

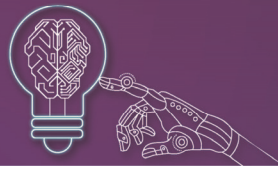
## [TP] 포스터세션

2026년 1월 29일(목), 10:00~19:00  
(공식발표시간: 17:40~19:00)

### D. Thin Film Process Technology 분과

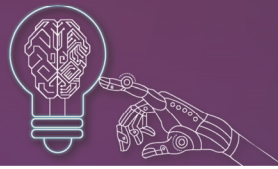
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| TP-001<br>ZONE 2-1<br>(5층, 로비) | <b>Hot Wire Assisted Area Selective Deposition of Ruthenium</b><br>Kyeongmin Min and Han-Bo-Ram Lee<br>Department of Materials Science and Engineering, Incheon National University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TP-002<br>ZONE 2-1<br>(5층, 로비) | <b>Single-Device Integration of PUFs and TRNGs via Stochastic ZGO Nanoclusters for Secure and Generative Applications</b><br>Seungme Kang, Wangmyung Choi, and Hocheon Yoo<br>Department of Electronic Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| TP-003<br>ZONE 2-1<br>(5층, 로비) | <b>The Effect of Post-Al<sub>2</sub>O<sub>3</sub> Passivation Annealing on the Electrical Characteristics of ALD-IGZO Thin-Film Transistors</b><br>Sahngik Aaron Mun <sup>1,2</sup> , Donghee Han <sup>1,2</sup> , Minhyuk Park <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                                                         |
| TP-004<br>ZONE 2-1<br>(5층, 로비) | <b>Oxalic Acid-Based Wet Etching of Amorphous Zinc-Tin-Oxide Thin Films Deposited by Atomic Layer Deposition</b><br>Jaewon Ham <sup>1,2</sup> , Seo Young Jang <sup>1,2,3</sup> , Yonghee Lee <sup>1,2</sup> , Sukin Kang <sup>1,2</sup> , Sahngik Aaron Mun <sup>1,2</sup> , Jinheon Choi <sup>1,2</sup> , Juneseong Choi <sup>1,2</sup> , Seoryong Park <sup>1,2</sup> , Hyungjeung Kim <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University, <sup>3</sup> SK Hynix Inc.                                                                                   |
| TP-005<br>ZONE 2-1<br>(5층, 로비) | <b>Al-Doped ZnSnO Amorphous Oxide Semiconductor for Highly Reliable Thin-Film Transistors and Capacitorless DRAM Applications</b><br>Jinheon Choi <sup>1,2</sup> , Taeyoung Jeong <sup>3</sup> , Shihyun Kim <sup>1,2</sup> , Néstor Ghenzi <sup>1,2</sup> , Byongwoo Park <sup>1,2</sup> , Gwangsik Jeon <sup>1,2</sup> , Juneseong Choi <sup>1,2</sup> , Hyungjeung Kim <sup>1,2</sup> , Jung-Hae Choi <sup>3</sup> , Yonghee Lee <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University, <sup>3</sup> Electronic and Hybrid Materials Research Center, KIST |
| TP-006<br>ZONE 2-1<br>(5층, 로비) | <b>Ferroelectric Thin-Film Transistors with Indium Gallium Zinc Oxide Channels: Effects of Stack Thickness Scaling</b><br>Won Kim <sup>1,2</sup> , Sung Eun Kim <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                                                                                                                         |
| TP-007<br>ZONE 2-1<br>(5층, 로비) | <b>Minimizing on-Current Drop in HfO<sub>2</sub>-Based Ferroelectric Tunnel Junctions through a-IGZO Interlayer Engineering</b><br>Sanghyup Lee <sup>1,2</sup> and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                                                                                                                                           |

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| <b>TP-008</b><br>ZONE 2-1<br>(5층, 로비) | <b>Mechanism Study of The Ferroelectric Behavior in Ferroelectric/Field-Induced Ferroelectric Bilayer Doped-HfO<sub>2</sub> Capacitors</b><br>Joon Young Kang <sup>1,2</sup> , Han Sol Park <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                      |
| <b>TP-009</b><br>ZONE 2-1<br>(5층, 로비) | <b>Ferroelectric Property of Wurtzite AlScN/AlN/AlScN Multilayers</b><br>Dong Jae Kim <sup>1,2</sup> and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                              |
| <b>TP-010</b><br>ZONE 2-1<br>(5층, 로비) | <b>Enhancing Ferroelectric Properties of Zr-Doped HfO<sub>2</sub> Thin Films Using the Bi-Layer Bottom Electrode Structures</b><br>Han Sol Park <sup>1,2</sup> , Joong Chan Shin <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                 |
| <b>TP-011</b><br>ZONE 2-1<br>(5층, 로비) | <b>Memory Window Improvement in Ferroelectric Thin-Film Transistors with Fluorite/Wurtzite Bilayers Grown by Atomic Layer Deposition</b><br>Hyun Woo Nam <sup>1,2</sup> , Dong Jae Kim <sup>1,2</sup> , Kyung Do Kim <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                             |
| <b>TP-012</b><br>ZONE 2-1<br>(5층, 로비) | <b>Improved Interfacial Properties of TiO<sub>2</sub> Thin Films on Ru Electrodes through Stepwise Optimization of Ozone-Assisted ALD</b><br>Haewon Song <sup>1,2</sup> , Tae Kyun Kim <sup>1,2</sup> , Heewon Paik <sup>1,2</sup> , Jonghoon Shin <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                               |
| <b>TP-013</b><br>ZONE 2-1<br>(5층, 로비) | <b>Effect of GeO<sub>2</sub> Interfacial Layer on Low-Temperature Crystallization of SrTiO<sub>3</sub> Thin Film Grown via Atomic Layer Deposition</b><br>Heewon Paik <sup>1,2</sup> , Tae Kyun Kim <sup>1,2</sup> , Jonghoon Shin <sup>1,2</sup> , Haewon Song <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                  |
| <b>TP-014</b><br>ZONE 2-1<br>(5층, 로비) | <b>BaTiO<sub>3</sub> Thin Films Grown by Atomic Layer Deposition Using a Seed-Layer Process</b><br>Chansoo Kwak <sup>1,2</sup> , Heewon Paik <sup>1,2</sup> , Sunoo Kim <sup>3</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University, <sup>3</sup> Next-Generation Semiconductor Convergence and Open Sharing System, Seoul National University |
| <b>TP-015</b><br>ZONE 2-1<br>(5층, 로비) | <b>Surmounting the Thermionic Restriction via All-ALD-Fabricated Metal-Oxide Negative Capacitance Field-Effect Transistor</b><br>Chan Lee <sup>1</sup> , Minho Jegal <sup>1</sup> , and Youn Sang Kim <sup>1,2</sup><br><sup>1</sup> Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, <sup>2</sup> Advanced Institute of Convergence Technology                                                                                                                      |
| <b>TP-016</b><br>ZONE 2-1<br>(5층, 로비) | <b>ZnO 채널의 결정 구조에 따른 박막 트랜지스터의 중이온 내방사선 특성 향상 연구</b><br>이용수 <sup>1</sup> , 이해원 <sup>2</sup> , 김수진 <sup>1</sup> , 박정민 <sup>1</sup> , 이병훈 <sup>2</sup> , 강창구 <sup>1</sup><br><sup>1</sup> 한국원자력연구원 첨단방사선연구소, <sup>2</sup> 포항공과대학교 전자전기공학과 반도체기술융합센터                                                                                                                                                                                                                                                                         |



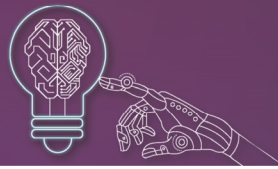
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| TP-017<br>ZONE 2-1<br>(5층, 로비) | <b>Ruthenium Metallic Compounds for Advanced Interconnect Materials</b><br>Gyungho Maeng <sup>1</sup> , Subeen Lim <sup>1</sup> , Bonggeun Shong <sup>2</sup> , and Yeonghun Lee <sup>1</sup><br><sup>1</sup> Department of Electronics Engineering, Incheon National University, <sup>2</sup> Department of Chemical Engineering, Hongik University                                              |
| TP-018<br>ZONE 2-1<br>(5층, 로비) | <b>Linear Memristor Synapse with Mechanism Elucidation for Online Training in Spiking Neural Networks</b><br>Yu Lin Zou <sup>1,2</sup> , Sunwoo Cheong <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University   |
| TP-019<br>ZONE 2-1<br>(5층, 로비) | <b>Sub-Oxide-Free and Amorphous HfO<sub>2</sub> Films Deposited by ALD Using Liquid Precursor &amp; H<sub>2</sub>O/O<sub>3</sub> Hybrid Reactants for HKMG Applications</b><br>Juyong Lee, Jaemin Han, Hanbee Lee, Wooyoung Park, and Hunhyeong Lim<br>Orbital Development Team, WONIK IPS Co., Ltd.                                                                                              |
| TP-020<br>ZONE 2-1<br>(5층, 로비) | <b>A Study on Ti Thin Film Deposition by the Cyclic Pulse Chemical Vapor Deposition Method to Improve the TiSi<sub>x</sub> Resistance of Via Contact</b><br>Ildong Cho, Min Kyu Bang, and Jinho Jeon<br>Department of Semiconductor and Display, College of Semiconductor, Gachon University                                                                                                      |
| TP-021<br>ZONE 2-1<br>(5층, 로비) | <b>Selenium-Assisted Growth of NbSe<sub>2</sub>/Bilayer Nb-Doped WSe<sub>2</sub> Heterostructures with Enhanced Performance</b><br>Seungmin Baek and Woo Jong Yu<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                    |
| TP-022<br>ZONE 2-1<br>(5층, 로비) | <b>Dynamics of Polarization Switching and Loss in Antiferroelectric/Dielectric Tunnel-Switch Bilayer</b><br>Seunghoon Choi <sup>1,2</sup> , Han Sol Park <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University |
| TP-023<br>ZONE 2-1<br>(5층, 로비) | <b>Artificial Retina based on 2D Schottky Solar Cells for Bioinspired Visual Signal Processing</b><br>Jinwoo Hong and Woo Jong Yu<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                   |
| TP-024<br>ZONE 2-1<br>(5층, 로비) | <b>Ag-Ion Intercalation-Enhanced h-BN/MoTe<sub>2</sub> Nanochannel Memristors for Neuromorphic Applications</b><br>Yun Jae Baek and Woo Jong Yu<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                     |
| TP-025<br>ZONE 2-1<br>(5층, 로비) | <b>Energy-Efficient Neuromorphic Learning Using Gold-Nanoparticle Floating-Gate Memristor Array</b><br>Sa Been Hong and Woo Jong Yu<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                 |
| TP-026<br>ZONE 2-1<br>(5층, 로비) | <b>극저온 광개시성 CVD 기반 불소계 고분자 합성 기초기술 및 반도체 응용 가능성 연구</b><br>박태원 <sup>1</sup> , 김형준 <sup>1</sup> , 한상혁 <sup>1</sup> , 김건우 <sup>2</sup> , 송상호 <sup>3</sup> , 김민주 <sup>1,2</sup><br><sup>1</sup> 단국대학교 공과대학 전자전기공학과, <sup>2</sup> 단국대학교 공과대학 융합반도체공학과, <sup>3</sup> 단국대학교 공과대학 고분자공학과                                                                                                                  |
| TP-027<br>ZONE 2-1<br>(5층, 로비) | <b>Enhanced Interface Quality of ZrO<sub>2</sub>/MoN-Based Capacitors with an Ultra-Thin Nb<sub>2</sub>O<sub>5</sub> Buffer Layer for DRAM Applications</b><br>Yeon-Ji Jeon and Ji-Hoon Ahn<br>Department of Materials Science & Chemical Engineering, Hanyang University                                                                                                                         |

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| TP-028<br>ZONE 2-1<br>(5층, 로비) | <b>Memory Window Expansion and Synaptic Behavior Enhancement in IGZO MFIS FeTFTs by HfAlOx Interlayer Engineering</b><br>Hyeong Seok Choi, Dong Hee Han, Hyun Woo Jeong, Jae Joon Kim, Dong In Han, Joonyong Kim, Suyong Lee, and Min Hyuk Park<br>Department of Material Science and Engineering, Seoul National University                                                                                                                                                                                                                                          |
| TP-029<br>ZONE 2-1<br>(5층, 로비) | <b>BEOL-Compatible Ferroelectric Activation by Wake-Up in As-Deposited <math>\text{Hf}_{1-x}\text{Zr}_x\text{O}_2/\text{MoO}_x</math> Films</b><br>Moonseek Jeong, Hyun Woo Jeong, Taegyu Kwon, Jaewook Lee, Geun Hyeong Park, Dong Hee Han, Ju Yong Park, Dong In Han, Yong Hyeon Cho, Jeongwang Lee, and Min Hyuk Park<br>Department of Material Science and Engineering, Seoul National University                                                                                                                                                                 |
| TP-030<br>ZONE 2-1<br>(5층, 로비) | <b>MoS<sub>2</sub> 결함 패시베이션을 위한 초박형 공중합 필름 개발</b><br>유지호 <sup>1</sup> , 원종서 <sup>1</sup> , 이재원 <sup>1</sup> , 한상혁 <sup>2</sup> , 박태원 <sup>2</sup> , 김형준 <sup>2</sup> , 김건우 <sup>2</sup> , 홍웅기 <sup>1,2,3</sup> , 김민주 <sup>1,2,3</sup><br><sup>1</sup> 단국대학교 공과대학 파운드리공학과, <sup>2</sup> 단국대학교 공과대학 전자전기공학부, <sup>3</sup> 단국대학교 공과대학 융합반도체공학과                                                                                                                                                                                                                           |
| TP-031<br>ZONE 2-1<br>(5층, 로비) | <b>Room Temperature Ferromagnetism of Magnetically Intercalated 2D Transition Metal Dichalcogenides</b><br>Joonmin Woo and Woojong Yu<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                                   |
| TP-032<br>ZONE 2-1<br>(5층, 로비) | <b>불화갈륨 전구체를 사용하여 불소화한 용액 공정 기반 IGZO 박막 트랜지스터의 전기적 특성</b><br>박설아 <sup>1</sup> , 정태희 <sup>2</sup> , 문국철 <sup>2</sup> , 김용상 <sup>1,2</sup><br><sup>1</sup> 성균관대학교 첨단디스플레이공학과, <sup>2</sup> 성균관대학교 전자전기컴퓨터공학과                                                                                                                                                                                                                                                                                                                                                            |
| TP-033<br>ZONE 2-1<br>(5층, 로비) | <b>IGZO:Y TFT의 Yttrium 도핑 농도에 따른 히스테리시스 특성</b><br>채수현 <sup>1</sup> , 문국철 <sup>2</sup> , 김용상 <sup>1,2</sup><br><sup>1</sup> 성균관대학교 첨단디스플레이공학과, <sup>2</sup> 성균관대학교 전자전기컴퓨터공학과                                                                                                                                                                                                                                                                                                                                                                                          |
| TP-034<br>ZONE 2-1<br>(5층, 로비) | <b>용매에 UV 처리를 이용한 용액 공정 기반 IGZO 박막 내 산소 공공 조절을 통한 신뢰성 개선</b><br>소인영 <sup>1</sup> , 정기용 <sup>2,3</sup> , 문국철 <sup>4</sup> , 김용상 <sup>1,2,4</sup><br><sup>1</sup> 성균관대학교 첨단디스플레이공학과, <sup>2</sup> 성균관대학교 반도체디스플레이공학부, <sup>3</sup> 삼성전자 공과대학교, <sup>4</sup> 성균관대학교 전자전기컴퓨터공학과                                                                                                                                                                                                                                                                                           |
| TP-035<br>ZONE 2-1<br>(5층, 로비) | <b>Interface Engineering of MFIS Capacitor with Plasma-Enhanced ALD Hafnium Nitride for FeFET Applications</b><br>Ga Yeon Lee, Yong Hyeon Cho, Geun Hyeong Park, Moonseek Jeong, Ju Yong Park, Dong Hee Han, Da Hyun Kim, Taegyu Kwon, and Min Hyuk Park<br>Department of Material Science and Engineering, Seoul National University                                                                                                                                                                                                                                 |
| TP-036<br>ZONE 2-1<br>(5층, 로비) | <b>Oxygen Vacancy Control via Ar Plasma Treatment for Remnant Polarization Enhancement of (Hf, Zr)O<sub>2</sub> Antiferroelectric Capacitors</b><br>Heejin Hong, Hyun Woo Jeong, Jeonggwang Lee, Jaewook Lee, Ju Yong Park, Hyojun Choi, Dong In Han, Kwan Hyun Park, and Min Hyuk Park<br>Department of Material Science and Engineering, Seoul National University                                                                                                                                                                                                  |
| TP-037<br>ZONE 2-1<br>(5층, 로비) | <b>고투과 및 고내열성 ZnO/Cu/SiO<sub>2</sub> 기반 다층 박막 투명히터의 제작 및 특성 분석</b><br>강건우, 조재정, 이찬경, 최두호<br>가천대학교 반도체공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TP-038<br>ZONE 2-1<br>(5층, 로비) | <b>Contact Engineering in In<sub>2</sub>O<sub>3</sub> Thin Film Transistors Guided by Contact-Dominated Low Frequency Measurement</b><br>Minsun Kim <sup>1,2</sup> , Donghee Kim <sup>1,2</sup> , Seunghwan Kim <sup>1,2</sup> , Jong-Ho Lee <sup>1,2</sup> , and Gyuweon Jung <sup>1,2,3</sup><br><sup>1</sup> Department of Electrical and Computer Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University, <sup>3</sup> School of Transdisciplinary Innovations, Seoul National University |



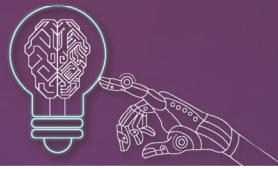
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| TP-040<br>ZONE 2-1<br>(5층, 로비) | <b>High-Reliable 1T-1C Cell with Mold Structures Fabricated by Channel-Last Processing of Amorphous Oxide Semiconductor Thin-Film Transistors</b><br>Subin Moon <sup>1,2</sup> , Jinheon Choi <sup>1,2</sup> , Sahngik Aaron Mun <sup>1,2</sup> , Juneseong Choi <sup>1,2</sup> , Jaewon Ham <sup>1,2</sup> , Hyungjeung Kim <sup>1,2</sup> , Shihyun Kim <sup>1,2</sup> , Jeongyoon Lee <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University |
| TP-041<br>ZONE 2-1<br>(5층, 로비) | <b>Impact of HfO<sub>2</sub> Back-Channel Resistive Switching Layer in Scaled IGZO Thin Film Transistors for Parallel 1T-1R Integration</b><br>Hyun Young Kim <sup>1,2</sup> and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                              |
| TP-042<br>ZONE 2-1<br>(5층, 로비) | <b>Controlled Deposition of HfO<sub>2</sub> Thin Films via Combined Remote and Direct Plasma ALD for Charge-Trap Applications</b><br>Byung Wook Kim, Ji Won Kim, In Kook Hwang, Young Woon Jang, Hyeon Wu Nam, Min Kyun Kang, and Chang Bun Yoon<br>Department of IT-Semiconductor Convergence Engineering, Tech University of Korea                                                                                                                                                                                                                                                                                              |
| TP-043<br>ZONE 2-1<br>(5층, 로비) | <b>Variations in the Ferroelectric Properties of Hf<sub>0.5</sub>Zr<sub>0.5</sub>O<sub>2</sub> Depending on the Hafnium Nitride Electrode Conditions</b><br>Seong Jae Shin <sup>1,2</sup> , Min Jong Kim <sup>1,2,3</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University, <sup>3</sup> R&D Center, SK Hynix Semiconductor                                                                                                                              |
| TP-044<br>ZONE 2-1<br>(5층, 로비) | <b>Wake-Up-Free Ferroelectricity in Ultrathin (5 nm) Hf<sub>0.5</sub>Zr<sub>0.5</sub>O<sub>2</sub> With Molybdenum Bottom Electrode</b><br>Seong Jae Shin <sup>1,2</sup> and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                  |
| TP-045<br>ZONE 2-1<br>(5층, 로비) | <b>Memory Window Enhancement with Channel Length Scaling of IGZO Channel-Based Al-Doped HfO<sub>2</sub> Ferroelectric Thin Film Transistors</b><br>Ho Jin Kim <sup>1,2</sup> and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                              |
| TP-046<br>ZONE 2-1<br>(5층, 로비) | <b>Atomic Layer Deposition of MoO<sub>3</sub> Using Noble Molybdenum Precursor for High-k Rutile TiO<sub>2</sub> in DRAM Applications</b><br>Yoonchul Shin, Yeon-Ji Jeon, Ji Hwan Kim, Chan-Bin Hong, Chang Mo Yoon, and Ji-Hoon Ahn<br>Department of Materials Science and Chemical Engineering, Hanyang University                                                                                                                                                                                                                                                                                                              |
| TP-047<br>ZONE 2-1<br>(5층, 로비) | <b>Impact of Channel Thickness and Composition on the Performance of Indium Tin Oxide Thin Film Transistors</b><br>Jae Joon Kim, Hyeong Seok Choi, Dong Hee Han, Hyun Woo Jeong, Joonyong Kim, Suyong Lee, and Min Hyuk Park<br>Department of Material Science and Engineering, Seoul National University                                                                                                                                                                                                                                                                                                                         |
| TP-048<br>ZONE 2-1<br>(5층, 로비) | <b>Demonstration of Low Temperature Processed P-Type Tellurium Thin Film Transistors for Next-Generation CMOS Application</b><br>Suyong Lee, Dong Hee Han, Hyun Woo Jeong, Hyeong Seok Choi, Jaejoon Kim, Joonyong Kim, and Min Hyuk Park<br>Department of Material Science and Engineering, Seoul National University                                                                                                                                                                                                                                                                                                            |

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| TP-049<br>ZONE 2-1<br>(5층, 로비) | <b>Atomic Layer Deposition of MoC<sub>x</sub> as a Next-Generation Electrode Using a Liquid Precursor</b><br>Eun-Su Chung <sup>1</sup> , Min-Ji Ha <sup>1</sup> , Na-Gyeong Kang <sup>1</sup> , Jin-Sik Kim <sup>2</sup> , Myeong-Ho Kim <sup>2</sup> , Yun-Gyeong Yi <sup>2</sup> , and Ji-Hoon Ahn <sup>1</sup><br><sup>1</sup> Hanyang University, <sup>2</sup> UP Chemical                                            |
| TP-051<br>ZONE 2-1<br>(5층, 로비) | <b>Low-Temperature Plasma Treatment for High-Performance p-Type Tellurium Field-Effect Transistors</b><br>Minhyuk Jeon <sup>1</sup> , Usik Jeong <sup>2</sup> , and Sunkook Kim <sup>1</sup><br><sup>1</sup> School of Advanced Materials and Science Engineering, Sungkyunkwan University, <sup>2</sup> DRAM Process Architecture Team, Samsung Electronics Co., Ltd.                                                    |
| TP-052<br>ZONE 2-1<br>(5층, 로비) | <b>Mechanistic Transformation Pathway to Continuous and Impurity-Free Tellurium Films</b><br>Seung Ho Ryu <sup>1,2</sup> , Seungsu Kim <sup>1,2</sup> , Jihoon Jeon <sup>1,2</sup> , Gwang Min Park <sup>1,2</sup> , and Seong Keun Kim <sup>1,2</sup><br><sup>1</sup> Electronic and Hybrid Materials Research Center, KIST, <sup>2</sup> KU-KIST Graduate School of Converging Science and Technology, Korea University |
| TP-053<br>ZONE 2-1<br>(5층, 로비) | <b>Top-Gate Stack Seed Layer Engineering for Stable Operation of MoS<sub>2</sub> Transistors</b><br>Dahyeon Kim and Myungsoo Kim<br>Department of Electrical Engineering, UNIST                                                                                                                                                                                                                                           |
| TP-054<br>ZONE 2-1<br>(5층, 로비) | <b>Process Integration of Al:IZTO Oxide Semiconductor Channel into NanoSheet Gate-All-Around Architecture</b><br>Bada Kim <sup>1,2</sup> , Chihun Sung <sup>2</sup> , Chaerin Yu <sup>1,2</sup> , Jeho Na <sup>2</sup> , Junghwan Kim <sup>1</sup> , and Sung Haeng Cho <sup>2</sup><br><sup>1</sup> UNIST, <sup>2</sup> ETRI                                                                                             |
| TP-055<br>ZONE 2-1<br>(5층, 로비) | <b>Theoretical Analysis on the Effect of HBr in TiN ALD Process</b><br>Seungmin Noh <sup>1</sup> , Jae Min Jang <sup>1</sup> , Kyeong Hyeon Choi <sup>2</sup> , Se Eun Kim <sup>2</sup> , Sang Woon Lee <sup>2</sup> , and Bonggeun Shong <sup>1</sup><br><sup>1</sup> Hongik University, <sup>2</sup> Ajou University                                                                                                    |
| TP-056<br>ZONE 2-1<br>(5층, 로비) | <b>Oxidation Behavior of Pt-Ru Bimetallic Thin Films by Atomic Layer Deposition</b><br>Young Wan Kim <sup>1</sup> , Jaehyeong Kim <sup>1</sup> , Yu Ri Han <sup>1</sup> , and Woo Jae Lee <sup>2</sup><br><sup>1</sup> Department of Nanotechnology Engineering, Pukyong National University, <sup>2</sup> Division of Nanotechnology and Semiconductor Engineering, Pukyong National University                          |
| TP-057<br>ZONE 2-1<br>(5층, 로비) | <b>Theoretical Analysis on the ALD Surface Chemistry of Elemental Antimony</b><br>Seoyun Heo and Bonggeun Shong<br>Hongik University                                                                                                                                                                                                                                                                                      |
| TP-058<br>ZONE 2-1<br>(5층, 로비) | <b>Computational Study on ALD Surface Chemistry of III-V Compounds</b><br>Ho Hyeon Kim and Bonggeun Shong<br>Hongik University                                                                                                                                                                                                                                                                                            |
| TP-059<br>ZONE 2-1<br>(5층, 로비) | <b>Computational Study on Surface Chemistry during Atomic Layer Deposition of GeSbTe</b><br>Il Hyeok Seo and Bonggeun Shong<br>Hongik University                                                                                                                                                                                                                                                                          |
| TP-060<br>ZONE 2-1<br>(5층, 로비) | <b>P-Type Doping in MoS<sub>2</sub> Field-Effect Transistors via Radical Encapsulation</b><br>Jaewon Lee, Mingyu Shin, Jiho Yu, Junyeon Hwang, Jungyeon Hur, Jongseo Won, Minju Kim, and Woonggi Hong<br>Department of Foundry Engineering, Dankook University                                                                                                                                                            |



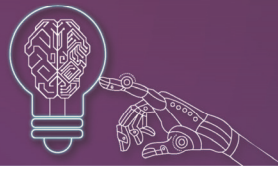
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| <b>TP-061</b><br>ZONE 2-1<br>(5층, 로비) | <b>Atomic Layer Growth of Pt films Using Dimethyl(N,N-Dimethyl-3-Butene-1-Amine-N)Platinum and O<sub>3</sub></b><br>Minseok Kim <sup>1,2</sup> , Taeseok Kim <sup>1,2</sup> , Jihoon Jeon <sup>1,2</sup> , Gwang Min Park <sup>1,2</sup> , Sung-Chul Kim <sup>3</sup> , Sung Ok Won <sup>3</sup> , Ryosuke Harada <sup>4</sup> , and Seong Keun Kim <sup>1,2</sup><br><sup>1</sup> KU-KIST Graduate School of Converging Science and Technology, Korea University, <sup>2</sup> Electronic and Hybrid Materials Research Center, KIST, <sup>3</sup> Advanced Analysis and Data Center, KIST, <sup>4</sup> Chemical Materials Development Department, TANAKA Precious Metals Technologies |
| <b>TP-062</b><br>ZONE 2-1<br>(5층, 로비) | <b>Vertically Integrated Floating-Gate Memristor Enabling Compact and Energy-Efficient Two-Terminal Neuromorphic Architectures</b><br>So Hyeon Park and Woo Jong Yu<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>TP-063</b><br>ZONE 2-1<br>(5층, 로비) | <b>Investigation of Dielectric Properties and Interface on the 2D Channel Thin-Film Transistor Performance</b><br>Soeun Ahn <sup>1,2</sup> , Seongmo Kang <sup>3</sup> , Minchul Kim <sup>3</sup> , Yonghun Kim <sup>3</sup> , Seokwoo Jeon <sup>2</sup> , and Seung-heon Chris Baek <sup>1</sup><br><sup>1</sup> Center for Semiconductor Technology, KIST, <sup>2</sup> Department of Materials Science and Engineering, Korea University, <sup>3</sup> Department of Energy and Environment Materials, KIMS                                                                                                                                                                           |
| <b>TP-064</b><br>ZONE 2-1<br>(5층, 로비) | <b>Designing Cryo-Compatible Ferroelectric Hafnia Devices through Electrode and Interface Control</b><br>Chaehyeong Ha <sup>1</sup> , Jeongmin Han <sup>2</sup> , Jeonghwan Han <sup>2</sup> , Taehwan Moon <sup>3</sup> , and Yoon Jang Chung <sup>1</sup><br><sup>1</sup> Department of Chemical and Biological Engineering, Korea University, <sup>2</sup> Department of Materials Science and Engineering, Seoul National University of Science & Technology, <sup>3</sup> Department of Intelligence Semiconductor Engineering, Ajou University                                                                                                                                     |
| <b>TP-065</b><br>ZONE 2-1<br>(5층, 로비) | <b>A HZO/ZnO-Based Ferroelectric Synaptic Transistor for Nonvolatile Neuromorphic Systems</b><br>Yoonseon An <sup>1</sup> and Woo Jong Yu <sup>2</sup><br><sup>1</sup> Department of Semiconductor Convergence Engineering, Sungkyunkwan University, <sup>2</sup> Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                             |
| <b>TP-066</b><br>ZONE 2-1<br>(5층, 로비) | <b>Non-Volatile Memory Characteristics and Artificial Synaptic Behaviors in Two-Dimensional Materials via Defect Engineering</b><br>Huiyeong Lee <sup>1,2</sup> , Hyeonmin Bong <sup>1,2</sup> , Jinsik Choe <sup>1</sup> , Shinyoung Moon <sup>1,2</sup> , M. -H. Cho <sup>2</sup> , and Sungjin Park <sup>1</sup><br><sup>1</sup> Icheon Branch, KICET, <sup>2</sup> Department of Physics, Yonsei University                                                                                                                                                                                                                                                                          |
| <b>TP-067</b><br>ZONE 2-1<br>(5층, 로비) | <b>Low-Resistivity TiN Thin Film Grown by Hydrazine-Enhanced Thermal ALD at Temperature Below 430°C</b><br>Kihye Kim, Ilhyeong Cho, Yooseong Kim, and Dongwon Seo<br>Hanwha Semitech, Process Development Team                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>TP-068</b><br>ZONE 2-1<br>(5층, 로비) | <b>Ferroelectric HfZrO<sub>2</sub> and MoTe<sub>2</sub> Heterostructures for Synaptic Memristor Applications</b><br>Yong Ha Shin and Woo Jong Yu<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>TP-069</b><br>ZONE 2-1<br>(5층, 로비) | <b>Positional Doping in Al:HfO<sub>2</sub> Enables Strain-Engineered Texture and 1.2 V Operating Ferroelectricity at 7 nm</b><br>Dong In Han <sup>1</sup> , Jaewook Lee <sup>1</sup> , Hyojun Choi <sup>1</sup> , Ju Yong Park <sup>1</sup> , Hyun Woo Jeong <sup>1</sup> , Younghwan Lee <sup>2</sup> , and Min Hyuk Park <sup>1</sup><br><sup>1</sup> Department of Material Science and Engineering, Seoul National University, <sup>2</sup> School of Materials Science and Engineering, Chonnam National University                                                                                                                                                                 |

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| TP-070<br>ZONE 2-1<br>(5층, 로비) | <b>Ru Area-Selective Deposition by Aldehyde Inhibitor on SiO<sub>2</sub>/Si<sub>3</sub>N<sub>4</sub> Patterns</b><br>이병찬 <sup>1</sup> , Chi Thang Nguyen <sup>1</sup> , Ngoc Le Trinh <sup>1</sup> , 민경민 <sup>1</sup> , 조은형 <sup>2</sup> , 이한보람 <sup>1</sup><br><sup>1</sup> Department of Materials Science and Engineering, Incheon National University, <sup>2</sup> 2D Device TU, Samsung Advanced Institute of Technology                                                                                                                                      |
| TP-071<br>ZONE 2-1<br>(5층, 로비) | <b>Improved Ferroelectricity and Tunneling Electroresistance in Metal-Ferroelectric-Insulator-Ferroelectric-Metal Structure Ferroelectric Tunnel Junctions via Nb<sub>2</sub>O<sub>5</sub> Interlayer Insertion</b><br>Hyungseok Lee, Hyo-Bae Kim, Gunho Kim, Hye-Won Cho, and Ji-Hoon Ahn<br>Department of Materials Science and Chemical Engineering, Hanyang University                                                                                                                                                                                          |
| TP-072<br>ZONE 2-1<br>(5층, 로비) | <b>Surface Oxidation-Dependent Growth Mechanism of ZnO Thin Films in Ozone-Diethylzinc ALD</b><br>Junhee Han and Yoon Jang Chung<br>Department of Chemical and Biological Engineering, Korea University                                                                                                                                                                                                                                                                                                                                                             |
| TP-073<br>ZONE 2-1<br>(5층, 로비) | <b>Area-Selective Atomic Layer Deposition of Ge-Sb-Te for Vertical-Recessed Phase-Change Memory</b><br>Sanghyeon Kim, Heejae Kim, Myung Jun Yu, Chaeyeon Jeong, Kyungwhan Koh, and Chanyoung Yoo<br>Department of Materials Science and Engineering, Hongik University                                                                                                                                                                                                                                                                                              |
| TP-074<br>ZONE 2-1<br>(5층, 로비) | <b>Atomic Layer Deposition of Ge-rich GeSe for Selector-Only Memory</b><br>Sungjin Kim <sup>1,2</sup> , Jeong Woo Jeon <sup>1,2</sup> , Wonho Choi <sup>1,2</sup> , Byongwoo Park <sup>1,2</sup> , Gwangsik Jeon <sup>1,2</sup> , Sangmin Jeon <sup>1,2</sup> , Junwoo Park <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                |
| TP-075<br>ZONE 2-1<br>(5층, 로비) | <b>ALD-Grown VO<sub>2</sub> Thin Films for Selector-Only Memory</b><br>Siyeon Song and Hongsub Lee<br>Department of Materials Science and Engineering, Kyung Hee University                                                                                                                                                                                                                                                                                                                                                                                         |
| TP-076<br>ZONE 2-1<br>(5층, 로비) | <b>Atomic Layer Deposition and Doping Strategies for High-Performance Arsenic-Free Ovonic Threshold Switch Devices</b><br>Byongwoo Park <sup>1,2</sup> , Jeong Woo Jeon <sup>1,2</sup> , Wonho Choi <sup>1,2</sup> , Gwangsik Jeon <sup>1,2</sup> , Sangmin Jeon <sup>1,2</sup> , Sungjin Kim <sup>1,2</sup> , Junwoo Park <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University |
| TP-077<br>ZONE 2-1<br>(5층, 로비) | <b>ZnO Thin Films with Stable, Tunable Properties Deposited by Atomic Layer Deposition Using Et<sub>2</sub>Zn:NEtMe<sub>2</sub> Precursor</b><br>Dokyun Kim <sup>1</sup> , Ye Won Shin <sup>1</sup> , and Woo Jae Lee <sup>2</sup><br><sup>1</sup> Department of Nanotechnology Engineering, Pukyong National University, <sup>2</sup> Division of Nanotechnology and Semiconductor Engineering, Pukyong National University                                                                                                                                        |
| TP-078<br>ZONE 2-1<br>(5층, 로비) | <b>새로운 플라즈마 소스를 활용한 실리콘 질화막 증착 연구</b><br>진광선, 신기원, 김유덕, 조승희, 왕야즈, 이태완, 노원태, 김훈<br>원익아이피에스 반도체연구소 선행기술개발본부 소재개발팀                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TP-079<br>ZONE 2-1<br>(5층, 로비) | <b>High Step Coverage Barrier/Seed Cu Metallization for AR &gt;10:1 TSV Using Twin Magnet Cathode Sputtering</b><br>Kazuki Hattori <sup>1</sup> , Hyo Jun Bae <sup>2</sup> , Tae Jung Kwon <sup>2</sup> , and Byeong Hwa Jeong <sup>2</sup><br><sup>1</sup> ULVAC Japan Co. Ltd., <sup>2</sup> ULVAC Korea Co. Ltd.                                                                                                                                                                                                                                                 |



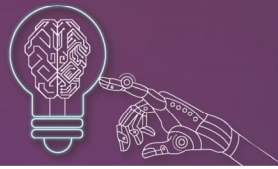
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| TP-080<br>ZONE 2-1<br>(5층, 로비) | <b>Dynamic Thermal Control via Intensive Pulsed Light in ALD: Interfacial Layer Suppression &amp; Crystallization of ZrO<sub>2</sub>/TiN Stacked Capacitors</b><br>Jongseo Kim <sup>1,2</sup> , Jihoon Jeon <sup>1,2</sup> , Seungwan Ye <sup>1,2</sup> , and Seong Keun Kim <sup>1,2</sup><br><sup>1</sup> KU-KIST Graduate School of Converging Science and Technology, Korea University, <sup>2</sup> Electronic and Hybrid Materials Research Center, KIST |
| TP-081<br>ZONE 2-1<br>(5층, 로비) | <b>Area-Selective Atomic Layer Deposition of ZnO Using Acetylacetone as a Small Molecule Inhibitor</b><br>Ye lim Lee and Yoon Jang Chung<br>Department of Chemical and Biological Engineering, Korea University                                                                                                                                                                                                                                                |
| TP-082<br>ZONE 2-1<br>(5층, 로비) | <b>Influence of Gallium Cycling on the Electrical Performance of In-Ga-O Thin-film Transistors Fabricated by Thermal Atomic Layer Deposition</b><br>Kang Choi, Dong-Geun Kim, Su-Jin Sim, and Ji-Hoon Ahn<br>Department of Materials Science and Chemical Engineering, Hanyang University                                                                                                                                                                      |
| TP-083<br>ZONE 2-1<br>(5층, 로비) | <b>Characterization of Ultra Low-k Amorphous Boron Nitride Deposited by Using PEALD</b><br>Chang Dong Lee, Dong Hak Kim, Ji Hyeon Kim, Gang Ill Seo, So Young Park, and Young Chul Choi<br>WONIK IPS Co., Ltd.                                                                                                                                                                                                                                                 |
| TP-084<br>ZONE 2-1<br>(5층, 로비) | <b>DC Magnetron Sputtered Ta/TaN Barriers and Seed-Cu Integration for Enhanced Metallization in BEOL Interconnects</b><br>Hyo Jun Bae, In Sik Joo, Tae Jung Kwon, So Hyeon Lee, and Byeong Hwa Jeong<br>ULVAC Korea Co., Ltd.                                                                                                                                                                                                                                  |
| TP-086<br>ZONE 2-1<br>(5층, 로비) | <b>Development of ON STACK Warpage Control Technique for Enhanced Integration Density in 3D NAND Flash Memory Device</b><br>Taehun Lim, Gunhee Jo, Chanyeop Kim, Gangjin Cheon, and Jaegab Lim<br>WONIK IPS Co., Ltd.                                                                                                                                                                                                                                          |
| TP-087<br>ZONE 2-1<br>(5층, 로비) | <b>Machine Learning-Guided Optimization of He Plasma-Assisted ALD for In<sub>2</sub>O<sub>3</sub> Thin-Film Transistors</b><br>Sung Hoon Lee <sup>1,2</sup> and Youn Sang Kim <sup>1,2</sup><br><sup>1</sup> Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, <sup>2</sup> Advanced Institute of Convergence Technology, <sup>3</sup> Samsung Institute of Technology, Samsung Electronics Co., Ltd.      |
| TP-088<br>ZONE 2-1<br>(5층, 로비) | <b>All-Oxide Double-Peak Anti-Ambipolar Transistors for Quaternary Logic Inverter through Composition Modulation</b><br>Jun Ah Jeon <sup>1</sup> , Jong Chan Shin <sup>1</sup> , Jiho Lee <sup>1</sup> , and Youn Sang Kim <sup>1,2</sup><br><sup>1</sup> Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, <sup>2</sup> Advanced Institute of Convergence Technology                                      |
| TP-089<br>ZONE 2-1<br>(5층, 로비) | <b>Accelerated Compositional Optimization of InZnHfO Thin-Film Transistors Using Machine Learning</b><br>Jiho Lee <sup>1</sup> , Serang Jung <sup>1</sup> , Minho Jekal <sup>1</sup> , and Youn Sang Kim <sup>1,2</sup><br><sup>1</sup> Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, <sup>2</sup> Advanced Institute of Convergence Technology                                                        |
| TP-090<br>ZONE 2-1<br>(5층, 로비) | <b>Non-Filamentary Self-Rectifying Resistive Switching in Sb<sub>2</sub>Te<sub>3</sub>-Based Chalcogenide RRAM</b><br>Sang Hyun Park and Yoon Jang Chung<br>Department of Chemical and Biological Engineering, Korea University                                                                                                                                                                                                                                |
| TP-091<br>ZONE 2-1<br>(5층, 로비) | <b>차세대 Vertical NAND 패턴링을 위한 SiON 하드마스크 공정</b><br>Soo Namgoong, Woongbin Yim, Sung Ryong Moon, Sangmin Lee, and Young Chul Choi<br>Department of CVD Development Team, WONIK IPS Co., Ltd.                                                                                                                                                                                                                                                                     |

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| TP-092<br>ZONE 2-1<br>(5층, 로비) | <b>Ar-Plasma Post-Treated TiO<sub>2-x</sub> Ultra-Thin Interlayer for Specific Contact Resistivity Reduction in ALD-In<sub>2</sub>O<sub>3</sub> FETs</b><br>Seungsu Kim <sup>1,2</sup> , Taikyu Kim <sup>2</sup> , Seung Ho Ryu <sup>1,2</sup> , Bo Kyoung Kim <sup>2</sup> , Jongseo Kim <sup>1,2</sup> , Seungwan Ye <sup>1,2</sup> , and Seong Keun Kim <sup>1,2</sup><br><sup>1</sup> KU-KIST Graduate School of Converging Science and Technology, Korea University, <sup>2</sup> Electronic and Hybrid Materials Research Center, KIST                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TP-093<br>ZONE 2-1<br>(5층, 로비) | <b>Seed-Layer-Mediated Nucleation for Enhanced Atomic Layer Deposition of Platinum Thin Films</b><br>Yoohyeon Jung, Dahui Jeon, and In-Hwan Baek<br>Department of Chemical Engineering and Program in Semiconductor Convergence, Inha University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| TP-094<br>ZONE 2-1<br>(5층, 로비) | <b>In-Cycle Plasma-Assisted Atomic Layer Deposition for High-Performance Oxide Thin-Film Transistors</b><br>Taeyun Kim <sup>1,3</sup> , Serang Jung <sup>1</sup> , Minho Jekal <sup>1</sup> , and Youn Sang Kim <sup>1,2</sup><br><sup>1</sup> Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, <sup>2</sup> Advanced Institute of Convergence Technology, <sup>3</sup> Samsung Institute of Technology, Samsung Electronics Co., Ltd.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TP-095<br>ZONE 2-1<br>(5층, 로비) | <b>Multifunctional Hybrid Superlattices: Achieving Ultra-High Conductivity, Optical Transparency, and Superior Gas-Barrier Performance in Flexible Thin Films</b><br>Quang Khanh Nguyen <sup>1</sup> , Soojin Park <sup>2</sup> , Junseong Hur <sup>2</sup> , and Myung Mo Sung <sup>1</sup><br><sup>1</sup> Department of Chemistry, Hanyang University, <sup>2</sup> Department of Semiconductor Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| TP-096<br>ZONE 2-1<br>(5층, 로비) | <b>Tailoring Mechanical Properties and Surface Energy of Fluorinated Copolymer Thin Films via iCVD for Interfacial Stabilization of Zinc Metal Anodes</b><br>오명석 <sup>1</sup> , 이진홍 <sup>2</sup> , 정규남 <sup>2</sup> , 장봉준 <sup>1</sup> , 임성갑 <sup>3</sup><br><sup>1</sup> 한국화학연구원, <sup>2</sup> 한국에너지기술원, <sup>3</sup> KAIST 생명화학공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TP-097<br>ZONE 2-1<br>(5층, 로비) | <b>Morphable and Sustainable Thin-Film Electronics Enabled by Shape-Reconfigurable and Recyclable Covalent Adaptable Network Substrates</b><br>Jihun Noh <sup>1</sup> , Jae Hyuk Lee <sup>2</sup> , Jaehoon Lee <sup>3,4</sup> , Seongmo Kang <sup>3,4</sup> , Chae Bin Kim <sup>2,5,6</sup> , and Boseok Kang <sup>1,3,4,7</sup><br><sup>1</sup> Department of Semiconductor Convergence Engineering, Sungkyunkwan University, <sup>2</sup> School of Chemical Engineering, Pusan National University, <sup>3</sup> SKKU Advanced Institute of Nano Technology, Sungkyunkwan University, <sup>4</sup> Department of Nano Science and Technology, Sungkyunkwan University, <sup>5</sup> Department of Polymer Science and Engineering, Pusan National University, <sup>6</sup> Research Institute for Convergence of Biomedical Science and Technology, Pusan National University Yangsan Hospital, <sup>7</sup> Department of Nano Engineering, Sungkyunkwan University |
| TP-098<br>ZONE 2-1<br>(5층, 로비) | <b>Indium 삽입층을 통한 IGZO 박막 트랜지스터의 소스/드레인 접촉 특성 향상 및 열적 안정성 확보</b><br>이호석 <sup>1</sup> , 김희태 <sup>1</sup> , 김희수 <sup>1</sup> , 조성행 <sup>2</sup> , 조병진 <sup>1</sup><br><sup>1</sup> 한국과학기술원 전기 및 전자공학부, <sup>2</sup> 한국전자통신연구원 플렉시블 전자소자연구실                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TP-099<br>ZONE 2-1<br>(5층, 로비) | <b>Enhanced Electrical Stability of Al<sub>2</sub>O<sub>3</sub>/ZnO Thin-Film Transistors through a Ga<sub>2</sub>O<sub>3</sub> Interfacial Layer</b><br>AhYoung Kim <sup>1</sup> , Hyunmin Dang <sup>1</sup> , Taehyun Yoon <sup>1</sup> , Minje Lee <sup>1</sup> , Jiyea Nam <sup>1</sup> , and Hyungtak Seo <sup>1,2</sup><br><sup>1</sup> Department of Energy Systems Research, Ajou University, <sup>2</sup> Department of Materials Science and Engineering, Ajou University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TP-100<br>ZONE 2-1<br>(5층, 로비) | <b>Discrete Feeding Method(DFM)을 이용한 HfO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> 구조의 다이폴 제어 및 신뢰성 향상 연구</b><br>박수연 <sup>1</sup> , 서형탁 <sup>1,2</sup><br><sup>1</sup> 아주대학교 에너지시스템학과, <sup>2</sup> 아주대학교 첨단신소재공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |



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| TP-101<br>ZONE 2-1<br>(5층, 로비) | <b>O<sub>2</sub> In-Situ 어닐 기반 계면 결함 개선: 히스테리시스-프리 IAZO TTFT for PIM</b><br>윤태현 <sup>1</sup> , 당현민 <sup>1</sup> , 김아영 <sup>1</sup> , 남지예 <sup>1</sup> , 서형탁 <sup>1,2</sup><br><sup>1</sup> 아주대학교 에너지시스템학과, <sup>2</sup> 아주대학교 첨단신소재공학과                                                                                                                                                                                                                     |
| TP-102<br>ZONE 2-1<br>(5층, 로비) | <b>Crystallinity-Driven Enhancement of Charge-to-Spin Conversion in Sb<sub>2</sub>Te<sub>3</sub> Topological Insulator Films</b><br>Woo Hyun Park and Yoon Jang Chung<br>Department of Chemical and Biological Engineering, Korea University                                                                                                                                                                                                               |
| TP-103<br>ZONE 2-1<br>(5층, 로비) | <b>Exploration of Metal Doped HfO<sub>2</sub> Ferroelectric Films via PEALD for Negative-Capacitance Field-Effect Transistors</b><br>Hye Won Lee <sup>1,2</sup> , Young Bin Yoon <sup>1</sup> , So Jeong Yun <sup>1,2</sup> , and Jung Wook Lim <sup>1,2</sup><br><sup>1</sup> Next-Generation Semiconductor Device Research Section, ETRI, <sup>2</sup> Department of Semiconductor and Advanced Device Engineering, University of Science and Technology |
| TP-104<br>ZONE 2-1<br>(5층, 로비) | <b>Properties of Strontium Oxide Films Deposited by Atomic Layer Deposition for Strontium Compounds</b><br>Ji Hwan Kim and Ji-Hoon Ahn<br>Department of Materials Science and Chemical Engineering, Hanyang University                                                                                                                                                                                                                                     |
| TP-105<br>ZONE 2-1<br>(5층, 로비) | <b>Research on Phase Transition via Ar Plasma and UV/Ozone Treatment</b><br>Joon Soo Byeon, Ha Yeon Choi, Ju Yong Shin, Seung Ri Jeong, Jong Mun Park, Shivam Kumar, Gautam, and Hi-DeokLee<br>Department of Electronics Engineering, Chungnam National University                                                                                                                                                                                         |
| TP-106<br>ZONE 2-1<br>(5층, 로비) | <b>산소 유량 제어를 통한 Li-Doped NiO 박막의 구조적·전기적·광학적 특성 변화</b><br>정혜린, 김지형, 김해찬, 윤승복, 홍정수<br>가천대학교 IT융합대학 전기공학과                                                                                                                                                                                                                                                                                                                                                    |
| TP-107<br>ZONE 2-1<br>(5층, 로비) | <b>Deposition of Ru-Doped ZnO Thin Films by ZnO/Ru Super-Cycle Atomic Layer Deposition</b><br>Jaewoo Ku, YongJu Kim, Chanmin Park, and Minsu Kim<br>Department of Advanced Materials Science and Engineering, Kyonggi University                                                                                                                                                                                                                           |
| TP-108<br>ZONE 2-1<br>(5층, 로비) | <b>Improved Switching Uniformity of HfO<sub>2</sub>-Based RRAM through Controlled TiN Deposition and Interfacial TiO<sub>x</sub>N<sub>y</sub> Engineering</b><br>Seokho Cho, Juan Hong, Soonbin Kwon, and Woongkyu Lee<br>Department of Materials Science and Engineering, Soongsil University                                                                                                                                                             |
| TP-109<br>ZONE 2-1<br>(5층, 로비) | <b>Formation and Electrical Properties of High-k SrTiO<sub>3</sub> Thin Films via ALD Using Sr(dmts)(hfac)<sub>2</sub> and (CpMe<sub>5</sub>)Ti(OMe)<sub>3</sub> Precursors</b><br>Sangyeon Jeong, Jaejun Lee, Juhyeong Kim, and Woongkyu Lee<br>Department of Materials Science and Engineering, Soongsil University                                                                                                                                      |
| TP-110<br>ZONE 2-1<br>(5층, 로비) | <b>Improving Electrical Properties of Indium Oxide Thin-Film Transistors through Niobium Ion Doping</b><br>Su-Jin Sim, Dong Geun Kim, Kang Choi, and Ji-Hoon Ahn<br>Department of Materials Science and Chemical Engineering, Hanyang University                                                                                                                                                                                                           |
| TP-111<br>ZONE 2-1<br>(5층, 로비) | <b>Bottom-Electrode Engineering for Enhanced Performance of Morphotropic Phase Boundary Hf<sub>1-x</sub>Zr<sub>x</sub>O<sub>2</sub> DRAM Capacitors</b><br>Donghyeon Bae <sup>1</sup> and Hyungtak Seo <sup>1,2</sup><br><sup>1</sup> Department of Energy Systems Research, Ajou University, <sup>2</sup> Department of Materials Science and Engineering, Ajou University                                                                                |

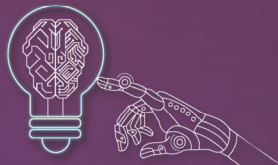
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| TP-112<br>ZONE 2-1<br>(5층, 로비) | <b>Abrupt Switching and Ultralow-Leakage Operation in an IGZO FET Integrated with a Filamentary Threshold Switch</b><br>Anupom Devnath <sup>1,2</sup> , Seungwoo Moon <sup>1,2</sup> , Junseong Bae <sup>1,2</sup> , Batyrbek Alimkhanuly <sup>1,2</sup> , Gisung Lee <sup>1,2</sup> , Minwoo Lee <sup>1,2</sup> , Jinsu Choi <sup>1,2</sup> , Taemin Sim <sup>1,2</sup> , Yongjun Kim <sup>1,2</sup> , and Seunghyun Lee <sup>1,2</sup><br><sup>1</sup> Department of Electronic Engineering, Kyung Hee University, <sup>2</sup> Department of Semiconductor Engineering, Kyung Hee University |
| TP-113<br>ZONE 2-1<br>(5층, 로비) | <b>Achieving p-Type SnO<sub>x</sub> via Sn(IV)-Based Thermal ALD: Oxygen-Deficient Growth and Mid-Film Al<sub>2</sub>O<sub>3</sub> Interlayers</b><br>Suhyeon Park, Huiseung Kim, Dawon Lee, Jiseop Byeon, Jeongin Seo, and Roy Byung Kyu Chung<br>Department of Advanced Materials Science and Engineering, Kyungpook National University                                                                                                                                                                                                                                                      |
| TP-114<br>ZONE 2-1<br>(5층, 로비) | <b>계면층 삽입을 통한 산화알루미늄-산화물반도체 계면 품질과 산화물 InGaZnO 박막트랜지스터의 성능 조절</b><br>김건하, 이진영, 정재욱<br>충북대학교 정보통신공학부                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TP-115<br>ZONE 2-1<br>(5층, 로비) | <b>Area-Selective Deposition of SnS<sub>2</sub> Using Self-Assembled Monolayer as Bottom-Up Patterning</b><br>Dong Geun Kim, Kang Choi, Su-Jin Sim, and Ji-Hoon Ahn<br>Department of Materials Science and Chemical Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                                             |
| TP-116<br>ZONE 2-1<br>(5층, 로비) | <b>Tuning Properties of Novel Amorphous p-Type Oxide Semiconductor via Thermal Evaporation Rate</b><br>Seongmo Kang <sup>1</sup> , Jaehoon Lee <sup>1</sup> , Jihun Noh <sup>2</sup> , and Boseok Kang <sup>1,2,3</sup><br><sup>1</sup> SKKU Advanced Institute of Nanotechnology (SAINT) and Department of Nano Science and Technology, Sungkyunkwan University, <sup>2</sup> Department of Semiconductor Convergence Engineering, Sungkyunkwan University, <sup>3</sup> Department of Nano Engineering, Sungkyunkwan University                                                               |
| TP-117<br>ZONE 2-1<br>(5층, 로비) | <b>Multilevel Resistive Switching in Perovskite Memristors Enabled by Ion Gel Layers</b><br>Seong Min Lee, Jung-Ju Bae, and Min Sup Choi<br>Department of Materials Science & Engineering, Chungnam National University                                                                                                                                                                                                                                                                                                                                                                         |
| TP-118<br>ZONE 2-1<br>(5층, 로비) | <b>누설전류 억제를 위한 원자층 증착 공정 기반 Al<sub>2</sub>O<sub>3</sub>/HfO<sub>2</sub> Nanolaminate 유전체 박막 트랜지스터의 구현</b><br>김민성 <sup>1</sup> , 이세형 <sup>2</sup> , 김성재 <sup>1</sup> , 윤혜지 <sup>1</sup> , 지현정 <sup>1</sup> , 장형록 <sup>1</sup> , 이문석 <sup>1</sup><br><sup>1</sup> 부산대학교 전기전자공학과, <sup>2</sup> 부산대학교 반도체특성화대학사업단                                                                                                                                                                                                                                                                                   |
| TP-119<br>ZONE 2-1<br>(5층, 로비) | <b>Zero-Bias-Operated Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> MXene/Lignin Composite Sensor for High-Sensitivity Chemiresistive Detection of CO<sub>2</sub> and NO<sub>2</sub></b><br>I Ketut Gary Devara and Jun Hong Park<br>Department of Materials Engineering and Convergence Technology, Gyeongsang National University                                                                                                                                                                                                                                                                  |
| TP-120<br>ZONE 2-1<br>(5층, 로비) | <b>Molecularly Triggered of Oxidized MXene Chemimemristor for Mimicking Biological Olfactory System</b><br>Windy Ayu Lestari and Jun Hong Park<br>Department of Materials Engineering and Convergence Technology, Gyeongsang National University                                                                                                                                                                                                                                                                                                                                                |



## D. Thin Film Process Technology 분과

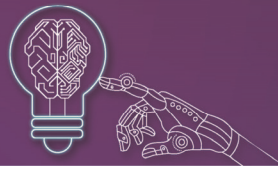
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| TP-121<br>ZONE 2-1<br>(5층, 로비) | <b>Investigation of Double-Gate In<sub>2</sub>O<sub>3</sub> TFTs</b><br>Kyun Han <sup>1</sup> and Hongseok Oh <sup>2</sup><br><sup>1</sup> Department of Intelligent Semiconductor, Soongsil University, <sup>2</sup> Department of Physics, Soongsil University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TP-122<br>ZONE 2-1<br>(5층, 로비) | <b>Schottky Barrier-Engineered Graphene Heterojunction Biosensor for Ultrasensitive DNA Detection</b><br>Sung Hyun Kim and Woo Jong Yu<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TP-123<br>ZONE 2-1<br>(5층, 로비) | <b>van der Waals Heterostructure-Integrated Fe-MST Memory Leveraging Ferroelectric Phase-Transition Behavior</b><br>Dokyoeng Yun and WooJong Yu<br>Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TP-124<br>ZONE 2-1<br>(5층, 로비) | <b>Study of Interfacial Property between Electrode and Superconducting NbN Thin Film at Room Temperature and Superconducting Transition Temperature</b><br>Soyun Woo <sup>1,2</sup> , Hyesoo Jin <sup>1,3</sup> , Byeong-Kwon Ju <sup>2</sup> , and Donghee Park <sup>1</sup><br><sup>1</sup> KIST, <sup>2</sup> School of Electrical Engineering, Korea University, <sup>3</sup> Department of Materials Science and Engineering, Seoul National University                                                                                                                                                                                                                                                                                                            |
| TP-125<br>ZONE 2-1<br>(5층, 로비) | <b>1k Active-Matrix Thermal Sensor Array Using IGZO Thin Film Transistors</b><br>Hyunsoo Kim <sup>1</sup> , Jaegoo Lee <sup>2</sup> , and Hongseok Oh <sup>1</sup><br><sup>1</sup> Department of Intelligent Semiconductor, Soongsil University, <sup>2</sup> Department of Physics, Soongsil University                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TP-126<br>ZONE 2-1<br>(5층, 로비) | <b>Effect of Precursor Molecular Structure on the Growth Behavior and Properties of SiNx Films via Very High-Frequency Atomic Layer Deposition</b><br>Yea-Ji Kim <sup>1</sup> , Kim-Hue Thi Dinh <sup>1</sup> , Young-Jin Lim <sup>1</sup> , Min-Jeong Rhee <sup>1</sup> , Nhat-Le Bui Dang <sup>1</sup> , Ngoc Le Trinh <sup>2</sup> , Bonwook Gu <sup>2</sup> , Youngho Kang <sup>2</sup> , Jae Hack Jeong <sup>3</sup> , Han-Bo-Ram Lee <sup>2</sup> , and Il-Kwon Oh <sup>1,4</sup><br><sup>1</sup> School of Intelligence Semiconductor Engineering, Ajou University, <sup>2</sup> School of Materials Science and Engineering, Incheon National University, <sup>3</sup> CN1 Co., Ltd., <sup>4</sup> School of Electric and Computer Engineering, Ajou University |
| TP-127<br>ZONE 2-2<br>(5층, 로비) | <b>Discrete Feeding in Atomic Layer Modulation of Dy-Doped HfO<sub>2</sub> Films</b><br>Bui Huu Phi <sup>1</sup> , Byung-Ha Kwak <sup>1</sup> , and Il-Kwon Oh <sup>1,2</sup><br><sup>1</sup> Department of Intelligence Semiconductor Engineering, Ajou University, <sup>2</sup> Department of Electrical and Computer Engineering, Ajou University                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TP-128<br>ZONE 2-2<br>(5층, 로비) | <b>ZnO/Te 반양극성 스위치를 이용한 Standard Ternary Inverter 연구</b><br>신현석 <sup>1,3</sup> , 최준혁 <sup>1,4</sup> , 김민재 <sup>2</sup> , 전재현 <sup>2</sup> , 이병훈 <sup>1,2,3,4</sup><br><sup>1</sup> Center for Semiconductor Technology Convergence, POSTECH, <sup>2</sup> National Institute for Nanomaterials Technology, POSTECH, <sup>3</sup> Department of Electrical Engineering, POSTECH, <sup>4</sup> Graduate school of semiconductor technology, POSTECH                                                                                                                                                                                                                                                                                                                       |
| TP-129<br>ZONE 2-2<br>(5층, 로비) | <b>저온/고압 수소 열처리 공정을 활용한 IGZO/Te CFET 성능 개선 연구</b><br>최준혁 <sup>1,3</sup> , 신현석 <sup>1,3</sup> , 김기영 <sup>1,2</sup> , 이병훈 <sup>1,2,3</sup><br><sup>1</sup> Center for Semiconductor Technology Convergence, POSTECH, <sup>2</sup> Department of Electrical Engineering, POSTECH, <sup>3</sup> Graduate school of semiconductor technology, POSTECH                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TP-130<br>ZONE 2-2<br>(5층, 로비) | <b>SiO<sub>2</sub> Interlayer와 고압수소 열처리를 활용한 Te TFT 소자의 Hysteresis 개선에 관한 연구</b><br>조중훈 <sup>1</sup> , 김기영 <sup>2,3</sup> , 이병훈 <sup>1,2,3</sup><br><sup>1</sup> Graduate School of Semiconductor Technology, POSTECH, <sup>2</sup> Department of Electrical Engineering, POSTECH, <sup>3</sup> Center for Semiconductor Technology Convergence, POSTECH                                                                                                                                                                                                                                                                                                                                                                                                                |

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| TP-131<br>ZONE 2-2<br>(5층, 로비) | <b>Multimode Operation of Light-Gated Transistors based on Millimeter-Scale Transition-Metal Dichalcogenide Grown by Chemical Vapor Deposition</b><br>Wonbeom Kim <sup>1</sup> , Somnath S. Kundale <sup>3</sup> , Hyeongtae Kim <sup>1</sup> , Su-Yeon Cho <sup>1</sup> , Mi Ji Kwon <sup>1</sup> , Soobin Shim <sup>1</sup> , and Jun Hong Park <sup>1,2</sup><br><sup>1</sup> Department of Materials Engineering and Convergence Technology, Gyeongsang National University, <sup>2</sup> School of Materials Science and Engineering, Gyeongsang National University, <sup>3</sup> Research Institute for Green Energy Convergence Technology, Gyeongsang National University                                                                                                                                                                                                                                                                    |
| TP-132<br>ZONE 2-2<br>(5층, 로비) | <b>열 안정화 Cp-Hf 전구체를 이용한 HfO<sub>2</sub> 박막의 ALD 증착 및 전기적 특성 평가: H<sub>2</sub>O와 O<sub>3</sub>산화제의 비교 연구</b><br>정현우 <sup>1,2</sup> , 김형민 <sup>1</sup> , 정재학 <sup>1</sup> , 허성우 <sup>2</sup> , 이희철 <sup>2</sup><br><sup>1</sup> 씨엔원, <sup>2</sup> 한국공학대학교 신소재공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TP-133<br>ZONE 2-2<br>(5층, 로비) | <b>Comparative Analysis of Lithography-Process-Induced Chemical and Potential Changes in InGaZnO Thin Films via XPS(X-ray Photoelectron Spectroscopy) and KPFM(Kelvin Probe Force Microscopy)</b><br>Hojoon Jeong and Bo Sung Kim<br>Division of Display and Semiconductor Physics, Korea University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| TP-135<br>ZONE 2-2<br>(5층, 로비) | <b>Threshold Switching Behavior and Oxygen-Vacancy-Driven Mechanisms in Pure SiO<sub>2</sub>-Based Selectors with Tunable V<sub>th</sub></b><br>Hye Rim Kim <sup>1</sup> , Tae Jung Ha <sup>2</sup> , Jeong Hwan Song <sup>2</sup> , Su Yong Park <sup>1</sup> , Jun Seok Moon <sup>1</sup> , Min-Yeong Choi <sup>3</sup> , Jae Hyeon Lee <sup>4</sup> , Jeong Hwan Han <sup>4</sup> , Byung Joon Choi <sup>4</sup> , Jae Hyuck Jang <sup>3,5</sup> , Soo Gil Kim <sup>2</sup> , and Tae Joo Park <sup>1</sup><br><sup>1</sup> Department of Materials Science and Chemical Engineering, Hanyang University, <sup>2</sup> SK hynix Inc., <sup>3</sup> AI enhanced Electron Microscopy Research Group, Korea Basic Science Institute, <sup>4</sup> Department of Materials Science and Engineering, Seoul National University of Science & Technology, <sup>5</sup> Graduate School of Analytical Science and Technology, Chungnam National University |
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| TP-137<br>ZONE 2-2<br>(5층, 로비) | <b>Capacitance-Voltage Characteristics of PMMA-Passivated Solution-Processed IGZO TFTs</b><br>Chaeyeon Jeong, Ayeong Cho, and Jaewook Jeong<br>School of Information and Communication Engineering, Chungbuk National University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TP-138<br>ZONE 2-2<br>(5층, 로비) | <b>Study on In-O Based Interfacial Layer as a Diffusion Barrier In-Te Alloy and W Electrode for Vertical Selector-Only Memory Applications</b><br>Beom Joo Kim <sup>2,3</sup> , Myeong Hwan You <sup>2</sup> , and Dae Hwan Kang <sup>1,2</sup><br><sup>1</sup> Department of Semiconductor Engineering, POSTECH, <sup>2</sup> Graduate School of Semiconductor Technology, POSTECH, <sup>3</sup> Department of Materials Science and Engineering, Chonnam National University                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TP-139<br>ZONE 2-2<br>(5층, 로비) | <b>높은 전자이동도를 가지는 N- 도핑 ALD SnO<sub>2</sub> 전하수송층 형성 방법</b><br>한재연 <sup>1</sup> , 김형민 <sup>1</sup> , 배다은 <sup>1</sup> , 이성민 <sup>1</sup> , 최재호 <sup>1</sup> , 이원종 <sup>2</sup> , 임종철 <sup>2</sup> , 정재학 <sup>1</sup><br><sup>1</sup> 씨엔원 기업부설연구소, <sup>2</sup> 충남대학교 에너지과학기술대학원                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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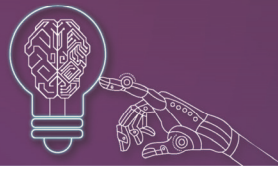
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| TP-141<br>ZONE 2-2<br>(5층, 로비) | <b>Enhanced Leakage Suppression and Interfacial Stability in ZrO<sub>2</sub>-Based MIM Capacitor with In<sub>2</sub>O<sub>3</sub> Electrodes for DRAM Applications</b><br>Hoonseok Son and Woojin Jeon<br>Department of Materials Science and Engineering, Kyung Hee University                                                                                                                                                                                                                                                                                                               |
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| TP-145<br>ZONE 2-2<br>(5층, 로비) | <b>Optoelectronic Synapse Behavior of HfS<sub>2</sub> Grown via Molten Salt Flux Method</b><br>Karybayeva Kamila, Mi Ji Kwon, and Jun Hong Park<br>Department of Material Engineering and Convergence Technology, Gyeongsang National University                                                                                                                                                                                                                                                                                                                                              |
| TP-146<br>ZONE 2-2<br>(5층, 로비) | <b>Surfactant-Driven Morphology Evolution of Hydrothermal Ceria Abrasives</b><br>Su-Bin Kim, Pil-Su Kim, Min-Uk Jeon, Se-Hui Lee, Hye-Min Lee, Jin-Sub Park, and Jea-Gun Park<br>Hanyang University                                                                                                                                                                                                                                                                                                                                                                                           |
| TP-147<br>ZONE 2-2<br>(5층, 로비) | <b>Enhanced NiSi Formation via Template Effect and Suppression of Ni Channeling by Employing Mo<sub>2</sub>N Interlayer</b><br>Jiwan Hong, Seoeun Yoon, and Woojin Jeon<br>Department of Materials Science and Engineering, Kyung Hee University                                                                                                                                                                                                                                                                                                                                              |
| TP-148<br>ZONE 2-2<br>(5층, 로비) | <b>Improving Dielectric Properties of TiO<sub>2</sub> Dielectric Films by Employing ZrO<sub>2</sub> Buffer Layer for Next-Generation DRAM Capacitor Applications</b><br>Kyungmo Yang, Chaeyeong Hwang, and Woojin Jeon<br>Department of Materials Science and Engineering, Kyung Hee University                                                                                                                                                                                                                                                                                               |
| TP-149<br>ZONE 2-2<br>(5층, 로비) | <b>MoSi<sub>x</sub>의 에피택셜 효과에 의한 C54 상 TiSi<sub>2</sub> 형성 온도 감소</b><br>윤서은, 홍지완, 전우진<br>경희대학교 신소재공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| TP-151<br>ZONE 2-2<br>(5층, 로비) | <b>Conformality-Controlled Atomic Layer Deposition with High Mass Noble Gas Plasma</b><br>Sangwon Lee <sup>1</sup> , Jeongmin Oh <sup>1</sup> , Jaeyun Lim <sup>1</sup> , Donghyun Kim <sup>2</sup> , and Jihwan An <sup>1,2</sup><br><sup>1</sup> Graduate School of Semiconductor Technology, POSTECH, <sup>2</sup> Department of Mechanical Engineering, POSTECH                                                                                                                                                                                                                           |

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| TP-152<br>ZONE 2-2<br>(5층, 로비) | <b>Enhancement of Electrical Characteristics of ALD-HfO<sub>2</sub> Thin Films Using a Modulated Split Feeding Approach (SFA) with TEMA-Hf and O<sub>3</sub></b><br>Soyoung Park <sup>1</sup> , Sangkuk Han <sup>2</sup> , Wonjae Choi <sup>1</sup> , Kyungwook Park <sup>2</sup> , Jaewon Chung <sup>1</sup> , Haesoo Jang <sup>1</sup> , Sangmyun Lim <sup>1</sup> , Sangwoo Jeong <sup>2</sup> , and Changhwan Choi <sup>1,2</sup><br><sup>1</sup> Department of Semiconductor Engineering, Hanyang University, <sup>2</sup> Division of Materials Science & Engineering, Hanyang University |
| TP-153<br>ZONE 2-2<br>(5층, 로비) | <b>Enhanced Performance in Polymer Transistors via Chain Alignment for Biosensor Applications</b><br>Jin Seok Yoon, Nak Hee Kang, Won Bae Cho, Hyung Soo Ahn, and Young Tea Chun<br>Division of Electronics and Electrical Information Engineering, Korea Maritime & Ocean University                                                                                                                                                                                                                                                                                                           |
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| TP-155<br>ZONE 2-2<br>(5층, 로비) | <b>Effects of VO<sub>x</sub> Interlayer on TiN Bottom Electrode on the Electrical Properties of Hf<sub>0.5</sub>Zr<sub>0.5</sub>O<sub>2</sub> Ferroelectric Thin Films</b><br>Iksun Kwon <sup>1</sup> , Seungwoo Lee <sup>1</sup> , Jaehyeon Yun <sup>1</sup> , Hyunseok Oh <sup>2</sup> , Donghun Shin <sup>2</sup> , Yongjoo Park <sup>2</sup> , and Woojin Jeon <sup>1</sup><br><sup>1</sup> Department of Materials Science and Engineering, Kyung Hee University, <sup>2</sup> Advanced Research Development Team, SK Trichem Co., Ltd.                                                    |
| TP-156<br>ZONE 2-2<br>(5층, 로비) | <b>Atomic Layer Infiltration of Al<sub>2</sub>O<sub>3</sub> for Organic-Inorganic Hybrid Encapsulation of Flexible OLED Display</b><br>Si Eun Jung <sup>1</sup> , Ye Jin Jung <sup>1</sup> , Su Min Eun <sup>1</sup> , Ji Ho Jeon <sup>1</sup> , Kwan hyuck Yoon <sup>2</sup> , Woo Yong Sung <sup>2</sup> , Jeong Hwan Han <sup>1</sup> , and Byung Joon Choi <sup>1</sup><br><sup>1</sup> Seoul National University of Science & Technology, <sup>2</sup> Display Research Center, Samsung Display Co., Ltd.                                                                                  |
| TP-157<br>ZONE 2-2<br>(5층, 로비) | <b>Subthreshold-Swing Control in Oxide-Semiconductor TFTs via Sn-Doped IGO (IGTO) Channels</b><br>Yeonghun Kim <sup>1</sup> , Yena Kim <sup>2</sup> , and Jae Kyeong Jeong <sup>1,2</sup><br><sup>1</sup> Department of Nano Semiconductor Engineering, Hanyang University, <sup>2</sup> Department of Electronic Engineering, Hanyang University                                                                                                                                                                                                                                               |
| TP-158<br>ZONE 2-2<br>(5층, 로비) | <b>Effect of Crystallinity-Controlled ZrO<sub>2</sub> Films on the Resistive Switching Behavior of RRAM Devices</b><br>Juyoung Park, Gyeongil Son, Suraj B. Madake, and Minjae Kim<br>School of Materials Science & Engineering, Yeungnam University                                                                                                                                                                                                                                                                                                                                            |
| TP-159<br>ZONE 2-2<br>(5층, 로비) | <b>Deposition of ALD HfO<sub>2</sub> Films at Various Temperatures and Evaluation of Device Characteristics</b><br>Muheon Kim, Hyun-June Park, Subin Lee, and Sung-Woong Chung<br>Graduate School of Semiconductor Technology, POSTECH                                                                                                                                                                                                                                                                                                                                                          |
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| <b>TP-164</b><br>ZONE 2-2<br>(5층, 로비) | <b>Atomic Layer Etching of ZrO<sub>2</sub> Using SF<sub>6</sub> Plasma and TiCl<sub>4</sub> for DRAM Capacitors</b><br>Juhyeon Kim, Sangyeon Jeong, Hyeongjun Kim, and Woongkyu Lee<br>Department of Materials Science and Engineering, Soongsil University                                                                                                                                                                                                                                                                           |
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| <b>TP-169</b><br>ZONE 2-2<br>(5층, 로비) | <b>Development of Ru ALD and ALE Processes for Continuous Ultrathin Low-Resistivity Films</b><br>Eun Ji Ju, Jae Hyeon Lee, and Jeong Hwan Han<br>Department of Materials Science and Engineering, Seoul National University of Science & Technology                                                                                                                                                                                                                                                                                   |
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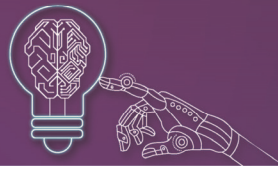
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| <b>TP-175</b><br>ZONE 2-2<br>(5층, 로비) | <b><math>\text{TiO}_2/\text{IZO}</math> Hybrid-Channel Phototransistor Enabling Enhanced In-Sensor Neuromorphic Vision Computing</b><br>Yu-Jung Cha <sup>1</sup> , Akash Bharat More <sup>2</sup> , Sung Woon Cho <sup>2</sup> , and Joon Seop Kwak <sup>1</sup><br><sup>1</sup> Department of Energy Technology, KENTECH, <sup>2</sup> Department of Advanced Components and Materials Engineering, Suncheon National University                                                 |
| <b>TP-176</b><br>ZONE 2-2<br>(5층, 로비) | <b>Comparative Study of Ga, Sn, and Zn <math>\delta</math>-Doped <math>\text{In}_2\text{O}_3</math> FETs Fabricated by PEALD for 3D DRAM Integration</b><br>Gwansun Choi <sup>1</sup> , Soojin Park <sup>2</sup> , and Jae Kyeong Jeong <sup>1,2</sup><br><sup>1</sup> Department of Electronic Engineering, Hanyang University, <sup>2</sup> Department of Artificial Intelligence Semiconductor Engineering, Hanyang University                                                 |
| <b>TP-177</b><br>ZONE 2-2<br>(5층, 로비) | <b>Advanced Atomic Level Patterning Process by Area Selective Atomic Layer Deposition Integrating Atomic Layer Etching</b><br>Seo-Hyun Lee <sup>1</sup> , Jieun Oh <sup>1</sup> , and Woo-Hee Kim <sup>2</sup><br><sup>1</sup> Department of Materials Science and Chemical Engineering, Hanyang University, <sup>2</sup> Advanced Materials and Semiconductor Engineering, Hanyang University                                                                                    |
| <b>TP-178</b><br>ZONE 2-2<br>(5층, 로비) | <b>Effect of Plasma Frequency on the Electrical Properties of Low-k Films Deposited by PECVD with a Dimethoxydimethylsilane Precursor</b><br>Minwoo Park <sup>1,2</sup> , Jaeyeon Kim <sup>1</sup> , Kyubeom Bae <sup>1</sup> , Young Chul Choi <sup>2</sup> , Dong Hak Kim <sup>2</sup> , Younghyun Kim <sup>2</sup> , Jeesoo Lee <sup>2</sup> , and Donggeun Jung <sup>1</sup><br><sup>1</sup> Department of Physics, Sungkyunkwan University, <sup>2</sup> WONIK IPS Co., Ltd. |
| <b>TP-179</b><br>ZONE 2-2<br>(5층, 로비) | <b>Enhancement of Electrical Properties of Molybdenum Oxide Thin Films via Post-Deposition Annealing and Plasma Treatment</b><br>Jiwon Ahn, Seungmin Jo, Hyeongjun Kim, and Woongkyu Lee<br>Department of Materials Science and Engineering, Soongsil University                                                                                                                                                                                                                  |
| <b>TP-180</b><br>ZONE 2-2<br>(5층, 로비) | <b>Suppression of Wake-Up Effect in Morphotropic Phase Boundary Stabilized <math>\text{Hf}_{1-x}\text{Zr}_x\text{O}_2</math> by Yttrium Doping</b><br>Chan-Bin Hong, Yoonchul Shin, Yeon-Ji Jeon, Ji Hwan Kim, Seo Young Choi, and Ji-Hoon Ahn<br>Department of Materials Science and Chemical Engineering, Hanyang University                                                                                                                                                    |
| <b>TP-181</b><br>ZONE 2-2<br>(5층, 로비) | <b>Chemical Vapor Deposition of Indium-Based Metal Organic Films as an All-Dry Resist for Next-Generation EUV Lithography</b><br>Hyekyung Kim and Woo-Hee Kim<br>College of Advanced Technology and Convergence, Hanyang University                                                                                                                                                                                                                                               |
| <b>TP-182</b><br>ZONE 2-2<br>(5층, 로비) | <b>Study of High-k <math>\text{Al}_2\text{O}_3</math> Dielectric under High Thermal Budget for FEOL Compatible Top Gate IGZO TFT</b><br>Sung Ha Lee <sup>1</sup> , Joo Hee Jeong <sup>2</sup> , and Jae Kyeong Jeong <sup>1,2</sup><br><sup>1</sup> School of Artificial Intelligence Semiconductor Engineering, Hanyang University, <sup>2</sup> School of Display Science and Engineering, Hanyang University                                                                   |
| <b>TP-183</b><br>ZONE 2-2<br>(5층, 로비) | <b>Sol-Gel Derived <math>\text{Ga}_2\text{O}_3/\text{ZnO}</math> Heterojunction Thin Films for Betavoltaic Energy Conversion</b><br>장성우, 이윤진, 송민석, 정이현, 신해주, 심인보<br>국민대학교 전자공학부                                                                                                                                                                                                                                                                                                   |



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| TP-184<br>ZONE 2-2<br>(5층, 로비) | <b>Improved Electrical Performance of HKMG pMOS Device Using Plasma-Based Hydrogen Treatment</b><br>Wonjae Choi <sup>1</sup> , Sangkuk Han <sup>2</sup> , Haesoo Jang <sup>1</sup> , Jaewon Chung <sup>1</sup> , Sangmyun Lim <sup>1</sup> , Kyungwook Park <sup>2,3</sup> , Sangwoo Jeong <sup>2</sup> , Soyoung Park <sup>1</sup> , and Changhwan Choi <sup>1,2</sup><br><sup>1</sup> Department of Semiconductor Engineering, Hanyang University, <sup>2</sup> Division of Materials Science and Engineering, Hanyang University, <sup>3</sup> DRAM Process Development Team, Samsung Electronics Co., Ltd.                                                                                                                            |
| TP-185<br>ZONE 2-2<br>(5층, 로비) | <b>Atomic Layer Deposition of Ga<sub>2</sub>O<sub>3</sub> Using (N,N'-di-tert-butylacetimidamido)dimethylgallium Precursor</b><br>Jun Yong Lee <sup>1,2</sup> , Inhong Hwang <sup>1,2</sup> , Dahui Jeon <sup>1,2</sup> , Changbong Yeon <sup>3</sup> , Jaesun Jung <sup>3</sup> , and In-Hwan Baek <sup>1,2</sup><br><sup>1</sup> Department of Chemical Engineering, Inha University, <sup>2</sup> Program in Semiconductor Convergence, Inha University, <sup>3</sup> Thin Film Materials Development Team, Soulbrain Co., Ltd.                                                                                                                                                                                                        |
| TP-186<br>ZONE 2-2<br>(5층, 로비) | <b>Ultra-thin Molybdenum Nitride (MoN) Using a Plasma-Enhanced ALD as a Next-Generation Copper Diffusion Barrier for Scaled Interconnects</b><br>Donguk Kim <sup>1</sup> , Hyunjin Yim <sup>2</sup> , Yehbeen Im <sup>2</sup> , Youngseo Na <sup>1</sup> , Kangbaek Seo <sup>1</sup> , Seungchae Lee <sup>2</sup> , Kanghyeok Lee <sup>1</sup> , Sangtae Park <sup>2</sup> , and Changhwan Choi <sup>1,2</sup><br><sup>1</sup> Department of Semiconductor Engineering, Hanyang University, <sup>2</sup> Division of Materials Science and Engineering, Hanyang University                                                                                                                                                                |
| TP-187<br>ZONE 2-2<br>(5층, 로비) | <b>Oxygen Reservoir Layer-Enabled Performance Enhancement in HZO Ferroelectrics: Dependence on Temperature and Electrode Oxygen Ratio</b><br>Taesuk Kim <sup>1</sup> , Kyungsoo Park <sup>1</sup> , Hyeoncheol Jung <sup>1</sup> , Yeonwoo Choi <sup>2</sup> , Sangmyun Lim <sup>2</sup> , Jihoon Choi <sup>2</sup> , Jinyeong Lee <sup>2</sup> , and Changhwan Choi <sup>1,2</sup><br><sup>1</sup> Division of Materials Science and Engineering, Hanyang University, <sup>2</sup> Department of Semiconductor Engineering, Hanyang University                                                                                                                                                                                           |
| TP-188<br>ZONE 2-2<br>(5층, 로비) | <b>Ultra-Thin ALD-MoN Interlayer for Low-Resistance and Reliable Contacts to In-Based Oxide Channels</b><br>Kyoungyeon Min <sup>1</sup> , JinYeong Lee <sup>1</sup> , YeonWoo Choi <sup>1</sup> , SunBum Kim <sup>2</sup> , and Changhwan Choi <sup>1,2</sup><br><sup>1</sup> Department of Semiconductor Engineering, Hanyang University, <sup>2</sup> Division of Materials Science and Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                 |
| TP-189<br>ZONE 2-2<br>(5층, 로비) | <b>Interfacial Oxygen Engineering for Rutile TiO<sub>2</sub> Growth Using Composition-Controlled RuO<sub>x</sub> Electrodes</b><br>Youngseo Na <sup>1</sup> , Sangkuk Han <sup>2</sup> , Soyoung Park <sup>1</sup> , and Changhwan Choi <sup>1,2</sup><br><sup>1</sup> Department of Semiconductor Engineering, Hanyang University, <sup>2</sup> Division of Materials Science and Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                        |
| TP-190<br>ZONE 2-2<br>(5층, 로비) | <b>Strain and Scavenging Effects of Metal Electrodes on Ferroelectric Properties of Hf<sub>x</sub>Zr<sub>1-x</sub>O<sub>2</sub> Thin Films</b><br>Yoonseok Lee <sup>1</sup> , Kyung-Soo Park <sup>2</sup> , Sang-Myun Lim <sup>1</sup> , Ji-Hoon Choi <sup>1</sup> , Yeon-Woo Choi <sup>1</sup> , Jin-Yeong Lee <sup>1</sup> , Hyeon-Cheol Jeong <sup>1</sup> , Young-Seo Na <sup>1</sup> , Chulwon Chung <sup>3</sup> , Tae-Suk Kim <sup>2</sup> , and Changhwan Choi <sup>1,2</sup><br><sup>1</sup> Department of Semiconductor Engineering, Hanyang University, <sup>2</sup> Division of Materials Science and Engineering, Hanyang University, <sup>3</sup> Research Institute of Industrial Materials Technology, Hanyang University |
| TP-191<br>ZONE 2-2<br>(5층, 로비) | <b>Switching Mechanism and Device Structure Optimization of Al-Doped HfO<sub>2</sub>-Based Self-Rectifying Memory for Uniform Switching Performance</b><br>Yura Oh and Hae Jin Kim<br>Department of Materials Science and Engineering, Myongji University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TP-192<br>ZONE 2-2<br>(5층, 로비) | <b>Cobalt Nitride (CoN) as for Alternative P-type Work-Function Metal Gate</b><br>Haesoo Jang <sup>1</sup> , Sangkuk Han <sup>2</sup> , Wonjae Choi <sup>1</sup> , Jaewon Chung <sup>1</sup> , Sangmyun Lim <sup>1</sup> , Kyungwook Park <sup>2</sup> , Sangwoo Jeong <sup>2</sup> , Soyoung Park <sup>1</sup> , and Changhwan Choi <sup>1,2</sup><br><sup>1</sup> Division of Semiconductor Engineering, Hanyang University, <sup>2</sup> Department of Materials Engineering, Hanyang University                                                                                                                                                                                                                                       |

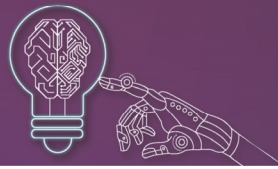
## G. Device & Process Modeling, Simulation and Reliability 분과

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| TP-193<br>ZONE 1<br>(4층, 로비) | <b>Mechanistic Evaluation of IGZO-Based 1T-1C Memory Cell via Fast I-V Measurements and HSPICE Modeling</b><br>Juneseong Choi <sup>1,2</sup> , Minsub Um <sup>1,2</sup> , Jinheon Choi <sup>1,2</sup> , Sahngik Aaron Mun <sup>1,2</sup> , Seoryong Park <sup>1,2</sup> , Jaewon Ham <sup>1,2</sup> , Hyungjeung Kim <sup>1,2</sup> , Shihyun Kim <sup>1,2</sup> , Subin Moon <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                                   |
| TP-194<br>ZONE 1<br>(4층, 로비) | <b>Experimental Demonstration of Analog Multi-Level Operation in a 16×16 2T0C Array</b><br>Hyungjeung Kim <sup>1,2</sup> , Néstor Ghenzi <sup>1,2</sup> , Shihyun Kim <sup>1,2</sup> , Yonghee Lee <sup>1,2</sup> , Jinheon Choi <sup>1,2</sup> , Sahngik Aaron Mun <sup>1,2</sup> , Juneseong Choi <sup>1,2</sup> , Jaewon Ham <sup>1,2</sup> , Seoryong Park <sup>1,2</sup> , Subin Moon <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                      |
| TP-195<br>ZONE 1<br>(4층, 로비) | <b>A 2T0C Cell Enabling Multi-Timescale Reservoir Computing</b><br>Shihyun Kim <sup>1,2</sup> , Yonghee Lee <sup>1,2</sup> , Hyungjeung Kim <sup>1,2</sup> , Néstor Ghenzi <sup>1,2</sup> , Sahngik Aaron Mun <sup>1,2</sup> , Jinheon Choi <sup>1,2</sup> , Juneseong Choi <sup>1,2</sup> , Jaewon Ham <sup>1,2</sup> , Seoryong Park <sup>1,2</sup> , Subin Moon <sup>1,2</sup> , Minsub Um <sup>1,2</sup> , Jeongyoon Lee <sup>1,2</sup> , Kyung Seok Woo <sup>3,4</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University,<br><sup>3</sup> Graduate School of Semiconductor Materials and Devices Engineering, UNIST,<br><sup>4</sup> Department of Materials Science and Engineering, UNIST |
| TP-196<br>ZONE 1<br>(4층, 로비) | <b>Artificial Neural Network Modeling of Feedback Field-Effect Transistor Considering Current State for Implementing Circuit Simulation</b><br>Jong Hyeok Oh, Seung Su Jeong, and Yun Seop Yu<br>Major of ICT & Robotics Engineering, Hankyong National University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| TP-197<br>ZONE 1<br>(4층, 로비) | <b>First-Principles Study of Amorphous Oxide Semiconductors Using DFT+U+V Method</b><br>Yumi Kim, Subeen Lim, and Yeonghun Lee<br>Department of Electronics Engineering, Incheon National University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TP-198<br>ZONE 1<br>(4층, 로비) | <b>Transport in Amorphous Semiconductors Using Effective Medium Theory</b><br>Hyeonseok Choi and Yeonghun Lee<br>Department of Electronics Engineering, Incheon National University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TP-199<br>ZONE 1<br>(4층, 로비) | <b>A Hafnia-Based Ferroelectric Tunnel-FET with a Stepped Gate Stack for Reliable Ternary Content Addressable Memory Implementation</b><br>Jiwon Park <sup>1,2</sup> and Woo Young Choi <sup>1,2</sup><br><sup>1</sup> Department of Electrical and Computer Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TP-200<br>ZONE 1<br>(4층, 로비) | <b>Metal to Insulator Transition in Rutile- and Anatase-Based Polytypes of MO<sub>2</sub> (M=V, Nb, Ta) by First Principles Calculations</b><br>Dohyun Kim <sup>1,2,3</sup> , Taeyoung Jeong <sup>1,2,3</sup> , Seungjae Yoon <sup>1,2,3</sup> , Yunjae Kim <sup>1,2,3</sup> , Cheol Seong Hwang <sup>2,3</sup> , and Jung-Hae Choi <sup>1</sup><br><sup>1</sup> Electronic and Hybrid Materials Research Center, KIST, <sup>2</sup> Department of Materials Science and Engineering, Seoul National University, <sup>3</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                                                  |
| TP-201<br>ZONE 1<br>(4층, 로비) | <b>Effect of Field Crowding Induced by Corner-Rounding on NBTI in Vertically Stacked Nanosheet MOSFET</b><br>Kyeong Min Lim, Jin Park, Won Suk Koh, Gang San Yun, Soo Bean Song, and In Man Kang<br>School of Electronic and Electrical Engineering, Kyungpook National University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



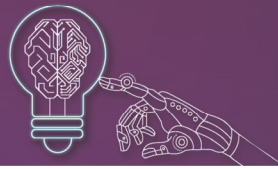
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| TP-202<br>ZONE 1<br>(4층, 로비) | <b>플라즈마 처리된 포토레지스트 잔류물이 MoS<sub>2</sub> 전자 구조에 미치는 영향: MD 및 DFT 연구</b><br>엄상민 <sup>1</sup> , 김다현 <sup>2</sup> , 김명수 <sup>2</sup> , 김병조 <sup>1</sup><br><sup>1</sup> 울산과학기술원 반도체소재부품대학원, <sup>2</sup> 울산과학기술원 전기전자공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TP-203<br>ZONE 1<br>(4층, 로비) | <b>Gated Recurrent Unit 을 활용한 Feedback Field-Effect Transistor 의 Compact SPICE 모델 연구</b><br>손승원 <sup>1</sup> , 우솔아 <sup>1,2</sup><br><sup>1</sup> 국립부경대학교 지능로봇학과, <sup>2</sup> 국립부경대학교 전자공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TP-204<br>ZONE 1<br>(4층, 로비) | <b>Role of Electron-Phonon Interaction on Transport in Amorphous Semiconductors: A First-Principles Study</b><br>Subeen Lim, Do Lee, and Yeonghun Lee<br>Department of Electronics Engineering, Incheon National University                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| TP-205<br>ZONE 1<br>(4층, 로비) | <b>게이트 구조에 따른 Nanosheet FBFET의 전기적 특성 분석</b><br>박태호, 조경아, 김상식<br>고려대학교 전기전자공학부                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TP-206<br>ZONE 1<br>(4층, 로비) | <b>Optimization of Recess-Structured Metal-Oxide TFTs for Footprint Reduction Using TCAD Simulation</b><br>Hyeon Jeong Park, Kook Cheol Moon, and Yong-Sang Kim<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                                                                                                       |
| TP-207<br>ZONE 1<br>(4층, 로비) | <b>Photoresponsive Characterization for Energy-Mapping of Donor- and Acceptor-Like Interface Traps in 5-Stage Si-NW GAA FETs</b><br>Soohyun Lim <sup>1</sup> , Jaewoo Yoo <sup>1</sup> , Hongseung Lee <sup>1</sup> , Seongbin Lim <sup>1</sup> , Minah Park <sup>1</sup> , Seohyeon Park <sup>1</sup> , Sojin Jung <sup>1</sup> , Donghyeon Lee <sup>1</sup> , Dongsun Shin <sup>1</sup> , Junhui Park <sup>1</sup> , Sieun Lee <sup>1</sup> , Yang-kyu Choi <sup>2</sup> , and Hagyoul Bae <sup>1</sup><br><sup>1</sup> Jeonbuk National University, <sup>2</sup> KAIST                                                                                           |
| TP-208<br>ZONE 1<br>(4층, 로비) | <b>Research of the Electrical Characteristics of Floating-Gate-Based Nanoscale Neuromorphic Transistors</b><br>Kangmin Yoo <sup>1</sup> , Hyeonseok Jeong <sup>1</sup> , Juyeong Chae <sup>1</sup> , Taehwan Koo <sup>1</sup> , Hyeongjin Chae <sup>1</sup> , Joonhyuk Kim <sup>3</sup> , Munseok Jung <sup>3</sup> , Dongyeop Kim <sup>3</sup> , and Moongyu Jang <sup>1,2</sup><br><sup>1</sup> School of Nano Convergence Technology, Hallym University, <sup>2</sup> Center of Nano Convergence Technology, Hallym University, <sup>3</sup> School of Semiconductor and Display, Hallym University                                                              |
| TP-210<br>ZONE 1<br>(4층, 로비) | <b>Compact Modeling of Self-Rectifying MoS<sub>2</sub>-Based RRAM with Schottky Barrier-Induced Rectification</b><br>Yoojin Shin and Min-woo Kwon<br>Department of Electronic Engineering, Seoul National University of Science & Technology                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TP-211<br>ZONE 1<br>(4층, 로비) | <b>Automated Optical Detection and Thickness Estimation of 2D Flakes for Large-Scale FET Data Acquisition</b><br>Sanghyun Lee <sup>1</sup> , Haksoon Jung <sup>1</sup> , Sumin Hong <sup>2</sup> , Minho Park <sup>1</sup> , and Jimin Kwon <sup>1,2</sup><br><sup>1</sup> Department of Electrical Engineering, UNIST, <sup>2</sup> Graduate School of Semiconductor Materials and Devices Engineering, UNIST                                                                                                                                                                                                                                                      |
| TP-212<br>ZONE 1<br>(4층, 로비) | <b>PN Separation Piling Process for Performance Optimization of 2 nm Gate-All-Around Field-Effect Transistors</b><br>Jaehyuk Lim <sup>1</sup> , Hyejin Park <sup>2</sup> , Seonghan Lee <sup>3</sup> , and Changhwan Shin <sup>3</sup><br><sup>1</sup> Research Institute of Semiconductor Technology, Korea University, <sup>2</sup> School of Chemical Engineering, Soongsil University, <sup>3</sup> School of Electrical Engineering, College of Engineering, Korea University                                                                                                                                                                                  |
| TP-213<br>ZONE 1<br>(4층, 로비) | <b>Atomistic Modeling on the Effects of Interface and Geometry in NiTe<sub>2</sub>-Te Contact for p-Type Te-Channel Thin-Film Transistors</b><br>Seungjae Yoon <sup>1,2,3</sup> , Wonho Choi <sup>2,3</sup> , Byongwoo Park <sup>2,3</sup> , Taeyoung Jeong <sup>1,2,3</sup> , Dohyun Kim <sup>1,2,3</sup> , Yunjae Kim <sup>1,2,3</sup> , Cheol Seong Hwang <sup>2,3</sup> , and Jung-Hae Choi <sup>1</sup><br><sup>1</sup> Electronic and Hybrid Materials Research Center, KIST, <sup>2</sup> Department of Materials Science and Engineering, Seoul National University, <sup>3</sup> Inter-university Semiconductor Research Center, Seoul National University |

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| TP-214<br>ZONE 1<br>(4층, 로비) | <b>VacHopPy: Automating Effective Parameter Extraction for Vacancy-Mediated Diffusion from Molecular Dynamics</b><br>Taeyoung Jeong <sup>1,2</sup> , Kun Hee Ye <sup>1,2</sup> , Seungjae Yoon <sup>1,2</sup> , Dohyun Kim <sup>1,2</sup> , Yunjae Kim <sup>1,2</sup> , Cheol Seong Hwang <sup>2</sup> , and Jung-Hae Choi <sup>1</sup><br><sup>1</sup> Electronic and Hybrid Materials Research Center, KIST, <sup>2</sup> Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University                                         |
| TP-215<br>ZONE 1<br>(4층, 로비) | <b>Vertical Electric Field Modulation by Ionic Dynamics in Dielectrics</b><br>Jiyeon Kim <sup>1</sup> , Jaeuk Bang <sup>2</sup> , Seong Chu Lim <sup>2</sup> , and Hyunjin Ji <sup>1</sup><br><sup>1</sup> Department of Electrical, Electronic and Computer Engineering, University of Ulsan, <sup>2</sup> Department of Energy Science, Sungkyunkwan University                                                                                                                                                                                                                                 |
| TP-216<br>ZONE 1<br>(4층, 로비) | <b>중이온 조사에 따른 매립채널 어레이 트랜지스터의 신뢰성 분석</b><br>김소원 <sup>1</sup> , 김건 <sup>1</sup> , 김동영 <sup>1</sup> , 김수연 <sup>1</sup> , 박제원 <sup>1</sup> , 김신욱 <sup>1</sup> , 강륜 <sup>1</sup> , 임채혁 <sup>1</sup> , 이주원 <sup>1</sup> , 서현아 <sup>1</sup> , 윤정현 <sup>1</sup> , 이혜린 <sup>1</sup> , 최우진 <sup>2</sup> , 김어진 <sup>2</sup> , 정만우 <sup>2</sup> , 이명진 <sup>2</sup><br><sup>1</sup> 전남대학교 지능전자컴퓨터공학과, <sup>2</sup> 전남대학교 전자컴퓨터공학부                                                                                                                                                                             |
| TP-217<br>ZONE 1<br>(4층, 로비) | <b>A Study on the Simultaneous Improvement of Performance and NBTI Reliability in PMOSFETs Using Passivation Tensile-SiN Process</b><br>Icksu-Jeon, Sangwon-Yun, Chaemin-Yeom, Hoyeon-Choi, Manlyun Ha, and Sanggi Lee<br>CIS Process Dev. Team/ Reliability Test Team, DB HiTek                                                                                                                                                                                                                                                                                                                  |
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| TP-219<br>ZONE 1<br>(4층, 로비) | <b>Hydrogen Effects in Indium-Gallium-Zinc-Oxide Thin Films via High-Pressure Deuterium Annealing</b><br>Inkyu Yoon, Donghyun Kim, Sang Hyeok Kim, Sukyeong Kang, Sangpil Yoon, and Jae Woo Lee<br>Department of Electronics & Information Engineering, Korea University                                                                                                                                                                                                                                                                                                                          |
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| TP-223<br>ZONE 1<br>(4층, 로비) | <b>First-Principles Investigation of Inhomogeneous Ferroelectric Switching Pathways in Wurtzite AlN</b><br>Yunjae Kim <sup>1,2,3</sup> , Kun Hee Ye <sup>1,2,3</sup> , Taeyoung Jeong <sup>1,2,3</sup> , Seung Jae Yoon <sup>1,2,3</sup> , Dohyun Kim <sup>1,2,3</sup> , Cheol Seong Hwang <sup>2,3</sup> , and Jung-Hae Choi <sup>1</sup><br><sup>1</sup> Electronic and Hybrid Materials Research Center, KIST, <sup>2</sup> Department of Materials Science and Engineering, Seoul National University, <sup>3</sup> Inter-university Semiconductor Research Center, Seoul National University |
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| TP-228<br>ZONE 1<br>(4층, 로비) | <b>Comparative of PMA and PDA Ferroelectric HZO MFM Devices with New Noise Analysis</b><br>Somi Lee, Donghyun Kim, Inkyu Yoon, Seung Gyu Lee, Lae Hyeong Jeong, Yoonhye Jang, and Jae Woo LEE<br>Department of Electronics & Information Engineering, Korea University                                                                                                                                                                                                                                                                                                                            |



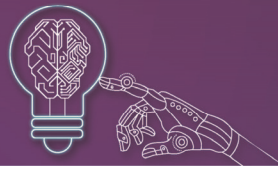
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| TP-229<br>ZONE 1<br>(4층, 로비) | <b>“내 칩 제작 서비스”를 통한 반도체 소자/공정/설계 융합교육 전략</b><br>김규태 <sup>1</sup> , 김용신 <sup>1</sup> , 심규현 <sup>2</sup> , 국일호 <sup>3</sup> , 노태문 <sup>3</sup> , 박건식 <sup>3</sup> , 정동윤 <sup>3</sup><br><sup>1</sup> 고려대학교 전기전자공학부, <sup>2</sup> 한성대학교 컴퓨터공학과, <sup>3</sup> 한국전자통신연구원                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TP-230<br>ZONE 1<br>(4층, 로비) | <b>Temperature-Dependent Analysis of Leakage and Disturb Phenomena in 1z-Generation DRAM</b><br>Subin Lee and Min-woo Kwon<br>Department of Electronic Engineering, Seoul National University of Science & Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| TP-231<br>ZONE 1<br>(4층, 로비) | <b>Effect of Poly-Silicon Grain Boundaries on the Electrical Characteristics of Positive Feedback Field-Effect Transistors</b><br>Damin Kim and Min-woo Kwon<br>Department of Electronic Engineering, Seoul National University of Science & Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| TP-233<br>ZONE 1<br>(4층, 로비) | <b>Deep Learning-Based Pareto Optimization Framework for LDMOS Transistors</b><br>Shinwook Kim <sup>1</sup> , Geon Kim <sup>1</sup> , Dongyeong Kim <sup>1</sup> , Suyeon Kim <sup>1</sup> , Jewon Park <sup>1</sup> , Ryun Kang <sup>1</sup> , Sowon Kim <sup>1</sup> , Chaehyuk Lim <sup>1</sup> , Hyeona Seo <sup>1</sup> , Jeonghyeon Yun <sup>1</sup> , Juwon Lee <sup>1</sup> , Hyerin Lee <sup>1</sup> , Ujin Choi <sup>1</sup> , Eojin Kim <sup>2</sup> , Minwoo Jeong <sup>2</sup> , and Myoungjin Lee <sup>2</sup><br><sup>1</sup> Department of Intelligent Electronics and Computer Engineering, Chonnam National University, <sup>2</sup> Department of Electronics and Computer Engineering, Chonnam National University |
| TP-234<br>ZONE 1<br>(4층, 로비) | <b>Experimental Investigation of Structural Parameter Effects on Switching Behavior of Dual-Gate Feedback Field-Effect Transistors</b><br>Hyunjin Kang and Min-woo Kwon<br>Department of Electronic Engineering, Seoul National University of Science & Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TP-235<br>ZONE 1<br>(4층, 로비) | <b>Pulse IV를 이용한 Te FET의 Hysteresis 특성 분석</b><br>최우석 <sup>1</sup> , 김민재 <sup>2</sup> , 이병훈 <sup>1,2,3</sup><br><sup>1</sup> Graduate school of semiconductor technology, POSTECH, <sup>2</sup> National Institute for Nanomaterials Technology, POSTECH, <sup>3</sup> Department of Electrical Engineering, POSTECH                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TP-236<br>ZONE 1<br>(4층, 로비) | <b>고에너지 양성자를 이용한 고유전 절연막의 신뢰성 개선 연구</b><br>이찬빈 <sup>1</sup> , 최우석 <sup>2</sup> , 이용수 <sup>4</sup> , 김병관 <sup>2</sup> , 황현준 <sup>5</sup> , 강창구 <sup>4</sup> , 이병훈 <sup>1,2,3</sup><br><sup>1</sup> Department of Electrical Engineering, POSTECH, <sup>2</sup> Graduate school of Semiconductor Technology, POSTECH, <sup>3</sup> Center for Semiconductor Technology Convergence, POSTECH, <sup>4</sup> Advanced Radiation Technology Institute, KAERI, <sup>5</sup> Department of Semiconductor Engineering, Mokpo National University                                                                                                                                                                                                |
| TP-237<br>ZONE 1<br>(4층, 로비) | <b>2D TMD 기반 FET에서 고속 중성자 조사로 유도된 채널 결함 및 전기적 열화</b><br>백승용 <sup>1</sup> , 유재욱 <sup>3</sup> , 심기단 <sup>1</sup> , 허지원 <sup>1</sup> , 임수빈 <sup>5</sup> , 정봉기 <sup>5</sup> , 배학열 <sup>3</sup> , 김태완 <sup>1,2,4</sup><br><sup>1</sup> 서울시립대학교 지능형반도체학과, <sup>2</sup> 서울시립대학교 첨단융합학부, <sup>3</sup> 전북대학교 전자공학과, <sup>4</sup> (주)투디에피, <sup>5</sup> (주)큐비솔루션                                                                                                                                                                                                                                                                                                                                                                                 |
| TP-238<br>ZONE 1<br>(4층, 로비) | <b>Modeling of the Ferroelectric/antiferroelectric Capacitor and Related Memory Systems</b><br>Seungyong Byun <sup>1,2</sup> , Seungheon Choi <sup>1,2</sup> , and Cheol Seong Hwang <sup>1,2</sup><br><sup>1</sup> Department of Materials Science and Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                                                                                                                                                                                                                                                                                                                                 |
| TP-239<br>ZONE 1<br>(4층, 로비) | <b>A Study on ESD BJT Devices with Reduced Electric Fields Employing ESD Implant Layer</b><br>Ji-Hoon HAN and Young Chul Kim<br>ESD/TCAD Team, TE Center, DB HiTek                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TP-240<br>ZONE 1<br>(4층, 로비) | <b>Design Strategies for Enhancing ESD Robustness of nLDMOS in BCD Process</b><br>Se-heon Oh and Young-chul Kim<br>Technology Development, DB HiTek                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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| TP-241<br>ZONE 1<br>(4층, 로비) | <b>Investigation of Carbon and Nitrogen Co-Doping Effects in Amorphous GeTe Using First-Principles and Machine-Learning Potential</b><br>Changmin Lim <sup>1</sup> and Jiwon Chang <sup>1</sup><br><sup>1</sup> Department of System Semiconductor Engineering, Yonsei University, <sup>2</sup> BK21 Graduate Program in Intelligent Semiconductor Technology                                                                                                                                                                                                                                                                                                                                                                 |
| TP-242<br>ZONE 1<br>(4층, 로비) | <b>Improving DC and RF Performance in NanosheetFET via Asymmetric Dual-κ Inner Spacer</b><br>Sang Min Lee and Hyun Woo Kim<br>Department of Electrical and Electronics Engineering, Konkuk University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| TP-243<br>ZONE 1<br>(4층, 로비) | <b>Hybrid Technique for Extraction of Intrinsic Oxide Trap Density in a-IGZO TFTs with 1/f Noise and Single-Wavelength Light Characterization</b><br>Donghyeon Lee <sup>1</sup> , Jaewook Yoo <sup>1</sup> , Hongseung Lee <sup>1</sup> , Seongbin Lim <sup>1</sup> , Sojin Jung <sup>1</sup> , Seohyeon Park <sup>1</sup> , Minah Park <sup>1</sup> , Dongsun Shin <sup>1</sup> , Sieun Lee <sup>1</sup> , Soohyun Lim <sup>1</sup> , Junhui Park <sup>1</sup> , Sangmoon Yoon <sup>4</sup> , TaeWan Kim <sup>3</sup> , Kiyoun Lee <sup>2</sup> , and Hagyoul Bae <sup>1</sup><br><sup>1</sup> Jeonbuk National University, <sup>2</sup> Hongik University, <sup>3</sup> University of Seoul, <sup>4</sup> Gachon University |
| TP-244<br>ZONE 1<br>(4층, 로비) | <b>Development of a Rare-Earth-Reduced Magnetic Collet based on Halbach Array for Damage-Free Semiconductor Packaging</b><br>Hyoung Su Kim <sup>1</sup> , Young Jun Lee <sup>1</sup> , Joon Beom An <sup>1</sup> , Dae kyeom Kim <sup>2</sup> , Seung yeon Park <sup>2</sup> , and Myung Suk Song <sup>2</sup><br><sup>1</sup> Research and Development Institute, Magtron Co., Ltd., <sup>2</sup> Korea Institute for Rare Metlas, KITECH                                                                                                                                                                                                                                                                                    |
| TP-245<br>ZONE 1<br>(4층, 로비) | <b>Oxidation Mechanism of HfSe<sub>2</sub> and Principle of Clean Van der Waals Gap between Native Oxide and MoS<sub>2</sub> (WSe<sub>2</sub>)</b><br>Joonho Park and Yong-Hoon Kim<br>School of Electrical Engineering, KAIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TP-246<br>ZONE 1<br>(4층, 로비) | <b>Performance Enhancement of 650V E-mode GaN HEMTs through Recess Etched pGaN Gate Structures</b><br>Min Su Cho, Junhyeok Lee, Nakwon Yu, Jihoun Jung, Wonchae Jeong, Heesub Lee, Jonghyun Lee, Sanggi Lee, and Woochul Jeon<br>DB HiTek                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TP-247<br>ZONE 1<br>(4층, 로비) | <b>In-Situ Characterization of Floating-Body Effects via Low-Frequency Noise Spectroscopy</b><br>Jaehong Min <sup>1</sup> , Youngchan Cho <sup>2</sup> , and Joon-Kyu Han <sup>3</sup> , and Wonjun Shin <sup>2</sup><br><sup>1</sup> Department of Advanced Materials Science and Engineering, Sungkyunkwan University, <sup>2</sup> Department of Semiconductor Convergence Engineering, Sungkyunkwan University, <sup>3</sup> Department of Material Science and Engineering, Seoul National University                                                                                                                                                                                                                    |
| TP-248<br>ZONE 1<br>(4층, 로비) | <b>A New Optimization Method to Extract Off-State Parameters of HR PD-SOI MOSFETs</b><br>Seunghun Yi <sup>1</sup> and Seonghearn Lee <sup>2</sup><br><sup>1</sup> Department of Electronics Engineering, Hankuk University of Foreign Studies, <sup>2</sup> Division of Semiconductor and Electronics Engineering, Hankuk University of Foreign Studies                                                                                                                                                                                                                                                                                                                                                                       |
| TP-249<br>ZONE 1<br>(4층, 로비) | <b>Improvement of Heater Temperature Uniformity through Electric Power Supply Control</b><br>Baek Ju Lee and Hyun Chul Wang<br>Department of Intelligent Semiconductor, Pyeongtaek University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TP-250<br>ZONE 1<br>(4층, 로비) | <b>Characterizing the Dielectric Properties of Two-Dimensional Electrified Interfaces based on the Electrostatic Embedding Method</b><br>Ryong-Gyu Lee, Kaptan Rajput, and Yong-Hoon Kim<br>School of Electrical Engineering, KAIST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| TP-251<br>ZONE 1<br>(4층, 로비) | <b>Surface Sulfur Passivation of InP for High Performance MoS<sub>2</sub>/InP Heterojunction Optoelectronic Devices</b><br>Dong Hwi Choi, Min Su Kim, Jae Hyeop Lee, Jong Hwan Park, and Jae Cheol Shin<br>Department of Electronics and Electrical Engineering, Dongguk University                                                                                                                                                                                                                                                                                                                                                                                                                                           |



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| TP-253<br>ZONE 1<br>(4층, 로비) | <b>전압 조건에 따른 <math>\alpha</math>-Ga<sub>2</sub>O<sub>3</sub> MSM X-ray 검출기의 과도 응답 및 오버샷 억제 매커니즘 분석</b><br>차형주 <sup>1,2</sup> , 김선재 <sup>2</sup> , 황완식 <sup>1,2</sup><br><sup>1</sup> 한국항공대학교 스마트항공모빌리티학과, <sup>2</sup> 한국항공대학교 신소재공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| TP-255<br>ZONE 1<br>(4층, 로비) | <b>Bandgap-Engineered 2D/III-V Heterojunction TFETs: Comparative Study of p-InP/n-MoS<sub>2</sub> and p-InGaAs/n-MoS<sub>2</sub> Structures</b><br>Minsu Kim, Jaehyeop Lee, Jonghwan Park, Dong Hwi Choi, and Jae Cheol Shin<br>Department of Electronics and Electrical Engineering, Dongguk University                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TP-256<br>ZONE 1<br>(4층, 로비) | <b>Analysis of Trap Dynamics in <math>\beta</math>-Ga<sub>2</sub>O<sub>3</sub> SBDs Using a Pulsed Voltage Measurement Technique</b><br>Thanh Huong Vo <sup>1,2</sup> , Sunjae Kim <sup>1,3</sup> , Ji-Hyeon Park <sup>3</sup> , Dae-Woo Jeon <sup>3</sup> , Wan Sik Hwang <sup>1,2</sup> , and Jinyoung Hwang <sup>4</sup><br><sup>1</sup> Department of Materials Science and Engineering, Korea Aerospace University, <sup>2</sup> Department of Smart Air Mobility, Korea Aerospace University, <sup>3</sup> KICET, <sup>4</sup> Department of Electrical and Electronic Engineering, Korea Aerospace University                                                                                                                                                    |
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| TP-259<br>ZONE 1<br>(4층, 로비) | <b>Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub> 기반 상변화 메모리와 GeTe 기반 상변화 메모리의 저항 변동성: 확률적 핵 생성을 통합한 다중 물리 시뮬레이션 연구</b><br>김혜수, 김예찬, 권용우<br>Department of Materials Science and Engineering, Hongik University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TP-260<br>ZONE 1<br>(4층, 로비) | <b>Physics-Based Compact Modeling of Ferroelectric In-Ga-Zr-O Thin-Film Transistors</b><br>Jae Woog Jung, Hyung Soo Kim, and Hyunwoo Kim<br>Department of Electrical and Electronics Engineering, Konkuk University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| TP-261<br>ZONE 1<br>(4층, 로비) | <b>SiC 트랜치 MOSFET의 항복 전압 향상을 위한 플로팅 게이트 구조의 TCAD 시뮬레이션 최적화</b><br>이동석, 김인화, 김기현<br>전북대학교 정보전자공학부                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TP-262<br>ZONE 1<br>(4층, 로비) | <b>상장법을 활용한 폴리 실리콘 박막에서의 고체상 결정화 과정 3차원 시뮬레이션</b><br>최다은, 이환욱, 권용우<br>홍익대학교 신소재공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TP-263<br>ZONE 1<br>(4층, 로비) | <b>Modeling of Channel and JFET Region Trap Occupancy Behavior under Short-Circuit Stress in 4H-SiC MOSFETs</b><br>Hyeona Seo <sup>1</sup> , Geon Kim <sup>1</sup> , Dongyeong Kim <sup>1</sup> , Suyeon Kim <sup>1</sup> , Jewon Park <sup>1</sup> , Shinwook Kim <sup>1</sup> , Ryun Kang <sup>1</sup> , Chaehyuk Lim <sup>1</sup> , Jeonghyeon Yun <sup>1</sup> , Sowon Kim <sup>1</sup> , Hyerin Lee <sup>1</sup> , Juwon Lee <sup>1</sup> , Ujin Choi <sup>2</sup> , Eojin Kim <sup>2</sup> , Minwoo Jeong <sup>2</sup> , and Myoungjin Lee <sup>2</sup><br><sup>1</sup> Department of Intelligent Electronics and Computer Engineering, Chonnam National University, <sup>2</sup> Department of Electronics and Computer Engineering, Chonnam National University |

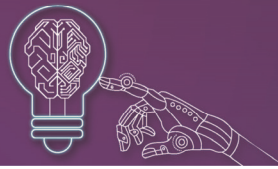
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| TP-264<br>ZONE 1<br>(4층, 로비) | <b>Power-Delay Pareto Front Exploration of Ring Oscillator at 1 nm Node Using ML-Based Model</b><br>정현준, 공정택, 김소영<br>성균관대학교 정보통신대학 전자전기컴퓨터공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TP-265<br>ZONE 1<br>(4층, 로비) | <b>Experimental Demonstration of a CMOS-compatible Diode for 1D-1R RRAM Integration</b><br>Seung Yeon Kim <sup>1</sup> , Sol Ji Park <sup>1</sup> , Min Sik Park <sup>1</sup> , Won Chul Lee <sup>2</sup> , and Jong Won Lee <sup>1</sup><br><sup>1</sup> Chungnam National University, <sup>2</sup> NNFC                                                                                                                                                                                                                                                                                                                 |
| TP-267<br>ZONE 1<br>(4층, 로비) | <b>Comparative Analysis of Analog Performance Between High-Voltage FinFET and HKMG Transistors</b><br>SoYun Kim, Jeong-Taek Kong, and SoYoung Kim<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                                                                           |
| TP-268<br>ZONE 1<br>(4층, 로비) | <b>Analysis of Hysteresis and PBS Degradation in In<sub>2</sub>O<sub>3</sub> and ITO TFTs based on TCAD Simulation</b><br>Ji-Won Son <sup>1</sup> , Su-Min Kim <sup>2</sup> , Kyu-Hwan Seok <sup>3</sup> , and Sung-Woong Chung <sup>1,2</sup><br><sup>1</sup> 포항공과대학교 반도체공학과, <sup>2</sup> 포항공과대학교 반도체대학원, <sup>3</sup> 포항공과대학교 전자전기공학과                                                                                                                                                                                                                                                                                  |
| TP-269<br>ZONE 1<br>(4층, 로비) | <b>3D Simulation-Based Analysis of Geometrical Scaling Effects on GAA-FET Electrical Characteristics</b><br>Sungsoo Park and Byoungdeog Choi<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                                                                                |
| TP-270<br>ZONE 1<br>(4층, 로비) | <b>차세대 FET 구조별 자가 발열 효과 비교 분석</b><br>신동현, 김소영, 공정택<br>성균관대학교 정보통신대학 전자전기컴퓨터공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| TP-271<br>ZONE 1<br>(4층, 로비) | <b>Charge Coupling Effects on the Electrical Characteristics of CMOS Neuron Hybridized With Memristor-Based Synapse</b><br>Seo Yong Chi <sup>1,2</sup> , Hi-Deok Lee <sup>2</sup> , and Wan-Gyu Lee <sup>1</sup><br><sup>1</sup> NNFC, <sup>2</sup> Chungnam National University                                                                                                                                                                                                                                                                                                                                          |
| TP-272<br>ZONE 1<br>(4층, 로비) | <b>인쇄 TFT의 실측 비대칭 I-V 데이터 기반 ML Compact Model 개발</b><br>유정민 <sup>1</sup> , 공정택 <sup>1</sup> , 김소영 <sup>2</sup><br><sup>1</sup> 성균관대학교 반도체융합공학과, <sup>2</sup> 성균관대학교 반도체시스템공학과                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TP-273<br>ZONE 1<br>(4층, 로비) | <b>ASM-HEMT 모델을 이용한 p-GaN AlGaN/GaN HEMT의 트랩 노드 기반 전압 의존 모델링 및 물리적 해석</b><br>이엘림, 김형탁<br>홍익대학교 전자전기공학부                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| TP-274<br>ZONE 1<br>(4층, 로비) | <b>유전 알고리즘 및 딥러닝 기반 a-IGZO TFT 전류-전압 특성 모델링</b><br>김문기 <sup>1,3,4</sup> , 김윤 <sup>2,3,4</sup><br><sup>1</sup> 서울시립대학교 지능형반도체학과, <sup>2</sup> 서울시립대학교 전자전기컴퓨터공학부, <sup>3</sup> 서울시립대학교 반도체 연구센터 (UOS-FAB), <sup>4</sup> 주식회사 IM전자                                                                                                                                                                                                                                                                                                                                                                                          |
| TP-275<br>ZONE 1<br>(4층, 로비) | <b>High-Efficiency Self-Curing Method for Radiation-Damaged SiC MOSFETs Using Joule Heating and Fowler-Nordheim Tunneling</b><br>Sang Hyeok Yun <sup>1</sup> , Kihyun Kim <sup>1</sup> , Gyuin Jamg <sup>1</sup> , Beomjin Kim <sup>1</sup> , Young Jun Yoon <sup>2</sup> , Jong-Ho Bae <sup>3</sup> , and Jae Hwa Seo <sup>4</sup><br><sup>1</sup> Power SoC Research Center, KERI, <sup>2</sup> School of Electronic & Mechanical Engineering, Gyeongbuk National University, <sup>3</sup> Department of System Semiconductor Engineering, Yonsei University, <sup>4</sup> Advanced Semiconductor Research Center, KERI |
| TP-382<br>ZONE 1<br>(4층, 로비) | <b>In-Ga-O 채널의 전도 활성화 거동의 물리적 해석 및 Self-Consistent 모델링</b><br>김희수 <sup>1</sup> , 김희태 <sup>1</sup> , 이호석 <sup>1</sup> , 조성행 <sup>2</sup> , 조병진 <sup>1</sup><br><sup>1</sup> 한국과학기술원 전기 및 전자공학부, <sup>2</sup> 한국전자통신연구원 플렉시블 전자소재연구실                                                                                                                                                                                                                                                                                                                                                                                        |



## H. Display and Imaging Technologies 분과

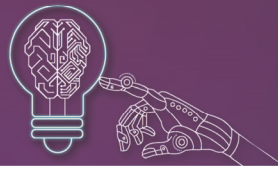
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| TP-276<br>ZONE 3<br>(6층, 로비) | <b>Mg-Doped NiO Hole Transport Layers with Ultrathin ALD-MgO Diffusion Barriers for All-Inorganic Quantum Dot Light-Emitting Diodes</b><br>Min Seok Kim <sup>1,2</sup> , Minsu Kim <sup>3</sup> , and Seong-Yong Cho <sup>1,2</sup><br><sup>1</sup> Department of Photonics and Nanoelectronics, Hanyang University, <sup>2</sup> BK21 FOUR ERICA-ACE Center, Hanyang University, <sup>3</sup> Department of Advanced Materials Engineering, Kyonggi University                                                                                                               |
| TP-277<br>ZONE 3<br>(6층, 로비) | <b>Enhanced Detectivity in PbS QD Photodetectors through P-Type Ink and ALD Integration</b><br>Hong Gu Kang <sup>1</sup> , Ju Young Woo <sup>1,2,3</sup> , and Seong-Yong Cho <sup>1,4,5</sup><br><sup>1</sup> Department of HYU-KITECH Joint Graduate School, Hanyang University, <sup>2</sup> Department of Autonomous Manufacturing & Process R&D, KITECH, <sup>3</sup> School of Integrative Engineering, Chung-Ang University, <sup>4</sup> Department of Photonics and Nanoelectronics, Hanyang University, <sup>5</sup> BK21 FOUR ERICA-ACE Center, Hanyang University |
| TP-278<br>ZONE 3<br>(6층, 로비) | <b>고성능 투명 히터와 융합을 통한 전기변색소자 성능 한계 돌파 연구</b><br>이찬경, 강건우, 조재정, 최두호<br>가천대학교 반도체공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| TP-279<br>ZONE 3<br>(6층, 로비) | <b>Ar 플라즈마 기반 초평탄 SnO<sub>x</sub>/Ag 계면 구현 기술로 근적외선 차폐, 계면 안정성, 광학적 및 전기적 특성의 동시 향상</b><br>조재정, 강건우, 이찬경, 최두호<br>가천대학교 반도체공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TP-280<br>ZONE 3<br>(6층, 로비) | <b>Enhancing the Stability and Lifetime of Quantum-Dot LEDs via Butylated Hydroxytoluene (BHT) Treatment</b><br>Jaesung Lee, Byoung-ho Kang, Saewan Kim, Sanghoon Jung, Sehyuk Yeom, and Wanghoon Lee<br>GERI                                                                                                                                                                                                                                                                                                                                                                 |
| TP-281<br>ZONE 3<br>(6층, 로비) | <b>Synthesis of Green Quantum Dots with High Efficiency and FWHM by Steric Hindrance</b><br>Byoung-ho Kang, Jaesung Lee, Saewan Kim, Sanghoon Jung, Sehyuk Yeom, and Wanghoon Lee<br>Semiconductor Defense Industrial Research Center, GERI                                                                                                                                                                                                                                                                                                                                   |
| TP-282<br>ZONE 3<br>(6층, 로비) | <b>IGZO TFT의 온도 변화에 따른 접촉저항 거동 분석</b><br>여준호, 문국철, 김용상<br>성균관대학교 전자전기컴퓨터공학과                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| TP-283<br>ZONE 3<br>(6층, 로비) | <b>Large-Area Bilayer MoS<sub>2</sub> Transistor-Based Active Pixel Array for High-Sensitivity Image Sensing</b><br>Minseo Kim and Sunkook Kim<br>Department of Advanced Materials Science & Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                                             |
| TP-284<br>ZONE 3<br>(6층, 로비) | <b>Universal Selective Transfer Printing via Micro-Vacuum Force for Flexible Optoelectronics</b><br>Ki Yun Nam <sup>1</sup> , Sang Hyun Park <sup>2</sup> , and Keon Jae Lee <sup>1,2</sup><br><sup>1</sup> Graduate School of Semiconductor Technology, KAIST, <sup>2</sup> Department of Materials Science and Engineering, KAIST                                                                                                                                                                                                                                           |
| TP-285<br>ZONE 3<br>(6층, 로비) | <b>Phase Engineering of Two-Dimensional MoS<sub>2</sub> Monolayers for Tuning Optical Properties</b><br>Ga-Ram Park <sup>1,2</sup> , Jae-Yeon Kim <sup>1</sup> , Mi-Jeong Kim <sup>3</sup> , Ick-Joon Park <sup>3</sup> , and Tae In Kim <sup>1,2</sup><br><sup>1</sup> School of Electrical and Electronic Engineering, Inha University, <sup>2</sup> Program in Semiconductor Convergence, Inha University, <sup>3</sup> Department of Electrical and Electronic Engineering, Joongbu University                                                                            |
| TP-286<br>ZONE 3<br>(6층, 로비) | <b>Two-Dimensional MoS<sub>2</sub>/h-BN Heterostructures for NAND Flash Memory Device</b><br>Mi-Jeong Kim <sup>1</sup> , Ha-Eun Dang <sup>2,3</sup> , Ga-Ram Park <sup>2,3</sup> , Tae In Kim <sup>2,3</sup> , and Ick-Joon Park <sup>1</sup><br><sup>1</sup> Department of Electrical and Electronic Engineering, Joongbu University, <sup>2</sup> School of Electrical and Electronic Engineering, Inha University, <sup>3</sup> Program in Semiconductor Convergence, Inha University                                                                                      |

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| TP-287<br>ZONE 3<br>(6층, 로비) | <b>Enhanced Electrical Performance of WSe<sub>2</sub> Transistors with Defect-Healed Graphene Electrodes</b><br>Min Seok Kim <sup>1</sup> , Janggeun Shin <sup>1</sup> , Young-Roh Shin <sup>2,3</sup> , Tae In Kim <sup>2,3</sup> , and Ick-Joon Park <sup>1</sup><br><sup>1</sup> Department of Electrical and Electronic Engineering, Joongbu University, <sup>2</sup> School of Electrical and Electronic Engineering, Inha University, <sup>3</sup> Program in Semiconductor Convergence, Inha University                                                                                                            |
| TP-288<br>ZONE 3<br>(6층, 로비) | <b>Vertically Stacked MoS<sub>2</sub>/Graphene Oxide Van der Waals Heterointerface</b><br>Su-Yeon Ye <sup>1</sup> , Min Seok Kim <sup>2</sup> , Ha-Eun Dang <sup>1,3</sup> , Ick-Joon Park <sup>2</sup> , and Tae In Kim <sup>1,3</sup><br><sup>1</sup> School of Electrical and Electronic Engineering, Inha University, <sup>2</sup> Department of Electrical and Electronic Engineering, Joongbu University, <sup>3</sup> Program in Semiconductor Convergence, Inha University                                                                                                                                        |
| TP-289<br>ZONE 3<br>(6층, 로비) | <b>Electro-Thermal Analysis of Quantum Dot Light-Emitting Diode as Pixel Areas Using Thermoreflectance Microscopy</b><br>Yongjin Shin <sup>1</sup> , Min Seok Kim <sup>1</sup> , Daehong Kim <sup>1</sup> , Jaekyun Kim <sup>1</sup> , Seong-Yong Cho <sup>1</sup> , SangHoon Shin <sup>2</sup> , and Younghyun Kim <sup>1</sup><br><sup>1</sup> Department of Photonics and Nanoelectronics, BK21 FOUR ERICA-ACE Center, Hanyang University ERICA, <sup>2</sup> School of Electrical Engineering, Hanyang University ERICA                                                                                               |
| TP-290<br>ZONE 3<br>(6층, 로비) | <b>Development of Al<sub>2</sub>O<sub>3</sub>/HfO<sub>2</sub>/Oxide-Based ARC Structure for Enhancing Quantum Efficiency in the UV Wavelength Range (200-400 nm)</b><br>Joo Young Jeong, Hong Boem Park, Sang Won Yun, Man Lyun Ha, and Sang Gi Lee<br>CIS Process Development Team, DB HiTek                                                                                                                                                                                                                                                                                                                             |
| TP-291<br>ZONE 3<br>(6층, 로비) | <b>압전-발광 동시 거동을 갖는 PVDF 그래프트 발광 공중합체의 합성</b><br>정예원 <sup>1</sup> , 이규영 <sup>1</sup> , 임병진 <sup>1</sup> , 장지혜 <sup>4</sup> , 진유진 <sup>1</sup> , 신상민 <sup>1</sup> , 김가영 <sup>1</sup> , 이진균 <sup>1,2</sup> , 김동환 <sup>3</sup> , 김은경 <sup>3</sup> , 박철민 <sup>4</sup><br><sup>1</sup> 인하대학교 고분자환경융합공학전공, <sup>2</sup> 인하대학교 고분자공학과, <sup>3</sup> 연세대학교 화학생명공학과, <sup>4</sup> 연세대학교 신소재공학과                                                                                                                                                                                                                                      |
| TP-292<br>ZONE 3<br>(6층, 로비) | <b>Interfacial Electronic Structure of ALD-Grown Al<sub>2</sub>O<sub>3</sub>/CuI-Based Heterojunction</b><br>Janggeun Shin <sup>1</sup> , Seo Yeon Kim <sup>2,3</sup> , Su-Yeon Ye <sup>2</sup> , Hyuck-In Kwon <sup>4</sup> , Tae In Kim <sup>2,3</sup> , and Ick-Joon Park <sup>1</sup><br><sup>1</sup> Department of Electrical and Electronic Engineering, Joongbu University, <sup>2</sup> School of Electrical and Electronic Engineering, Inha University, <sup>3</sup> Program in Semiconductor Convergence, Inha University, <sup>4</sup> School of Electrical and Electronics Engineering, Chung-Ang University |
| TP-293<br>ZONE 3<br>(6층, 로비) | <b>Development of CuI/In<sub>2</sub>Se<sub>3</sub> pn Heterojunction for Optoelectronic Applications</b><br>Seo Yeon Kim <sup>1,2</sup> , Ga-Ram Park <sup>1,2</sup> , Jae-Yeon Kim <sup>1</sup> , Ick-Joon Park <sup>3</sup> , and Tae In Kim <sup>1,2</sup><br><sup>1</sup> School of Electrical and Electronic Engineering, Inha University, <sup>2</sup> Program in Semiconductor Convergence, Inha University, <sup>3</sup> Department of Electrical and Electronic Engineering, Joongbu University                                                                                                                  |
| TP-294<br>ZONE 3<br>(6층, 로비) | <b>Strain-Insensitive Capacitive Pressure Sensor for Stretchable Displays</b><br>Geonoh Choe and Yei Hwan Jung<br>Department of Electronic Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TP-295<br>ZONE 3<br>(6층, 로비) | <b>Super Sampling 기반의 Pixel-Modulation Transfer Function(MTF) 시뮬레이션 방법론</b><br>성현준 <sup>1</sup> , 박문수 <sup>1</sup> , 김윤경 <sup>1,2</sup><br><sup>1</sup> 동아대학교 ICT융합해양스마트시티공학과, <sup>2</sup> 동아대학교 전자공학과                                                                                                                                                                                                                                                                                                                                                                                                                   |
| TP-296<br>ZONE 3<br>(6층, 로비) | <b>MicroLED Integration with Single-Crystalline MOSFETs on a Releasable Substrate</b><br>Ji-Woong Cho and Yei-Hwan Jung<br>Department of Electronic Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| TP-297<br>ZONE 3<br>(6층, 로비) | <b>광대역 및 고안정성 ZnO/Te/Al<sub>2</sub>O<sub>3</sub> 구조 기반 광트랜지스터</b><br>강민서 <sup>1,2</sup> , 이경수 <sup>1,3</sup> , 이병훈 <sup>1,2,3</sup><br><sup>1</sup> Center for Semiconductor Technology Convergence, POSTECH, <sup>2</sup> Department of Electrical Engineering, POSTECH, <sup>3</sup> Graduate School of Semiconductor, POSTECH                                                                                                                                                                                                                                                                                          |
| TP-298<br>ZONE 3<br>(6층, 로비) | <b>Sub-1-Volt, Reconfigurable Gires-Tournois Resonators for Enhanced Chromaticity in Reflective Monopixel Array</b><br>Hyo Eun Jeong and Young Min Song<br>School of Electrical Engineering, KAIST                                                                                                                                                                                                                                                                                                                                                                                                                        |



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| TP-299<br>ZONE 3<br>(6층, 로비) | <b>Stress Analysis of a-IGZO TFTs with Various Device Architectures for Stretchable Backplanes Using Rigid-Island Structures</b><br>Seong Eun Kim <sup>1,2</sup> , Ji-Ho Lee <sup>1,2</sup> , Dong Hyeon Lee <sup>1,2</sup> , Soobin An <sup>1,2</sup> , and Soo-Yeon Lee <sup>1,2</sup><br><sup>1</sup> Department of Electrical and Computer Engineering, Seoul National University, <sup>2</sup> Inter-university Semiconductor Research Center, Seoul National University                                           |
| TP-300<br>ZONE 3<br>(6층, 로비) | <b>Study on the Degradation Mechanism in AlGaInP-Based Red Micro-LEDs under Electrical Stress</b><br>Yeonbin Kang, T. Lee, and Dae-Myeong Geum<br>Department of Electrical and Computer Engineering, Inha University                                                                                                                                                                                                                                                                                                    |
| TP-301<br>ZONE 3<br>(6층, 로비) | <b>Crystallization of In<sub>2</sub>O<sub>3</sub> Channels for the Self-Aligned Coplanar Thin Film Transistor Applications by Controlling the Channel Thickness</b><br>A-yeong Lee, Se-Hyun Chun, and Sung-Min Yoon<br>Kyung Hee University                                                                                                                                                                                                                                                                             |
| TP-302<br>ZONE 3<br>(6층, 로비) | <b>Ultra- Thin (<math>\leq 0.5 \mu\text{m}</math>) InGaAs Broadband (400- 1700 nm) Photodetectors With High External Quantum Efficiency (&gt;70%)</b><br>Hosang Hwang <sup>1</sup> , Junho Jang <sup>2</sup> , Dae-Myeong Geum <sup>3</sup> , and SangHyeon Kim <sup>1,2</sup><br><sup>1</sup> Graduate school of semiconductor technology, KAIST, <sup>2</sup> School of Electrical Engineering, KAIST, <sup>3</sup> Department of Electrical and Electronic Engineering, Inha University                              |
| TP-303<br>ZONE 3<br>(6층, 로비) | <b>Impact of Gate-Edge Fields and Self-Heating on Self-Aligned Top-Gate a-IGZO TFTs</b><br>Hyeonseo Lee, Seunghyun Oh, and Junhong Na<br>Department of Semiconductor Physics, Kangwon National University                                                                                                                                                                                                                                                                                                               |
| TP-304<br>ZONE 3<br>(6층, 로비) | <b>Light-Driven Reconfigurable Logic in a Monolithic Perovskite Device via Nonlinear Photoresponse Switching</b><br>Dante Ahn <sup>1,2</sup> , Hyun Seock Song <sup>1,2</sup> , and Yusin Pak <sup>3</sup><br><sup>1</sup> Nano-Photonics System Research Center, KIST, <sup>2</sup> KU-KIST Graduate School of Converging Science and Technology, Korea University, <sup>3</sup> Division of Advanced Materials Engineering, Jeonbuk National University                                                               |
| TP-305<br>ZONE 3<br>(6층, 로비) | <b>OLEDos Pixel Transistor Optimization through the AI-Based TCAD Optimization Method(ATOM) Framework</b><br>Suyeong Hwang <sup>1</sup> , Jaekyoung Son <sup>2</sup> , Sueyeon Kim <sup>2</sup> , Wook Lee <sup>3</sup> , and Jongwook Jeon <sup>2</sup><br><sup>1</sup> Department of Display Engineering, Sungkyunkwan University, <sup>2</sup> Department of Electrical and Computer Engineering, Sungkyunkwan University, <sup>3</sup> Department of Semiconductor Convergence Engineering, Sungkyunkwan University |
| TP-306<br>ZONE 3<br>(6층, 로비) | <b>Solution-Processable Polymer/ZnO Hybrid UV Detector with Tunable Doping for Performance Optimization</b><br>Sanghoon Jung, Byoung-ho Kang, Jaesung Lee, Saewan Kim, Sehyuk Yeom, and Wanghoon Lee<br>Semiconductor-Defense Industrial Research Center                                                                                                                                                                                                                                                                |
| TP-307<br>ZONE 3<br>(6층, 로비) | <b>Enhanced Electrical Performance of CuI Transistors through Hydrogen-induced Buried Interface Engineering</b><br>Hyeong-Min Kim <sup>1</sup> , Hyo-Won Jang <sup>1</sup> , Tae-In Kim <sup>2</sup> , Ick-Joon Park <sup>3</sup> , and Hyuck-In Kwon <sup>1</sup><br><sup>1</sup> Chung-Ang University, <sup>2</sup> Inha University, <sup>3</sup> Joongbu University                                                                                                                                                  |
| TP-308<br>ZONE 3<br>(6층, 로비) | <b>Vacancy-Engineered CuI/IGTO Vertical Heterojunction for High-Performance Self-Powered Ultraviolet Photodetectors</b><br>Go-Eun Kim <sup>1</sup> , Tae-In Kim <sup>2</sup> , Ick-Joon Park <sup>3</sup> , and Hyuck-In Kwon <sup>1</sup><br><sup>1</sup> Chung-Ang University, <sup>2</sup> Inha University, <sup>3</sup> Joongbu University                                                                                                                                                                          |
| TP-309<br>ZONE 3<br>(6층, 로비) | <b>Next Generation Cold Electron Beam Microscopy Using a Carbon Nanotube Cold Cathode</b><br>Aniket Karande and Kyu Chang Park<br>Kyung Hee University                                                                                                                                                                                                                                                                                                                                                                  |

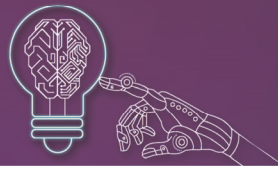
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| <b>TP-310</b><br>ZONE 3<br>(6층, 로비) | <b>Single-Island Cold Cathode Electron Beam (C-Beam) for High Resolution X-ray Semiconductors Inspection</b><br>Ravindra Patil, and Kyu Chang Park<br>Kyung Hee University                                                                                                                                                                                                                                                                                                             |
| <b>TP-311</b><br>ZONE 3<br>(6층, 로비) | <b>Light-Driven Polarity Control in Single Walled Carbon Nanotube/Te Transistors for Convolution Neural Networks</b><br>Jae Jun Lee <sup>1</sup> , Yun Sung Lee <sup>2</sup> , Han Min Kim <sup>2</sup> , Hyeon Bin Jo <sup>1</sup> , Soo Heon Chae <sup>1</sup> , and Sung Hun Jin <sup>1</sup><br><sup>1</sup> Department of Information Display, Kyung Hee University, <sup>2</sup> Department of Intelligent Semiconductor Engineering, Incheon National University                |
| <b>TP-312</b><br>ZONE 3<br>(6층, 로비) | <b>Solution Processed Cs<sub>2</sub>SnI<sub>6</sub> RRAMs for Security Application</b><br>Ji Sang Kim <sup>1</sup> , Hyeon Bin Jo <sup>1</sup> , Han Min Kim <sup>2</sup> , Yun Sung Lee <sup>2</sup> , and Sung Hun Jin <sup>1</sup><br><sup>1</sup> Department of Information Display, Kyung Hee University, <sup>2</sup> Department of Intelligent Semiconductor Engineering, Incheon National University                                                                           |
| <b>TP-313</b><br>ZONE 3<br>(6층, 로비) | <b>Statistical Analysis and Origin of Photodiode Full-Well Capacity Variation in CMOS Image Sensors</b><br>강전웅, 박지원, 이지원<br>포항공과대학교 반도체공학과                                                                                                                                                                                                                                                                                                                                             |
| <b>TP-314</b><br>ZONE 3<br>(6층, 로비) | <b>In-Situ STEM-DPC Biasing을 이용한 OLED 소자 내 전기장 분포 이미징</b><br>윤진하 <sup>1</sup> , 이기용 <sup>1</sup> , 김종일 <sup>1</sup> , 신미향 <sup>2</sup> , 이용희 <sup>2</sup> , 한석규 <sup>2</sup> , 오상호 <sup>1</sup><br><sup>1</sup> 한국에너지공과대학교 에너지신소재트랙, <sup>2</sup> 삼성디스플레이                                                                                                                                                                                                                              |
| <b>TP-315</b><br>ZONE 3<br>(6층, 로비) | <b>Trap-Mediated Negative Feedback Enables Self-Regulated Switching in Polymer Inserted CuI RRAMs</b><br>Yun Tae Won <sup>1</sup> , Ji Min Kang <sup>1</sup> , Dhananjay Mishra <sup>1</sup> , Hyeon Bin Jo <sup>1</sup> , Han Min Kim <sup>2</sup> , Yun Sung Lee <sup>2</sup> , and Sung Hun Jin <sup>1</sup><br><sup>1</sup> Department of Information Display, Kyung Hee University, <sup>2</sup> Department of Intelligent Semiconductor Engineering, Incheon National University |



## I. MEMS & Sensors Systems 분과

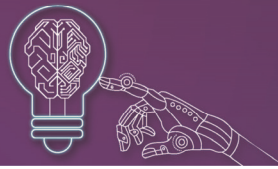
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| TP-316<br>ZONE 1<br>(4층, 로비) | <b>Photospike-Driven True Random Number Generation for Secure Image Processing</b><br>Juhung Seo, Seungme Kang, Taehyun Park, and Hocheon Yoo<br>Department of Electric Engineering, Hanyang University                                                                                                                                                                                                                                                                           |
| TP-317<br>ZONE 1<br>(4층, 로비) | <b>Graphene-Based Physically Unclonable Functions Patterned by Randomly Distributed Microparticles</b><br>Dong Hyun Lee, Youngmin Han, and Hocheon Yoo<br>Department of Electronic Engineering, Hanyang University                                                                                                                                                                                                                                                                |
| TP-318<br>ZONE 1<br>(4층, 로비) | <b>Zinc Tin Oxide Nanoparticle-Based Deep UV Photodetector Embedded Circuit for Wireless Flame Detection</b><br>Junhyung Cho <sup>1</sup> , Seungmi Kang <sup>2</sup> , Taehyun Park <sup>2</sup> , and Hocheon Yoo <sup>1,2</sup><br><sup>1</sup> Department of Artificial Intelligence Semiconductor Engineering, Hanyang University, <sup>2</sup> Department of Electronic Engineering, Hanyang University                                                                     |
| TP-319<br>ZONE 1<br>(4층, 로비) | <b>Wavelength-Dependent Negative Photoconductance Effect Enabling Neuromorphic-Photodetector Switching in Low-Power ZnON Transistors Integrated with PCB Systems</b><br>Won Woo Lee <sup>1</sup> , Wangmyung Choi <sup>2</sup> , and Hocheon Yoo <sup>1,2</sup><br><sup>1</sup> Department of Artificial Intelligence Semiconductor Engineering, Hanyang University, <sup>2</sup> Department of Electronic Engineering, Hanyang University                                        |
| TP-320<br>ZONE 1<br>(4층, 로비) | <b>Dual Gate ZnON Transistor for Logic Gate Implementation in a Single Device</b><br>Heebeon Shin <sup>1</sup> , Youngmin Han <sup>2</sup> , Minseo Kim <sup>1</sup> , and Hocheon Yoo <sup>2</sup><br><sup>1</sup> School of Semiconductor Engineering, Gachon University, <sup>2</sup> School of Electronic Engineering, Hanyang University                                                                                                                                     |
| TP-321<br>ZONE 1<br>(4층, 로비) | <b>Light-to-Acoustic Entropy Generation in Nanocomposite PUFs</b><br>Taehyun Park and Hocheon Yoo<br>Department of Electric Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                       |
| TP-322<br>ZONE 1<br>(4층, 로비) | <b>Gaussian Function with Twist Contact Transistor</b><br>Kyoungsoon Kim <sup>1</sup> , Youngmin Han <sup>2</sup> , Eousik Cho <sup>3</sup> , and Hocheon Yoo <sup>2</sup><br><sup>1</sup> Department of Semiconductor Engineering, Gachon University, <sup>2</sup> Department of Electronic Engineering, Hanyang University, <sup>3</sup> Department of Electronic Engineering, Gachon University                                                                                |
| TP-323<br>ZONE 1<br>(4층, 로비) | <b>Thickness-Dependent Switching between Optoelectronic Memory and Gaussian-Sigmoid Behavior in a Double-Floating-Gate Transistor</b><br>Seungeun Jeong <sup>1</sup> , Seungme Kang <sup>2</sup> , Eousik Cho <sup>3</sup> , and Hocheon Yoo <sup>2</sup><br><sup>1</sup> Department of Semiconductor Engineering, Gachon University, <sup>2</sup> Department of Electronic Engineering, Hanyang University, <sup>3</sup> Department of Electronic Engineering, Gachon University |
| TP-324<br>ZONE 1<br>(4층, 로비) | <b>Schottky-Gated Polyaniline/Reduced Graphene Oxide Channel for Conductivity Modulation on Flexible Substrates</b><br>Hyeon-Wook Yu, Tae-Hee Kim, Jun-Yeong Jeon, Seung-Woo Lee, Ju-Seong Lee, and Hyun-Seok Kim<br>Division of Electronics and Electrical Engineering, Dongguk University                                                                                                                                                                                       |
| TP-326<br>ZONE 1<br>(4층, 로비) | <b>CMOS-Compatible Oxide TFT-Based 2T-2C Near-Pixel Analog Compute Cell with ADC/DAC-Free Sensor Interface for Energy-Efficient Feature Extraction</b><br>Seonjae Park <sup>1</sup> , Seungyeob Kim <sup>2</sup> , Seungmin Cheon <sup>2</sup> , Taeseung Jung <sup>2</sup> , and Sanghun Jeon <sup>1,2</sup><br><sup>1</sup> Graduate School of Semiconductor Technology, KAIST, <sup>2</sup> School of Electrical Engineering, KAIST                                            |
| TP-329<br>ZONE 1<br>(4층, 로비) | <b>Enhanced Response and Stability of a Low-Power Transparent SnO<sub>2</sub> Gas Sensor with Memristor Integration</b><br>Taegi Kim and Hee-Dong Kim<br>Department of Electrical Engineering and Convergence Engineering for Intelligent Drone, Sejong University                                                                                                                                                                                                                |

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| TP-331<br>ZONE 1<br>(4층, 로비) | <b>Flexible NO<sub>2</sub> Gas Sensor Using IGZO for Enhanced Mechanical and Electrical Stability</b><br>Sanggyu Bang and Hee-dong Kim<br>Department of Electrical Engineering and Convergence Engineering for Intelligent Drone, Sejong University                                                                                                                                                                                                                                                                                                                                                            |
| TP-332<br>ZONE 1<br>(4층, 로비) | <b>Microheater-Centric Design Optimization of TFT-Type Gas Sensors</b><br>Siwon Jang <sup>1</sup> , Hunhee Shin <sup>1</sup> , Jong-Ho Lee <sup>1</sup> , and Gyuweon Jung <sup>1,2</sup><br><sup>1</sup> Department of Electrical and Computer Engineering and Inter-university Semiconductor Research Center, Seoul National University, <sup>2</sup> School of Transdisciplinary Innovations, Seoul National University                                                                                                                                                                                     |
| TP-333<br>ZONE 1<br>(4층, 로비) | <b>Electrospun P(VDF-TrFE) Nanofibrous Membrane Based High Performing Energy Harvesting Devices</b><br>Yongbin Han and Hong-Joon Yoon<br>Department of Semiconductor Engineering, Gachon University                                                                                                                                                                                                                                                                                                                                                                                                            |
| TP-334<br>ZONE 1<br>(4층, 로비) | <b>IZO / CNT TFT를 활용한 상보성 인버터 기반 암모니아 가스센서</b><br>길가영 <sup>1</sup> , 임수빈 <sup>1</sup> , 백수진 <sup>2</sup> , 김봉준 <sup>2</sup> , 김민희 <sup>1</sup><br><sup>1</sup> 한밭대학교 창의융합학과, <sup>2</sup> 숙명여자대학교 첨단소재·전자융합공학부 지능형전자시스템 전공                                                                                                                                                                                                                                                                                                                                                                                     |
| TP-335<br>ZONE 1<br>(4층, 로비) | <b>Laser-Induced Graphene Functionalized with Copper Oxide for a Highly Sensitive and Flexible Non-Enzymatic Glucose Sensor</b><br>Ji Min Kim <sup>1</sup> , Yun hoe Koo <sup>1</sup> , Suok Lee <sup>2</sup> , A-Rang Jang <sup>1</sup> , and Young-Woo Lee <sup>2</sup><br><sup>1</sup> Division of Electrical, Electronic and Control Engineering, Kongju National University, <sup>2</sup> Department of Energy Engineering, Soonchunhyang University                                                                                                                                                      |
| TP-336<br>ZONE 1<br>(4층, 로비) | <b>NO<sub>2</sub> Gas Sensing Characteristics of Carbon Nanotubes-Ag Nanoparticles Heterostructure-Based Memristor Gas Sensor</b><br>Mohsin Ali <sup>1,2,3</sup> and Hee-Dong Kim <sup>1,2,3</sup><br><sup>1</sup> Department of Semiconductor Systems Engineering, Sejong University, <sup>2</sup> Department of Electrical Engineering, Sejong University, <sup>3</sup> Convergence Engineering for Intelligent Drone, Sejong University                                                                                                                                                                     |
| TP-337<br>ZONE 1<br>(4층, 로비) | <b>Enhancing the Reservoir Characteristics of IGZO Optoelectronic Transistor via Oxygen Vacancy Modulation for In-Sensor RC System</b><br>Dongjun Min <sup>1</sup> , Hyunjun Kim <sup>1</sup> , Narim Lee <sup>1</sup> , Hyunjoo Hwang <sup>2</sup> , Wonwoo Kho <sup>2</sup> , and Seung-Eon Ahn <sup>1,2</sup><br><sup>1</sup> Department of Nano & Semiconductor Engineering, Tech University of Korea, <sup>2</sup> Department of IT · Semiconductor Convergence Engineering, Tech University of Korea                                                                                                     |
| TP-338<br>ZONE 1<br>(4층, 로비) | <b>Textile-Based ZnO Nanorod In-Sensor Reservoir Computing for Word Recognition</b><br>Dongjun Min <sup>1</sup> , Hyunjun Kim <sup>1</sup> , Narim Lee <sup>1</sup> , Hyunjoo Hwang <sup>2</sup> , Wonwoo Kho <sup>2</sup> , and Seung-Eon Ahn <sup>1,2</sup><br><sup>1</sup> Department of Nano & Semiconductor Engineering, Tech University of Korea, <sup>2</sup> Department of IT · Semiconductor Convergence Engineering, Tech University of Korea                                                                                                                                                        |
| TP-339<br>ZONE 1<br>(4층, 로비) | <b>Optoelectronic Dynamics of ZnO Nanorods for Wearable In-Sensor Reservoir Computing</b><br>Hyunjoo Hwang <sup>1</sup> , Wonwoo Kho <sup>1</sup> , Dongjun Min <sup>2</sup> , Hyunjun Kim <sup>2</sup> , Narim Lee <sup>2</sup> , and Seung-Eon Ahn <sup>1,2</sup><br><sup>1</sup> Department of IT · Semiconductor Convergence Engineering, Tech University of Korea, <sup>2</sup> Department of Nano & Semiconductor Engineering, Tech University of Korea                                                                                                                                                  |
| TP-340<br>ZONE 1<br>(4층, 로비) | <b>Electrochemical Characteristics and Biodegradable PVA Shuttle-Assisted Insertion of Gold/Graphene Hybrid Electrode Arrays for Neural Interfaces</b><br>Youngsoo Kim <sup>1</sup> , Hyungjun Choi <sup>2</sup> , Dongjun Han <sup>3</sup> , Rayoung Park <sup>2</sup> , Sookyeong Kim <sup>2</sup> , and Dong-Wook Park <sup>1,3</sup><br><sup>1</sup> Department of BioHealth and Eco-Up Convergence, University of Seoul, <sup>2</sup> Department of Electrical and Computer Engineering Convergence, University of Seoul, <sup>3</sup> School of Electrical and Computer Engineering, University of Seoul |
| TP-342<br>ZONE 1<br>(4층, 로비) | <b>Flat-Top Response Coarse Wavelength-Division Demultiplexer for Mid-Infrared Photonic Applications</b><br>Inki Kim, Soohyun Kim, and SangHyeon Kim<br>3D Integrated Opto-Electronic Device Laboratory, KAIST                                                                                                                                                                                                                                                                                                                                                                                                 |



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| TP-343<br>ZONE 1<br>(4층, 로비) | <b>Performance Evaluation of CeO<sub>2</sub>/ZnO Memristor-Based Gas Sensor for Carbon Monoxide Detection</b><br>Ibtisam Ahmad <sup>1</sup> , Myungbin Gwak <sup>2</sup> , Yoon-Sik Cho <sup>2</sup> , and Hee-Dong Kim <sup>1</sup><br><sup>1</sup> Department of Semiconductor Systems Engineering and Convergence Engineering for Intelligent Drone, Sejong University, <sup>2</sup> Department of Artificial Intelligence, Chung-Ang University                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TP-344<br>ZONE 1<br>(4층, 로비) | <b>Improved Resistive Switching Characteristics Observed in Amorphous Boron Nitride-Based RRAM Device via Oxygen Doping: A Study based on Bulk and Interface Traps Analysis</b><br>Syed Ameer Hamza <sup>1,2,3</sup> and Hee-Dong Kim <sup>1,2,3</sup><br><sup>1</sup> Department of Semiconductor Systems Engineering, Sejong University, <sup>2</sup> Department of Electrical Engineering, Sejong University, <sup>3</sup> Convergence Engineering for Intelligent Drone, Sejong University                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| TP-345<br>ZONE 1<br>(4층, 로비) | <b>Photo-Induced Dual-Mode Memory Transistor with Charge-Storage Bilayer Dielectric for Flexible Optoelectronic Neuromorphic Computing</b><br>Sunwoo Jeong <sup>1</sup> , Gyeongho Lee <sup>2,3</sup> , Hyeonjung Kim <sup>4</sup> , Seyong Oh <sup>4</sup> , Hocheon Yoo <sup>5</sup> , and Junhwan Choi <sup>1</sup><br><sup>1</sup> Department of Chemical Engineering, Dankook University, <sup>2</sup> Semiconductor Total Solution Center, Korea Institute of Ceramic Engineering and Technology, <sup>3</sup> Department of Materials Science and Engineering, Korea University, <sup>4</sup> Division of Electrical Engineering, Hanyang University ERICA, <sup>5</sup> Department of Electronic Engineering, Hanyang University                                                                                                                                                                                         |
| TP-346<br>ZONE 1<br>(4층, 로비) | <b>Role of en-APTAS Membranes in Enhancing the NO<sub>2</sub> Gas-Sensing Characteristics of Carbon Nanotube/ZnO-Based Memristor Gas Sensors</b><br>Umar Ijaz and Hee-Dong Kim<br>Department of Semiconductor Systems Engineering and Convergence Engineering for Intelligent Drone, Sejong University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| TP-347<br>ZONE 1<br>(4층, 로비) | <b>Flexible CMUT Array for Conformal Wearable Ultrasound Imaging</b><br>Keun Young Huh <sup>1,2</sup> , Jin Soo Park <sup>1</sup> , Joo Young Pyun <sup>1</sup> , Soo Jin Kim <sup>2</sup> , and Byung Chul Lee <sup>1,3,4</sup><br><sup>1</sup> Bionics Research Center, KIST, <sup>2</sup> Department of Electrical Engineering, Korea University, <sup>3</sup> Division of Bio-Medical Science & Technology, KIST School, University of Science & Technology, <sup>4</sup> KHU-KIST Department of Converging Science and Technology, Kyung Hee University                                                                                                                                                                                                                                                                                                                                                                     |
| TP-348<br>ZONE 1<br>(4층, 로비) | <b>Cyano-Functionalized Copolymeric Memristors Synthesized by iCVD for CNN-Based Compute-in-Memory Applications</b><br>Minsu So <sup>1</sup> , Ji In Kim <sup>1</sup> , Taehoon Kim <sup>1</sup> , Woo Jin Wang <sup>2</sup> , Yong Goo Shin <sup>2</sup> , Min Ju Kim <sup>1,3,4</sup> , and Junhwan Choi <sup>1,5</sup><br><sup>1</sup> Department of Foundry Engineering, Dankook University, <sup>2</sup> Department of Electronics and Information, Korea University, <sup>3</sup> Department of Semiconductor Convergence Engineering, Dankook University, <sup>4</sup> Department of Electronics & Electrical Engineering, Dankook University, <sup>5</sup> Department of Chemical Engineering, Dankook University                                                                                                                                                                                                        |
| TP-349<br>ZONE 1<br>(4층, 로비) | <b>Fabrication of Silicon Nano Rods via Single-Ring Metal-Assisted Chemical Etching for Electromechanical Applications</b><br>Seonghun Cho <sup>1,2</sup> , Seyeon Yun <sup>1,3</sup> , Sung Hun Jang <sup>1,4</sup> , Woo Jin Jung <sup>1,5</sup> , Dong-Hyun Kang <sup>1,6</sup> , and Byung Chul Lee <sup>1,7,8</sup><br><sup>1</sup> Bionics Research Center, KIST, <sup>2</sup> School of Electrical Engineering, KAIST, <sup>3</sup> Department of Energy Resources Engineering, Inha University, <sup>4</sup> Department of Electrical and Electronic Engineering, Inha University, <sup>5</sup> School of Electronic Engineering, Hanyang University, <sup>6</sup> Department of Mechanical Engineering, Gangneung-Wonju National University, <sup>7</sup> Division of Bio-Medical Science and Technology, KIST School, UST, <sup>8</sup> KHU-KIST Department of Converging Science and Technology, Kyung Hee University |
| TP-350<br>ZONE 1<br>(4층, 로비) | <b>A Circuit for Microbubble Harmonics in Blood-Brain Barrier (BBB) Opening</b><br>Yu Been Oh <sup>1</sup> , Ho Jun Kim <sup>1</sup> , and Jae Myung Lim <sup>1,2</sup><br><sup>1</sup> Department of Artificial Intelligence Semiconductor Engineering, Hanyang University, <sup>2</sup> Department of Electronic Engineering, Hanyang University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

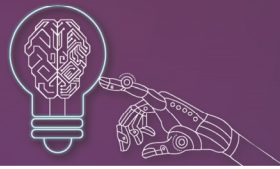
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| TP-351<br>ZONE 1<br>(4층, 로비) | <b>CeO<sub>2</sub> 촉매층이 코팅된 산화물 반도체 가스센서를 이용한 휘발성 방향족 탄화수소의 고감도·고선택성 검지</b><br>윤성영, 서정후, 이상명, 정성용<br>국립공주대학교 신소재공학과                                                                                                                                                                                                                                                                                                                                                                                                        |
| TP-352<br>ZONE 1<br>(4층, 로비) | <b>다공성 PdO-SnO<sub>2</sub> 산화물 반도체를 활용한 초고속·고감도 H<sub>2</sub> 가스센서</b><br>서정후, 윤성영, 이상명, 정성용<br>국립공주대학교 신소재공학과                                                                                                                                                                                                                                                                                                                                                                                                             |
| TP-353<br>ZONE 1<br>(4층, 로비) | <b>Machine Learning Enabled Environmental Adaptation in TEMPO-Functionalized SWCNTs-Based H<sub>2</sub>S Sensor</b><br>Da-Gyo Yoo <sup>1</sup> , Ryang Ha Kim <sup>1</sup> , Minhyeok Yang <sup>2</sup> , Young Lae Kim <sup>2</sup> , and Myung-Hyun Baek <sup>2</sup><br><sup>1</sup> Department of Electronic Engineering, Gangneung-Wonju National University, <sup>2</sup> Department of Electronic and Semiconductor Engineering, Gangneung-Wonju National University                                                |
| TP-354<br>ZONE 1<br>(4층, 로비) | <b>Hierarchical Triangular MoS<sub>2</sub> for Edge-Engineered Hydrogen Sensing</b><br>Minsu Lee, Johaug Seo, and Juwon Lee<br>Department of Electrical and Computer Engineering, Sungkyunkwan University                                                                                                                                                                                                                                                                                                                  |
| TP-355<br>ZONE 1<br>(4층, 로비) | <b>Environmental Monitoring Using a Highly Sensitive and Stable Nitrogen Dioxide Gas Sensor</b><br>Bum Hwan Kim, Jae Eun Kim, Hyung Soo Ahn, Won Bae Cho, and Young Tea Chun<br>Division of Electronics and Electrical Information Engineering, Korea Maritime & Ocean University                                                                                                                                                                                                                                          |
| TP-356<br>ZONE 1<br>(4층, 로비) | <b>Programmable Thermo-Responsive Biodegradable Composites for On-Demand Deactivation of Electronic Systems</b><br>Hyeok Kang, Chan-Hwi Eom, and Suk-Won Hwang<br>Korea University                                                                                                                                                                                                                                                                                                                                         |
| TP-357<br>ZONE 1<br>(4층, 로비) | <b>Microfluidic 3D Hydrodynamic Focusing Technologies for Advanced Microflow Platform</b><br>Gyeonghyeon Lee, Noah Jang, Hyunjun Kim, Da Ye Kim, Jinkyung Kim, Jin Park, Kihyun Kim, Dongchan Jung, and Seong Ho Kong<br>School of Semiconductor Convergence Engineering, Kyungpook National University                                                                                                                                                                                                                    |
| TP-358<br>ZONE 1<br>(4층, 로비) | <b>Physical Anchoring Enables Buckling-Guided Assembly of Freestanding 3D Mesostructures</b><br>Yeonhee Heo <sup>1</sup> , Gooyoon Chung <sup>1</sup> , Pei Liu <sup>2</sup> , Raudel Avila <sup>2</sup> , and Yoonseok Park <sup>1</sup><br><sup>1</sup> Department of Materials Science and Engineering, Kyung Hee University, <sup>2</sup> Department of Mechanical Engineering, Rice University                                                                                                                        |
| TP-359<br>ZONE 1<br>(4층, 로비) | <b>Magnetically Driven Triboelectric Nanogenerator for a Wireless, Versatile Energy Transfer System</b><br>Junyeop Kim <sup>1</sup> , Hong-Joon Yoon <sup>2</sup> , and Yoonseok Park <sup>1</sup><br><sup>1</sup> Department of Materials Science Engineering, Kyung Hee University, <sup>2</sup> Department of Semiconductor Engineering, Gachon University                                                                                                                                                              |
| TP-360<br>ZONE 1<br>(4층, 로비) | <b>Magnet-Based Wearable Sensing System for Real-time Monitoring of Physiological Organ Motion</b><br>Jihoo Kim and Yoonseok Park<br>Department of Materials Science and Engineering, Kyung Hee University                                                                                                                                                                                                                                                                                                                 |
| TP-361<br>ZONE 1<br>(4층, 로비) | <b>Highly Stretchable and Biodegradable Materials for Soft, Temporary Electronics</b><br>Hyewon Cho, Won-Bae Han, Gwan-Jin Ko, and Suk-Won Hwang<br>Korea University                                                                                                                                                                                                                                                                                                                                                       |
| TP-362<br>ZONE 1<br>(4층, 로비) | <b>Multifunctional, Bioresorbable and Elastomeric Polymers for Eco-friendly and Biomedical Electronics</b><br>Jeong-Uk Kim <sup>1</sup> , Jeong-Woong Shin <sup>1</sup> , Dong-Je Kim <sup>1</sup> , Tae-Min Jang <sup>1</sup> , and Suk-Won Hwang <sup>1,2,3</sup><br><sup>1</sup> KU-KIST Graduate School of Converging Science and Technology, Korea University, <sup>2</sup> Center for Biomaterials, Biomedical Research Institute, KIST, <sup>3</sup> Department of Integrative Energy Engineering, Korea University |



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| TP-363<br>ZONE 1<br>(4층, 로비) | <b>Improved H<sub>2</sub>S Detection Through Ligand Modification of Carbon Nanotube Networks</b><br>Ryang Ha Kim <sup>2</sup> , Kun Choi <sup>1</sup> , Kyu Won Lee <sup>3</sup> , Eunji Lee <sup>3</sup> , and Young Lae Kim <sup>1</sup><br><sup>1</sup> Department of Electronic and Semiconductor Engineering, Gangneung-Wonju National University,<br><sup>2</sup> Department of Electronic Engineering, Gangneung-Wonju National University, <sup>3</sup> Department of Chemistry, Gangneung-Wonju National University                                 |
| TP-364<br>ZONE 1<br>(4층, 로비) | <b>Germanium-on-Insulator 중적외선 On-Chip 가스 센서용 광대역 편광 회전 기</b><br>김수현 <sup>1</sup> , 김인기 <sup>2</sup> , 김상현 <sup>1,2</sup><br><sup>1</sup> KAIST 반도체공학대학원, <sup>2</sup> KAIST 전기및전자공학부                                                                                                                                                                                                                                                                                                                                                                        |
| TP-365<br>ZONE 1<br>(4층, 로비) | <b>Multi-Functional, Fully Biodegradable Bioelectronic System Featuring Shape-Programmable and Bioresorbable Elastomer</b><br>Li Hyun Kim, Jun Hyeon Lim, Won Bae Han, and Suk-Won Hwang<br>KU-KIST Graduate School of Converging Science and Technology, Korea University                                                                                                                                                                                                                                                                                   |
| TP-367<br>ZONE 1<br>(4층, 로비) | <b>Machine Learning-Based Tracking of Cardiac Motion Using Implantable Magnetic Patches</b><br>Sunjin Lee <sup>1</sup> , Eojin Lee <sup>1</sup> , Youn-kyoung Baek <sup>2</sup> , Sumin Kim <sup>3</sup> , Mikyung Shin <sup>4</sup> , and Yoonseok Park <sup>1</sup><br><sup>1</sup> Department of Materials Science and Engineering, Kyung Hee University, <sup>2</sup> KIMS, <sup>3</sup> Department of Intelligent Precision Healthcare Convergence, Sungkyunkwan University, <sup>4</sup> Department of Biomedical Engineering, Sungkyunkwan University |
| TP-368<br>ZONE 1<br>(4층, 로비) | <b>ZnO/Al<sub>2</sub>O<sub>3</sub>/IGZO TFT for Room-Temperature Ammonia Sensing</b><br>Dong Chan Jung <sup>1</sup> , Seong Ho Kong <sup>1</sup> , Hyunjun Kim <sup>2</sup> , Da Ye Kim <sup>2</sup> , Noah Jang <sup>2</sup> , Uihoon Jung <sup>2</sup> , Gyeongyeon Lee <sup>2</sup> , Kihyun Kim <sup>2</sup> , Jinkyung Kim <sup>2</sup> , and Jin Park <sup>2</sup><br><sup>1</sup> School of Semiconductor Convergence Engineering, Kyungpook National University, <sup>2</sup> School of Electronic and Electric, Kyungpook National University       |

## O. System LSI Design 분과

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| TP-369<br>ZONE 2-2<br>(5층, 로비) | <b>Fuzzy-State-Machine Energy Management System for a 30-kW PEMFC Hybrid System in Green Marine Applications</b><br>Md. Rubel Sarkar, Jeong-Min Woo, and Hyunwoo Son<br>School of Electronic Engineering, Gyeongsang National University                                                                                                                                                       |
| TP-370<br>ZONE 2-2<br>(5층, 로비) | <b>사전 명령어 분석 기반 저전력 RISC-V 프로세서</b><br>우정민, Md. Rubel Sarkar, 손현우<br>경상국립대학교 전자공학부                                                                                                                                                                                                                                                                                                             |
| TP-371<br>ZONE 2-2<br>(5층, 로비) | <b>A Low-Power Asynchronous AES-128 Design</b><br>So Jeong Ok and Woong Choi<br>School of Electronics Engineering, Sookmyung Women's University                                                                                                                                                                                                                                                |
| TP-372<br>ZONE 2-2<br>(5층, 로비) | <b>A 2-4GHz Digital-PLL-Based Octa Clock Generator With Fast Phase Error Calibration for Clock Distribution in HBM Interfaces</b><br>Si Heon Lee and Younghyun Lim<br>Department of Semiconductor Engineering, Kyung Hee University                                                                                                                                                            |
| TP-373<br>ZONE 2-2<br>(5층, 로비) | <b>Residue Number System을 이용한 FPGA 기반 고속신호 전처리 파이프라인</b><br>김현진 <sup>1</sup> , 박태인 <sup>1,2</sup> , 최문영 <sup>1,2</sup><br><sup>1</sup> 단국대학교 전자전기공학과, <sup>2</sup> LIG넥스원(주) 해양연구소                                                                                                                                                                                                             |
| TP-374<br>ZONE 2-2<br>(5층, 로비) | <b>오픈-소스 설계 도구 활용 “내 칩 제작 서비스” MPW 검증 사례</b><br>국일호 <sup>1</sup> , 노태문 <sup>1</sup> , 박건식 <sup>1</sup> , 정동윤 <sup>1</sup> , 고상춘 <sup>1</sup> , 김규태 <sup>2</sup> , 김용신 <sup>2</sup> , 심규현 <sup>3</sup><br><sup>1</sup> 한국전자통신연구원, <sup>2</sup> 고려대학교 전기전자공학부, <sup>3</sup> 한성대학교 컴퓨터공학과                                                                                                         |
| TP-375<br>ZONE 2-2<br>(5층, 로비) | <b>LPDDR6의 신뢰성을 위한 On-Die ECC</b><br>공영배 <sup>1</sup> , 양준성 <sup>1,2,3</sup><br><sup>1</sup> 연세대학교 전기전자공학과, <sup>2</sup> 연세대학교 시스템반도체공학과, <sup>3</sup> 연세대학교 지능형반도체 IT융합전공                                                                                                                                                                                                                     |
| TP-376<br>ZONE 2-2<br>(5층, 로비) | <b>A Novel ECC for Reliability and Power in LPDDR6</b><br>Jongwoo Jeon <sup>1</sup> and Joon-Sung Yang <sup>1,2,3</sup><br><sup>1</sup> Department of Electrical and Electronic Engineering, Yonsei University, <sup>2</sup> Department of Systems Semiconductor Engineering, Yonsei University, <sup>3</sup> BK21 Graduate Program in Intelligent Semiconductor Technology, Yonsei University |
| TP-377<br>ZONE 2-2<br>(5층, 로비) | <b>Xilinx FPGA 기반 FFT 가속 구조를 적용한 GPS 수신기</b><br>이현우 <sup>1</sup> , 라승환 <sup>1</sup> , 양희훈 <sup>1</sup> , 권석영 <sup>2</sup> , 양상진 <sup>2</sup> , 김창현 <sup>2</sup> , 이영빈 <sup>2</sup> , 유호영 <sup>1</sup><br><sup>1</sup> 충남대학교 전자공학과, <sup>2</sup> 아이오테크아이                                                                                                                                        |



## R. Semiconductor Software 분과

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| TP-378<br>ZONE 3<br>(6층, 로비) | LLM 추론 시나리오별 스토리지 I/O 특성 분석<br>정준혁 <sup>1</sup> , 최문석 <sup>2</sup> , 김재호 <sup>2</sup><br><sup>1</sup> 경상국립대학교 항공우주및소프트웨어공학부, <sup>2</sup> 경상국립대학교 AI융합공학과                |
| TP-379<br>ZONE 3<br>(6층, 로비) | FEMU 기반 FDP SSD 에뮬레이터 구현 이슈와 해결 방안<br>Nakyeong Kim and Jongmoo Choi<br>Department of AI-based Convergence, Dankook University                                            |
| TP-380<br>ZONE 3<br>(6층, 로비) | WAL-aware한 KVSSD 설계 및 구현<br>Kwanghee Lee and Jongmoo Choi<br>Department of Computer Science, Dankook University                                                          |
| TP-381<br>ZONE 3<br>(6층, 로비) | eBPF 기반 실시간 메모리 접근 패턴 탐지 및 페이지 교체 정책 최적화 시스템<br>안승현 <sup>1</sup> , 이동영 <sup>2</sup> , 강동현 <sup>1</sup><br><sup>1</sup> 동국대학교 컴퓨터·AI학부, <sup>2</sup> 동국대학교 일반대학원 컴퓨터·AI학과 |

## K. Memory (Design &amp; Process Technology) 분과

TP-383  
ZONE 3  
(6층, 로비)

Optimizing Al-Doped  $\text{HfO}_2$  Thin Films via PEALD for Ferroelectric Tunnel Junction (FTJ) Applications

Gangmin Lee, Sang Hyun Sung, and Keon Jae Lee  
Department of Materials Sciences and Engineering, KAIST