <sup>2</sup> , Yonghun Kim <sup>2</sup> , Byungjin Cho <sup>2</sup> , and Ji-Hoon Ahn <sup>1</sup> <sup>1</sup> <i>Department of Electronic Material Engineering, Korea Maritime and Ocean University</i> <sup>2</sup> <i>Department of Advanced Functional Thin Films, Surface Technology Division, Korea Institute of Materials Science (KIMS)</i>
<b>WP1-118</b>	<b>Graded Synthetic Characteristics of 2D SnS-SnS<sub>2</sub> by Chemical Vapor Transport Using SnS Precursor</b> Chaeun Kim, Jun-Cheol Park, Tae Young Kim, Jin Park, and Ji-Hoon Ahn <i>Department of Electronic Material Engineering, Korea Maritime and Ocean University</i>
<b>WP1-119</b>	<b>Growth Phenomena and Mechanism of MoS<sub>2</sub> Formed by Conventional Chemical Vapor Deposition</b> Cheol-Min Hyeon, Hyun-Jin Jo, Jeong-Hun Choi, and Ji-Hoon Ahn <i>Department of Electronic Material Engineering, Korea Maritime and Ocean University</i>
<b>WP1-120</b>	<b>Self-Heating Effect of Flexible FD-SOI MOSFET on Polymer Substrate</b> Jae Hoon Bong <sup>1</sup> , Seung-Yoon Kim <sup>1</sup> , Chan Bae Jeong <sup>2</sup> , Ki Soo Chang <sup>2</sup> , Wan-Sik Hwang <sup>3</sup> , and Byung Jin Cho <sup>1</sup> <sup>1</sup> <i>School of Electrical Engineering, Korea Advanced Institute of Science and Technology,</i> <sup>2</sup> <i>Division of Instrument Development, Korea Basic Science Institute,</i> <sup>3</sup> <i>Department of Materials Engineering, Korea Aerospace University</i>
<b>WP1-121</b>	<b>Highly Conductive and Stretchable Strain Sensors Using Graphene Flakes-Coated Yarns</b> Wonkyeong Son, Sungwoo Chun, Yeonhoi Choi, and Wanjun Park <i>Department of Electronic Engineering, Hanyang University</i>
<b>WP1-122</b>	<b>Wafer-Scale, Homogeneous MoS<sub>2</sub> Layers on Plastic Substrates for Flexible Visible-Light Photodetectors</b> Yi Rang Lim, Wooseok Song, Sung Myung, Sun Sook Lee, Ki-Seok An, and Jongsun Lim <i>Thin Film Materials Research Center, Korea Research Institute of Chemical Technology</i>
<b>WP1-123</b>	<b>Electrical Characteristics of Benzenedithiolate Molecular Devices with Multilayer Graphene Electrodes on Rigid/Flexible Substrates</b> Yeonisk Jang, Hyunhak Jeong, Dongku Kim, Wang-Taek Hwang, Jun-Woo Kim, and Takhee Lee <i>Department of Physics and Astronomy, Seoul National University</i>

<b>WP1-124</b>	<p><b>Conductive Graphene/Polydimethylsiloxane (PDMS) Composite for Flexible Pressure Sensor</b></p> <p>Soa Bang, Sungwoo Chun, Yeonhoi Choi, Chunho Ha, Wonkyeong Son, and Wanjun Park <i>Department of Electronic Engineering, Hanyang University</i></p>
<b>WP1-125</b>	<p><b>Au-Ag Core-Shell Nanoparticle Arrangement for Improving Broadband Plasmonic Characteristic by Using Block Copolymer Patterning</b></p> <p>Geon Gug Yang, Seung Keun Cha, Hyeong Min Jin, and Sang Ouk Kim <i>Department of Materials Science and Engineering, KAIST</i></p>
<b>WP1-126</b>	<p><b>Nanotube Assisted Graphene Electrophysiological Sensors</b></p> <p>Sun Sang Kwon<sup>1</sup>, Jae Hyeok Shin<sup>1</sup>, SungWoo Nam<sup>2</sup>, and Won Il Park<sup>1</sup> <i><sup>1</sup>Division of Materials Science &amp; Engineering, Hanyang University, <sup>2</sup>Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign</i></p>
<b>WP1-127</b>	<p><b>Novel Synthesis of PANI-CNT Nanocomposites via N-doped Sites of Carbon Nanotubes</b></p> <p>Hojin Lee, Atta Ul Haq, Joonwon Lim, and Sang Ouk Kim <i>Department of Advanced Material Science and Engineering, KAIST</i></p>
<b>WP1-128</b>	<p><b>Development of Biodegradable and Conductive Polymer and Application Base on Therefrom: Triboelectric Nano Generator</b></p> <p>Ha Ryeon Hwang and Sukwon Hwang <i>KU-KIST Graduate School of Converging Science and Technology, Korea University</i></p>
<b>WP1-129</b>	<p><b>그래핀 고정저항에 의한 그래핀/ZnO:N 배리스터의 동작특성 열화연구</b></p> <p>허선우, 심창후, 김윤지, 김소영, 김기영, 이용수, 이상경, 이병훈 <i>Center for Emerging Electric Devices and Systems, School of Materials Science and Engineering, Gwangju Institute of Science and Technology</i></p>
<b>WP1-130</b>	<p><b>그래핀/금속 접합 계면층에 따른 그래핀의 Fermi-level 변화</b></p> <p>김윤지, 김소영, 허선우, 심창후, 이상경, 장경은, 이병훈 <i>Center for Emerging Electronic Devices and Systems, School of Materials Science and Engineering, Gwangju Institute of Science and Technology</i></p>
<b>WP1-131</b>	<p><b>CVD-Synthesis of Monolayer MoS<sub>2</sub> and Its Noise Characteristics</b></p> <p>Tae-Young Kim, Younggul Song, Kyungjune Cho, Jinsu Pak, Jae-Keun Kim, Barbara Yuri Choi, Seungjun Chung, and Takhee Lee <i>Department of Physics and Astronomy, Seoul National University</i></p>
<b>WP1-132</b>	<p><b>고압 수소 열처리를 이용한 그래핀 광소자의 성능 개선</b></p> <p>김시현, 김윤지, 유태진, 장경은, 이병훈 <i>Center for Emerging Electronic Devices and Systems, School of Materials Science and Engineering, Gwangju Institute of Science and Technology</i></p>
<b>WP1-133</b>	<p><b>화학적 도핑을 이용한 그래핀 - ZnO:N 배리스터의 문턱전압 조절</b></p> <p>김소영, 김윤지, 심창후, 허선우, 황현준, 한경주, 이선규, 이병훈 <i>Center for Emerging Electric Devices and Systems, School of Material Science and Engineering, Gwangju Institute of Science and Technology</i></p>



WP1-134	<p><b>Analysis on the Electronic Noise Characteristics in Organic Nanocomposite Resistive Memory Devices</b></p> <p>Younggul Song, Jingon Jang, Daekyoung Yoo, Youngrok Kim, Woocheol Lee, and Takhee Lee <i>Department of Physics and Astronomy, Seoul National University</i></p>
WP1-135	<p><b>Self-Aligned Multi-Channel Graphene Nanoribbon Transistor Arrays Fabricated at Wafer-Scale</b></p> <p>Seong-Jun Jeong<sup>1</sup>, Sanghyun Jo<sup>1</sup>, Jooho Lee<sup>2</sup>, Kiyeon Yang<sup>2</sup>, Hyangsook Lee<sup>2</sup>, Chang-Seok Lee<sup>1</sup>, Heesoon Park<sup>1</sup>, and Seongjun Park<sup>1</sup> <sup>1</sup><i>Device Lab., Device &amp; System Research Center, Samsung Advanced Institute of Technology,</i> <sup>2</sup><i>Platform Technology Lab., Device &amp; System Research Center, Samsung Advanced Institute of Technology</i></p>
WP1-136	<p><b>Synthesis of Single Crystalline Core-shell Nanoparticles via Non-epitaxial Route</b></p> <p>Dong Gyue Kim<sup>1</sup>, Jiwoong Chang<sup>2</sup>, and Jaekyun Kim<sup>1</sup> <sup>1</sup><i>Department of Materials Science Engineering, Hanbat National University,</i> <sup>2</sup><i>Department of Energy and Chemical Engineering, Kumoh National Institute of Technology</i></p>
WP1-137	<p><b>The Effect of Dielectric Capping Layer on Few-layer MoS<sub>2</sub> Field Effect Transistor (FET)</b></p> <p>June Park<sup>1</sup>, Seung-Hwan Kim<sup>1</sup>, Sun-Woo Kim<sup>1</sup>, and Hyun-Yong Yu<sup>2</sup> <sup>1</sup><i>Department of Nano-Semiconductor, Korea University,</i> <sup>2</sup><i>School of Electrical Engineering, Korea University</i></p>
WP1-138	<p><b>트리페닐포스핀(PPh<sub>3</sub>)을 활용한 고성능 이황화몰리브덴(MoS<sub>2</sub>) 트랜지스터와 광 검출기</b></p> <p>Jeong Hoon Kim, Gyeong Min Back, and Jin-Hong Park <i>School of Electronic and Electrical Engineering, Sungkyunkwan University</i></p>
WP1-139	<p><b>Type-Converted N-doping of WSe<sub>2</sub> through Thermal and Optical Activation</b></p> <p>Hyeong-Jun Kim and Jin-Hong Park <i>School of Electronics and Electrical Engineering, Sungkyunkwan University</i></p>
WP1-140	<p><b>비정질 IGZO 가시광선 Photodetector에 Post-Fabrication Annealing이 미치는 영향</b></p> <p>Hang-Il Cho and Jin-Hong Park <i>School of Electronic and Electrical Engineering, Sungkyunkwan University</i></p>
WP1-141	<p><b>몰리브덴 디설파이드(MoS<sub>2</sub>)에 ZnO를 이용한 Non-degenerate N-type도핑현상</b></p> <p>Hang-Il Cho and Jin-Hong Park <i>School of Electronic and Electrical Engineering, Sungkyunkwan University</i></p>
WP1-142	<p><b>금속유도 층 변화 결정화에 의한 Strained 다결정 Germanium</b></p> <p>Hang-Il Cho and Jin-Hong Park <i>School of Electronic and Electrical Engineering, Sungkyunkwan University</i></p>
WP1-143	<p><b>WITHDRAWN</b></p>

WP1-144	<i>WITHDRAWN</i>
WP1-145	<p><b>M-DNA와 전이금속 칼코겐화합물을 이용한 고감도 바이오 전계 효과 트랜지스터</b></p> <p>Jeong Hoon Kim, Sim Young Woo, and Jin-Hong Park  <i>School of Electronic and Electrical Engineering, Sungkyunkwan University</i></p>
WP1-146	<p><b>Enhanced Tunnel Magnetoresistance and Electric-Field Effect in W/CoFeB/MgO/CoFeB/W Perpendicular Magnetic Tunnel Junction</b></p> <p>Dae-Hoon Kim, Kyoung-Woong Park, and Byong-Guk Park  <i>Department of Materials Science and Engineering, KAIST</i></p>
WP1-147	<p><b>pH-Mediated Structural Tailoring of Hydrothermally-Grown ZnO Nanostructure on 2D Nanomaterials for Flexible UV Photodetectors</b></p> <p>Young Bum Lee, Seong Ku Kim, Wooseok Song, Sung Myung, Sun Sook Lee, Ki-seok An, and Jongsun Lim  <i>Thin Film Materials Research Center, Korea Research Institute of Chemical Technology</i></p>
WP1-148	<p><b>High Voltage Driving Circuit for Operating CMUT</b></p> <p>Byung Jo So, Jun Young Kweon, Jun Tae Choi, and Yun Heub Song  <i>Department of Electronics and Computer Engineering, Hanyang University</i></p>
WP1-149	<p><b>A 90nm BSI Full-HD CMOS Image Sensor with a 12-bit Two-Step Single-Slope ADC and an Efficient Memory Allocation Technique.</b></p> <p>Yongwon Cho, Seongjoo Lee, and Minkyu Song  <i>Department of Semiconductor Science, Dongguk University</i></p>
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WP1-151	<p><b>시냅스 출력 전류를 펄스 폭으로 변환하는 뉴로모픽 뉴런 및 저장 회로</b></p> <p>백승헌, 이종호, 김재하  <i>서울대학교 전기정보공학부, 서울대학교 반도체공동연구소</i></p>
WP1-152	<p><b>비동기식 SAR ADC의 내부 신호 발생기를 위한 지연 시간 조정 회로</b></p> <p>김주언, 백광현  <i>중앙대학교 전자전기공학부</i></p>
WP1-153	<p><b>An Auto-Switching Energy Harvesting Circuit Using Vibration and Thermal Energy</b></p> <p>Eun-Jung Yoon, Jong-Tae Park, and Chong-Gun Yu  <i>Department of Electronics Engineering, Incheon National University</i></p>
WP1-154	<p><b>A High-Efficient Full-Wave Rectifier with Vibration Detector</b></p> <p>Eun-Jung Yoon, Jong-Tae Park, and Chong-Gun Yu  <i>Department of Electronics Engineering, Incheon National University</i></p>





WP1-155	<b>Multiple Energy Harvesting Circuit for Micro Sensor Nodes</b> Eun-Jung Yoon, Jong-Tae Park, and Chong-Gun Yu <i>Department of Electronics Engineering, Incheon National University</i>
WP1-156	<b>A Linear Analysis of Output Topology of Class-D Audio Amplifier</b> Ji-Hun Lee and Gyu-Hyeong Cho <i>School of Electrical Engineering, KAIST</i>
WP1-157	<b>A Portable Fluorescence Detection Receiver Array in 0.11-<math>\mu</math>m CMOS</b> Ying He and Sung Min Park <i>Department of Electronics and Electrical Engineering, Ewha Womans University</i>
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WP1-159	<b>Voltage Reference Using Stacked Transistors</b> Jeongho Hwang and Deog-Kyoon Jeong <i>Department of Electrical and Computer Engineering, Seoul National University</i>
WP1-160	<b>A Coefficient-Error-Robust FFE for a Silicon Interposer Channel</b> Seungho Han, Sooeun Lee, Minsoo Choi, Jae-Yoon Sim, Hong-June Park, and Byungsub Kim <i>Department of Electrical Engineering, Pohang University of Science and Technology</i>
WP1-161	<b>Design of Adaptive CTLE for DisplayPort Version 1.3</b> Kwanseo Park and Deog-Kyoon Jeong <i>Department of Electrical and Computer Engineering, Seoul National University</i>
WP1-162	<b>모바일 DRAM 인터페이스를 위한 쿼드러처 신호 교정기</b> 김용조, 조성환 <i>한국과학기술원 전기 및 전자공학과</i>
WP1-163	<b>A 10 Gbps CDR for Wireless Chip-to-Chip Communication</b> Junsub Yoon, Dongjun Park, and Jongsun Kim <i>Department of Electronic and Electrical Engineering, Hongik University</i>
WP1-164	<b>A Multi-Phase Fractional-Ratio Frequency Multiplier</b> Junsub Yoon, Dongjun Park, and Jongsun Kim <i>Department of Electronic and Electrical Engineering, Hongik University</i>
WP1-165	<b>A Circuit Implementation and a Simulation Result of CML-Based 50 Gb/s PAM-4 CTLE / VSPA in 28nm CMOS</b> Haram Ju and Deog-Kyoon Jeong <i>Department of Electrical Engineering and Computer Science, Seoul National University</i>
WP1-166	<b>A 5 GHz 2-Stage Injection-Locked Ring Oscillator with Wide Lock Range</b> Sung-Yong Cho and Deog-Kyoon Jeong <i>Department of Electrical and Computer Engineering, Seoul National University</i>

<b>WP1-167</b>	<p><b>A Current-Integrating Summer for Multi-Tap Decision Feedback Equalizer</b></p> <p>Chang Soo Yoon and Deog-Kyoon Jeong <i>Department of Electrical and Computer Engineering, Seoul National University</i></p>
<b>WP1-168</b>	<p><b>A 128.4 <math>\mu</math>W, -78 dB PSRR Bandgap Reference</b></p> <p>Kun Huang, Behnam Samadpoor Rikan, Jung Yeon Kim, and Kang Yoon Lee <i>College of Information and Communication Engineering, Sungkyunkwan University</i></p>
<b>WP1-169</b>	<p><b>Digital LDO Regulator with Reduced Transient Response</b></p> <p>Nabeel Ahmad, Behnam Samadpoor Rikan, and Kang-Yoon Lee <i>Department of Information &amp; Communication Engineering, Sungkyunkwan University</i></p>
<b>WP1-170</b>	<p><b>A 10 Bit 8 MS/s Asynchronous SAR ADC for Low-Power Applications</b></p> <p>Hyeeyeong Kang, Dong-Soo Lee, and Kang-Yoon Lee <i>School of Information and Communication Engineering, Sungkyunkwan University</i></p>
<b>WP1-171</b>	<p><b>Improving Energy Efficiency of Switched Capacitor DC-DC Converters for Low Duty-Cycle Load Circuits</b></p> <p>Saad Arslan<sup>1,2</sup>, Syed Asmat Ali Shah<sup>1</sup>, and HyungWon Kim<sup>1</sup> <i><sup>1</sup>School of Electronics Engineering, Chungbuk National University, <sup>2</sup>Electrical Engineering Department, COMSATS Institute of Information Technology</i></p>
<b>WP1-172</b>	<p><b>A 24GHz I/Q LO Generator Using Two Phase Shifters</b></p> <p>Heesung Yang, Bohoon Shin, Haejoon Yang, and Ilku Nan <i>Department of Electrical Engineering, Pusan National University</i></p>
<b>WP1-173</b>	<p><b>A 0.4 V, 300 <math>\mu</math>W Armstrong VCO with Dual Transformer Feedback Operating at 8.5 GHz</b></p> <p>Muhammad Talha Gul, Jae-Hun Lee, Woo-Jin Jo, and Jong-Woork Lee <i>Department of Electronics and Radio Engineering, Kyung Hee University</i></p>
<b>WP1-174</b>	<p><b>Design of Fully Integrated Cascode CMOS Power Amplifier for Ka-Band Application</b></p> <p>Sungjae Oh, Jongseok Bae, Hyunjun Kim, Wonseob Lim, and Youngoo Yang <i>School of Electronic and Electrical Engineering, Sungkyunkwan University</i></p>
<b>WP1-175</b>	<p><b>A Phase Shifter with Wideband Transmission Phase Using Phase Compensation Technique</b></p> <p>Ngoc-Duy-Hien Lai, Nhut-Tan Doan, Dong-Kwan Han, Ju-Hwan Lim, and Sang-Woong Yoon <i>Department of Electronics and Radio Engineering, Kyung Hee University</i></p>
<b>WP1-176</b>	<p><b>A Fractional-N DPLL with Bidirectional PI Phase Rotation</b></p> <p>Sunghyun Bae, Minuk Heo, Junsoo Ko, and Minjae Lee <i>School of Electrical Engineering and Computer Science, Gwangju Institute of Science and Technology</i></p>
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WP1-180	<b>Ku-Band 레이더용 18-GHz LC 전압 제어 발진기와 ILFD 5 분주기의 설계</b> 김보라, 문용 <i>송실대학교 전자공학과</i>
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WP1-187	<b>Modeling of Power Supply Induced Jitter in Digital Delay-Locked Loop</b> Yunju Choi, Jiho Lee, Kyunghoon Kim, and Jaeha Kim <i>Department of Electrical and Computer Engineering, Seoul National University</i>
WP1-188	<b>Performance Evaluation of Compressed Multi-Layer Perceptron in Embedded Computing Platforms</b> Taehwan Shin, Soohyun Choi, and Jaeyong Chung <i>Department of Electronic Engineering, Incheon National University</i>
WP1-189	<b>A Technology Mapping Algorithm for MTJ-based LUT</b> Minyoung Im, Jeongbin Kim, Taehee You, and Eui-Young Chung <i>School of Electrical and Electronic Engineering, Yonsei University</i>

WP1-190	<p><b>MIMO 신호 처리를 위한 4 X 4 Real-Valued Sorted QR Decomposition 구현</b></p> <p>JiHye Koo, HyunSub Kim, HyukYeon Lee, and JaeSeok Kim  <i>Department of Electrical and Electronic Engineering, Yonsei University</i></p>
WP1-191	<p><b>A 0.9-mW 2-GHz Programmable Integer-N Synchronous Frequency Divider with 50% Duty-Cycle Output for PLL Application</b></p> <p>Sung-Joon Lee and Jaeha Kim  <i>Department of Electrical and Computer Engineering, Seoul National University, Inter-University Semiconductor Research Center, Seoul National University</i></p>
WP1-192	<p><b>Area-Efficient Serial-in/Serial-out Binary Modulo Operator</b></p> <p>Jonghyuk Kwon, Yunho Park, and Youngjoo Lee  <i>Department of Electronics Engineering, Kwangwoon University</i></p>
WP1-193	<p><b>근사 연산을 활용한 고속 연속 제거 기반 극 부호 복호기</b></p> <p>박인호<sup>1</sup>, 이영주<sup>2</sup>, 김지훈<sup>3</sup>  <sup>1</sup>충남대학교 전자전파정보통신공학과, <sup>2</sup>광운대학교 전자공학과, <sup>3</sup>서울과학기술대학교 전기정보공학과</p>
WP1-194	<p><b>Test Syndrome 기반 저면적 연판정 BCH 복호기</b></p> <p>김태성, 최대현, 이한호  <i>인하대학교 정보통신공학과</i></p>
WP1-195	<p><b>실시간 차선 검출을 위한 카메라 왜곡 보정의 최적화</b></p> <p>안중근, 이영주  <i>광운대학교 전자공학과</i></p>
WP1-196	<p><b>Amdahl's Law for Mobile Applications</b></p> <p>Yonghee Yun, Sodam Han, and Young Hwan Kim  <i>Department of Electrical Engineering, Pohang University of Science and Technology</i></p>
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WP1-204	<b>Co<sub>3</sub>O<sub>4</sub>/graphene Nanocomposite Anodes for High-Performance Lithium-Ion Batteries</b> Kyunghoon Jang, Jaewon Jang, Hayong Song, and Moon-Ho Ham <i>School of Materials Science and Engineering, Gwangju Institute of Science and Technology</i>
WP1-205	<b>Graphene-Laminated PEDOT:PSS Films for Highly Conductive, and Environmentally Stable Organic Transparent Electrodes</b> Jae Hwan Chu <sup>1,3</sup> , Do Hee Lee <sup>1</sup> , Junhyeon Jo <sup>1</sup> , Sung Youb Kim <sup>2</sup> , Jung-Woo Yoo <sup>1</sup> , and Soon-Yong Kwon <sup>1</sup> <sup>1</sup> <i>School of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST)</i> , <sup>2</sup> <i>School of Mechanical and Nuclear Engineering, Ulsan National Institute of Science and Technology (UNIST)</i> , <sup>3</sup> <i>Department of Electrical and Computer Engineering, University of California</i>
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WP1-210	<b>Sol-gel 방법을 이용한 실리콘 웨이퍼의 Surface Passivation</b> 오세현, 이승호, 임상우 <i>연세대학교 화공생명공학과</i>
WP1-211	<b>Effect of Metal-Assisted Chemical Etching on Ge Surface</b> Seung Hyo Lee and Sang Woo Lim <i>Yonsei University</i>
WP1-212	<b>Fabrication Method of PEDOT:PSS based Thermoelectric Devices on PDMS Substrates</b> Nak Kyu Shin and Jeonghun Kwak <i>School of Electrical and Computer Engineering, University of Seoul</i>

<b>WP1-213</b>	<b>4H-SiC Trench Gate MOSFET의 온/오프 특성 최적화를 위한 P-shielding Layer 최적화 설계</b> Sinsu Kyoung, Tae-jin Nam, Young-sung Hong, Myung-hwan Lee, and Tai Young Kang <i>Research and Development, Powercubesemi incorporated</i>
<b>WP1-214</b>	<b>Studies on Depletion Layer of Hetero-junction for Water Splitting</b> Hyun Kim and Bee Lyong Yang <i>School of Advanced Materials and System Engineering, Kumoh National Institute of Technology</i>
<b>WP1-215</b>	<b>Enhanced Thermoelectric Properties of Single- and Bi- Graphene Nanomeshes from Block Copolymer Self-Assembly</b> Jinwoo Oh and Jeong Gon Son <i>Photo-electronic Hybrids Center, Korea Institute of Science and Technology</i>
<b>WP1-216</b>	<b>Conformally Coated BiVO<sub>4</sub> Nanodots on Porosity-Controlled WO<sub>3</sub> Nanorods as Highly Efficient Type II Heterojunction Photoanodes for Water Oxidation</b> Mi Gyoung Lee and Ho Won Jang <i>Department of Material Science and Engineering, Seoul National University</i>
<b>WP1-217</b>	<b>SnO<sub>2</sub>와 그래핀을 이용한 다공성 하이브리드 복합체 제조 및 에너지 저장소자 음극재로의 적용 연구</b> 조규상, 장재원, 함문호 <i>광주과학기술원 신소재공학부</i>
<b>WP1-218</b>	<b>A Novel Strategy of Crumpled Graphene Balls for High Performance Supercapacitor.</b> Eunji Kim and Jeong Gon Son <i>Photo-electronic Hybrids Center, Korea Institute of Science and Technology</i>
<b>WP1-219</b>	<b>Wafer-Scale Solution-Processed Synthesis of NiO Nanostructures for Efficient Si-based Water Splitting Photoanode</b> Sol A Lee, Sun Yong Lee, Kootak Hong, and Ho Won Jang <i>Department of Materials Science and Engineering, Seoul National University</i>
<b>WP1-220</b>	<b>A Study on the Efficiency Improvement of 1kW Photovoltaic Inverter with SiC SBD</b> Taejin Nam, Youngsung Hong, Jungho Nam, Myunghwan Lee, Taiyoung Kang, and Sinsu Kyoung <i>Department of research and development, Powercubesemi Incorporated</i>
<b>WP1-221</b>	<b>Wafer-Scale Transferable Molybdenum Disulfide Thin-Film Catalysts for Photoelectrochemical Hydrogen Production</b> Seokhoon Choi <sup>1</sup> , Ki Chang Kwon <sup>1</sup> , Soo Young Kim <sup>2</sup> , and Ho Won Jang <sup>1</sup> <i><sup>1</sup>Department of Materials Science and Engineering, Seoul National University, <sup>2</sup>School of Chemical Engineering and Materials Science, Chung-Ang University</i>
<b>WP1-222</b>	<b>Surface Contamination and Accurate Measurement of Thicknesses of Nano-Scale HfO<sub>2</sub> Thin Films by XRR (X-ray Reflectometry)</b> Chang Soo Kim <sup>1</sup> , In Young Jung <sup>2</sup> , Minhyuk Choi <sup>3</sup> , and Ki-Hong Kim <sup>4</sup> <i><sup>1</sup>Division of Industrial Metrology, Korea Research Institute of Standards and Science, <sup>2</sup>Department of Physics, Hanyang University, <sup>3</sup>Department of Physics, Chungnam National University, <sup>4</sup>AE Group, Platform Technology Lab., SAIT, Samsung Electronics Co. Ltd.</i>



WP1-223	<p><b>Fabrication of Multiwalled Carbon Nanotube Field Emitter and Characterization Using Field Ion Microscope in Ultra-High Vacuum State</b></p> <p>Sanjeev Kumar Kanth, Byong Chon Park, Kwangil Kim, and Bok Lae Cho <i>Korea Research Institute of Standards and Science</i></p>
WP1-224	<p><b>Physical Analysis on Gain and Time Response of Single-Input Single-Output Electron Density, Temperature Controllers for SF<sub>6</sub>/Ar Plasma</b></p> <p>Sangwon Ryu<sup>1</sup>, Hyung-Joon Roh<sup>1</sup>, Yunchang Jang<sup>1</sup>, Dae-Geun Ha<sup>2</sup>, Jun-Mo Koo<sup>2</sup>, Dam-Dae Park<sup>2</sup>, Chong-Hun Han<sup>2</sup>, and Gon-Ho Kim<sup>1</sup> <sup>1</sup><i>Department of Energy Systems Engineering, Seoul National University, </i><sup>2</sup><i>Department of Chemical and Biological Engineering, Seoul National University</i></p>
WP1-225	<p><b>SRAM 반도체 EPI 성장 공정 중 eSiGe 구조 분리 측정을 위한 OCD 기술개발</b></p> <p>이기웅, 강윤식, 배군호, 심규찬 <i>SK Hynix Inc.</i></p>
WP1-226	<p><b>RF 측정 시스템의 Gage R&amp;R 판정을 위한 분석 방법 제시</b></p> <p>서지연, 주용한, 심규찬 <i>SK Hynix Inc.</i></p>
WP1-227	<p><b>광학 다중 초점을 이용한 반도체 불량 깊이 정보 검출 기술</b></p> <p>김덕인, 권오장, 김규영, 심규찬 <i>SK Hynix Inc.</i></p>
WP1-228	<p><b>EUV 마스크 검사를 위한 EUV Scanning Lensless Imaging 기술 개발</b></p> <p>우동곤<sup>1</sup>, 김정환<sup>1</sup>, 홍성철<sup>1</sup>, 신승혁<sup>2</sup>, 김회율<sup>2</sup>, 안진호<sup>1,3</sup> <sup>1</sup><i>한양대학교 신소재공학과, </i><sup>2</sup><i>한양대학교 전자컴퓨터통신공학과, </i><sup>3</sup><i>나노과학기술연구소</i></p>
WP1-229	<p><b>결맞음성 회절 현미경의 검사 안정성 개선 연구</b></p> <p>김영웅<sup>1</sup>, 우동곤<sup>1</sup>, 김정환<sup>1</sup>, 안진호<sup>1,2</sup> <sup>1</sup><i>한양대학교 신소재공학과, </i><sup>2</sup><i>나노과학기술연구소</i></p>
WP1-230	<p><b>DRAM 저항성 Fail EBI Sensitivity &amp; Throughput 향상 기술 개발</b></p> <p>김귀량, 조재철, 박정환, 권광민, 오동연, 임운하, 심규찬 <i>SK Hynix Inc.</i></p>
WP1-231	<p><b>Standard Measurement for the Focal Spot Size of Microfocus X-ray</b></p> <p>Sung Hwan Heo, Yong Min Kim, and Hyung Won Yoo <i>SK Hynix Inc.</i></p>
WP1-232	<p><b>SEM을 기반한 3D NAND의 HAR구조에서 하부 Residue성 검출력 확보</b></p> <p>권오장, 이일용, 서종현, 권광민, 심규찬 <i>SK Hynix Inc.</i></p>
WP1-233	<p><b>Metrology of Protective Yttrium Oxide Film for Contamination Free Manufacturing under Plasma Etching</b></p> <p>Je-Boem Song<sup>1,2</sup>, Kwan-Sik Min<sup>1</sup>, Seung-Su Lee<sup>1</sup>, Minjoong Kim<sup>1</sup>, Jin-Tae Kim<sup>1</sup>, Seong-Geun Oh<sup>2</sup>, and Ju-Young Yun<sup>1</sup> <sup>1</sup><i>Vacuum Center, Korea Research Institute of Standards and Science, </i><sup>2</sup><i>Department of Chemical Engineering, Hanyang University</i></p>

<p><b>WP1-234</b></p>	<p><b>Optical Simulation Study for Enhancing Defect Detection Rate</b>                  Seong-Min Ma, Joonseong Hahn, Jae Hyoung Oh, Byoung-Ho Lee, and Hyung Won Yoo  <i>SK Hynix Inc.</i></p>
<p><b>WP1-235</b></p>	<p><b>In-Line Detection of Silicon Surface Quality Variation Using Room Temperature Photoluminescence Measurements</b>                  JaeHyun Kim<sup>1,2</sup>, ByungDae.Woo<sup>1</sup>, ChangWhan Lee<sup>1</sup>, HyungWon Yoo<sup>1</sup>, ByoungHo Lee<sup>1</sup>, JinSan Yoo<sup>1</sup>, and SeungMin Han<sup>2</sup>  <sup>1</sup>SK Hynix Inc., <sup>2</sup>KAIST</p>
<p><b>WP1-236</b></p>	<p><b>The Investigation of Electron Beam Inspection Simulation Using Monte Carlo Method</b>                  Jin-hee Han, Jae Hyoung Oh, and Hyung Won Yoo  <i>SK Hynix Inc.</i></p>
<p><b>WP1-237</b></p>	<p><b>Is Performance of Mueller-Matrix Spectroscopic Ellipsometer Superior to That of Common Spectroscopic Ellipsometer?</b>                  Yong Jai Cho, Won Chegal, Jeong Pyo Lee, and Hyun Mo Cho  <i>Center for Nanometrology, Division of Industrial Metrology, Korea Research Institute of Standards and Science</i></p>
<p><b>WP1-238</b></p>	<p><b>반도체/OLED 박막공정용 화학증착소재의 증기압 측정</b>                  심섭<sup>1,2</sup>, 안종기<sup>1,3</sup>, 강고루<sup>1,4</sup>, 남민우<sup>1,5</sup>, 이보금<sup>1,6</sup>, 강연태<sup>1,7</sup>, 김진태<sup>1,2</sup>, 정낙관<sup>1</sup>, 윤주영<sup>1,2</sup>  <sup>1</sup>한국표준과학연구원 진공기술센터, <sup>2</sup>과학기술연합대학원대학교 나노재료공학, <sup>3</sup>경북대학교 전자공학부, <sup>4</sup>성균관대학교 기계공학부, <sup>5</sup>중앙대학교 융합공학부, <sup>6</sup>한남대학교 화학과, <sup>7</sup>건양대학교 화학공학과</p>
<p><b>WP1-239</b></p>	<p><b>BDD와 Pt 전극에 의해 만들어진 이온수에 의한 파티클 제거율 및 유기물 제거율 비교</b>                  Jinwook Kim and Daesun Lim  <i>Korea University</i></p>
<p><b>WP1-240</b></p>	<p><b>3D Automated Industrial Atomic Force Microscope for In-Line Fin Height Monitoring to Film Characterization Metrology</b>                  Ahjin Jo, Seong-Hun Yun, Byoung-Woon Ahn, Ju Suk Lee, Sang-Joon Cho, and Sang-il Park  <i>Park Systems Corp.</i></p>
<p><b>WP1-241</b></p>	<p><b>NVRAM 기반의 멀티코어 모바일 디바이스를 위한 태스크 스케줄러</b>                  김성민, 구철환, 주지민, 강성묵, 이화수, 김태석  <i>광운대학교 컴퓨터공학과</i></p>