2026-01-29(목), 10:00-19:00
(공식발표시간: 17:40-19:00)
ZONE1 (4층, 로비)

[TP] 포스터세션

G. Device & Process Modeling, Simulation and Reliability 분과

TP-193	**Mechanistic Evaluation of IGZO-Based 1T-1C Memory Cell via Fast I-V Measurements and HSPICE Modeling** Juneseong Choi[1,2], Minsub Um[1,2], Jinheon Choi[1,2], Sahngik Aaron Mun[1,2], Seoryong Park[1,2], Jaewon Ham[1,2], Hyungjeung Kim[1,2], Shihyun Kim[1,2], Subin Moon[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-194	**Experimental Demonstration of Analog Multi-Level Operation in a 16×16 2T0C Array** Hyungjeung Kim[1,2], Néstor Ghenzi[1,2], Shihyun Kim[1,2], Yonghee Lee[1,2], Jinheon Choi[1,2], Sahngik Aaron Mun[1,2], Juneseong Choi[1,2], Jaewon Ham[1,2], Seoryong Park[1,2], Subin Moon[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-195	**A 2T0C Cell Enabling Multi-Timescale Reservoir Computing** Shihyun Kim[1,2], Yonghee Lee[1,2], Hyungjeung Kim[1,2], Néstor Ghenzi[1,2], Sahngik Aaron Mun[1,2], Jinheon Choi[1,2], Junseong Choi[1,2], Jaewon Ham[1,2], Seoryong Park[1,2], Subin Moon[1,2], Minsub Um[1,2], Jeongyoon Lee[1,2], Kyung Seok Woo[3,4], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University, [3]Graduate School of Semiconductor Materials and Devices Engineering, UNIST, [4]Department of Materials Science and Engineering, UNIST

TP-196	**Artificial Neural Network Modeling of Feedback Field-Effect Transistor Considering Current State for Implementing Circuit Simulation** Jong Hyeok Oh, Seung Su Jeong, and Yun Seop Yu Major of ICT & Robotics Engineering, Hankyong National University
TP-197	**First-Principles Study of Amorphous Oxide Semiconductors Using DFT+U+V Method** Yumi Kim, Subeen Lim, and Yeonghun Lee Department of Electronics Engineering, Incheon National University
TP-198	**Transport in Amorphous Semiconductors Using Effective Medium Theory** Hyeonseok Choi and Yeonghun Lee Department of Electronics Engineering, Incheon National University
TP-199	**A Hafnia-Based Ferroelectric Tunnel-FET with a Stepped Gate Stack for Reliable Ternary Content Addressable Memory Implementation** Jiwon Park[1,2] and Woo Young Choi[1,2] [1]Department of Electrical and Computer Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-200	**Metal to Insulator Transition in Rutile- and Anatase-Based Polytypes of MO_2 (M=V, Nb, Ta) by First Principles Calculations** Dohyun Kim[1,2,3], Taeyoung Jeong[1,2,3], Seungjae Yoon[1,2,3], Yunjae Kim[1,2,3], Cheol Seong Hwang[2,3], and Jung-Hae Choi[1] [1]Electronic and Hybrid Materials Research Center, KIST, [2]Department of Materials Science and Engineering, Seoul National University, [3]Inter-university Semiconductor Research Center, Seoul National University
TP-201	**Effect of Field Crowding Induced by Corner-Rounding on NBTI in Vertically Stacked Nanosheet MOSFET** Kyeong Min Lim, Jin Park, Won Suk Koh, Gang San Yun, Soo Bean Song, and In Man Kang School of Electronic and Electrical Engineering, Kyungpook National University
TP-202	**플라즈마 처리된 포토레지스트 잔류물이 MoS2 전자 구조에 미치는 영향: MD 및 DFT 연구** 엄상민[1], 김다현[2], 김명수[2], 김병조[1] [1]울산과학기술원 반도체소재부품대학원, [2]울산과학기술원 전기전자공학과

TP-203	**Gated Recurrent Unit 을 활용한 Feedback Field-Effect Transistor 의 Compact SPICE 모델 연구** 손승원[1], 우솔아[1,2] [1]국립부경대학교 지능로봇학과, [2]국립부경대학교 전자공학과
TP-204	**Role of Electron–Phonon Interaction on Transport in Amorphous Semiconductors: A First-Principles Study** Subeen Lim, Do Lee, and Yeonghun Lee Department of Electronics Engineering, Incheon National University
TP-205	**게이트 구조에 따른 Nanosheet FBFET의 전기적 특성 분석** 박태호, 조경아, 김상식 고려대학교 전기전자공학부
TP-206	**Optimization of Recess-Structured Metal-Oxide TFTs for Footprint Reduction Using TCAD Simulation** Hyeon Jeong Park, Kook Cheol Moon, and Yong-Sang Kim Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-207	**Photoresponsive Characterization for Energy-Mapping of Donor- and Acceptor-Like Interface Traps in 5-Stage Si-NW GAA FETs** Soohyun Lim[1], Jaewoo Yoo[1], Hongseung Lee[1], Seongbin Lim[1], Minah Park[1], Seohyeon Park[1], Sojin Jung[1], Donghyeon Lee[1], Dongsun Shin[1], Junhui Park[1], Sieun Lee[1], Yang-kyu Choi[2], and Hagyoul Bae[1] [1]Jeonbuk National University, [2]KAIST
TP-208	**Research of the Electrical Characteristics of Floating-Gate-Based Nanoscale Neuromorphic Transistors** Kangmin Yoo[1], Hyeonseok Jeong[1], Juyeong Chae[1], Taehwan Koo[1], Hyeongjin Chae[1], Joonhyuk Kim[3], Munseok Jung[3], Dongyeop Kim[3], and Moongyu Jang[1,2] [1]School of Nano Convergence Technology, Hallym University, [2]Center of Nano Convergence Technology, Hallym University, [3]School of Semiconductor and Display, Hallym University

TP-210	**Compact Modeling of Self-Rectifying MoS_2-Based RRAM with Schottky Barrier-Induced Rectification** Yoojin Shin and Min-woo Kwon Department of Electronic Engineering, Seoul National University of Science & Technology
TP-211	**Automated Optical Detection and Thickness Estimation of 2D Flakes for Large-Scale FET Data Acquisition** Sanghyun Lee[1], Haksoon Jung[1], Sumin Hong[2], Minho Park[1], and Jimin Kwon[1,2] [1]Department of Electrical Engineering, UNIST, [2]Graduate School of Semiconductor Materials and Devices Engineering, UNIST
TP-212	**PN Separation Piling Process for Performance Optimization of 2 nm Gate-All-Around Field-Effect Transistors** Jaehyuk Lim[1], Hyejin Park[2], Seonghan Lee[3], and Changhwan Shin[3] [1]Research Institute of Semiconductor Technology, Korea University, [2]School of Chemical Engineering, Soongsil University, [3]School of Electrical Engineering, College of Engineering, Korea University
TP-213	**Atomistic Modeling on the Effects of Interface and Geometry in $NiTe_2$-Te Contact for p-Type Te-Channel Thin-Film Transistors** Seungjae Yoon[1,2,3], Wonho Choi[2,3], Byongwoo Park[2,3], Taeyoung Jeong[1,2,3], Dohyun Kim[1,2,3], Yunjae Kim[1,2,3], Cheol Seong Hwang[2,3], and Jung-Hae Choi[1] [1]Electronic and Hybrid Materials Research Center, KIST, [2]Department of Materials Science and Engineering, Seoul National University, [3]Inter-university Semiconductor Research Center, Seoul National University
TP-214	**VacHopPy: Automating Effective Parameter Extraction for Vacancy-Mediated Diffusion from Molecular Dynamics** Taeyoung Jeong[1,2], Kun Hee Ye[1,2], Seungjae Yoon[1,2], Dohyun Kim[1,2], Yunjae Kim[1,2], Cheol Seong Hwang[2], and Jung-Hae Choi[1] [1]Electronic and Hybrid Materials Research Center, KIST, [2]Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

TP-215	**Vertical Electric Field Modulation by Ionic Dynamics in Dielectrics** Jiyoon Kim[1], Jaeuk Bang[2], Seong Chu Lim[2], and Hyunjin Ji[1] [1]Department of Electrical, Electronic and Computer Engineering, University of Ulsan, [2]Department of Energy Science, Sungkyunkwan University
TP-216	**중이온 조사에 따른 매립채널 어레이 트랜지스터의 신뢰성 분석** 김소원[1], 김건[1], 김동영[1], 김수연[1], 박제원[1], 김신욱[1], 강륜[1], 임채혁[1], 이주원[1], 서현아[1], 윤정현[1], 이혜린[1], 최우진[2], 김어진[2], 정민우[2], 이명진[2] [1]전남대학교 지능전자컴퓨터공학과, [2]전남대학교 전자컴퓨터공학부
TP-217	**A Study on the Simultaneous Improvement of Performance and NBTI Reliability in PMOSFETs Using Passivation Tensile-SiN Process** Icksu-Jeon, Sangwon-Yun, Chaemin-Yeom, Hoyeon-Choi, Manlyun Ha, and Sanggi Lee CIS Process Dev. Team/ Reliability Test Team, DB HiTek
TP-218	**Process-Induced Warpage Behavior in Backside Power Delivery Network (BSPDN) Fabrication** Seong-Ji Min, Jun-hyeok Lee, Hyeong-kyu Jin, Won-chan Kim, and Hyun-Yong Yu Korea University
TP-219	**Hydrogen Effects in Indium-Gallium-Zinc-Oxide Thin Films via High-Pressure Deuterium Annealing** Inkyu Yoon, Donghyun Kim, Sang Hyeok Kim, Sukyeong Kang, Sangpil Yoon, and Jae Woo Lee Department of Electronics & Information Engineering, Korea University
TP-220	**New Weight Modulation Method for Charge Trap Flash-Based Synaptic Devices** Jeong-hyun Kim and Jong-ho Lee Seoul National University
TP-221	**Investigation of the Buried Photodiode Structure for Dark Noise Suppression in Silicon Infrared Image Sensors** Hyeong-Soo Kim, Yu-Jin Cho, E Kyoung Kim, Areum Han, and Moon Hee Kang School of Semiconductor Engineering, Chungbuk National University

TP-222	**NiO/β-Ga_2O_3 p-n 다이오드의 동적 회로 설계** 최윤영[1], 조영관[1], 서다원[2], 김동빈[3], 조병진[3], 신명훈[1] [1]한국항공대학교 우주시스템융합전공, [2]한국항공대학교 전자및항공전자공학, [3]한국과학기술원 전기및전자공학부
TP-223	**First-Principles Investigation of Inhomogeneous Ferroelectric Switching Pathways in Wurtzite AlN** Yunjae Kim[1,2,3], Kun Hee Ye[1,2,3], Taeyoung Jeong[1,2,3], Seung Jae Yoon[1,2,3], Dohyun Kim[1,2,3], Cheol Seong Hwang[2,3], and Jung-Hae Choi[1] [1]Electronic and Hybrid Materials Research Center, KIST, [2]Department of Materials Science and Engineering, Seoul National University, [3]Inter-university Semiconductor Research Center, Seoul National University
TP-224	**CFD-Based Analysis of Flow-Through Line-Charging Effects on Deposition Efficiency in Atomic Layer Deposition** Seulwon Choi[1], Yunseok Kim[1], and Hwanyeol Park[1,2] [1]Department of Electronic Materials, Devices, and Equipment Engineering, Soonchunhyang University, [2]Department of Display Materials Engineering, Soonchunhyang University
TP-225	**Computational Fluid Dynamics Analysis of Ternary $HfAlO_x$ Spatial ALD with Dynamic Wafer Motion** Huichan Kang[1], Yunseok Kim[1], and Hwanyeol Park[1,2] [1]Department of Electronic Materials, Devices, and Equipment Engineering, Soonchunhyang University, [2]Department of Display Materials Engineering, Soonchunhyang University
TP-226	**Multiscale CFD-DFT Coupled Modeling for Growth Mechanism Control in Spatial ALD of Al_2O_3** Yunseok Kim[1,2], Seulwon Choi[1,2], and Hwanyeol Park[1,2] [1]Department of Electronic Materials, Devices, and Equipment Engineering, Soonchunhyang University, [2]Department of Display Materials Engineering, Soonchunhyang University

TP-227	**Comparative Kinetic-Thermodynamic Analysis of Ru Thenium Precursors on TiN for ALD by DFT Calculations** Mai Phuong Uyen Vu[1] and Hwanyeol Park[1,2] [1]Department of Electronic Materials and Devices Convergence Engineering, Soonchunhyang University, [2]Department of Display Materials Engineering, Soonchunhyang University
TP-228	**Comparative of PMA and PDA Ferroelectric HZO MFM Devices with New Noise Analysis** Somi Lee, Donghyun Kim, Inkyu Yoon, Seung Gyu Lee, Lae Hyeong Jeong, Yoonhye Jang, and Jae Woo LEE Department of Electronics & Information Engineering, Korea University
TP-229	**"내 칩 제작 서비스"를 통한 반도체 소자/공정/설계 융합교육 전략** 김규태[1], 김용신[1], 심규현[2], 국일호[3], 노태문[3], 박건식[3], 정동윤[3] [1]고려대학교 전기전자공학부, [2]한성대학교 컴퓨터공학과, [3]한국전자통신연구원
TP-230	**Temperature-Dependent Analysis of Leakage and Disturb Phenomena in 1z-Generation DRAM** Subin Lee and Min-woo Kwon Department of Electronic Engineering, Seoul National University of Science & Technology
TP-231	**Effect of Poly-Silicon Grain Boundaries on the Electrical Characteristics of Positive Feedback Field-Effect Transistors** Damin Kim and Min-woo Kwon Department of Electronic Engineering, Seoul National University of Science & Technology
TP-232	**Analysis of Sneak Path Current Characteristics in Resistive Random-Access Memory Arrays Using a Compact Model** Minsang Kim and Min-woo Kwon Department of Electronic Engineering, Seoul National University of Science & Technology

TP-233	**Deep Learning-Based Pareto Optimization Framework for LDMOS Transistors** Shinwook Kim[1], Geon Kim[1], Dongyeong Kim[1], Suyeon Kim[1], Jewon Park[1], Ryun Kang[1], Sowon Kim[1], Chaehyuk Lim[1], Hyeona Seo[1], Jeonghyeon Yun[1], Juwon Lee[1], Hyerin Lee[1], Ujin Choi[1], Eojin Kim[2], Minwoo Jeong[2], and Myoungjin Lee[2] [1]Department of Intelligent Electronics and Computer Engineering, Chonnam National University, [2]Department of Electronics and Computer Engineering, Chonnam National University
TP-234	**Experimental Investigation of Structural Parameter Effects on Switching Behavior of Dual-Gate Feedback Field-Effect Transistors** Hyunjin Kang and Min-woo Kwon Department of Electronic Engineering, Seoul National University of Science & Technology
TP-235	**Pulse IV를 이용한 Te FET의 Hysteresis 특성 분석** 최우석[1], 김민재[2], 이병훈[1,2,3] [1]Graduate school of semiconductor technology, POSTECH, [2]National Institute for Nanomaterials Technology, POSTECH, [3]Department of Electrical Engineering, POSTECH
TP-236	**고에너지 양성자를 이용한 고유전 절연막의 신뢰성 개선 연구** 이찬빈[1], 최우석[2], 이용수[4], 김병관[2], 황현준[5], 강창구[4], 이병훈[1,2,3] [1]Department of Electrical Engineering, POSTECH, [2]Graduate school of Semiconductor Technology, POSTECH, [3]Center for Semiconductor Technology Convergence, POSTECH, [4]Advanced Radiation Technology Institute, KAERI, [5]Department of Semiconductor Engineering, Mokpo National University
TP-237	**2D TMD 기반 FET에서 고속 중성자 조사로 유도된 채널 결함 및 전기적 열화** 백승용[1], 유재욱[3], 심기단[1], 허지원[1], 임수빈[5], 정봉기[5], 배학열[3], 김태완[1,2,4] [1]서울시립대학교 지능형반도체학과, [2]서울시립대학교 첨단융합학부, [3]전북대학교 전자공학과, [4]㈜투디에피, [5]㈜큐빔솔루션
TP-238	**Modeling of the Ferroelectric/antiferroelectric Capacitor and Related Memory Systems** Seungyong Byun[1,2], Seungheon Choi[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University

TP-239	**A Study on ESD BJT Devices with Reduced Electric Fields Employing ESD Implant Layer** Ji-Hoon HAN and Young Chul Kim ESD/TCAD Team, TE Center, DB HiTek
TP-240	**Design Strategies for Enhancing ESD Robustness of nLDMOS in BCD Process** Se-heon Oh and Young-chul Kim Technology Development, DB HiTek
TP-241	**Investigation of Carbon and Nitrogen Co-Doping Effects in Amorphous GeTe Using First-Principles and Machine-Learning Potential** Changmin Lim[1] and Jiwon Chang[1] [1]Department of System Semiconductor Engineering, Yonsei University, [2]BK21 Graduate Program in Intelligent Semiconductor Technology
TP-242	**Improving DC and RF Performance in NanosheetFET via Asymmetric Dual-κ Inner Spacer** Sang Min Lee and Hyun Woo Kim Department of Electrical and Electronics Engineering, Konkuk University
TP-243	**Hybrid Technique for Extraction of Intrinsic Oxide Trap Density in a-IGZO TFTs with 1/f Noise and Single-Wavelength Light Characterization** Donghyeon Lee[1], Jaewook Yoo[1], Hongseung Lee[1], Seongbin Lim[1], Sojin Jung[1], Seohyeon Park[1], Minah Park[1], Dongsun Shin[1], Sieun Lee[1], Soohyun Lim[1], Junhui Park[1], Sangmoon Yoon[4], TaeWan Kim[3], Kiyoung Lee[2], and Hagyoul Bae[1] [1]Jeonbuk National University, [2]Hongik University, [3]University of Seoul, [4]Gachon University
TP-244	**Development of a Rare-Earth-Reduced Magnetic Collet based on Halbach Array for Damage-Free Semiconductor Packaging** Hyoung Su Kim[1], Young Jun Lee[1], Joon Beom An[1], Dae kyeom Kim[2], Seung yeon Park[2], and Myung Suk Song[2] [1]Research and Development Institute, Magtron Co., Ltd., [2]Korea Institute for Rare Metlas, KITECH

TP-245	**Oxidation Mechanism of $HfSe_2$ and Principle of Clean Van der Waals Gap between Native Oxide and MoS_2 (WSe_2)** Joonho Park and Yong-Hoon Kim School of Electrical Engineering, KAIST
TP-246	**Performance Enhancement of 650V E-mode GaN HEMTs through Recess Etched pGaN Gate Structures** Min Su Cho, Junhyeok Lee, Nakwon Yu, Jihoun Jung, Wonchae Jeong, Heesub Lee, Jonghyun Lee, Sanggi Lee, and Woochul Jeon DB HiTek
TP-247	**In-Situ Characterization of Floating-Body Effects via Low-Frequency Noise Spectroscopy** Jaehong Min[1], Youngchan Cho[2], and Joon-Kyu Han[3], and Wonjun Shin[2] [1]Department of Advanced Materials Science and Engineering, Sungkyunkwan University, [2]Department of Semiconductor Convergence Engineering, Sungkyunkwan University, [3]Department of Material Science and Engineering, Seoul National University
TP-248	**A New Optimization Method to Extract Off-State Parameters of HR PD-SOI MOSFETs** Seunghun Yi[1] and Seonghearn Lee[2] [1]Department of Electronics Engineering, Hankuk University of Foreign Studies, [2]Division of Semiconductor and Electronics Engineering, Hankuk University of Foreign Studies
TP-249	**Improvement of Heater Temperature Uniformity through Electric Power Supply Control** Baek Ju Lee and Hyun Chul Wang Department of Intelligent Semiconductor, Pyeongtaek University
TP-250	**Characterizing the Dielectric Properties of Two-Dimensional Electrified Interfaces based on the Electrostatic Embedding Method** Ryong-Gyu Lee, Kaptan Rajput, and Yong-Hoon Kim School of Electrical Engineering, KAIST

TP-251	**Surface Sulfur Passivation of InP for High Performance MoS2/InP Heterojunction Optoelectronic Devices** Dong Hwi Choi, Min Su Kim, Jae Hyeop Lee, Jong Hwan Park, and Jae Cheol Shin Department of Electronics and Electrical Engineering, Dongguk University
TP-252	**Characterization Approach for Spatial and Energetic Analysis of Trap States in Oxide Semiconductor FETs** 도현서[1], 석규환[2], 정성웅[1,2] [1]Department of Semiconductor Engineering, POSTECH, [2]Department of Electrical and Electronic Engineering, POSTECH
TP-253	**전압 조건에 따른 α-Ga2O3 MSM X-ray 검출기의 과도 응답 및 오버슛 억제 매커니즘 분석** 차형주[1,2], 김선재[2], 황완식[1,2] [1]한국항공대학교 스마트항공모빌리티학과, [2]한국항공대학교 신소재공학과
P-254	**Density Functional-Based Recursive Matrix Green's Function Calculations of Large-Scale Devices** Jeongwon Lee, Ryong-Gyu Lee, and Yong-Hoon Kim School of Electrical Engineering, KAIST
TP-255	**Bandgap-Engineered 2D/III-V Heterojunction TFETs: Comparative Study of p-InP/n-MoS_2 and p-InGaAs/n-MoS_2 Structures** Minsu Kim, Jaehyeop Lee, Jonghwan Park, Dong Hwi Choi, and Jae Cheol Shin Department of Electronics and Electrical Engineering, Dongguk University
TP-256	**Analysis of Trap Dynamics in β-Ga_2O_3 SBDs Using a Pulsed Voltage Measurement Technique** Thanh HuongVo[1,2], Sunjae Kim[1,3], Ji-Hyeon Park[3], Dae-Woo Jeon[3], Wan Sik Hwang[1,2], and Jinyoung Hwang[4] [1]Department of Materials Science and Engineering, Korea Aerospace University, [2]Department of Smart Air Mobility, Korea Aerospace University, [3]KICTEC, [4]Department of Electrical and Electronic Engineering, Korea Aerospace University

TP-257	**Machine Learning-Accelerated Single Event Effect (SEE) Modeling for Nanosheet FETs** Joonhan Kim[1], Dongwook Kim[1], and Jongwook Jeon[2] [1]Department of Display Engineering, Sungkyunkwan University, [2]Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-258	**2D Material-Based Low Height Complementary Field-Effect Transistor** Junyeol Lee[1], Hanggyo Jung[2], Hojin Kim[2], and Jongwook Jeon[1] [1]Department of Electrical and Computer Engineering, Sungkyunkwan University, [2]Department of Semiconductor Convergence Engineering, Sungkyunkwan University
TP-259	**$Ge_2Sb_2Te_5$ 기반 상변화 메모리와 GeTe 기반 상변화 메모리의 저항 변동성: 확률적 핵 생성을 통합한 다중 물리 시뮬레이션 연구** 김혜수, 김예찬, 권용우 Department of Materials Science and Engineering, Hongik University
TP-260	**Physics-Based Compact Modeling of Ferroelectric In-Ga-Zr-O Thin-Film Transistors** Jae Woog Jung, Hyung Soo Kim, and Hyunwoo Kim Department of Electrical and Electronics Engineering, Konkuk University
TP-261	**SiC 트렌치 MOSFET의 항복 전압 향상을 위한 플로팅 게이트 구조의 TCAD 시뮬레이션 최적화** 이동석, 김인화, 김기현 전북대학교 정보전자공학부
TP-262	**상장법을 활용한 폴리 실리콘 박막에서의 고체상 결정화 과정 3차원 시뮬레이션** 최다은, 이환욱, 권용우 홍익대학교 신소재공학과

TP-263	**Modeling of Channel and JFET Region Trap Occupancy Behavior under Short-Circuit Stress in 4H-SiC MOSFETs** Hyeona Seo[1], Geon Kim[1], Dongyeong Kim[1], Suyeon Kim[1], Jewon Park[1], Shinwook Kim[1], Ryun Kang[1], Chaehyuk Lim[1], Jeonghyeon Yun[1], Sowon Kim[1], Hyerin Lee[1], Juwon Lee[1], Ujin Choi[2], Eojin Kim[2], Minwoo Jeong[2], and Myoungjin Lee[2] [1]Department of Intelligent Electronics and Computer Engineering, Chonnam National University, [2]Department of Electronics and Computer Engineering, Chonnam National University
TP-264	**Power-Delay Pareto Front Exploration of Ring Oscillator at 1 nm Node Using ML-Based Model** 정현준, 공정택, 김소영 성균관대학교 정보통신대학 전자전기컴퓨터공학과
TP-265	**Experimental Demonstration of a CMOS-compatible Diode for 1D-1R RRAM Integration** Seung Yeon Kim[1], Sol Ji Park[1], Min Sik Park[1], Won Chul Lee[2], and Jong Won Lee[1] [1]Chungnam National University, [2]NNFC
TP-266	**First-Principles Investigation of Oxygen Vacancy Effects on In_2O_3 (001)/Metal Contacts** Seunghyun Yu and Yong-Hoon Kim School of Electrical Engineering, KAIST
TP-267	**Comparative Analysis of Analog Performance Between High-Voltage FinFET and HKMG Transistors** SoYun Kim, Jeong-Taek Kong, and SoYoung Kim Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-268	**Analysis of Hysteresis and PBS Degradation in In_2O_3 and ITO TFTs based on TCAD Simulation** Ji-Won Son[1], Su-Min Kim[2], Kyu-Hwan Seok[3], and Sung-Woong Chung[1,2] [1]포항공과대학교 반도체공학과, [2]포항공과대학교 반도체대학원, [3]포항공과대학교 전자전기공학과

TP-269	**3D Simulation-Based Analysis of Geometrical Scaling Effects on GAA-FET Electrical Characteristics** Sungsoo Park and Byoungdeog Choi Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-270	**차세대 FET 구조별 자가 발열 효과 비교 분석** 신동현, 김소영, 공정택 성균관대학교 정보통신대학 전자전기컴퓨터공학과
TP-271	**Charge Coupling Effects on the Electrical Characteristics of CMOS Neuron Hybridized With Memristor-Based Synapse** Seo Yong Chi[1,2], Hi-Deok Lee[2], and Wan-Gyu Lee[1] [1]NNFC, [2]Chungnam National University
TP-272	**인쇄 TFT의 실측 비대칭 I-V 데이터 기반 ML Compact Model 개발** 유정민[1], 공정택[1], 김소영[2] [1]성균관대학교 반도체융합공학과, [2]성균관대학교 반도체시스템공학과
TP-273	**ASM-HEMT 모델을 이용한 p-GaN AlGaN/GaN HEMT의 트랩 노드 기반 전압 의존 모델링 및 물리적 해석** 이엘림, 김형탁 홍익대학교 전자전기공학부
TP-274	**유전 알고리즘 및 딥러닝 기반 a-IGZO TFT 전류-전압 특성 모델링** 김문기[1,3,4], 김윤[2,3,4] [1]서울시립대학교 지능형반도체학과, [2]서울시립대학교 전자전기컴퓨터공학부, [3]서울시립대학교 반도체 연구센터(UOS-FAB), [4]주식회사 IM전자
TP-275	**High-Efficiency Self-Curing Method for Radiation-Damaged SiC MOSFETs Using Joule Heating and Fowler-Nordheim Tunneling** Sang Hyeok Yun[1], Kihyun Kim[2], Gyuin Jang[2], Beomjin Kim[2], Young Jun Yoon[2], Jong-Ho Bae[3], and Jae Hwa Seo[4] [1]Power SoC Research Center, KERI, [2]School of Electronic & Mechanical Engineering, Gyeongkuk National University, [3]Department of System Semiconductor Engineering, Yonsei University, [4]Advanced Semiconductor Research Center, KERI

TP-382	**In-Ga-O 채널의 전도 활성화 거동의 물리적 해석 및 Self-Consistent 모델링** 김희수[1], 김희태[1], 이호석[1], 조성행[2], 조병진[1] [1]한국과학기술원 전기 및 전자공학부, [2]한국전자통신연구원 플렉시블 전자소자연구실

2026-01-29(목), 10:00-19:00
(공식발표시간: 17:40-19:00)
ZONE1 (4층, 로비)

[TP] 포스터세션

I. MEMS & Sensors Systems 분과

TP-316	**Photospike-Driven True Random Number Generation for Secure Image Processing** Juhyung Seo, Seungme Kang, Taehyun Park, and Hocheon Yoo Department of Electric Engineering, Hanyang University
TP-317	**Graphene-Based Physically Unclonable Functions Patterned by Randomly Distributed Microparticles** Dong Hyun Lee, Youngmin Han, and Hocheon Yoo Department of Electronic Engineering, Hanyang University
TP-318	**Zinc Tin Oxide Nanoparticle-Based Deep UV Photodetector Embedded Circuit for Wireless Flame Detection** Junhyung Cho[1], Seungmi Kang[2], Taehyun Park[2], and Hocheon Yoo[1,2] [1]Department of Artificial Intelligence Semiconductor Engineering, Hanyang University, [2]Department of Electronic Engineering, Hanyang University
TP-319	**Wavelength-Dependent Negative Photoconductance Effect Enabling Neuromorphic-Photodetector Switching in Low-Power ZnON Transistors Integrated with PCB Systems** Won Woo Lee[1], Wangmyung Choi[2], and Hocheon Yoo[1,2] [1]Department of Artificial Intelligence Semiconductor Engineering, Hanyang University, [2]Department of Electronic Engineering, Hanyang University
TP-320	**Dual Gate ZnON Transistor for Logic Gate Implementation in a Single Device** Heebeen Shin[1], Youngmin Han[2], Minseo Kim[1], and Hocheon Yoo[2] [1]School of Semiconductor Engineering, Gachon University, [2]School of Electronic Engineering, Hanyang University

TP-321	**Light-to-Acoustic Entropy Generation in Nanocomposite PUFs** Taehyun Park and Hocheon Yoo Department of Electric Engineering, Hanyang University
TP-322	**Gaussian Function with Twist Contact Transistor** Kyounghoon Kim[1], Youngmin Han[2], Eousik Cho[3], and Hocheon Yoo[2] [1]Department of Semiconductor Engineering, Gachon University, [2]Department of Electronic Engineering, Hanyang University, [3]Department of Electronic Engineering, Gachon University
TP-323	**Thickness-Dependent Switching between Optoelectronic Memory and Gaussian-Sigmoid Behavior in a Double-Floating-Gate Transistor** Seungeun Jeong[1], Seungme Kang[2], Eousik Cho[3], and Hocheon Yoo[2] [1]Department of Semiconductor Engineering, Gachon University, [2]Department of Electronic Engineering, Hanyang University, [3]Department of Electronic Engineering, Gachon University
TP-324	**Schottky-Gated Polyaniline/Reduced Graphene Oxide Channel for Conductivity Modulation on Flexible Substrates** Hyeon-Wook Yu, Tae-Hee Kim, Jun-Yeong Jeon, Seung-Woo Lee, Ju-Seong Lee, and Hyun-Seok Kim Division of Electronics and Electrical Engineering, Dongguk University
TP-325	**CMOS-Compatible Neuromorphic Photoreceptor with Monolithic Optical-to-Spike Conversion and In-Sensor Convolution** Seungyeob Kim[1], Seungmin Cheon[1], Seonjae Park[2], Taeseung Jung[1], and Sanghun Jeon[1,2] [1]School of Electrical Engineering, KAIST, [2]Graduate School of Semiconductor Technology, KAIST
TP-326	**CMOS-Compatible Oxide TFT-Based 2T-2C Near-Pixel Analog Compute Cell with ADC/DAC-Free Sensor Interface for Energy-Efficient Feature Extraction** Seonjae Park[1], Seungyeob Kim[2], Seungmin Cheon[2], Taeseung Jung[2], and Sanghun Jeon[1,2] [1]Graduate School of Semiconductor Technology, KAIST, [2]School of Electrical Engineering, KAIST

TP-327	**Bio-Inspired TTFS Coding Architecture Utilizing L-AFeFET and TS Devices for Sub-1 ms Neuromorphic Tactile Systems** Taeseung Jung[1], Seonjae Park[2], Seungyeob Kim[1], and Sanghun Jeon[1] [1]School of Electrical Engineering, KAIST, [2]Graduate School of Semiconductor Technology, KAIST
TP-328	**Bioinspired Thermal Perception via IGZO Memristor–Pt Sensor Integration for Artificial Nociceptor Systems** Jiseon Moon, Muhammad Naqi, and Sunkook Kim School of Advanced Materials Science and Engineering, Sungkyunkwan University
TP-329	**Enhanced Response and Stability of a Low-Power Transparent SnO_2 Gas Sensor with Memristor Integration** Taegi Kim and Hee-Dong Kim Department of Electrical Engineering and Convergence Engineering for Intelligent Drone, Sejong University
TP-330	**Colorimetric E-Nose Platform Using Fluorescent Nanofiber and IGZO Phototransistor Arrays** Siyun Lee and Sunkook Kim Sungkyunkwan University
TP-331	**Flexible NO_2 Gas Sensor Using IGZO for Enhanced Mechanical and Electrical Stability** Sanggyu Bang and Hee-dong Kim Department of Electrical Engineering and Convergence Engineering for Intelligent Drone, Sejong University
TP-332	**Microheater-Centric Design Optimization of TFT-Type Gas Sensors** Siwon Jang[1], Hunhee Shin[1], Jong-Ho Lee[1], and Gyuweon Jung[1,2] [1]Department of Electrical and Computer Engineering and Inter-university Semiconductor Research Center, Seoul National University, [2]School of Transdisciplinary Innovations, Seoul National University
TP-333	**Electrospun P(VDF-TrFE) Nanofibrous Membrane Based High Performing Energy Harvesting Devices** Yongbin Han and Hong-Joon Yoon Department of Semiconductor Engineering, Gachon University

TP-334	**IZO / CNT TFT를 활용한 상보성 인버터 기반 암모니아 가스센서** 길가영[1], 임수빈[1], 백수진[2], 김봉준[2], 김민회[1] [1]한밭대학교 창의융합학과, [2]숙명여자대학교 첨단소재 · 전자융합공학부 지능형전자시스템 전공
TP-335	**Hydrogen-Treated Pd-Graphene Interface for Enhanced Electrocatalytic Performance in Laser-Induced Graphene Electrodes** Yunhoe Koo[1], Ji Min Kim[1], Jueun Park[1], Suok Lee[2], Young-Woo Lee[2], Hyoung Woo Yang[3], and A-Rang Jang[1] [1]Division of Electrical, Electronic and Control Engineering, Kongju National University, [2]Department of Energy Engineering, Soonchunhyang University, [3]Firbl
TP-336	**NO_2 Gas Sensing Characteristics of Carbon Nanotubes-Ag Nanoparticles Heterostructure-Based Memristor Gas Sensor** Mohsin Ali[1,2,3] and Hee-Dong Kim[1,2,3] [1]Department of Semiconductor Systems Engineering, Sejong University, [2]Department of Electrical Engineering, Sejong University, [3]Convergence Engineering for Intelligent Drone, Sejong University
TP-337	**Enhancing the Reservoir Characteristics of IGZO Optoelectronic Transistor via Oxygen Vacancy Modulation for In-Sensor RC System** Dongjun Min[1], Hyunjun Kim[1], Narim Lee[1], Hyunjoo Hwang[2], Wonwoo Kho[2], and Seung-Eon Ahn[1,2] [1]Department of Nano & Semiconductor Engineering, Tech University of Korea, [2]Department of IT · Semiconductor Convergence Engineering, Tech University of Korea
TP-338	**Textile-Based ZnO Nanorod In-Sensor Reservoir Computing for Word Recognition** Dongjun Min[1], Hyunjun Kim[1], Narim Lee[1], Hyunjoo Hwang[2], Wonwoo Kho[2], and Seung-Eon Ahn[1,2] [1]Department of Nano & Semiconductor Engineering, Tech University of Korea, [2]Department of IT · Semiconductor Convergence Engineering, Tech University of Korea

TP-339	**Optoelectronic Dynamics of ZnO Nanorods for Wearable In-Sensor Reservoir Computing** Hyunjoo Hwang[1], Wonwoo Kho[1], Dongjun Min[2], Hyunjun Kim[2], Narim Lee[2], and Seung-Eon Ahn[1,2] [1]Department of IT· Semiconductor Convergence Engineering, Tech University of Korea, [2]Department of Nano & Semiconductor Engineering, Tech University of Korea
TP-340	**Electrochemical Characteristics of Gold/Graphene Hybrid Neural Electrodes for Electrical Stimulation** Youngsoo Kim[1], Hyungjun Choi[2], Dongjun Han[3], Rayoung Park [2], Sookyeong Kim[2], and Dong-Wook Park[1,3] [1]Department of BioHealth and Eco-Up Convergence, University of Seoul, [2]Department of Electrical and Computer Enigneering Convergence, University of Seoul, [3]School of Electrical and Computer Engineering, University of Seoul
TP-341	**Interfacial Ion Dynamics in Fluorinated Electrolyte-Gated Transistors** Yeonseo Kim[1], Serang Jung[1], Minho Jegal[1], and Youn Sang Kim[1,2] [1]Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, [2]Advanced Institute of Convergence Technology, Seoul National University
TP-342	**Flat-Top Response Coarse Wavelength-Division Demultiplexer for Mid-Infrared Photonic Applications** Inki Kim, Soohyun Kim, and SangHyeon Kim 3D Integrated Opto-Electronic Device Laboratory, KAIST
TP-343	**Performance Evaluation of CeO_2/ZnO Memristor-Based Gas Sensor for Carbon Monoxide Detection** Ibtisam Ahmad[1], Myungbin Gwak[2], Yoon-Sik Cho[2], and Hee-Dong Kim[1] [1]Department of Semiconductor Systems Engineering and Convergence Engineering for Intelligent Drone, Sejong University, [2]Department of Artificial Intelligence, Chung-Ang University

TP-344	**Improved Resistive Switching Characteristics Observed in Amorphous Boron Nitride-Based RRAM Device via Oxygen Doping: A Study based on Bulk and Interface Traps Analysis** Syed Ameer Hamza[1,2,3] and Hee-Dong Kim[1,2,3] [1]Department of Semiconductor Systems Engineering, Sejong University, [2]Department of Electrical Engineering, Sejong University, [3]Convergence Engineering for Intelligent Drone, Sejong University
TP-345	**Photo-Induced Dual-Mode Memory Transistor with Charge-Storage Bilayer Dielectric for Flexible Optoelectronic Neuromorphic Computing** Sunwoo Jeong[1], Gyeongho Lee[2,3], Hyeonjung Kim[4], Seyong Oh[4], Hocheon Yoo[5], and Junhwan Choi[1] [1]Department of Chemical Engineering, Dankook University, [2]Semiconductor Total Solution Center, Korea Institute of Ceramic Engineering and Technology, [3]Department of Materials Science and Engineering, Korea University, [4]Division of Electrical Engineering, Hanyang University ERICA, [5]Department of Electronic Engineering, Hanyang University
TP-346	**Role of en-APTAS Membranes in Enhancing the NO2 Gas-Sensing Characteristics of Carbon Nanotube/ZnO-Based Memristor Gas Sensors** Umar Ijaz and Hee-Dong Kim Department of Semiconductor Systems Engineering and Convergence Engineering for Intelligent Drone, Sejong University
TP-347	**Flexible CMUT Array for Conformal Wearable Ultrasound Imaging** Keun Young Huh[1,2], Jin Soo Park[1], Joo Young Pyun[1], Soo Jin Kim[2], and Byung Chul Lee[1,3,4] [1]Bionics Research Center, KIST, [2]Department of Electrical Engineering, Korea University, [3]Division of Bio-Medical Science & Technology, KIST School, University of Science & Technology, [4]KHU-KIST Department of Converging Science and Technology, Kyung Hee University

TP-348	**Cyano-Functionalized Copolymeric Memristors Synthesized by iCVD for CNN-Based Compute-in-Memory Applications** Minsu So[1], Ji In Kim[1], Taehoon Kim[1], Woo Jin Wang[2], Yong Goo Shin[2], Min Ju Kim[1,3,4], and Junhwan Choi[1,5] [1]Department of Foundry Engineering, Dankook University, [2]Department of Electronics and Information, Korea University, [3]Department of Semiconductor Convergence Engineering, Dankook University, [4]Department of Electronics & Electrical Engineering, Dankook University, [5]Department of Chemical Engineering, Dankook University
TP-349	**Fabrication of Silicon Nano Rods via Single-Ring Metal-Assisted Chemical Etching for Electromechanical Applications** Seonghun Cho[1,2], Seyeon Yun[1,3], Sung Hun Jang[1,4], Woo Jin Jung[1,5], Dong-Hyun Kang[1,6], and Byung Chul Lee[1,7,8] [1]Bionics Research Center, KIST, [2]School of Electrical Engineering, KIST, [3]Department of Energy Resources Engineering, Inha University, [4]Department of Electrical and Electronic Engineering, Inha University, [5]School of Electronic Engineering, Hanyang University, [6]Department of Mechanical Engineering, Gangneung-Wonju National University, [7]Division of Bio-Medical Science and Technology, KIST School, University of Science and Technology, [8]KHU-KIST Department of Converging Science and Technology, Kyung Hee University
TP-350	**A Circuit for Microbubble Harmonics in Blood-Brain Barrier (BBB) Opening** Yu Been Oh[1], Ho Jun Kim[1], and Jae Myung Lim[1,2] [1]Department of Artificial Intelligence Semiconductor Engineering, Hanyang University, [2]Department of Electronic Engineering, Hanyang University
TP-351	**CeO_2 촉매층이 코팅된 산화물 반도체 가스센서를 이용한 휘발성 방향족 탄화수소의 고감도·고선택성 검지** 윤성영, 서정후, 이상명, 정성용 국립공주대학교 신소재공학과
TP-352	**다공성 PdO-SnO_2 산화물 반도체를 활용한 초고속·고감도 H_2 가스센서** 서정후, 윤성영, 이상명, 정성용 국립공주대학교 신소재공학과

TP-353	**Machine Learning Enabled Environmental Adaptation in TEMPO-Functionalized SWCNTs-Based H_2S Sensor** Da-Gyo Yoo[1], Ryang Ha Kim[1], Minhyeok Yang[2], Young Lae Kim[2], and Myung-Hyun Baek[2] [1]Department of Electronic Engineering, Gangneung-Wonju National University, [2]Department of Electronic and Semiconductor Engineering, Gangneung-Wonju National University
TP-354	**Hierarchical Triangular MoS_2 for Edge-Engineered Hydrogen Sensing** Minsu Lee, Johaug Seo, and Juwon Lee Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-355	**Environmental Monitoring Using a Highly Sensitive and Stable Nitrogen Dioxide Gas Sensor** Bum Hwan Kim, Jae Eun Kim, Hyung Soo Ahn, Won Bae Cho, and Young Tea Chun Division of Electronics and Electrical Information Engineering, Korea Maritime & Ocean University
TP-356	**Programmable Thermo-Responsive Biodegradable Composites for On-Demand Deactivation of Electronic Systems** Hyeok Kang, Chan-Hwi Eom, and Suk-Won Hwang Korea University
TP-357	**Microfluidic 3D Hydrodynamic Focusing Technologies for Advanced Microflow Platform** Gyeonghyeon Lee, Noah Jang, Hyunjun Kim, Da Ye Kim, Jinkyung Kim, Jin Park, Kihyun Kim, Dongchan Jung, and Seong Ho Kong School of Semiconductor Convergence Engineering, Kyungpook National University
TP-358	**Physical Anchoring Enables Buckling-Guided Assembly of Freestanding 3D Mesostructures** Yeonhee Heo[1], Gooyoon Chung[1], Pei Liu[2], Raudel Avila[2], and Yoonseok Park[1] [1]Department of Materials Science and Engineering, Kyung Hee University, [2]Department of Mechanical Engineering, Rice University

TP-359	**Magnetically Driven Triboelectric Nanogenerator for a Wireless, Versatile Energy Transfer System** Junyeop Kim[1], Hong-Joon Yoon[2], and Yoonseok Park[1] [1]Department of Materials Science Engineering, Kyung Hee University, [2]Department of Semiconductor Engineering, Gachon University
TP-360	**Magnet-Based Wearable Sensing System for Real-time Monitoring of Physiological Organ Motion** Jihoo Kim and Yoonseok Park Department of Materials Science and Engineering, Kyung Hee University
TP-361	**Highly Stretchable and Biodegradable Materials for Soft, Temporary Electronics** Hyewon Cho, Won-Bae Han, Gwan-Jin Ko, and Suk-Won Hwang Korea University
TP-362	**Multifunctional, Bioresorbable and Elastomeric Polymers for Eco-friendly and Biomedical Electronics** Jeong-Uk Kim[1], Jeong-Woong Shin[1], Dong-Je Kim[1], Tae-Min Jang[1], and Suk-Won Hwang[1,2,3] [1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Center for Biomaterials, Biomedical Research Institute, KIST, [3]Department of Integrative Energy Engineering, Korea University
TP-363	**Improved H_2S Detection Through Ligand Modification of Carbon Nanotube Networks** Ryang Ha Kim[2], Kun Choi[1], Kyu Won Lee[3], Eunji Lee[3], and Young Lae Kim[1] [1]Department of Electronic and Semiconductor Engineering, Gangneung-Wonju National University, [2]Department of Electronic Engineering, Gangneung-Wonju National University, [3]Department of Chemistry, Gangneung-Wonju National University
TP-364	**Germanium-on-Insulator 중적외선 On-Chip 가스 센서용 광대역 편광 회전 기** 김수현[1], 김인기[2], 김상현[1,2] [1]KAIST 반도체공학대학원, [2]KAIST 전기및전자공학부

TP-365	**Multi-Functional, Fully Biodegradable Bioelectronic System Featuring Shape-Programmable and Bioresorbable Elastomer** Li Hyun Kim, Jun Hyeon Lim, Won Bae Han, and Suk-Won Hwang KU-KIST Graduate School of Converging Science and Technology, Korea University
TP-366	**Self-Clocking Perovskite TRNG with Polymer-Blended Stochastic Photoresponse for Secure Encryption** Minz Lee[1,2], Hyun Seok Song[1], and Yusin Pak[3] [1]Nanophotonic Systems Center, KIST, [2]Department of Materials Science and Engineering, Korea University, [3]Division of Advanced Materials Engineering, Jeonbuk National University
TP-367	**Machine Learning-Based Tracking of Cardiac Motion Using Implantable Magnetic Patches** Sunjin Lee[1], Eojin Lee[1], Youn-kyoung Baek[2], Sumin Kim[3], Mikyung Shin[4], and Yoonseok Park[1] [1]Department of Materials Science and Engineering, Kyung Hee University, [2]KIMS, [3]Department of Intelligent Precision Healthcare Convergence, Sungkyunkwan University, [4]Department of Biomedical Engineering, Sungkyunkwan University
TP-368	**ZnO/Al_2O_3/IGZO TFT for Room-Temperature Ammonia Sensing** Dong Chan Jung[1], Seong Ho Kong[1], Hyunjun kim[2], Da Ye Kim[2], Noah Jang[2], Uihoon Jung[2], Gyeongyeon Lee[2], Kihyun Kim[2], Jinkyung Kim[2], and Jin Park[2] [1]School of Semiconductor Convergence Engineering, Kyungpook National University, [2]School of Electronic and Electric, Kyungpook National University

2026-01-29(목), 10:00-19:00
(공식발표시간: 17:40-19:00)
ZONE2-1 (5층, 로비)

[TP] 포스터세션

D. Thin Film Process Technology 분과

TP-001	**Hot Wire Assisted Area Selective Deposition of Ruthenium** Kyeongmin Min and Han-Bo-Ram Lee Department of Materials Science and Engineering, Incheon National University
TP-002	**Single-Device Integration of PUFs and TRNGs via Stochastic ZGO Nanoclusters for Secure and Generative Applications** Seungme Kang, Wangmyung Choi, and Hocheon Yoo Department of Electronic Engineering, Hanyang University
TP-003	**The Effect of Post-Al2O3 Passivation Annealing on the Electrical Characteristics of ALD-IGZO Thin-Film Transistors** Sahngik Aaron Mun[1,2], Donghee Han[1,2], Minhyuk Park[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-004	**Oxalic Acid-Based Wet Etching of Amorphous Zinc-Tin-Oxide Thin Films Deposited by Atomic Layer Deposition** Jaewon Ham[1,2], Seo Young Jang[1,2,3], Yonghee Lee[1,2], Sukin Kang[1,2], Sahngik Aaron Mun[1,2], Jinheon Choi[1,2], Juneseong Choi[1,2], Seoryong Park[1,2], Hyungjeung Kim[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University, [3]SK Hynix Inc.

TP-005	**Al-Doped ZnSnO Amorphous Oxide Semiconductor for Highly Reliable Thin-Film Transistors and Capacitorless DRAM Applications** Jinheon Choi[1,2], Taeyoung Jeong[3], Shihyun Kim[1,2], Néstor Ghenzi[1,2], Byongwoo Park[1,2], Gwangsik Jeon[1,2], Juneseong Choi[1,2], Hyungjeung Kim[1,2], Jung-Hae Choi[3], Yonghee Lee[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University, [3]Electronic and Hybrid Materials Research Center, KIST
TP-006	**Ferroelectric Thin-Film Transistors with Indium Gallium Zinc Oxide Channels: Effects of Stack Thickness Scaling** Won Kim[1,2], Sung Eun Kim[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-007	**Minimizing on-Current Drop in HfO2-Based Ferroelectric Tunnel Junctions through a-IGZO Interlayer Engineering** Sanghyup Lee[1,2] and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-008	**Mechanism Study of The Ferroelectric Behavior in Ferroelectric/Field-Induced Ferroelectric Bilayer Doped-HfO_2 Capacitors** Joon Young Kang[1,2], Han Sol Park[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-009	**Ferroelectric Property of Wurtzite AlScN/AlN/AlScN Multilayers** Dong Jae Kim[1,2] and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-010	**Enhancing Ferroelectric Properties of Zr-Doped HfO_2 Thin Films Using the Bi-Layer Bottom Electrode Structures** Han Sol Park[1,2], Joong Chan Shin[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University

TP-011	**Memory Window Improvement in Ferroelectric Thin-Film Transistors with Fluorite/Wurtzite Bilayers Grown by Atomic Layer Deposition** Hyun Woo Nam[1,2], Dong Jae Kim[1,2], Kyung Do Kim[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-012	**Improved Interfacial Properties of TiO_2 Thin Films on Ru Electrodes through Stepwise Optimization of Ozone-Assisted ALD** Haewon Song[1,2], Tae Kyun Kim[1,2], Heewon Paik[1,2], Jonghoon Shin[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-013	**Effect of GeO_2 Interfacial Layer on Low-Temperature Crystallization of $SrTiO_3$ Thin Film Grown via Atomic Layer Deposition** Heewon Paik[1,2], Tae Kyun Kim[1,2], Jonghoon Shin[1,2], Haewon Song[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-014	**$BaTiO_3$ Thin Films Grown by Atomic Layer Deposition Using a Seed-Layer Process** Chansoo Kwak[1,2], Heewon Paik[1,2], Sunoo Kim[3], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University, [3]Next-Generation Semiconductor Convergence and Open Sharing System, Seoul National University
TP-015	**Surmounting the Thermionic Restriction via All-ALD-Fabricated Metal-Oxide Negative Capacitance Field-Effect Transistor** Chan Lee[1], Minho Jegal[1], and Youn Sang Kim[1,2] [1]Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, [2]Advanced Institute of Convergence Technology

TP-016	**ZnO 채널의 결정 구조에 따른 박막 트랜지스터의 중이온 내방사선 특성 향상 연구** 이용수[1], 이해원[2], 김수진[1], 박정민[1], 이병훈[2], 강창구[1] [1]한국원자력연구원 첨단방사선연구소, [2]포항공과대학교 전자전기공학과 반도체기술융합센터
TP-017	**Ruthenium Metallic Compounds for Advanced Interconnect Materials** Gyungho Maeng[1], Subeen Lim[1], Bonggeun Shong[2], and Yeonghun Lee[1] [1]Department of Electronics Engineering, Incheon National University, [2]Department of Chemical Engineering, Hongik University
TP-018	**Linear Memristor Synapse with Mechanism Elucidation for Online Training in Spiking Neural Networks** Yu Lin Zou[1,2], Sunwoo Cheong[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-019	**Sub-Oxide-Free and Amorphous HfO_2 Films Deposited by ALD Using Liquid Precursor & H_2O/O_3 Hybrid Reactants for HKMG Applications** Juyong Lee, Jaejin Han, Hanbee Lee, Wooyoung Park, and Hunhyeong Lim Orbital Development Team, WONIK IPS Co., Ltd.
TP-020	**A Study on Ti Thin Film Deposition by the Cyclic Pulse Chemical Vapor Deposition Method to Improve the $TiSi_x$ Resistance of Via Contact** Ildong Cho, Min Kyu Bang, and Jinho Jeon Department of Semiconductorand Display, College of Semiconductor, Gachon University
TP-021	**Selenium-Assisted Growth of $NbSe_2$/Bilayer Nb-Doped WSe_2 Heterostructures with Enhanced Performance** Seungmin Baek and Woo Jong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-022	**Dynamics of Polarization Switching and Loss in Antiferroelectric/Dielectric Tunnel-Switch Bilayer** Seungheon Choi[1,2], Han Sol Park[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University

TP-023	**Artificial Retina based on 2D Schottky Solar Cells for Bioinspired Visual Signal Processing** Jinwoo Hong and Woo Jong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-024	**Ag-Ion Intercalation-Enhanced h-BN/$MoTe_2$ Nanochannel Memristors for Neuromorphic Applications** Yun Jae Baek and Woo Jong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-025	**Energy-Efficient Neuromorphic Learning Using Gold-Nanoparticle Floating-Gate Memristor Array** Sa Been Hong and Woo Jong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-026	**극저온 광개시성 CVD 기반 불소계 고분자 합성 기초기술 및 반도체 응용 가능성 연구** 박태원[1], 김형준[1], 한상혁[1], 김건우[2], 송상호[3], 김민주[1,2] [1]단국대학교 공과대학 전자전기공학과, [2]단국대학교 공과대학 융합반도체공학과, [3]단국대학교 공과대학 고분자공학과
TP-027	**Enhanced Interface Quality of ZrO_2/MoN-Based Capacitors with an Ultra-Thin Nb2O5 Buffer Layer for DRAM Applications** Yeon-Ji Jeon and Ji-Hoon Ahn Department of Materials Science & Chemical Engineering, Hanyang University
TP-028	**Memory Window Expansion and Synaptic Behavior Enhancement in IGZO MFMIS FeTFTs by HfAlOx Interlayer Engineering** Hyeong Seok Choi, Dong Hee Han, Hyun Woo Jeong, Jae Joon Kim, Dong In Han, Joonyong Kim, Suyong Lee, and Min Hyuk Park Department of Material Science and Engineering, Seoul National University

TP-029	**BEOL-Compatible Ferroelectric Activation by Wake-Up in As-Deposited $Hf_{1-x}Zr_xO_2/MoO_x$ Films** 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 Department of Material Science and Engineering, Seoul National University
TP-030	**MoS_2 결함 패시베이션을 위한 초박형 공중합 필름 개발** 유지호[1], 원종서[1], 이재원[1], 한상혁[2], 박태원[2], 김형준[2], 김건우[2], 홍웅기[1,2,3], 김민주[1,2,3] [1]단국대학교 공과대학 파운드리공학과, [2]단국대학교 공과대학 전자전기공학부, [3]단국대학교 공과대학 융합반도체공학과
TP-031	**Room Temperature Ferromagnetism of Magnetically Intercalated 2D Transition Metal Dichalcogenides** Joonmin Woo and Woojong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-032	**불화갈륨 전구체를 사용하여 불소화한 용액 공정 기반 IGZO 박막 트랜지스터의 전기적 특성** 박설아[1], 정태희[2], 문국철[2], 김용상[1,2] [1]성균관대학교 첨단디스플레이공학과, [2]성균관대학교 전자전기컴퓨터공학과
TP-033	**IGZO:Y TFT의 Yttrium 도핑 농도에 따른 히스테리시스 특성** 채수현[1], 문국철[2], 김용상[1,2] [1]성균관대학교 첨단디스플레이공학과, [2]성균관대학교 전자전기컴퓨터공학과
TP-034	**용매에 UV 처리를 이용한 용액 공정 기반 IGZO 박막 내 산소 공공 조절을 통한 신뢰성 개선** 소인영[1], 정기용[2,3], 문국철[4], 김용상[1,2,4] [1]성균관대학교 첨단디스플레이공학과, [2]성균관대학교 반도체디스플레이공학부, [3]삼성전자 공과대학교, [4]성균관대학교 전자전기컴퓨터공학과
TP-035	**Interface Engineering of MFIS Capacitor with Plasma-Enhanced ALD Hafnium Nitride for FeFET Applications** 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 Department of Material Science and Engineering, Seoul National University

TP-036	**Oxygen Vacancy Control via Ar Plasma Treatment for Remnant Polarization Enhancement of (Hf, Zr)O_2 Antiferroelectric Capacitors** Heejin Hong, Hyun Woo Jeong, Jeonggwang Lee, Jaewook Lee, Ju Yong Park, Hyojun Choi, Dong In Han, Kwan Hyun Park, and Min Hyuk Park Department of Material Science and Engineering, Seoul National University
TP-037	**고투과 및 고내열성 ZnO/Cu/SiO_2 기반 다층 박막 투명히터의 제작 및 특성 분석** 강건우, 조재정, 이찬경, 최두호 가천대학교 반도체공학과
TP-038	**Contact Engineering in In_2O_3 Thin Film Transistors Guided by Contact-Dominated Low Frequency Measurement** Minsun Kim[1,2], Donghee Kim[1,2], Seunghwan Kim[1,2], Jong-Ho Lee[1,2], and Gyuweon Jung[1,2,3] [1]Department of Electrical and Computer Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University, [3]School of Transdisciplinary Innovations, Seoul National University
TP-039	**유전율 구배형 게이트 절연막을 통한 SiC MOSFET 신뢰성 향상** 이승민, 송현교 반암 주식회사
TP-040	**High-Reliable 1T-1C Cell with Mold Structures Fabricated by Channel-Last Processing of Amorphous Oxide Semiconductor Thin-Film Transistors** Subin Moon[1,2], Jinheon Choi[1,2], Sahngik Aaron Mun[1,2], Juneseong Choi[1,2], Jaewon Ham[1,2], Hyungjeung Kim[1,2], Shihyun Kim[1,2], Jeongyoon Lee[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-041	**Impact of HfO_2 Back-Channel Resistive Switching Layer in Scaled IGZO Thin Film Transistors for Parallel 1T-1R Integration** Hyun Young Kim[1,2] and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University

TP-042	**Controlled Deposition of HfO_2 Thin Films via Combined Remote and Direct Plasma ALD for Charge-Trap Applications** Byung Wook Kim, Ji Won Kim, In Kook Hwang, Young Woon Jang, Hyeon Wu Nam, Min Kyun Kang, and Chang Bun Yoon Department of IT·Semiconductor Convergence Engineering, Tech University of Korea
TP-043	**Variations in the Ferroelectric Properties of $Hf_{0.5}Zr_{0.5}O_2$ Depending on the Hafnium Nitride Electrode Conditions** Seong Jae Shin[1,2], Min Jong Kim[1,2,3], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University, [3]R&D Center, SK Hynix Semiconductor
TP-044	**Wake-Up-Free Ferroelectricity in Ultrathin (5 nm) $Hf_{0.5}Zr_{0.5}O_2$ With Molybdenum Bottom Electrode** Seong Jae Shin[1,2] and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-045	**Memory Window Enhancement with Channel Length Scaling of IGZO Channel-Based Al-Doped HfO_2 Ferroelectric Thin Film Transistors** Ho Jin Kim[1,2] and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-046	**Atomic Layer Deposition of MoO_2 Using Noble Molybdenum Precursor for High-k Rutile TiO_2 in DRAM Applications** Yoonchul Shin, Yeon-Ji Jeon, Ji Hwan Kim, Chan-Bin Hong, Chang Mo Yoon, and Ji-Hoon Ahn Department of Materials Science and Chemical Engineering, Hanyang University
TP-047	**Impact of Channel Thickness and Composition on the Performance of Indium Tin Oxide Thin Film Transistors** Jae Joon Kim, Hyeong Seok Choi, Dong Hee Han, Hyun Woo Jeong, Joonyong Kim, Suyong Lee, and Min Hyuk Park Department of Material Science and Engineering, Seoul National University

TP-048	**Demonstration of Low Temperature Processed P-Type Tellurium Thin Film Transistors for Next-Generation CMOS Application** Suyong Lee, Dong Hee Han, Hyun Woo Jeong, Hyeong Seok Choi, Jaejoon Kim, Joonyong Kim, and Min Hyuk Park Department of Material Science and Engineering, Seoul National University
TP-049	**Atomic Layer Deposition of MoC_x as a Next-Generation Electrode Using a Liquid Precursor** Eun-Su Chung[1], Min-Ji Ha[1], Na-Gyeong Kang[1], Jin-Sik Kim[2], Myeong-Ho Kim[2], Yun-Gyeong Yi[2], and Ji-Hoon Ahn[1] [1]Hanyang University, [2]UP Chemical
TP-050	**Low-Temperature Heterogeneous Integration of Complementary Thin-Film Transistors for Advanced Micro-LED Backplanes** Junho Lee, Joo-On Oh, Yuseong Lee, and Sunkook Kim Sungkyunkwan University
TP-051	**Low-Temperature Plasma Treatment for High-Performance p-Type Tellurium Field-Effect Transistors** Minhyuk Jeon[1], Uisik Jeong[2], and Sunkook Kim[1] [1]School of Advanced Materials and Science Engineering, Sungkyunkwan University, [2]DRAM Process Architecture Team, Samsung Electronics Co., Ltd.
TP-052	**Mechanistic Transformation Pathway to Continuous and Impurity-Free Tellurium Films** Seung Ho Ryu[1,2], Seungsu Kim[1,2], Jihoon Jeon[1,2], Gwang Min Park[1,2], and Seong Keun Kim[1,2] [1]Electronic and Hybrid Materials Research Center, KIST, [2]KU-KIST Graduate School of Converging Science and Technology, Korea University
TP-053	**Top-Gate Stack Seed Layer Engineering for Stable Operation of MoS_2 Transistors** Dahyeon Kim and Myungsoo Kim Department of Electrical Engineering, UNIST

TP-054	**Process Integration of Al:IZTO Oxide Semiconductor Channel into NanoSheet Gate-All-Around Architecture** Bada Kim[1,2], Chihun Sung[2], Chaerin Yu[1,2], Jeho Na[2], Junghwan Kim[1], and Sung Haeng Cho[2] [1]UNIST, [2]ETRI
TP-055	**Theoretical Analysis on the Effect of HBr in TiN ALD Process** Seungmin Noh[1], Jae Min Jang[1], Kyeong Hyeon Choi[2], Se Eun Kim[2], Sang Woon Lee[2], and Bonggeun Shong[1] [1]Hongik University, [2]Ajou University
TP-056	**Oxidation Behavior of Pt-Ru Bimetallic Thin Films by Atomic Layer Deposition** Young Wan Kim[1], Jaehyeong Kim[1], Yu Ri Han[1], and Woo Jae Lee[2] [1]Department of Nanotechnology Engineering, Pukyong National University, [2]Division of Nanotechnology and Semiconductor Engineering, Pukyong National University
TP-057	**Theoretical Analysis on the ALD Surface Chemistry of Elemental Antimony** Seoyun Heo and Bonggeun Shong Hongik University
TP-058	**Computational Study on ALD Surface Chemistry of III-V Compounds** Ho Hyeon Kim and Bonggeun Shong Hongik University
TP-059	**Computational Study on Surface Chemistry during Atomic Layer Deposition of GeSbTe** Il Hyeok Seo and Bonggeun Shong Hongik University
TP-060	**P-Type Doping in MoS_2 Field-Effect Transistors via Radical Encapsulation** Jaewon Lee, Mingyu Shin, Jiho Yu, Junyeon Hwang, Jungyoon Hur, Jongseo Won, Minju Kim, and Woonggi Hong Department of Foundry Engineering, Dankook University

TP-061	**Atomic Layer Growth of Pt films Using Dimethyl(N,N-Dimethyl-3-Butene-1-Amine-N)Platinum and O_3** Minseok Kim[1,2], Taeseok Kim[1,2], Jihoon Jeon[1,2], Gwang Min Park[1,2], Sung-Chul Kim[3], Sung Ok Won[3], Ryosuke Harada[4], and Seong Keun Kim[1,2] [1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Electronic and Hybrid Materials Resea
TP-062	**Vertically Integrated Floating-Gate Memristor Enabling Compact and Energy-Efficient Two-Terminal Neuromorphic Architectures** So Hyeon Park and Woo Jong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-063	**Investigation of Dielectric Properties and Interface on the 2D Channel Thin-Film Transistor Performance** Soeun Ahn[1,2], Seongmo Kang[3], Minchul Kim[3], Yonghun Kim[3], Seokwoo Jeon[2], and Seung-heon Chris Baek[1] [1]Center for Semiconductor Technology, KIST, [2]Department of Materials Science and Engineering, Korea University, [3]Department of Energy and Environment Materials, KIMS
TP-064	**Designing Cryo-Compatible Ferroelectric Hafnia Devices through Electrode and Interface Control** Chaehyeong Ha[1], Jeongmin Han[2], Jeonghwan Han[2], Taehwan Moon[3], and Yoon Jang Chung[1] [1]Department of Chemical and Biological Engineering, Korea University, [2]Department of Materials Science and Engineering, Seoul National University of Science & Technology, [3]Department of Intelligence Semiconductor Engineering, Ajou University
TP-065	**A HZO/ZnO-Based Ferroelectric Synaptic Transistor for Nonvolatile Neuromorphic Systems** Yoonseon An[1] and Woo Jong Yu[2] [1]Department of Semiconductor Convergence Engineering, Sungkyunkwan University, [2]Department of Electrical and Computer Engineering, Sungkyunkwan University

TP-066	**Non-Volatile Memory Characteristics and Artificial Synaptic Behaviors in Two-Dimensional Materials via Defect Engineering** Huiyeong Lee[1,2], Hyeonmin Bong[1,2], Jinsik Choe[1], Shinyoung Moon[1,2], M. -H. Cho[2], and Sungjin Park[1] [1]Icheon Branch, KICET, [2]Department of Physics, Yonsei University
TP-067	**Low-Resistivity TiN Thin Film Grown by Hydrazine-Enhanced Thermal ALD at Temperature Below 430°C** Kihye Kim, Ilhyeong Cho, Yooseong Kim, and Dongwon Seo Hanwha Semitech, Process Development Team
TP-068	**Ferroelectric $HfZrO_2$ and $MoTe_2$ Heterostructures for Synaptic Memristor Applications** Yong Ha Shin and Woo Jong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-069	**Positional Doping in Al:HfO2 Enables Strain-Engineered Texture and 1.2 V Operating Ferroelectricity at 7 nm** Dong In Han[1], Jaewook Lee[1], Hyojun Choi[1], Ju Yong Park[1], Hyun Woo Jeong[1], Younghwan Lee[2], and Min Hyuk Park[1] [1]Department of Material Science and Engineering, Seoul National University, [2]School of Materials Science and Engineering, Chonnam National University
TP-070	**Ru Area-Selective Deposition by Aldehyde Inhibitor on SiO_2/Si_3N_4 Patterns** 이병찬[1], Chi Thang Nguyen[1], Ngoc Le Trinh[1], 민경민[1], 조은형[2], 이한보람[1] [1]Department of Materials Science and Engineering, Incheon National University, [2]2D Device TU, Samsung Advanced Institute of Technology
TP-071	**Improved Ferroelectricity and Tunneling Electroresistance in Metal-Ferroelectric-Insulator-Ferroelectric-Metal Structure Ferroelectric Tunnel Junctions via Nb_2O_5 Interlayer Insertion** Hyungseok Lee, Hyo-Bae Kim, Gunho Kim, Hye-Won Cho, and Ji-Hoon Ahn Department of Materials Science and Chemical Engineering, Hanyang University

TP-072	**Surface Oxidation-Dependent Growth Mechanism of ZnO Thin Films in Ozone-Diethylzinc ALD** Junhee Han and Yoon Jang Chung Department of Chemical and Biological Engineering, Korea University
TP-073	**Area-Selective Atomic Layer Deposition of Ge-Sb-Te for Vertical-Recessed Phase-Change Memory** Sanghyeon Kim, Heejae Kim, Myung Jun Yu, Chaeyeon Jeong, Kyungwhan Koh, and Chanyoung Yoo Department of Materials Science and Engineering, Hongik University
TP-074	**Atomic Layer Deposition of Ge-rich GeSe for Selector-Only Memory** Sungjin Kim[1,2], Jeong Woo Jeon[1,2], Wonho Choi[1,2], Byongwoo Park[1,2], Gwangsik Jeon[1,2], Sangmin Jeon[1,2], Junwoo Park[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-075	**ALD-Grown VO_2 Thin Films for Selector-Only Memory** Siyeon Song and Hongsub Lee Department of Materials Science and Engineering, Kyung Hee University
TP-076	**Atomic Layer Deposition and Doping Strategies for High-Performance Arsenic-Free Ovonic Threshold Switch Devices** Byongwoo Park[1,2], Jeong Woo Jeon[1,2], Wonho Choi[1,2], Gwangsik Jeon[1,2], Sangmin Jeon[1,2], Sungjin Kim[1,2], Junwoo Park[1,2], and Cheol Seong Hwang[1,2] [1]Department of Materials Science and Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-077	**ZnO Thin Films with Stable, Tunable Properties Deposited by Atomic Layer Deposition Using Et_2Zn:$NEtMe_2$ Precursor** Dokyun Kim[1], Ye Won Shin[1], and Woo Jae Lee[2] [1]Department of Nanotechnology Engineering, Pukyong National University, [2]Division of Nanotechnology and Semiconductor Engineering, Pukyong National University

TP-078	**새로운 플라즈마 소스를 활용한 실리콘 질화막 증착 연구** 진광선, 신기원, 김유덕, 조승희, 왕야즈, 이태완, 노원태, 김훈 원익아이피에스 반도체연구소 선행기술개발본부 소재개발팀
TP-079	**High Step Coverage Barrier/Seed Cu Metallization for AR 〉10:1 TSV Using Twin Magnet Cathode Sputtering** Kazuki Hattori[1], Hyo Jun Bae[2], Tae Jung Kwon[2], and Byeong Hwa Jeong[2] [1]ULVAC Japan Co. Ltd , [2]ULVAC Korea Co. Ltd
TP-080	**Dynamic Thermal Control via Intensive Pulsed Light in ALD: Interfacial Layer Suppression & Crystallization of ZrO_2/TiN Stacked Capacitors** Jongseo Kim[1,2], Jihoon Jeon[1,2], Seungwan Ye[1,2], and Seong Keun Kim[1,2] [1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Electronic and Hybrid Materials Research Center, KIST
TP-081	**Area-Selective Atomic Layer Deposition of ZnO Using Acetylacetone as a Small Molecule Inhibitor** Ye lim Lee and Yoon Jang Chung Department of Chemical and Biological Engineering, Korea University
TP-082	**Influence of Gallium Cycling on the Electrical Performance of In-Ga-O Thin-film Transistors Fabricated by Thermal Atomic Layer Deposition** Kang Choi, Dong-Geun Kim, Su-Jin Sim, and Ji-Hoon Ahn Department of Materials Science and Chemical Engineering, Hanyang University
TP-083	**Characterization of Ultra Low-k Amorphous Boron Nitride Deposited by Using PEALD** Chang Dong Lee, Dong Hak Kim, Ji Hyeon Kim, Gang Ill Seo, So Young Park, So Young Park, and Young Chul Choi WONIK IPS Co., Ltd.
TP-084	**DC Magnetron Sputtered Ta/TaN Barriers and Seed-Cu Integration for Enhanced Metallization in BEOL Interconnects** Hyo Jun Bae, In Sik Joo, Tae Jung Kwon, So Hyeon Lee, and Byeong Hwa Jeong ULVAC Korea Co., Ltd.

TP-085	**Optical Modulation of Charge Transport and Negative Differential Transconductance in Hybrid Heterojunction Transistor for Reconfigurable Multi-Valued Logic** Jong Chan Shin[1], Serang Jung[1], and Youn Sang Kim[1,2] [1]Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, [2]Advanced Institute of Convergence Technology
TP-086	**Development of ON STACK Warpage Control Technique for Enhanced Integration Density in 3D NAND Flash Memory Device** Taehun Lim, Gunhee Jo, Chanyeop Kim, Gangjin Cheon, and Jaegab Lim WONIK IPS Co., Ltd.
TP-087	**Machine Learning-Guided Optimization of He Plasma-Assisted ALD for In_2O_3 Thin-Film Transistors** Sung Hoon Lee[1,2] and Youn Sang Kim[1,2] [1]Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, [2]Advanced Institute of Convergence Technology, [3]Samsung Institute of Technology, Samsung Electronics Co., Ltd.
TP-088	**All-Oxide Double-Peak Anti-Ambipolar Transistors for Quaternary Logic Inverter through Composition Modulation** Jun Ah Jeon[1], Jong Chan Shin[1], Jiho Lee[1], and Youn Sang Kim[1,2] [1]Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, [2]Advanced Institute of Convergence Technology
TP-089	**Accelerated Compositional Optimization of InZnHfO Thin-Film Transistors Using Machine Learning** Jiho Lee[1], Serang Jung[1], Minho Jekal[1], and Youn Sang Kim[1,2] [1]Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, [2]Advanced Institute of Convergence Technology
TP-090	**Non-Filamentary Self-Rectifying Resistive Switching in Sb_2Te_3-Based Chalcogenide RRAM** Sang Hyun Park and Yoon Jang Chung Department of Chemical and Biological Engineering, Korea University

TP-091	**차세대 Vertical NAND 패터닝을 위한 SiON 하드마스크 공정** Soo Namgoong, Woongbin Yim, Sung Ryong Moon, Sangmin Lee, and Young Chul Choi Department of CVD Development Team, WONIK IPS Co., Ltd.
TP-092	**Field-Effect Mobility Boosting via Ar-Plasma Post-Treated TiO_{2-x} Interlayer for Specific Contact Resistivity Reduction in In_2O_3 Transistors** Seungsu Kim[1,2], Taikyu Kim[2], Seung Ho Ryu[1,2], Bo Kyoung Kim[2], Jongseo Kim[1,2], Seungwan Ye[1,2], and Seong Keun Kim[1,2] [1]KU-KIST Graduate School of Converging Science and Technology, Korea University, [2]Electronic and Hybrid Materials Research Center, KIST
TP-093	**Seed-Layer-Mediated Nucleation for Enhanced Atomic Layer Deposition of Platinum Thin Films** Yoohyeon Jung, Dahui Jeon, and In-Hwan Baek Department of Chemical Engineering and Program in Semiconductor Convergence, Inha University
TP-094	**In-Cycle Plasma-Assisted Atomic Layer Deposition for High-Performance Oxide Thin-Film Transistors** Taeyun Kim[1,3], Serang Jung[1], Minho Jekal[1], and Youn Sang Kim[1,2] [1]Department of Chemical and Biological Engineering, College of Engineering, Seoul National University, [2]Advanced Institute of Convergence Technology, [3]Samsung Institute of Technology, Samsung Electronics Co., Ltd.
TP-095	**Multifunctional Hybrid Superlattices: Achieving Ultra-High Conductivity, Optical Transparency, and Superior Gas-Barrier Performance in Flexible Thin Films** Quang Khanh Nguyen[1], Soojin Park[2], Junseong Hur[2], and Myung Mo Sung[1] [1]Department of Chemistry, Hanyang University, [2]Department of Semiconductor Engineering, Hanyang University
TP-096	**Tailoring Mechanical Properties and Surface Energy of Fluorinated Copolymer Thin Films via iCVD for Interfacial Stabilization of Zinc Metal Anodes** 오명석[1], 이진홍[2], 정규남[2], 장봉준[1], 임성갑[3] [1]한국화학연구원, [2]한국에너지기술원, [3]KAIST 생명화학공학과

TP-097	**Morphable and Sustainable Thin-Film Electronics Enabled by Shape-Reconfigurable and Recyclable Covalent Adaptable Network Substrates** Jihun Noh[1], Jae Hyuk Lee[2], Jaehoon Lee[3,4], Seongmo Kang[3,4], Chae Bin Kim[2,5,6], and Boseok Kang[1,3,4,7] [1]Department of Semiconductor Convergence Engineering, Sungkyunkwan University, [2]School of Chemical Engineering, Pusan National University, [3]SKKU Advanced Institute of Nano Technology, Sungkyunkwan University, [4]Department of Nano Science and Technology, Sungkyunkwan University, [5]Department of Polymer Science and Engineering, Pusan National University, [6]Research Institute for Convergence of Biomedical Science and Technology, Pusan National University Yangsan Hospital, [7]Department of Nano Engineering, Sungkyunkwan University
TP-098	**Indium 삽입층을 통한 IGZO 박막 트랜지스터의 소스/드레인 접촉 특성 향상 및 열적 안정성 확보** 이호석[1], 김희태[1], 김희수[1], 조성행[2], 조병진[1] [1]한국과학기술원 전기 및 전자공학부, [2]한국전자통신연구원 플렉시블 전자소자연구실
TP-099	**Enhanced Electrical Stability of Al_2O_3/ZnO Thin-Film Transistors through a Ga_2O_3 Interfacial Layer** AhYoung Kim[1], Hyunmin Dang[1], Taehyun Yoon[1], Minje Lee[1], Jiyea Nam[1], and Hyungtak Seo[1,2] [1]Department of Energy Systems Research, Ajou University, [2]Department of Materials Science and Engineering, Ajou University
TP-100	**Discrete Feeding Method(DFM)을 이용한 HfO_2/Al_2O_3 구조의 다이폴 제어 및 신뢰성 향상 연구** 박수연[1], 서형탁[1,2] [1]아주대학교 에너지시스템학과, [2]아주대학교 첨단신소재공학과
TP-101	**O_2 In-Situ 어닐 기반 계면 결함 개선: 히스테리시스-프리 IAZO TTFT for PIM** 윤태현[1], 당현민[1], 김아영[1], 남지예[1], 서형탁[1,2] [1]아주대학교 에너지시스템학과, [2]아주대학교 첨단신소재공학과
TP-102	**Crystallinity-Driven Enhancement of Charge-to-Spin Conversion in Sb_2Te_3 Topological Insulator Films** Woo Hyun Park and Yoon Jang Chung Department of Chemical and Biological Engineering, Korea University

TP-103	**Exploration of Metal Doped HfO_2 Ferroelectric Films via PEALD for Negative-Capacitance Field-Effect Transistors** Hye Won Lee[1,2], Young Bin Yoon[1], So Jeong Yun[1,2], and Jung Wook Lim[1,2] [1]Next-Generation Semiconductor Device Research Section, ETRI, [2]Department of Semiconductor and Advanced Device Engineering, University of Science and Technology
TP-104	**Properties of Strontium Oxide Films Deposited by Atomic Layer Deposition for Strontium Compounds** Ji Hwan Kim and Ji-Hoon Ahn Department of Materials Science and Chemical Engineering, Hanyang University
TP-105	**Research on Phase Transition via Ar Plamsa and UV/Ozone Treatment** Joon Soo Byeon, Ha Yeon Choi, Ju Yong Shin, Seung Ri Jeong, Jong Mun Park, Shivam Kumar, Gauatam, and Hi-DeokLee Department of Electronics Engineering, Chungnam National University
TP-106	**산소 유량 제어를 통한 Li-Doped NiO 박막의 구조적·전기적·광학적 특성 변화** 정혜린, 김지형, 김해찬, 윤승복, 홍정수 가천대학교 IT융합대학 전기공학과
TP-107	**Deposition of Ru-Doped ZnO Thin Films by ZnO/Ru Super-Cycle Atomic Layer Deposition** Jaewoo Ku, YongJu Kim, Chanmin Park, and Minsu Kim Department of Advanced Materials Science and Engineering, Kyonggi University
TP-108	**Improved Switching Uniformity of HfO_2-Based RRAM through Controlled TiN Deposition and Interfacial TiO_xN_y Engineering** Seokho Cho, Juan Hong, Soonbin Kwon, and Woongkyu Lee Department of Materials Science and Engineering, Soongsil University
TP-109	**Formation and Electrical Properties of High-k $SrTiO_3$ Thin Films via ALD Using $Sr(dmts)(hfac)_2$ and $(CpMe_5)Ti(OMe)_3$ Precursors** Sangyeon Jeong, Jaejun Lee, Juhyeong Kim, and Woongkyu Lee Department of Materials Science and Engineering, Soongsil University

TP-110	**Improving Electrical Properties of Indium Oxide Thin-Film Transistors through Niobium Ion Doping** Su-Jin Sim, Dong Geun Kim, Kang Choi, and Ji-Hoon Ahn Department of Materials Science and Chemical Engineering, Hanyang University
TP-111	**Bottom-Electrode Engineering for Enhanced Performance of Morphotropic Phase Boundary $Hf_{1-x}Zr_xO_2$ DRAM Capacitors** Donghyeon Bae[1] and Hyungtak Seo[1,2] [1]Department of Energy Systems Research, Ajou University, [2]Department of Materials Science and Engineering, Ajou University
TP-112	**Abrupt Switching and Ultralow-Leakage Operation in an IGZO FET Integrated with a Filamentary Threshold Switch** Anupom Devnath[1,2], Seungwoo Moon[1,2], Junseong Bae[1,2], Batyrbek Alimkhanuly[1,2], Gisung Lee[1,2], Minwoo Lee[1,2], Jinsu Choi[1,2], Taemin Sim[1,2], Yongjun Kim[1,2], and Seunghyun Lee[1,2] [1]Department of Electronic Engineering, Kyung Hee University, [2]Department of Semiconductor Engineering, Kyung Hee University
TP-113	**Achieving p-Type SnO_x via Sn(IV)-Based Thermal ALD: Oxygen-Deficient Growth and Mid-Film Al_2O_3 Interlayers** Suhyeon Park, Huiseung Kim, Dawon Lee, Jiseop Byeon, Jeongin Seo, and Roy Byung Kyu Chung Department of Advanced Materials Science and Engineering, Kyungpook National University
TP-114	**계면층 삽입을 통한 산화알루미늄-산화물반도체 계면 품질과 산화물 InGaZnO 박막 트랜지스터의 성능 조절** 김건하, 이진영, 정재욱 충북대학교 정보통신공학부
TP-115	**Area-Selective Deposition of SnS_2 Using Self-Assembled Monolayer as Bottom-Up Patterning** Dong Geun Kim, Kang Choi, Su-Jin Sim, and Ji-Hoon Ahn Department of Materials Science and Chemical Engineering, Hanyang University

TP-116	**Tuning Properties of Novel Amorphous p-Type Oxide Semiconductor via Thermal Evaporation Rate** Seongmo Kang[1], Jaehoon Lee[1], Jihun Noh[2], and Boseok Kang[1,2,3] [1]SKKU Advanced Institute of Nanotechnology (SAINT) and Department of Nano Science and Technology, Sungkyunkwan University, [2]Department of Semiconductor Convergence Engineering, Sungkyunkwan University, [3]Department of Nano Engineering, Sungkyunkwan University
TP-117	**Multilevel Resistive Switching in Perovskite Memristors Enabled by Ion Gel Layers** Seong Min Lee, Jung-Ju Bae, and Min Sup Choi Department of Materials Science & Engineering, Chungnam National University
TP-118	**누설전류 억제를 위한 원자층 증착 공정 기반 Al_2O_3/HfO_2 Nanolaminate 유전체 박막 트랜지스터의 구현** 김민성[1], 이세형[2], 김성재[1], 윤혜지[1], 지현정[1], 장형록[1], 이문석[1] [1]부산대학교 전기전자공학과, [2]부산대학교 반도체특성화대학사업단
TP-119	**Zero-Bias-Operated $Ti_3C_2T_x$ MXene/Lignin Composite Sensor for High-Sensitivity Chemiresistive Detection of CO_2 and NO_2** I Ketut Gary Devara and Jun Hong Park Department of Materials Engineering and Convergence Technology, Gyeongsang National University
TP-120	**Molecularly Triggered of Oxidized MXene Chemimemristor for Mimicking Biological Olfactory System** Windy Ayu Lestari and Jun Hong Park Department of Materials Engineering and Convergence Technology, Gyeongsang National University

2026-01-29(목), 10:00-19:00
(공식발표시간: 17:40-19:00)
ZONE2-2 (5층, 로비)

[TP] 포스터세션

D. Thin Film Process Technology 분과

TP-121	**Investigation of Double-Gate In_2O_3 TFTs** Kyusun Han[1] and Hongseok Oh[2] [1]Department of Intelligent Semiconductor, Soongsil University, [2]Department of Physics, Soongsil University
TP-122	**Schottky Barrier-Engineered Graphene Heterojunction Biosensor for Ultrasensitive DNA Detection** Sung Hyun Kim and Woo Jong Yu Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-123	**van der Waals Heterostructure-Integrated Fe-MST Memory Leveraging Ferroelectric Phase-Transition Behavior** Dokyoeng Yun and WooJong Yu Sungkyunkwan University
TP-124	**Study of Interfacial Property between Electrode and Superconducting NbN Thin Film at Room Temperature and Superconducting Transition Temperature** Soyun Woo[1,2], Hyesoo Jin[1,3], Byeong-Kwon Ju[2], and Donghee Park[1] [1]KIST, [2]School of Electrical Engineering, Korea University, [3]Department of Materials Science and Engineering, Seoul National University
TP-125	**1k Active-Matrix Thermal Sensor Array Using IGZO Thin Film Transistors** Hyunsoo Kim[1], Jaegoo Lee[2], and Hongseok Oh[1] [1]Department of Intelligent Semiconductor, Soongsil University, [2]Department of Physics, Soongsil University

TP-126	**Effect of Precursor Molecular Structure on the Growth Behavior and Properties of SiNx Films via Very High-Frequency Atomic Layer Deposition** Yea-Ji Kim[1], Kim-Hue Thi Dinh[1], Young-Jin Lim[1], Min-Jeong Rhee[1], Nhat-Le Bui Dang[1], Ngoc Le Trinh[2], Bonwook Gu[2], Youngho Kang[2], Jae Hack Jeong[3], Han-Bo-Ram Lee[2], and Il-Kwon Oh[1,4] [1]School of Intelligence Semiconductor Engineering, Ajou University, [2]School of Materials Science and Engineering, Incheon National University, [3]CN1 Co., Ltd., [4]School of Electric and Computer Engineering, Ajou University
TP-127	**Discrete Feeding in Atomic Layer Modulation of Dy-Doped HfO_2 Films** Bui Huu Phi[1], Byung-Ha Kwak[1], and Il-Kwon Oh[1,2] [1]Department of Intelligence Semiconductor Engineering, Ajou University, [2]Department of Electrical and Computer Engineering, Ajou University
TP-128	**ZnO/Te 반양극성 스위치를 이용한 Standard Ternary Inverter 연구** 신현석[1,3], 최준혁[1,4], 김민재[2], 전재현[2], 이병훈[1,2,3,4] [1]Center for Semiconductor Technology Convergence, POSTECH, [2]National Institute for Nanomaterials Technology, POSTECH, [3]Department of Electrical Engineering, POSTECH, [4]Graduate school of semiconductor technology, POSTECH
TP-129	**저온/고압 수소 열처리 공정을 활용한 IGZO/Te CFET 성능 개선 연구** 최준혁[1,3], 신현석[1,3], 김기영[1,2], 이병훈[1,2,3] [1]Center for Semiconductor Technology Convergence, POSTECH, [2]Department of Electrical Engineering, POSTECH, [3]Graduate school of semiconductor technology, POSTECH
TP-130	**SiO_2 Interlayer와 고압수소 열처리를 활용한 Te TFT 소자의 Hysteresis 개선에 관한 연구** 조중훈[1], 김기영[2,3], 이병훈[1,2,3] [1]Graduate School of Semiconductor Technology, POSTECH, [2]Department of Electrical Engineering, POSTECH, [3]Center for Semiconductor Technology Convergence, POSTECH

TP-131	**Multimode Operation of Light-Gated Transistors based on Millimeter-Scale Transition-Metal Dichalcogenide Grown by Chemical Vapor Deposition** Wonbeom Kim[1], Somnath S. Kundale[3], Hyeongtae Kim[1], Su-Yeon Cho[1], Mi Ji Kwon[1], Soobin Shim[1], and Jun Hong Park[1,2] [1]Department of Materials Engineering and Convergence Technology, Gyeongsang National University, [2]School of Materials Science and Engineering, Gyeongsang National University, [3]Research Institute for Green Energy Convergence Technology, Gyeongsang National University
TP-132	**열 안정화 Cp-Hf 전구체를 이용한 HfO2 박막의 ALD 증착 및 전기적 특성 평가: H_2O와 O_3산화제의 비교 연구** 정현우[1,2], 김형민[1], 정재학[1], 허성우[2], 이희철[2] [1]씨엔원, [2]한국공학대학교 신소재공학과
TP-133	**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)** Hojoon Jeong and Bo Sung Kim Division of Display and Semiconductor Physics, Korea University
TP-134	**Multi-Level Switching and Threshold Engineering in Te/Al:IZTO Heterojunction TFTs** Jung Hoon Han[1,2], MiRiNae Lee[3], Chahwan Yang[3], Byeong-Kwon Ju[2], and Sooji Nam[1,3] [1]Flexible Electronic Device Research Division, ETRI, [2]Department of Micro/Nano System, Korea University, [3]Semiconductor and Advanced Device Engineering, University of Science and Technology

TP-135	**Threshold Switching Behavior and Oxygen-Vacancy-Driven Mechanisms in Pure SiO_2-Based Selectors with Tunable V_{th}** Hye Rim Kim[1], Tae Jung Ha[2], Jeong Hwan Song[2], Su Yong Park[1], Jun Seok Moon[1], Min-Yeong Choi[3], Jae Hyeon Lee[4], Jeong Hwan Han[4], Byung Joon Choi[4], Jae Hyuck Jang[3,5], Soo Gil Kim[2], and Tae Joo Park[1] [1]Department of Materials Science and Chemical Engineering, Hanyang University, [2]SK hynix Inc., [3]AI enhanced Electron Microscopy Research Group, Korea Basic Science Institute, [4]Department of Materials Science and Engineering, Seoul National University of Science & Technology, [5]Graduate School of Analytical Science and Technology, Chungnam National University
TP-136	**Superconducting Transition Characteristics of NbN Films Applied to Nanowire Photon Detectors** Hyesoo Jin[1,2], Soyun Woo[1,3], Howon Jang[2], and Donghee Park[1] [1]Center for Quantum Technology, KIST, [2]Department of Materials Science and Engineering, Seoul National University, [3]School of Electrical Engineering, Korea University
TP-137	**Capacitance-Voltage Characteristics of PMMA-Passivated Solution-Processed IGZO TFTs** Chaeyeon Jeong, Ayeong Cho, and Jaewook Jeong School of Information and Communication Engineering, Chungbuk National University
TP-138	**Study on In-O Based Interfacial Layer as a Diffusion Barrier In-Te Alloy and W Electrode for Vertical Selector-Only Memory Applications** Beom Joo Kim[2,3], Myeong Hwan You[2], and Dae Hwan Kang[1,2] [1]Department of Semiconductor Engineering, POSTECH, [2]Graduate School of Semiconductor Technology, POSTECH, [3]Department of Materials Science and Engineering, Chonnam National University
TP-139	**높은 전자이동도를 가지는 N- 도핑 ALD SnO_2 전하수송층 형성 방법** 한재연[1], 김형민[1], 배다은[1], 이성민[1], 최재호[1], 이원종[2], 임종철[2], 정재학[1] [1]㈜씨엔원 기업부설연구소, [2]충남대학교 에너지과학기술대학원

TP-140	**Low-Temperature Solution-Processed Indium-Tungsten Oxide Thin-Film Transistor via Hybrid Microwave Annealing** Seong-Hwan Lim and Won-Ju Cho Department of Electronic Materials Engineering, Kwangwoon University
TP-141	**Enhanced Leakage Suppression and Interfacial Stability in ZrO_2-Based MIM Capacitor with In_2O_3 Electrodes for DRAM Applications** Hoonseok Son and Woojin Jeon Department of Materials Science and Engineering, Kyung Hee University
TP-142	**Ag/Al_2O_3/Ag Multilayer 기반의 FP UV Pass Filter 제작 및 Ag 두께에 따른 빛의 투과율 평가** 정한비, 김지형, 김해찬, 윤승복, 홍정수 가천대학교 전기공학과
TP-143	**Effect of H_2/N_2 Ratio on the Electrical and Structural Properties of Cobalt Films Prepared by Plasma-Enhanced Atomic Layer Deposition** Seungchae Lee[1], Hyunjin Lim[1], Yehbeen Im[1], Youngseo Na[2], Kangbaek Seo[2], Donguk Kim[2], Sangtae Park[1], Kanghyeok Lee[2], and Changhwan Choi[1,2] [1]Division of Materials Science & Engineering, Hanyang University, [2]Department of Semiconductor Engineering, Hanyang University
TP-144	**Modulating Synaptic Plasticity of Analogue Memristor based on Oxidized MXene Composited with ZrO_2 Quantum Dots** Prabana Jetty[1], Fernando Ordonez Morales[1], Seongchan Kim[2], and Jun Hong Park[1] [1]Department of Materials Engineering and Convergence Technology, Gyeongsang National University, [2]Division of Materials Engineering and Science, Hanyang University
TP-145	**Optoelectronic Synapse Behavior of HfS_2 Grown via Molten Salt Flux Method** Karybayeva Kamila, Mi Ji Kwon, and Jun Hong Park Department of Material Engineering and Convergence Technology, Gyeongsang National University
TP-146	**Surfactant-Driven Morphology Evolution of Hydrothermal Ceria Abrasives** Su-Bin Kim, Pil-Su Kim, Min-Uk Jeon, Se-Hui Lee, Hye-Min Lee, Jin-Sub Park, and Jea-Gun Park Hanyang University

TP-147	**Enhanced NiSi Formation via Template Effect and Suppression of Ni Channeling by Employing Mo_2N Interlayer** Jiwan Hong, Seoeun Yoon, and Woojin Jeon Department of Materials Science and Engineering, Kyung Hee University
TP-148	**Improving Dielectric Properties of TiO_2 Dielectric Films by Employing ZrO_2 Buffer Layer for Next-Generation DRAM Capacitor Applications** Kyungmo Yang, Chaeyeong Hwang, and Woojin Jeon Department of Materials Science and Engineering, Kyung Hee University
TP-149	**$MoSi_x$의 에피택셜 효과에 의한 C54 상 $TiSi_2$ 형성 온도 감소** 윤서은, 홍지완, 전우진 경희대학교 신소재공학과
TP-150	**Leakage Suppression and Memory Window Optimization via Gd-Doped HfO_2 Charge-Trap Layers in 3D NAND** Jonghyeok Lee[1], Jihun Nam[1], Hansol Oh[2], Hanbyul Kim[2], Yongjoo Park[2], and Woojin Jeon[1] [1]Department of Materials Science and Engineering, Kyung Hee University, [2]Advanced Research Development Team, SK Trichem Co. Ltd
TP-151	**Conformality-Controlled Atomic Layer Deposition with High Mass Noble Gas Plasma** Sangwon Lee[1], Jeongmin Oh[1], Jaeyun Lim[1], Donghyun Kim[2], and Jihwan An[1,2] [1]Graduate School of Semiconductor Technology, POSTECH, [2]Department of Mechanical Engineering, POSTECH
TP-152	**Enhancement of Electrical Characteristics of ALD-HfO_2 Thin Films Using a Modulated Split Feeding Approach (SFA) with TEMA-Hf and O_3** Soyoung Park[1], Sangkuk Han[2], Wonjae Choi[1], Kyungwook Park[2], Jaewon Chung[1], Haesoo Jang[1], Sangmyun Lim[1], Sangwoo Jeong[2], and Changhwan Choi[1,2] [1]Department of Semiconductor Engineering, Hanyang University, [2]Division of Materials Science & Engineering, Hanyang University

TP-153	**Enhanced Performance in Polymer Transistors via Chain Alignment for Biosensor Applications** Jin Seok Yoon, Nak Hee Kang, Won Bae Cho, Hyung Soo Ahn, and Young Tea Chun Division of Electronics and Electrical Information Engineering, Korea Maritime & Ocean University
TP-154	**Enhancement of Electric Properties in MoO_2 Deposited by ALD Using Ethanol as a Reactant** Soo Min Yoo, Chaeyeong Hwang, and Woojin Jeon Department of Materials Science and Engineering, Kyung Hee University
TP-155	**Effects of VO_x Interlayer on TiN Bottom Electrode on the Electrical Properties of $Hf_{0.5}Zr_{0.5}O_2$ Ferroelectric Thin Films** Iksun Kwon[1], Seungwoo Lee[1], Jaehyeon Yun[1], Hyunseok Oh[2], Donghun Shin[2], Yongjoo Park[2], and Woojin Jeon[1] [1]Department of Materials Science and Engineering, Kyung Hee University, [2]Advanced Research Development Team, SK Trichem Co., Ltd.
TP-156	**Atomic Layer Infiltration of Al_2O_3 for Organic-Inorganic Hybrid Encapsulation of Flexible OLED Display** Si Eun Jung[1], Ye Jin Jung[1], Su Min Eun[1], Ji Ho Jeon[1], Kwan hyuck Yoon[2], Woo Yong Sung[2], Jeong Hwan Han[1], and Byung Joon Choi[1] [1]Seoul National University of Science & Technology, [2]Display Research Center, Samsung Display Co., Ltd.
TP-157	**Subthreshold-Swing Control in Oxide-Semiconductor TFTs via Sn-Doped IGO (IGTO) Channels** Yeonghun Kim[1], Yena Kim[2], and Jae Kyeong Jeong[1,2] [1]Department of Nano Semiconductor Engineering, Hanyang University, [2]Department of Electronic Engineering, Hanyang University
TP-158	**Effect of Crystallinity-Controlled ZrO_2 Films on the Resistive Switching Behavior of RRAM Devices** Juyoung Park, Gyeongil Son, Suraj B. Madake, and Minjae Kim School of Materials Science & Engineering, Yeungnam University

TP-159	**Deposition of ALD HfO_2 Films at Various Temperatures and Evaluation of Device Characteristics** Muheon Kim, Hyun-June Park, Subin Lee, and Sung-Woong Chung Graduate School of Semiconductor Technology, POSTECH
TP-160	**Area-Selective Atomic Layer Deposition of Molybdenum Carbide Enabled by Acetylacetone as a Dual-Function Inhibitor and Counter-Reactant** Min Seok Kim, Ji Sang Ahn, and Jeong Hwan Han Department of Materials Science and Engineering, Seoul National University of Science & Technology
TP-161	**Atomic-Layer-Doped TaO_x Memristor With Enhanced Self-Rectification and Analog Switching for Neuromorphic Crossbar Array** Gyeongil Son, Juyoung Park, Suraj B. Madake, and Minjae Kim School of Materials Science & Engineering, Yeungnam University
TP-162	**Study on Compact Modeling of Selector-Only Memory Devices** Ju Hwan Park, Hyun Wook Km, Se Hwan Jeon, and Byung Joon Choi Seoul National University of Science & Technology
TP-163	**Impact of Crystallization on Performance and Reliability of ALD-Derived IGO Thin-Film Transistors for High-Thermal-Budget DRAM Application** Nahyun Kim[1], Jeong Eun Oh[2], Daeyoung Kim[1], and Jae Kyeong Jeong[2] [1]Department of Artificial Intelligence Semiconductor Engineering, Hanyang University, [2]Department of Electronics Engineering, Hanyang University
TP-164	**Atomic Layer Etching of ZrO_2 Using SF_6 Plasma and $TiCl_4$ for DRAM Capacitors** Juhyeong Kim, Sangyeon Jeong, Hyeongjun Kim, and Woongkyu Lee Department of Materials Science and Engineering, Soongsil University
TP-165	**Threshold Voltage Modulation in nMOS Devices via Rare-Earth Oxide-Based Dipole Engineering Using ALD** Gaeul Kim[1], Seungwoo Lee[1], Hanbyul Kim[2], Hansol Oh[2], Yongjoo Park[2], and Woojin Jeon[1] [1]Department of Materials Science and Engineering, Kyung Hee University, [2]Advanced Research Development Team, SK Trichem Co., Ltd.

TP-166	**Memory Window Enhancement in Ferroelectric Field-Effect Transistors via Oxygen Content Control in IGZO** Su Min Jeong[1], He Young Kang[2], Seung Hee Cha[2], and Jae Kyeong Jeong[1,2] [1]Department of Artificial Intelligence Semiconductor Engineering, Hanyang University, [2]Department of Electronic Engineering, Hanyang University
TP-167	**Bandgap-Engineered Te-Based Alloy Films for High-Performance p-Channel Thin-Film Transistors** Seok Hyun Hwang[1], Chanwoo Jung[2], and Jae Kyeong Jeong[1,2] [1]Department of Electronic Engineering, Hanyang University, [2]Department of Display Science and Engineering, Hanyang University
TP-168	**Self-Oxidized Metal Gate-Driven GI Formation for Gate-All-Around Structures toward Process-Simplified 3D DRAM Integration** Minsong Kim[1], Jaehyun Park[2], and Jae Kyeong Jeong[1,2] [1]Department of Electronic Engineering, Hanyang University, [2]Department of Artificial Intelligence Semiconductor Engineering, Hanyang University
TP-169	**Development of Ru ALD and ALE Processes for Continuous Ultrathin Low-Resistivity Films** Eun Ji Ju, Jae Hyeon Lee, and Jeong Hwan Han Department of Materials Science and Engineering, Seoul National University of Science & Technology
TP-170	**Switching-Kinetics-Engineered Selector-Less Single-Capacitor FeRAM: First Experimental Demonstration** Yong Hyeon Cho[1], Dong Hyun Lee[2], Geun Hyeong Park[1], Hyeong Seok Choi[1], Dong Hee Han[1], Ga Yeon Lee[1], and Min Hyuk Park[1] [1]Department of Material Science and Engineering, Seoul National University, [2]Electronic Nanomaterials, Center for Functional Nanomaterials, Brookhaven National Laboratory
TP-171	**Atomic Layer Deposition of Molybdenum Oxide Thin Films and Electrical Properties under Various Annealing Conditions** Seungmin Jo, Hyeongjun Kim, Jiwon Ahn, and Woongkyu Lee Department of Materials Science and Engineering, Soongsil University

TP-172	**Electrical Voltage-Induced Optical Property Changes in Te-Based Ovonic Threshold Switch** Sangyeop Kim[1,2], Siwon Park[1,2], Jihun Kang[1,2], Young-Min Kim[1,2], Seungwhan Moon[1,2], and Jong-Souk Yeo[1,2] [1]School of Integrated Technology, College of Computing, Yonsei University, [2]BK21 Graduate Program in Intelligent Semiconductor Technology, Yonsei University
TP-173	**Low-Temperature Metal-Induced Crystallization of α-IGZO: High-Performance Thin Films for 3D DRAM Applications** Hyun Wee Cho, Jeong Woo Seo, Sae Gyoung Song, Dong Il Kim, Byeong Chan Sim, Min Ju Kim, and Jin Pyo Hong Department of Physics, Hanyang University
TP-174	**Parametric Study on the Growth of $MoTe_2$ Using MOCVD Method: Analysis of Phase-Controlled Synthesis** Sanghwa Lee[1,2], Hyunwoo Kim[1,2], Junghyun Lee[1,2], Bongjoong Kim[2], and Jun Oh Kim[1] [1]KRISS, [2]Hongik University
TP-175	**TiO_2/IZO Hybrid-Channel Phototransistor Enabling Enhanced In-Sensor Neuromorphic Vision Computing** Yu-Jung Cha[1], Akash Bharat More[2], Sung Woon Cho[2], and Joon Seop Kwak[1] [1]Department of Energy Technology, KENTECH, [2]Department of Advanced Components and Materials Engineering, Sunchon National University
TP-176	**Comparative Study of Ga, Sn, and Zn δ-Doped In_2O_3 FETs Fabricated by PEALD for 3D DRAM Integration** Gwansun Choi[1], Soojin Park[2], and Jae Kyeong Jeong[1,2] [1]Department of Electronic Engineering, Hanyang University, [2]Department of Artificial Intelligence Semiconductor Engineering, Hanyang University
TP-177	**Advanced Atomic Level Patterning Process by Area Selective Atomic Layer Deposition Integrating Atomic Layer Etching** Seo-Hyun Lee[1], Jieun Oh[1], and Woo-Hee Kim[2] [1]Department of Materials Science and Chemical Engineering, Hanyang University, [2]Advanced Materials and Semiconductor Engineering, Hanyang University

TP-178	**Effect of Plasma Frequency on the Electrical Properties of Low-k Films Deposited by PECVD with a Dimethoxydimethylsilane Precursor** Minwoo Park[1,2], Jaeyeon Kim[1], Kyubeom Bae[1], Young Chul Choi[2], Dong Hak Kim[2], Younghyun Kim[2], Jeesoo Lee[2], and Donggeun Jung[1] [1]Department of Physics, Sungkyunkwan University, [2]WONIK IPS Co., Ltd.
TP-179	**Enhancement of Electrical Properties of Molybdenum Oxide Thin Films via Post-Deposition Annealing and Plasma Treatment** Jiwon Ahn, Seungmin Jo, Hyeongjun Kim, and Woongkyu Lee Department of Materials Science and Engineering, Soongsil University
TP-180	**Suppression of Wake-Up Effect in Morphotropic Phase Boundary Stabilized $Hf_{1-x}Zr_xO_2$ by Yttrium Doping** Chan-Bin Hong, Yoonchul Shin, Yeon-Ji Jeon, Ji Hwan Kim, Seo Young Choi, and Ji-Hoon Ahn Department of Materials Science and Chemical Engineering, Hanyang University
TP-181	**Chemical Vapor Deposition of Indium-Based Metal Organic Films as an All-Dry Resist for Next-Generation EUV Lithography** Hyekyung Kim and Woo-Hee Kim College of Advanced Technology and Convergence, Hanyang University
TP-182	**Study of High-k Al_2O_3 Dielectric under High Thermal Budget for FEOL Compatible Top Gate IGZO TFT** Sung Ha Lee[1], Joo Hee Jeong[2], and Jae Kyeong Jeong[1,2] [1]School of Artificial Intelligence Semiconductor Engineering, Hanyang University, [2]School of Display Science and Engineering, Hanyang University
TP-183	**Sol-Gel Derived Ga_2O_3/ZnO Heterojunction Thin Films for Betavoltaic Energy Conversion** 장성우, 이윤진, 송민석, 정이현, 신해주, 심인보 국민대학교 전자공학부

TP-184	**Improved Electrical Performance of HKMG pMOS Device Using Plasma-Based Hydrogen Treatment** Wonjae Choi[1], Sangkuk Han[2], Haesoo Jang[1], Jaewon Chung[1], Sangmyun Lim[1], Kyungwook Park[2,3], Sangwoo Jeong[2], Soyoung Park[1], and Changhwan Choi[1,2] [1]Deparment of Semiconductor Engineering, Hanyang University, [2]Division of Materials Science and Engineering, Hanyang University, [3]DRAM Process Development Team, Samsung Electronics Co., Ltd.
TP-185	**Atomic Layer Deposition of Ga_2O_3 Using (N,N'-di-tert-butylacetimidamido)dimethylgallium Precursor** Jun Yong Lee[1,2], Inhong Hwang[1,2], Dahui Jeon[1,2], Changbong Yeon[3], Jaesun Jung[3], and In-Hwan Baek[1,2] [1]Department of Chemical Engineering, Inha University, [2]Program in Semiconductor Convergence, Inha University, [3]Thin Film Materials Development Team, Soulbrain Co., Ltd.
TP-186	**Ultra-thin Molybdenum Nitride (MoN) Using a Plasma-Enhanced ALD as a Next-Generation Copper Diffusion Barrier for Scaled Interconnects** Donguk Kim[1], Hyunjin Yim[2], Yehbeen Im[2], Youngseo Na[1], Kangbaek Seo[1], Seungchae Lee[2], Kanghyeok Lee[1], Sangtae Park[2], and Changhwan Choi[1,2] [1]Department of Semiconductor Engineering, Hanyang University, [2]Division of Materials Science and Engineering, Hanyang University
TP-187	**Oxygen Reservoir Layer-Enabled Performance Enhancement in HZO Ferroelectrics: Dependence on Temperature and Electrode Oxygen Ratio** Taesuk Kim[1], Kyungsoo Park[1], Hyeoncheol Jung[1], Yeonwoo Choi[2], Sangmyun Lim[2], Jihoon Choi[2], Jinyeong Lee[2], and Changhwan Choi[1,2] [1]Division of Materials Science and Engineering, Hanyang University, [2]Department of Semiconductor Engineering, Hanyang University
TP-188	**Ultra-Thin ALD-MoN Interlayer for Low-Resistance and Reliable Contacts to In-Based Oxide Channels** Kyoungyeon Min[1], JinYeong Lee[1], YeonWoo Choi[1], SunBum Kim[2], and Changhwan Choi[1,2] [1]Department of Semiconductor Engineering, Hanyang University, [2]Division of Materials Science and Engineering, Hanyang University

TP-189	**Interfacial Oxygen Engineering for Rutile TiO_2 Growth Using Composition-Controlled RuO_x Electrodes** Youngseo Na[1], Sangkuk Han[2], Soyoung Park[1], and Changhwan Choi[1,2] [1]Department of Semiconductor Engineering, Hanyang University, [2]Division of Materials Science and Engineering, Hanyang University
TP-190	**Strain and Scavenging Effects of Metal Electrodes on Ferroelectric Properties of $Hf_xZr_{1-x}O_2$ Thin Films** Yoonseok Lee[1], Kyung-Soo Park [2], Sang-Myun Lim[1], Ji-Hoon Choi[1], Yeon-Woo Choi[1], Jin-Yeong Lee[1], Hyeon-Cheol Jeong[1], Young-Seo Na[1], Chulwon Chung[3], Tae-Suk Kim[2], and Changhwan Choi[1,2] [1]Department of Semiconductor Engineering, Hanyang University, [2]Division of Materials Science and Engineering, Hanyang University, [3]Research Institute of Industrial Materials Technology, Hanyang University
TP-191	**Switching Mechanism and Device Structure Optimization of Al-Doped HfO_2-Based Self-Rectifying Memory for Uniform Switching Performance** Yura Oh and Hae Jin Kim Department of Materials Science and Engineering, Myongji University
TP-192	**Cobalt Nitride (CoN) as for Alternative P-type Work-Function Metal Gate** Haesoo Jang[1], Sangkuk Han[2], Wonjae Choi[1], Jaewon Chung[1], Sangmyun Lim[1], Kyungwook Park[2], Sangwoo Jeong[2], Soyoung Park[1], and Changhwan Choi[1,2] [1]Division of Semiconductor Engineering, Hanyang University, [2]Department of Materials Engineering, Hanyang University

2026-01-29(목), 10:00-19:00
(공식발표시간: 17:40-19:00)
ZONE2-2 (5층, 로비)

[TP] 포스터세션

O. System LSI Design 분과

TP-369	**Fuzzy-State-Machine Energy Management System for a 30-kW PEMFC Hybrid System in Green Marine Applications** Md. Rubel Sarkar, Jeong-Min Woo, and Hyunwoo Son School of Electronic Engineering, Gyeongsang National University
TP-370	**사전 명령어 분석 기반 저전력 RISC-V 프로세서** 우정민, Md. Rubel Sarkar, 손현우 경상국립대학교 전자공학부
TP-371	**A Low-Power Asynchronous AES-128 Design** So Jeong Ok and Woong Choi School of Electronics Engineering, Sookmyung Women's University
TP-372	**A 2-4GHz Digital-PLL-Based Octa Clock Generator With Fast Phase Error Calibration for Clock Distribution in HBM Interfaces** Si Heon Lee and Younghyun Lim Department of Semiconductor Engineering, Kyung Hee University
TP-373	**Residue Number System을 이용한 FPGA 기반 고속신호 전처리 파이프라인** 김현진[1], 박태인[1,2], 최문영[1,2] [1]단국대학교 전자전기공학과, [2]LIG넥스원㈜ 해양연구소
TP-374	**오픈-소스 설계 도구 활용 "내 칩 제작 서비스" MPW 검증 사례** 국일호[1], 노태문[1], 박건식[1], 정동윤[1], 고상춘[1], 김규태[2], 김용신[2], 심규현[3] [1]한국전자통신연구원, [2]고려대학교 전기전자공학부, [3]한성대학교 컴퓨터공학과
TP-375	**LPDDR6의 신뢰성을 위한 On-Die ECC** 공영배[1], 양준성[1,2,3] [1]연세대학교 전기전자공학과, [2]연세대학교 시스템반도체공학과, [3]연세대학교 지능형반도체 IT융합전공

TP-376	**A Novel ECC for Reliability and Power in LPDDR6** Jongwoo Jeon[1] and Joon-Sung Yang[1,2,3] [1]Department of Electrical and Electronic Engineering, Yonsei University, [2]Department of Systems Semiconductor Engineering, Yonsei University, [3]BK21 Graduate Program in Intelligent Semiconductor Technology, Yonsei University
TP-377	**Xilinx FPGA 기반 FFT 가속 구조를 적용한 GPS 수신기** 이현우[1], 라승환[1], 양희훈[1], 유호영[1], 권석영[2], 양상진[2], 길창현[2], 이영빈[2] [1]충남대학교 전자공학과, [2]아이오테크아이

2026-01-29(목), 10:00-19:00
(공식발표시간: 17:40-19:00)
ZONE3 (6층, 로비)

[TP] 포스터세션

H. Display and Imaging Technologies 분과

TP-276	**Mg-Doped NiO Hole Transport Layers with Ultrathin ALD-MgO Diffusion Barriers for All-Inorganic Quantum Dot Light-Emitting Diodes** Min Seok Kim[1,2], Minsu Kim[3], and Seong-Yong Cho[1,2] [1]Department of Photonics and Nanoelectronics, Hanyang University, [2]BK21 FOUR ERICA-ACE Center, Hanyang University, [3]Department of Advanced Materials Engineering, Kyonggi University
TP-277	**Enhanced Detectivity in PbS QD Photodetectors through P-Type Ink and ALD Integration** Hong Gu Kang[1], Ju Young Woo[1,2,3], and Seong-Yong Cho[1,4,5] [1]Department of HYU-KITECH Joint Graduate School, Hanyang University, [2]Department of Autonomous Manufacturing & Process R&D, KITECH, [3]School of Integrative Engineering, Chung-Ang University, [4]Department of Photonics and Nanoelectronics, Hanyang University, [5]BK21 FOUR ERICA-ACE Center, Hanyang University
TP-278	**고성능 투명 히터와 융합을 통한 전기변색소자 성능 한계 돌파 연구** 이찬경, 강건우, 조재정, 최두호 가천대학교 반도체공학과
TP-279	**Ar 플라즈마 기반 초평탄 SnO_x/Ag 계면 구현 기술로 근적외선 차폐, 계면 안정성, 광학적 및 전기적 특성의 동시 향상** 조재정, 강건우, 이찬경, 최두호 가천대학교 반도체공학과
TP-280	**Enhancing the Stability and Lifetime of Quantum-Dot LEDs via Butylated Hydroxytoluene (BHT) Treatment** Jaesung Lee, Byoungho Kang, Saewan Kim, Sanghoon Jung, Sehyuk Yeom, and Wanghoon Lee GERI

TP-281	**Synthesis of Green Quantum Dots with High Efficiency and FWHM by Steric Hindrance** Byoungho Kang, Jaesung Lee, Saewan Kim, Sanghoon Jung, Sehyuk Yeom, and Wanghoon Lee Semiconductor Defense Industrial Research Center, GERI
TP-282	**IGZO TFT의 온도 변화에 따른 접촉저항 거동 분석** 여준호, 문국철, 김용상 성균관대학교 전자전기컴퓨터공학과
TP-283	**Large-Area Bilayer MoS_2 Transistor-Based Active Pixel Array for High-Sensitivity Image Sensing** Minseo Kim and Sunkook Kim Department of Advanced Materials Science & Engineering, Sungkyunkwan University
TP-284	**Universal Selective Transfer Printing via Micro-Vacuum Force for Flexible Optoelectronics** Ki Yun Nam[1], Sang Hyun Park[2], and Keon Jae Lee[1,2] [1]Graduate School of Semiconductor Technology, KAIST, [2]Department of Materials Science and Engineering, KAIST
TP-285	**Phase Engineering of Two-Dimensional MoS2 Monolayers for Tuning Optical Properties** Ga-Ram Park[1,2], Jae-Yeon Kim[1], Mi-Jeong Kim[3], Ick-Joon Park[3], and Tae In Kim[1,2] [1]School of Electrical and Electronic Engineering, Inha University, [2]Program in Semiconductor Convergence, Inha University, [3]Department of Electrical and Electronic Engineering, Joongbu University
TP-286	**Two-Dimensional MoS_2/h-BN Heterostructures for NAND Flash Memory Device** Mi-Jeong Kim[1], Ha-Eun Dang[2,3], Ga-Ram Park[2,3], Tae In Kim[2,3], and Ick-Joon Park[1] [1]Department of Electrical and Electronic Engineering, Joongbu University, [2]School of Electrical and Electronic Engineering, Inha University, [3]Program in Semiconductor Convergence, Inha University

TP-287	**Enhanced Electrical Performance of WSe_2 Transistors with Defect-Healed Graphene Electrodes** Min Seok Kim[1], Janggeun Shin[1], Young-Roh Shin[2,3], Tae In Kim[2,3], and Ick-Joon Park[1] [1]Department of Electrical and Electronic Engineering, Joongbu University, [2]School of Electrical and Electronic Engineering, Inha University, [3]Program in Semiconductor Convergence, Inha University
TP-288	**Vertically Stacked MoS_2/Graphene Oxide Van der Waals Heterointerface** Su-Yeon Ye[1], Min Seok Kim[2], Ha-Eun Dang[1,3], Ick-Joon Park[2], and Tae In Kim[1,3] [1]School of Electrical and Electronic Engineering, Inha University, [2]Department of Electrical and Electronic Engineering, Joongbu University, [3]Program in Semiconductor Convergence, Inha University
TP-289	**Electro-Thermal Analysis of Quantum Dot Light-Emitting Diode as Pixel Areas Using Thermoreflectance Microscopy** Yongjin Shin[1], Min Seok Kim[1], Daehong Kim[1], Jaekyun Kim[1], Seong-Yong Cho[1], SangHoon Shin[2], and Younghyun Kim[1] [1]Department of Photonics and Nanoelectronics, BK21 FOUR ERICA-ACE Center, Hanyang University ERICA, [2]School of Electrical Engineering, Hanyang University ERICA
TP-290	**Development of Al_2O_3/HfO_2/Oxide-Based ARC Structure for Enhancing Quantum Efficiency in the UV Wavelength Range (200-400 nm)** Joo Young Jeong, Hong Boem Park, Sang Won Yun, Man Lyun Ha, and Sang Gi Lee CIS Process Development Team, DB HiTek
TP-291	**압전-발광 동시 거동을 갖는 PVDF 그라프트 발광 공중합체의 합성** 정예원[1], 이규영[1], 임병진[1], 장지혜[4], 진유진[1], 신상민[1], 김가영[1], 이진균[1,2], 김동환[3], 김은경[3], 박철민[4] [1]인하대학교 고분자환경융합공학전공, [2]인하대학교 고분자공학과, [3]연세대학교 화공생명공학과, [4]연세대학교 신소재공학과

TP-292	**Interfacial Electronic Structure of ALD-Grown Al_2O_3/CuI-Based Heterojunction** Janggeun Shin[1], Seo Yeon Kim[2,3], Su-Yeon Ye[2], Hyuck-In Kwon[4], Tae In Kim[2,3], and Ick-Joon Park[1] [1]Department of Electrical and Electronic Engineering, Joongbu University, [2]School of Electrical and Electronic Engineering, Inha University, [3]Program in Semiconductor Convergence, Inha University, [4]School of Electrical and Electronics Engineering, Chung-Ang University
TP-293	**Development of CuI/In_2Se_3 pn Heterojunction for Optoelectronic Applications** Seo Yeon Kim[1,2], Ga-Ram Park[1,2], Jae-Yeon Kim[1], Ick-Joon Park[3], and Tae In Kim[1,2] [1]School of Electrical and Electronic Engineering, Inha University, [2]Program in Semiconductor Convergence, Inha University, [3]Department of Electrical and Electronic Engineering, Joongbu University
TP-294	**Strain-Insensitive Capacitive Pressure Sensor for Stretchable Displays** Geonoh Choe and Yei Hwan Jung Department of Electronic Engineering, Hanyang University
TP-295	**Super Sampling 기반의 Pixel-Modulation Transfer Function(MTF) 시뮬레이션 방법론** 성현준[1], 박문수[1], 김윤경[1,2] [1]동아대학교 ICT융합해양스마트시티공학과, [2]동아대학교 전자공학과
TP-296	**MicroLED Integration with Single-Crystalline MOSFETs on a Releasable Substrate** Ji-Woong Cho and Yei-Hwan Jung Department of Electronic Engineering, Hanyang University
TP-297	**광대역 및 고안정성 ZnO/Te/Al_2O_3 구조 기반 광트랜지스터** 강민서[1,2], 이경수[1,3], 이병훈[1,2,3] [1]Center for Semiconductor Technology Convergence, POSTECH, [2]Department of Electrical Engineering, POSTECH, [3]Graduate School of Semiconductor, POSTECH

TP-298	**Sub-1-Volt, Reconfigurable Gires-Tournois Resonators for Enhanced Chromaticity in Reflective Monopixel Array** Hyo Eun Jeong and Young Min Song School of Electrical Engineering, KAIST
TP-299	**Stress Analysis of a-IGZO TFTs with Various Device Architectures for Stretchable Backplanes Using Rigid-Island Structures** Seong Eun Kim[1,2], Ji-Ho Lee[1,2], Dong Hyeon Lee[1,2], Soobin An[1,2], and Soo-Yeon Lee[1,2] [1]Department of Electrical and Computer Engineering, Seoul National University, [2]Inter-university Semiconductor Research Center, Seoul National University
TP-300	**Study on the Degradation Mechanism in AlGaInP-Based Red Micro-LEDs under Electrical Stress** Yeonbin Kang, T. Lee, and Dae-Myeong Geum Department of Electrical and Computer Engineering, Inha University
TP-301	**Crystallization of In_2O_3 Channels for the Self-Aligned Coplanar Thin Film Transistor Applications by Controlling the Channel Thickness** A-yeong Lee, Se-Hyun Chun, and Sung-Min Yoon Kyung Hee University
TP-302	**Ultra-Thin ($\leq$0.5 μm) InGaAs Broadband (400-1700 nm) Photodetectors With High External Quantum Efficiency ($>$70%)** Hosang Hwang[1], Junho Jang[2], Dae-Myeong Geum[3], and SangHyeon Kim[1,2] [1]Graduate school of semiconductor technology, KAIST, [2]School of Electrical Engineering, KAIST, [3]Department of Electrical and Electronic Engineering, Inha University
TP-303	**Impact of Gate-Edge Fields and Self-Heating on Self-Aligned Top-Gate a-IGZO TFTs** Hyeonseo Lee, Seunghyun Oh, and Junhong Na Department of Semiconductor Physics, Kangwon National University

TP-304	**Light-Driven Reconfigurable Logic in a Monolithic Perovskite Device via Nonlinear Photoresponse Switching** Dante Ahn[1,2], Hyun Seock Song[1,2], and Yusin Pak[3] [1]Nano-Photonics System Research Center, KIST, [2]KU-KIST Graduate School of Converging Science and Technology, Korea University, [3]Division of Advanced Materials Engineering, Jeonbuk National University
TP-305	**OLEDoS Pixel Transistor Optimization through the AI-Based TCAD Optimization Method(ATOM) Framework** Suyeong Hwang[1], Jaekyoung Son[2], Sueyeon Kim[2], Wook Lee[3], and Jongwook Jeon[2] [1]Department of Display Engineering, Sungkyunkwan University, [2]Department of Electrical and Computer Engineering, Sungkyunkwan University, [3]Department of Semiconductor Convergence Engineering, Sungkyunkwan University
TP-306	**Solution-Processable Polymer/ZnO Hybrid UV Detector with Tunable Doping for Performance Optimization** Sanghoon Jung, Byoungho Kang, Jaesung Lee, Saewan Kim, Sehyuk Yeom, and Wanghoon Lee Semiconductor-Defense Industrial Research Center
TP-307	**Enhanced Electrical Performance of CuI Transistors through Hydrogen-induced Buried Interface Engineering** Hyeong-Min Kim[1], Hyo-Won Jang[1], Tae-In Kim[2], Ick-Joon Park[3], and Hyuck-In Kwon[1] [1]Chung-Ang University, [2]Inha University, [3]Joongbu University
TP-308	**Vacancy-Engineered CuI/IGTO Vertical Heterojunction for High-Performance Self-Powered Ultraviolet Photodetectors** Go-Eun Kim[1], Tae-In Kim[2], Ick-Joon Park[3], and Hyuck-In Kwon[1] [1]Chung-Ang University, [2]Inha University, [3]Joongbu University
TP-309	**Next Generation Cold Electron Beam Microscopy Using a Carbon Nanotube Cold Cathode** Aniket Karande and Kyu Chang Park Kyung Hee University

TP-310	**Single-Island Cold Cathode Electron Beam (C-Beam) for High Resolution X-ray Semiconductors Inspection** Ravindra Patil, and Kyu Chang Park Kyung Hee University
TP-311	**Light-Driven Polarity Control in Single Walled Carbon Nanotube/Te Transistors for Convolution Neural Networks** Jae Jun Lee[1], Yun Sung Lee[2], Han Min Kim[2], Hyeon Bin Jo[1], Soo Heon Chae[1], and Sung Hun Jin[1] [1]Department of Information Display, Kyung Hee University, [2]Department of Intelligent Semiconductor Engineering, Incheon National University
TP-312	**Solution Processed Cs_2SnI_6 RRAMs for Security Application** Ji Sang Kim[1], Hyeon Bin Jo[1], Han Min Kim[2], Yun Sung Lee[2], and Sung Hun Jin[1] [1]Department of Information Display, Kyung Hee University, [2]Department of Intelligent Semiconductor Engineering, Incheon National University
TP-313	**Statistical Analysis and Origin of Photodiode Full-Well Capacity Variation in CMOS Image Sensors** 강전웅, 박지원, 이지원 포항공과대학교 반도체공학과
TP-314	**In-Situ STEM-DPC Biasing을 이용한 OLED 소자 내 전기장 분포 이미징** 윤진하[1], 이기용[1], 김종일[1], 신미향[2], 이용희[2], 한석규[2], 오상호[1] [1]한국에너지공과대학교 에너지신소재트랙, [2]삼성디스플레이
TP-315	**Trap-Mediated Negative Feedback Enables Self-Regulated Switching in Polymer Inserted CuI RRAMs** Yun Tae Won[1], Ji Min Kang[1], Dhananjay Mishura[1], Hyeon Bin Jo[1], Han Min Kim[2], Yun Sung Lee[2], and Sung Hun Jin[1] [1]Department of Information Display, Kyung Hee University, [2]Department of Intelligent Semiconductor Engineering, Incheon National University

2026-01-29(목), 10:00-19:00
(공식발표시간: 17:40-19:00)
ZONE3 (6층, 로비)

[TP] 포스터세션

R. Semiconductor Software 분과

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

2026-01-29(목), 10:00-19:00

(공식발표시간: 17:40-19:00)

ZONE3 (6층, 로비)

[TP] 포스터세션

K. Memory (Design & Process Technology) 분과

TP-383	Optimizing Al-Doped 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