[TP] 포스터세션

2025-2-13(목), 09:00-18:30

A. Interconnect & Package 분과	
TP-001	**Optimization of Fly Cutting Process for Cu/Polyimide Hybrid Bonding** Suin Jang[1], Junyoung Choi[1], Dongmyeong Lee[1], Hoogwan Lee[2], and Sarah Eunkyung Kim[1] [1]Department of Semiconductor Engineering, Seoul National University of Science and Technology, [2]Department of Electrical and Information Engineering, Seoul National University of Science and Technology
TP-002	**Study of Low Temperature Cu-to-Cu Bonding using Reducing Plasma Pretreatment** Dongmyeong Lee[1], Hoogwan Lee[2], Junyoung Choi[1], Suin Jang[1], and Sarah Eunkyung Kim[1] [1]Department of Semiconductor Engineering, Seoul National University of Science and Technology, [2]Department of Electrical and Information Engineering, Seoul National University of Science and Technology
TP-003	**Characterization of PVD SiCN Thin Films for Chip Stacking** Junyoung Choi[1], Suin Jang[1], Dongmyeong Lee[1], Hoogwan Lee[2], and Sarah Eunkyung Kim[1] [1]Department of Semiconductor Engineering, Seoul National University of Science and Technology, [2]Department of Electrical and Information Engineering, Seoul National University of Science and Technology
TP-004	**EExperimental Data Management Platform for Data-Driven Investigation of Interconnect Materials** Joonho Bang[1], Beomjun Kim[2], and Dongwoo Lee[1] [1]School of Mechanical Engineering, Sungkyunkwan University, [2]Department of Semiconductor Convergence Engineering, Sungkyunkwan University
TP-005	**The mechanical effect of soft pad on copper chemical mechanical polishing** Pengzhan Liu and Taesung Kim Sungkyunkwan University

TP-006	**Study of Cu Dishing After Cu CMP Based on Pad Layouts and Its Impact on Hybrid Bonding** Sunjae Kim[1], Kangmin Seo[1], Hoogwan Lee[1], Sangwoo Park[2], and Sarah Eunkyung Kim[2] [1]Department of Electrical and Information Engineering, Seoul National University of Science and Technology, [2]Department of Semiconductor Engineering, Seoul National University of Science and Technology
TP-007	**3D-Printed Antenna-in-Package Substrates with Quasi-Coaxial Through-Vias for 5G-Advanced Applications** Nahyeon Kim[1], Haksoon Jung[2], Yurim Choi[2], Yongwoo Lee[2], Yunsik Park[3], Seungyeon Koh[4], Hyeok Kim[4], and Jimin Kwon[1,2] [1]Graduate School of Semiconductor Materials and Devices Engineering, UNIST, [2]Department of Electrical Engineering, UNIST, [3]ICT Device & Packaging Research Center, KETI, [4]School of Electrical and Computer Engineering, University of Seoul
TP-008	**Inkjet-Printed Photoresist Films for Panel-Level Packaging Using Glass Interposers** Yurim Choi[1], Yongwoo Lee[1], Haksoon Jung[1], Nahyeon Kim[2], and Jimin Kwon[1,2] [1]Department of Electrical Engineering, UNIST, [2]Graduate School of Semiconductor Materials and Devices Engineering, UNIST
TP-009	**Enhancing Semiconductor Package Molding Set-up Efficiency Through Machine Learning** Hae Chan Rho[1,2] and Jae Woo Lee[2] [1]Package Development, SK Hynix, [2]Department of Semiconductor Convergence Engineering, Korea University
TP-010	**Study on Ti-based intermetallic compounds as a new interconnect material** Seung-Jun Na[1] and Hoo-Jeong Lee[1,2] [1]Department of Smart Fab. Technology, Sungkyunkwan University, [2]School of Advanced Materials Science and Engineering, Sungkyunkwan University
TP-011	**Plasma Surface Treatment Technique to Overcome the Trade-Off Between Sheet Resistance and Transmittance in Ultra-Thin Cu Based Flexible Transparent Electrodes** Jae Woo Park[1], Jeong Eun Chae[2], and Doo Ho Choi[1] [1]Gachon University, [2]Test Analysis and Evaluation Center, GERI

TP-012	**Optimizing the Ag-TiO_2 Interface with Ar^+ Ion Bombardment to reach the Optimal Haacke Figure of Merit** Chankyoung Lee[1], Jeong Eun Chae[2], and Dooho Choi[1] [1]Gachon University, [2]Test Analysis and Evaluation Center, GERI
TP-013	**Time-Constant Spectrum Extracted by Utilizing the Subspace Barzilai and Borwei Non-Negative Least Square Algorithm for Thermal Transient Analysis** Joosun Yun[1], Byongjin Ma[2], Guesuk Lee[2], Tae-Hee Jung[2], Dong-Soo Shin[3], Youngbeom Kim[1], and Hyundon Jung[1] [1]EtaMax Co., Ltd., [2]KETI, [3]Hanyang University ERICA
TP-014	**Development of New High-speed Inline SAT Machine Focusing on Improvement HBM Capability & Application of AI solutions** Han Nu Ri Park[1] and Sang Yup Lee[2] [1]SK hynix Inc., [2]H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology
TP-015	**Computational Exploration of Binary Alloys for Advanced Interconnects** 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-016	**A Comprehensive Analysis of Cu Dishing and Pad Design in Cu-Cu Hybrid Bonding** Yeon Ju Kim and Jong Kyung Park Department of Semiconductor Engineering, Seoul National University of Science and Technology
TP-017	**Enhanced Contact Resistance Measurement in Cu Hybrid Bonding for Advanced Heterogeneous Integration** Kyoung Min Shin and Jong Kyung Park Seoul National University of Science and Technology
TP-018	**Improving Power Efficiency in Semiconductor Interconnects through Development and Methodology Proposal** Tae-Yeong Hong, Dong-Yun Sung, and Seul-Ki Hong Department of Semiconductor Engineering, Seoul National University of Science and Technology

TP-019	**칩렛 시스템 구현을 위한 저비용 패키지 설계 기법 개발** Chungju Kim, Tai Sik Yang, and Yong Seok Kang LG Electronics Inc.
TP-020	**공정열처리 유무에 따른 ALD Ru/ZnO 구조의 박막응력과 계면접착에너지 간의 상관관계 분석** 김민진[1], 공혜영[1], 이수연[1], 정대윤[1], 김가희[1], 손예슬[2], 김민우[2], 김수현[2,3], 박영배[1] [1]국립안동대학교 청정·에너지소재기술연구센터, [2]울산과학기술원 반도체 소재·부품 대학원, [3]울산과학기술원 신소재공학과
TP-021	**Deep Neural Networks (DNN) Supported Thermal Management for Advanced VLSI Packaging** Jun Ho Lee[1], Jae Gyu Kim[1], Seong Jin Kim[1], Ju Hwan Kim[2], Woong Seo[2], Jae Yong Song[1], and Byoung Don Kong[1] [1]POSTECH, [2]SAPEON Korea Inc.
TP-022	**Hardmask-Film CMP Slurry containing Sulfate Radical Oxidant for High Quality Surface Roughness and High Polishing-Rate** Min-ji Kim, Yun-heub Song, and Jae-Gun Park [1]Department of Electronic Engineering, Hanyang University
TP-023	**Gaussian Fitting Volume Approximation for PR Coating Compensation** Kyo Mun Ku, Mi Jin Kim, MD Saiful Islam, Hyo Yung Kim, Jae Hong Shim, and Ki Hyun Kim Tech University of Korea
TP-024	**Enhancement of TID Resistance through Aluminum Shielding** Je Won Park and Myoung Jin Lee Department of Intelligent Electronics and Computer Engineering, Chonnam National University
TP-025	**Topological Semimetals for Highly Scaled Interconnect** Subeen Lim, Gyungho Maeng, and Yeonghun Lee Department of Electronics Engineering, Incheon National University
TP-026	**A Study on the Effects of Wire Diameter and Die Tilt on the Thermal and Electrical Performance of Si-IGBT Based on DOE** Dong-Hyeon Kim[1,2] and Sung-Uk Zhang[1,2] [1]Digital Twin Laboratory, [2]Center for Brain Busan [21] Plus Program

TP-027	**Thin Film Growth of Topological Semi-metal for Future Electronic Device** Sehun Oh and Hyeon-Jin Shin Department of Semiconductor Engineering, School of Electrical Engineering and Computer Science, GIST
TP-028	**Time-dependent Growth and Microstructural Characterization of through-hole via Fill Varying Plating Additives** Eun-Bi Lee[1], So-Yeon Lee[1], Seung-Yong Lee[2], and Kyung-A Won[2] [1]Kumoh National Institute of Technology, [2]YLG Innotek
TP-029	**Process Automation for Evaluating Reliability of AI Accelerator** Min Seo Song[1], Seung Hyeon Cha[1], Sangyul Ha[1], and Jihoon Kang[2] [1]Myong Ji University, [2]PKG Development, SK Hynix
TP-030	**Electrochemical Growth of Micrometer-scale Cu Single Crystals Compatible with Microscale Patterns** Giho Jeong[1], Kyung-Ho Park[2] and Jae Yong Song[1,3] [1]Graduate school of semiconductor technology, POSTECH, [2]Advanced Packaging TF, KANC, [3]Dept of Semiconductor Engineering and Dept of MSE, POSTECH
TP-031	**Resistivity Scaling Model for CNT-embedded Metal Interconnects** Huiyun Jung, Seunggyu Hwang, Bogeun Son, Jaewon Park and Hongsik Park School of Electronic and Electrical Engineering, Kyungpook National University
TP-032	**Investigation of BEOL Metal Height Variation with Pattern Density** Siin Kim, Suhyeon Cha, Seon Gyo Jang, Joon Nyung Lee, Hyejun Jin, Jeong Hoon Ahn, and Jong-Ho Lee Foundry business, Samsung Electronics
TP-033	**Reliability of fatigue deformation for flexible Cu interconnect varying interfacial adhesion** Jeong A Heo, Jun Hyeok Hyun, and So-Yeon Lee Kumoh National Institute of Technology
TP-034	**Enhancement of IR Thermography for Semiconductor Packages Using Pixel-Level Emissivity Correction** Seongjin Kim[1], Min Gyu Jo[2], and Jae Yong Song[1,3,4] [1]Department of Materials Science and Engineering, POSTECH, [2]Department of Materials Science and Engineering, Korea University, [3]Department of Semiconductor Engineering, POSTECH, [4]Graduate school of semiconductor technology, POSTECH

TP-035	**Additive-free Electrochemical Synthesis of Single-crystal Copper Nanowires for BEOL Interconnection** Jae Wook LEE[1], Jae Yong SONG[1,2] [1]Graduate School of Semiconductor Technology, POSTECH, [2]Department of Semiconductor Engineering and Department of Materials Science and Engineering, POSTECH
TP-036	**CVT Growth of Molybdenum Phosphide Thin Films for BEOL Applications** Yeji Shin[1], Jae Yong Song[1,2,3] [1]Department of Graduate School of Semiconductor Technology, POSTECH, [2]Department of Semiconductor Engineering, POSTECH, [3]Department of Materials Science and Engineering, POSTECH
TP-037	**Dependence of Diffusion Barrier Characteristics on Post-Treatment Methods for SiCN Films Deposited in Plasma-Enhanced Chemical Vapor Deposition Using 1-(Trimethylsilyl)pyrrolidine Precursor** Kyubeom Bae, Jaeyeon Kim, Chanyong Seo, Jeongbeom Choi, Namwuk Baek, and Donggeun Jung Department of Physics, Sungkyunkwan University
TP-038	**Dielectric Properties of Low-k Films Deposited at 300 ℃ in Plasma Enhanced Chemical Vapor Deposition System Using Tris(trimethylsiloxy)silane Precursor** Jaeyeon Kim, Kyubeom Bae, Chanyong Seo, Namwuk Baek, Jeongbeom Choi, and Donggeun Jung Department of Physics, Sungkyunkwan University
TP-039	**Analysis of the substrate effect on electrical characteristics of channels for 2.5D packaging using glass interposers** Donghyun Uhm[1], Junu Choi[1], Kyuho Sung[1], Jaeyoung Choi[1], and Jaemyung Lim[1,2] [1]Department of Electronic Engineering, Hanyang University, [2]Department of Nano Semiconductor Engineering, Hanyang University
TP-040	**Improving Joint Properties of Cu Pillar Bumps using Ni Diffusion Barrier Layer and IPL Soldering** Eun-ChaeNoh, Eun-SuJang, and Jeong-WonYoon [1]Department of AdvancedMaterialsEngineering, Chungbuk National University

TP-041	**Highly Robust Sintered Silver Pressureless Bonding Using Self-Heating of PMMA in Silver Paste** Moses Gu[1], Hyun Jin Nam[2], Se Hoon Park[2], and Sung-Hoon Choa [1]Seoul National University of Science and Technology, Intelligent Semiconductor Engineering Department, [2]KETI, ICT Device and Packing Center
TP-042	**차량용 전장 부품 연결을 위한 FPCB Ni-Sn-Cu 접합부의 전기적 기계적 신뢰성 연구** 고명수[1], 이용규[1], 김지정[2], 김병준[1] [1]한국공학대학교 신소재공학과,[2] 현대자동차, 전기전자재료개발팀
TP-043	**반도체 패키지용 SR/EMC 계면의 고온 및 고습 조건에서 접착 에너지 변화 연구** 마지수[1], 김원빈[2], 고영관[3], 주영창[2], 김병준[1] [1]한국공학대학교, 신소재공학과, [2]서울대학교 재료공학부, [3]삼성전자
TP-044	**전력반도체 패키징을 위한 Ag 및 Cu@Ag 소결 접합 특성 연구** Mi So Won, Dajung Kim, and Chulmin Oh Electronic Convergence Materials & Device Research Center, KETI
TP-045	**Effect of Surface Finish on Solder Joint Reliability in Electronic Packaging** Jeeyeon Park[1], Chulmin On[1] , and Jeong-Won Yoon[2] [1]KETI, [2]Chungbuk National University
TP-046	**저온 경화형 Glass Package Substrate용 Resin Coated Copper 개발** 김선우[1,2], 김유빈[2], 남현진[2], 류제인[2], 박성준[1], 박세훈[2] [1]성균관대학교,화학공학과, [2]한국전자기술연구원, ICT 디바이스패키징연구센터
TP-047	**Optimization of die and clip attach process for double-sided bonding of Power module** Dajung Kim[1], Yun Hwa Choi[2] , Hoseob Park[2], and Chulmin Oh[1] [1]KETI, [2]JMJ Korea Co. LTD
TP-048	**Enhancing Structure Functions for Accurate Thermal Characterization and Monitoring of Semiconductor Packages: Sampling Optimization and Geometric Analysis** Wonbin Song[1], Guesuk Lee[2], and Byeng D. Youn[1,3] [1]Seoul National University., [2]Korea Electronics Technology Institute, [3]One Predict Inc.

TP-049	**Development of Stretchable Low-Dielectric Film Using Hydrophobic PDMS with Porous Silica and Surfactant** Moses Gu[1], Hyun Jin Nam[2], Se Hoon Park[2], and Sung-Hoon Choa[1] [1]Seoul National University of Science and Technology, Intelligent Semiconductor Engineering Department, [2]KETI, ICT Device and Packing Center
TP-050	**Through-InP-Via (TIV)-embedded 3D Metal Interconnection Technology between InP and SiC Substrates for RF Application** Jonghyun Song[1,2], Hyoungho Ko[2] , and Jongwon Lee[2] [1]NNFC, [2]Chungnam National University
TP-051	**A Study on Signal Integrity in Hybrid Bonding with Misalignment for Stacked Die** Chan-Woong Park[1] and Kee-Won Kwon[2] [1]Department of Electrical and Computer Engineering, Sungkyunkwan University, [2]Department of Semiconductor Systems Engineering, Sungkyunkwan University
TP-052	**Evaluation of SiO_2 Bonding Strength using Various Plasma Gases for Hybrid Bonding** Injoo Kim[1], Siye Lee[1], Jinho Jang[2], Minji Kang[2], Hyein Jin[3], Soohyun Ko[2], and Sungdong Kim[2] [1]Department of Mechanical Design and Robot Engineering, Seoul National University of Science and Technology, [2]Department of Mechanical System Design Engineering, Seoul National University of Science and Technology, [3]Department of Manufacturing Systems and Design Engineering, Seoul National University of Science and Technology
TP-053	**Surface Treatment Methods for Cu-Cu Bonding in Cu/SiO_2 Hybrid Bonding** Siye Lee[1], Injoo Kim[1], Jinho Jang[2] , Minji Kang[2], Hyein Jin[3], Sunghwan Joo[4], and Sungdong Kim[2] [1]Department of Mechanical Design and Robot Engineering, Seoul National University of Science and Technology, [2]Department of Mechanical System Design Engineering, Seoul National University of Science and Technology, [3]Department of Manufacturing Systems and
TP-054	**Precise Evaluation of Electrical Contact on Ultra-thin Silicided Semiconductors Using Bridge-contact Resistance (BCR) method** Seunggyu Hwang, Bogeun Son, Huiyun Jung, and Hongsik Park School of Electronic and Electrical Engineering, Kyungpook National University

TP-055	**Measurement and Analysis of Through Glass Via (TGV) for High-Speed ??Interface 2.5D/3D Package** Suin Chae and Je-In Yu KETI
TP-056	**Dry Etching Technology for Sub-10 ?m Vertical Via Formation in Build-Up Films for Advanced Semiconductor Packaging** Sunbum Kim[1], Gyulee Kim[1], Kyoungyeon Min[2], Dugkyu Han[1], Young Ju Han[3], Soonoh Jeong[3], Mooseong Kim[3], and Changhwan Choi[1,2] [1]Division of Materials Science and Engineering, Hanyang University, [2]Department of Semiconductor Engineering, Hanyang University, [3]LG Innotek
TP-057	**Signal Characteristics of Coplanar Waveguide Structure Redistribution Layer on PSPI Substate** Dugkyu Han[1], Sunbum Kim[1], Gyulee Kim[1], Kyoungyeon Min[2], and Changhwan Choi[1,2] [1]Division of Materials Science and Engineering, Hanyang University, [2]Division of Semiconductor Engineering, Hanyang University
TP-058	**Development of a Dry Desmear Process for High-Performance Packaging and Analysis of Smear Removal Efficiency** Kyoungyeon Min[1], Sunbum Kim[2], Gyulee Kim[2], Dugkyu Han[2], Young Ju Han[3], Soonoh Jeong[3], Mooseong Kim[3], and Changhwan Choi[1,2] [1]Department of Semiconductor Engineering, Hanyang University, [2]Division of Materials Science and Engineering, Hanyang University, [3]LG Innotek
TP-059	**Effect of Plasma Parameters on the Properties of Low-k SiCOH Films Grown by Plasma-Enhanced Chemical Vapor Deposition Using Dimethyldimethoxysilane** Seong-Bin Park[1,2], Jinseok Choi[1], H. J. Yeom[1], Gwang-Seok Chae[1], Kwan-Yong Kim[1], Wonchul Kee[3], Hyo-Chang Lee[4,5], Hyun-Dam Jeong[3], and Jung Hyung Kim[1] [1]KRISS, [2]Department of Mechanical Engineering, Yonsei Universeity, [3]Department of Chemistry, Chonnam National University, [4]School of Electronics and Information Engineering, Korea Aerospace University, [5]Department of Semiconductor Science, Engineering and Technology, Korea Aerospace University

B. Patterning (Lithography & Etch Technology)

TP-060	**Hybrid Multilayer Extreme Ultraviolet Resist with Vertical Molecular Wire Structure for Exceptionally Low Line Edge Roughness** Jaehyuk Lee, Hyeonseok Ji, Chaerim Kim, and Myung Mo Sung Department of Chemistry, Hanyang University
TP-061	**Advanced Dry Development of EUV Photoresist by Organic Precursor** Namseon Jang, Hyeonseok Ji, Jaehyuk Lee, Hyejeong Oh, Juyeong Lee, and Myung Mo Sung Department of Chemistry, Hanyang University
TP-062	**Heptafluoroisopropyl trifluoromethyl ketone을 이용한 SiO_2와 Si_3N_4의 plasma 식각** 김민욱[1,2], 김창구[1,2] [1]Department of Chemical Engineering, Ajou University, [2]Department of Energy Systems Research, Ajou University
TP-063	**Observation of Cross-Sectional Photoresist Patterns Using FIB** Seohyeon Lee[1], Ye Jin Ku[2], Gayoung Kim[2], Jin-Kyun Lee[2], and Byung Jun Jung[1] [1]University of Seoul, [2]Inha University
TP-064	**Mask 3D effect의 완화가 가능한 high-NA EUV 마스크용 광학상수 영역 분석 연구** 이승호[1,2], 정동민[1,2], 김연수[1,2], 이태호[2], 안진호[1,2] [1]한양대학교 신소재공학과, [2]Center for Hyperscale, Hyperfunction, Heterogeneous Integration Pioneering Semiconductor Technology
TP-065	**Gapless Stencil Lithography Utilizing PMMA Protective Layer for Facile Fabrication of 2D Materials Electronics Devices** Jaemin Myoung[1,2], Taehyeon Kim[1,2], Seunghun Lee[3], Jeonghwan Kim[3], Taesung Kim[2], and Jihun Mun[1] [1]Korea Research Institute of Standards and Science, [2]Sungkyunkwan University, [3]Hanbat National University
TP-066	**Positive-tone Tin-Oxo Nanocluster Resists for Extreme UV Lithography exploiting Lewis Acid-Base Interaction Chemistry** Gayoung Kim[1], Yejin Ku[1], Subin Jeon[1], Jin-Kyun Lee[1], Seohyun Lee[2], Byung Jun Jung[2], Sung-Il Lee[3], Choonghan Ryu[3], Kangho Park[3], Yun Lim Jung[3], Changyoung Jeong[3], Jin Choi[3] [1]Inha University, [2]University of Seoul, [3]Samsung Electronics Co., Ltd.,

TP-067	Cyclic Etching Using Organic Gas/O2 Mixture for Formation of 150 nm Co Line Patterns Ha Rin Song, Dae Han Won, Hong Ju Yang, and Chee Won Chung Department of Chemical Engineering, Inha University
TP-068	A Low-Power Compact-Area PMOS-based Two-Stage Operational Amplifier in a 180-nm CMOS Seungyun Phee, Eunjae Ko, Jimin Oh, Yujin Lee, Somi Park, Sunkyung Lee, Bobin Seo, and Sung Min Park Division of Electronic & Semiconductor Engineering, Ewha Womans University
TP-069	Effects of Electronegativity on Electron Energy Distribution Function and Ion Energy Distribution Function in Ar/O_2 Inductively Coupled Plasma Haneul Lee[1], Hwiwon Seo[1], Namjae Bae[1], Gon-Ho Kim[1], and Seolhye Park[2] [1]Seoul National University, [2]Samsung Display
TP-070	Synthesis and Characterizations of a Novel Non-Alkyl Tin Oxo Cluster CNU-TOC-01(4C-C) and its Application to EUV Lithography Hyeok Yun[1], Jiyoung Bang[1], Minyeob Kim[1], Hyun-Dam Jeong[1], Hyung-Bae Moon[2], Cheol-Min Kim[2], Hee-Seon Lee[3], Kyuyoung Heo[3], Siwoo Noh[4], Geonhwa Kim[4], Sangsul Lee[4], and Ki-Jeong Kim[4] [1]Chonnam National University, [24]Chem Laboratory, [3]KRICT, [4]Pohang Accelerator Laboratory
TP-071	Investigation of the Effect of Electron Beam Irradiation on Dibenzyltin Diacetate Using Local Thin Film Analysis and Quantum Chemical Calculations Hyeok Yun, Hyun-Dam Jeong Chonnam National University
TP-072	Tapered Micro-hole Silicon Array Formed by Dffusion-limited Wet Etch Process for Robust and Highly-efficient Energy Devices Yebin Ahn, Soohyeok Park, Sangbeom Hong, Hyein Cho, Geonhwi Kim, Yejin Han, Inkyeong Park, Seongmin Lee, Jihwan Jeong, Taewan Kim, Gayeong Lee, and Han-Don Um Kangwon National University
TP-073	Advanced Anisotropic Etching Process using Ozone for Fabrication of Silicon Nano Structures Hyein Cho, Yebin Ahn, Sang Beom Hong, Soohyeok Park, Yejin Han, Geonhwi Kim, Inkyeong Park, Seongmin lee, Taewan Kim, Jihwan Jeong, Gayeong Lee, and Han-Don

	Um Kangwon National University
TP-074	Extreme Ultraviolet Lighting Source based on the C-beam Irradiation Technique with Silicon Target Iksu Kim, Umesh Balaso Apugade, and Kyu Chang Park Kyung Hee University
TP-075	Evaluation of Stability of C- Beam Irradiation Generated EUV Light Umesh Balaso Apugade, Iksu Kim, and Kyu Chang Park Kyung Hee University
TP-076	Impact of Exposure Dose on Micro-patterns of OLED Layers Eun Yeong Soh[1], Seohyeon Lee[1], Dongjin Shin[1], Byung Jun Jung[1], Gayoung Kim[2], Jin-Kyun Lee[2], Sangmin Yoon[2], and Myungwoong Kim[2] [1]University of Seoul, [2]Inha University
TP-077	Enhanced vertical etching of silicon by controlled metal catalysts of metal-assisted chemical etch method Yejin Han, Yebin Ahn, Hyein Cho, Sangbeom Hong, Geonhwi Kim, Soohyeok Park, Inkyeong Park, Seongmin Lee, Taewan Kim, Jihwan Jeong, Gayeong Lee, and Han-don Um Kangwon National University
TP-078	Ultrafine Pattern Transfer Based on Sequential Infiltration Synthesis Il-Suk Kang, Yeon-Wha Oh, Sanghee Jung, Jungchul Song, Huijae Cho, and Se-Hun Kwon [1]National Nanofab Center, KAIST, [2]Pusan National University
TP-079	Optimizing $LiNbO_3$ Waveguides: ICP-RIE and Post-Cleaning for Enhanced Performance Namhoon Kim[1], Heon-jin Choi[2], and Donghee Park[1] [1]Center for Quantum technology, KIST, [2]Department of Material Science and Engineering, Yonsei University

TP-080	Simulating Internal Resist Behavior and Its Impact on EUV Lithography Pattern Perfomance Hyunseok Kim[1], Jihun Ahn[1], and Su-Mi Hur[1,2] [1]Department of Polymer Engineering, Graduate School, Chonnam National University (CNU), [2]Shcool of Polymer Science and Engineering, Chonnam National University (CNU)
M. RF and Wireless Design	
TP-081	Design of Radio-Frequency Receiver with Wireless Power Transfer Taeyeong Kim, Jongho Lee, Gyungtae Ryu, Hoyeon Sin, and Ickhyun Song Hanyang University
TP-082	A TID and SEE Radiation-Hardened-by-Design Receiver Taeyeong Kim, Jongho Lee, Gyungtae Ryu, Hoyeon Sin, and Ickhyun Song Hanyang University
TP-083	A CMOS-based Optoelectronic Receiver IC for LiDAR Sensors Yunji Song[1,2] and Sung Min Park[1,2] [1]Division of Electronic & Semiconductor Engineering, Ewha Womans University, [2]Graudate Program in Smart Factory, Ewha Womans University
TP-084	An Optoelectronic Inverter Transimpedance Amplifier in 180-nm CMOS Bobin Seo[1,2], Sunkyung Lee[1,2] Somi Park[1,2], and Sung-Min Park[1,2] [1]Division of Electronic & Semiconductor Engineering, Ewha Womans University, [2]Graduate Program in Smart Factory, Ewha Womans University
TP-085	A Current-Mode VCSEL Driver for Short-Range LiDAR Sensors Juntong Li[1,2] and Sung Min Park[1,2] [1]Division of Electronic & Semiconductor Engineering, Ewha Womans University, [2]Graudate Program in Smart Factory, Ewha Womans University
TP-086	A CMOS Active-Feedback Transimpedance Amplifier for LiDAR Sensors Somi Park[1,2], Sunkyung Lee[1,2], Bobin Seo[1,2], and Sung-Min Park[1,2] [1]Division of Electronic and Semiconductor Engineering, Ewha Womans University, [2]Graduate Program in Smart Factory, Ewha Womans University

TP-087	**커플드 라인 부하 회로를 활용한 11 dB 백오프 3-Way 도허티 전력 증폭기** 김상엽[1], 임서균[1], 전형진[1,2], 양영구[1,2] [1]성균관대학교 전자전기컴퓨터공학과, [2]para-PA Inc
TP-088	**결합선로를 사용한 간소화된 광대역 동작 도허티 전력증폭기** 주윤형[1], 전형진[1,2], 양영구[1,2] [1]성균관대학교 전자전기컴퓨터공학과, [2]para-PA Inc
TP-089	**Out-phased current combining을 이용한 2.8-4.3 GHz 대역 도허티 전력증폭기 설계** 안민석[1], 최영찬[1], 임서균[1], 양영구[1,2] [1]성균관대학교 전자전기컴퓨터공학과, [2]para-PA Inc.
TP-090	**Design of Doherty Power Amplifier with Output Power Back-off of 7.23 dB** Ren Liu[1] and Youngoo Yang[1,2] [1]Department of Electrical and Computer Engineering, Sungkyunkwan University, [2]para-PA Inc.
TP-091	**0.9 dB 이하의 잡음 지수를 갖는 X 밴드 저잡음 증폭기 설계** 임서균[1], 김상엽[1], 양영구[1,2] 성균관대학교 전기전자컴퓨터공학과
TP-092	**단일 병렬 다이오드를 이용한 35 GHz 정류기 설계** 문규현[1], 빈수현[1], 양영구[1,2] [1]성균관대학교 정보통신대학 전자전기컴퓨터공학과, [2]para-PA Inc
TP-093	**비대칭 전력 분배기를 이용한 도허티 전력 증폭기 설계** 김민수[1], 이윤정[1], 주윤형[1], 양영구[1,2] [1]성균관대학교 전자전기컴퓨터공학과, [2]para_PA
TP-094	**RF Front-End Application 을 위한 SOI RF 스위치를 대체 할 DTI 공정이 적용된 HRS RF 스위치 (HRS RF Switch with DTI as an Alternative to SOI RF Switch for RF Front-End Applications)** 전태현, 유창현, 김휘수, 김용은, 김기준, 김대일, 김경록, 정진효 DB HiTek
S. Chip Design Contest	

TP-095	**Fan-Out Buffer with Automatic Skew Control** Yun-Hyok Choi, Jae-hyun Park, and Byung-Sung Kim RF Microelectronic Design Lab., Sungkyunkwan University
TP-096	**Asymmetric SPDT Switch with High Isolation and Low Insertion Loss** Jae Eun Lee[1], Choul Young Kim[1], and Gwang Hyeon Jeong[2] [1]Department of Engineering, Chungnam National University, [2]Department of Semiconductor System Engineering, Hanbat National University
TP-097	**A Reconfigurable Artifact-Tolerant Analog Front-End IC for Bidirectional Neural SoCs** Soonseong Hong[1,2], Hyojun Yoo[1,2], Bosung Park[2], Daeyeong Jeon[2], and Hyouk Kyu Cha[2] [1]Samsung Electronics Co., Ltd., [2]Seoul National University of Science and Technology
TP-098	**A Multi-Mode CMOS Image Sensor for Cognitive Imaging** Taehyoung Kim, Kiwon Seo, Jongho Jung, and Gunhee Han School of Integrated Technology, Yonsei University
TP-099	**Built-in Self Repair Circuit for Improving Reliability of 3D Stacked Memory** Donghyun Han, Heetae Kim, Jongho Park, Hyojoon Yun, Sunghoon Kim, Seung Ho Shin, Duyeon Won, and Sungho Kang Yonsei University
TP-100	**Energy-Efficient Neural Processing Unit for Object Detection** Seongmin Ki, Hyunmin Kim, Gwanghwi Seo, Yeonggeon Kim, and Sungju Ryu Sogang University
TP-101	**ReRAM-based AI Accelerator with Ternary Input and Septenary Weight having On-Chip Write-Verify** Dong Hyuk Ahn[1], Seo Yoon Lee, Ho Jin Lee[2], Young Hyun Lee[2], and Kee Won Kwon[1] [1]Department of Semiconductor and Display Engineering, Sungkyunkwan University, [2]Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-102	**An Input-Buffer Embedding Dual-Residue Pipelined SAR ADC with Non-binary Capacitive Interpolation** Raymond Mabilangan, Seung-Yong Lim, and Seung-Tak Ryu School of Electrical Engineering, KAIST

TP-103	**Impedance Measurement IC for Wireless Sensor Readout** Su-Hwan Kim and Kyeongha Kwon KAIST
TP-104	**A 10-bit Column-Driver IC with High-Speed DAC with Feed-Forward Paths for OLED Display** Haesang Park, June hee Lee, and Byong-Deok Choi Department of Electronic Engineering, Hanyang University
TP-105	**Injection Locked Frequency Division-by-4 with High Harmonic Rejection Ratio** Akram Muhamad Rafli, Muhammad Fakhri Mauludin, and Jusung Kim Hanbat National University
TP-106	**A Highly Sensitive D-band Detector using 180-nm CMOS Process for Millimeter-Wave Imaging System** Ha-Neul Lee, Jae-Hyun Lee, and Jong-Ryul Yang Konkuk University
TP-107	**High-Efficiency Digital LDO Leveraging Single VCO and Dual Frequency Gain Control for Optimal Current Performance** SongI Cheon, YoonSang Lee, JunYoung Choi, Hyunsu Jang, Chanbin Hwang, SeungMyeong Yu, Jongchan An, and JunYoung Song Department of Electronics Engineering, Incheon National University
TP-108	**Active Common-Mode Termination Circuit for Automotive Link** Yong-Hui Yun and Sang-Gug Lee KAIST
TP-109	**HBC Rx to Obtain in vivo Bio-Signals and Endoskeleton Pressure Sensor Signals** Hyunyeop Lee, Yunchul Chung, Dongyoon Lee, and Minkyu Je KAIST
TP-110	**A Multi-mode NS-SAR ADC with MOM-capacitor for CMOS Image Sensor** Kiwon Seo, Taehyoung Kim, Jongho Jung, and Gunhee Han School of Integrated Technology, Yonsei University

TP-111	**Fully Integrated On-Chip EIS System** ByeongHo Hwang, YunChae Lee, UiKyoung Lee, JiHan Shin, and KyeongHa Kwon KAIST
TP-112	**A V-band Digital-controlled Variable Gain Amplifier with 6-bit Tuning Range and 0.5-dB Resolution in 28nm CMOS Technology** In Cheol Yoo, Dong Ouk Cho, and Chul Woo Byeon Depart of Electronic and Electrical Engineering, Dankook University
TP-113	**A Sub-50-fs RMS Jitter, 103.5-GHz Fundamental-Sampling PLL With an Extended Loop Bandwidth** Jooeun Bang[1], Jaeho Kim[2], Seohee Jung[2], and Jaehyouk Choi[2] [1]KAIST, [2]Seoul National University
TP-114	**High PSR and Fast Slew Rate Capacitor-less LDO Using Multi-Paths** Bong Su Kim, Gyu Won Jeon, Gwang Myeong An, Hyang Hee Park, Jin Soo Bae, Myeong Ju Park, Min Gyun Kim, and Jun Young Song Department of Electronics Engineering, Incheon National University
TP-115	**Fully Dynamic Discrete-Time Delta-Sigma Modulator with Digital Noise Coupling** Younghun Moon and Seung Tak Ryu School of Electrical Engineering, KAIST
TP-116	**A V-Band Low-Loss Compact Power Divier/Combiner with Coupling Inductor in 28nm CMOS Technology** Yeon Soo Lim, Taek Min Park, and Chul Woo Byeon Depart of Electronic and Electrical Engineering, Dankook University
TP-117	**Low-Power Word-Line Voltage Generation for NAND Flash Memory** Hyunsik Jeong[1], Donghwan Kim[2], and SeongHwan Cho[2] [1]SK Hynix, [2]KAIST
TP-118	**Low-Power Fast-Settling Duty-Cycled PPG Readout using a Zero-Volt Regulator** Pangi Park and SeongHwan Cho KAIST

TP-119	전류 재사용 구조 기반 9.2-18.0 GHz 광대역 저잡음 증폭기 이남경, 김지수, 오준택 숭실대학교 지능형반도체학과
TP-120	A 20-MS/s Flash ADC with Foreground Calibration for Process Time Reduction Jeong Wook Han and Byoungho Kim Hanyang University
TP-121	A Low-Jitter and Compact-Area Fractional-N Digital PLL with Fast Multi-Variable Calibration Seheon Jang[1], Munjae Chae[1], Hangi Park[1,2], Chanwoong Hwang[1,2], and Jaehyouk Choi[1] [1]Seoul National University, [2]KAIST
TP-122	A High-Performance Boost Converter for Wearable TEG with High Efficient MPPT and Self-Startup in 28 nm CMOS Process Jung Hyun Moon, Arooba Shafique, and Jong Wook Lee Department of Electronic Engineering, Kyung Hee University
TP-123	Gate Driver for Silicon Carbide MOSFET with Adaptive Soft Turnoff Technique Youngseok Kwak[1], Seungjik Lee[2], Jinman Myoung[1], Geonwoo Park[1], and ilku Nam[1] [1]Department of Electric Engineering, Pusan National University, [2]Onsemi
TP-124	Dynamic Resouce Management in Reconfigurable SoC for Multi-Tenancy Support Sohyeon Kim and Ji-Hoon Kim Ewha Womans University
TP-125	Torsion-Assisted Via-Anchor Nanoelectromechanical Memory Switches Jin Wook Lee, Geun Tae Park, and Woo Young Choi Seoul National University and Inter-university Semiconductor Research Center
TP-126	CMOS Digitally Driven Pixel Circuit for Modular Display Hyung-Min Song, Min-Seo Kim, and Byong-Deok Choi Department of Electronic Engineering, Hanyang University

TP-127	Leakage-Current-Suppressed Pixel Circuits for Micro-LED on Silicon San Kim[1], Joo-Sun Lee[2], and Byong-Deok Choi[1,2] [1]Department of Display Science and Engineering, Hanyang University, [2]Department of Electronic Engineering, Hanyang University
TP-128	5080-PPI OLED on Silicon Pixel Circuit for Wide Data Range Hyeon-Jun Shin, Hyeon-Ji Lee, and Byong-Deok Choi Department of Electronic Engineering, Hanyang University
TP-129	An 8-bit 20-MSPS SAR ADC with Delay-driven Calibration with Asynchronous Clock Generator Jiwon Lee and Byoungho Kim Hanyang University
TP-130	Efficient CIM Macro Controller Logic Sukhyun Choi[1], Hyunmyung Oh[2], and Jae-Joon Kim[1] [1]Seoul National University, [2]POSTECH
TP-131	Advancing Vision Technology: Design and Fabrication of a High-Performance Retina Chip using 180nm BCDMOS Technology Md Turiqul Islam, Seunghyeok Choi, Abdey Munaf, Porika Nandini, Hyun-woo Jin, Gaurav Mehra, and Hanjung Song Department of Nanoscience and Engineering, Gimhae
TP-132	A 0.25V, 1MHz Clocking Hybrid Flip-Flop for Near Threshold Computing Seokhan Jeong and Junghyup Lee DGIST
TP-133	Observation of Electrode-Gap Narrowing in Nanoelectromechanical (NEM) Memory Switches Seung Hun Baek, Geun Tae Park, Myeong Su Shin, and Woo Young Choi Seoul National University and Inter-University Semiconductor Research Center
TP-134	Design of polysilicon grating couplers in FD-SOI platform Hyunmin Shin, Youngjae Jeong, Pradono Rizki Arif, and Kyoungsik Yu KAIST

TP-135	Reduction of t_{RCD} through Parasitic Component Isolation in 1T-1C DRAM Ju Hong Min[1], Ji Hun Kang[1], and Jang Hyun Kim[1,2] [1]Department of Intelligence Semiconductor Engineering, Ajou University, [2]Department of Electronic Engineering, Ajou University
TP-136	A 8T SRAM-based Digital Compute-In-Memory Macro with In-SRAM Approximation Scheme Huiwon Kim and Jongsun Park Department of Electrical Engineering, Korea University
TP-137	Area-Efficient Partially-Parallel FWHT Processor for OFDM/CDMA communication 황용택, 황지우, 구교덕, 유호영 충남대학교 전자공학과
TP-138	Diffrenciator-based Noise Injection SCA-resistant LDO with 15 dB Noise Magnitude Control Ayeon Gwon, Yeseul Song, and Junwon Jeong Sookmyung Women's University
TP-139	SPAD Arrays for direct Time-of-Flight (dToF) LiDAR 채종혁, 조영민, 범진욱 Sogang University
TP-140	A 3.2 GHz Ring Oscillator Based Charge Pump PLL Achieveing Lower Than -110 dBcHz in-band Phase Noise Seunghoon YI[1], Yoochang Kim[1], Hee-Cheol Joo[1], and Young-Ha Hwang[1,2] [1]Department of Intelligent Semiconductors, Soongsil University, [2]School of Electronic Engineering, Soongsil University
TP-141	A 64-channel Time-multiplexed Neural Recording IC with Dual Positive Feedback Loop Z_{IN}-Boosting Christopher Santos, Dong-Hwi Choi, and Minkyu Je KAIST
TP-142	A High-Resolution Linear-Exponential Incremental ADC Minkyu Yang, Changjoo Park, Jooeun Kim, Jeongmyeong Kim, Dalta Imam Maulana, and Wanyeong Jung KAIST

TP-143	**Output-Capacitorless Low-Dropout Regulator with Dynamic Current Source** Ji-Sun Lee and Jong-Seok Kim Department of Electrical and Electronic Engineering, Hanyang University ERICA
TP-144	**A Compact Power-On Reset Circuit with Brown-Out Detection for DRAM Modules** Yoochang Kim[1] and Young-Ha Hwang[1,2] [1]Department of Intelligent Semiconductors, Soongsil University, [2]School of Electronic Engineering, Soongsil University
TP-145	**An Output-Capacitor-Free, Transient-Enhanced FVF LDO Supporting Up to 70-mA Load at 0.1-V Dropout** Hee-Cheol Joo[1] and Young-Ha Hwang[1,2] [1]Department of Intelligent Semiconductors, Soongsil University, [2]School of Electronic Engineering, Soongsil University
TP-146	**Ka-Band Bi-Directional Vector-Sum Phase Shifter Using Linearity Improved X-Type Variable Attenuator** Jaehui Jung and Byung-wook Min Yonsei University
TP-147	**Scalable Transformer Accelerator with Variable Systolic Array for Multiple Models** Seok-Woo Chang and Dong-Sun Kim Sejong University
TP-148	**Verification of Elementary Technology for nvSRAM Platform** Woon-San Ko, Jun-Ho Byun, Do-Yeon Lee, So-Yeon Kwon, and Ga-Won Lee Chungnam National University
TP-149	**외부 커패시터가 없는 이벤트 기반 비동기 방식의 99.99% 최대 전류 효율을 가지는 Digital LDO** Ji-Hoon Song[1,2], Yeong-Hun Kim[1,2], Ho-Jin Kwark[2], and Kang-Yoon Lee[1,2] [1]SKAIChips Co., Ltd., [2]Department of Electrical and Computer Engineering, Sungkyunkwan University

TP-150	**Ka-Band Bi-directional 2-Way Active Power Divider with Reverse Bypass Mode for Phased Array Signal Distribution Networks** Youngjoo Lee, Hyeonhak Lim, and Byung-Wook Min Yonsei University
TP-151	**A Wide Dynamic Range ΔΣ Current-to-Digital Converter with a Truncation-Noise-Shaped Baseline-Servo-Loop in 0.18μm CMOS** Taeryoung Seol, Minoo Lee, and Junghyup Lee DGIST
TP-152	**A 1V-Supply Wide Input-Range 2nd-Order Noise-Shaping SAR-ADC with Enhanced Input Impedance in 0.18μm CMOS** Geunha Kim, Jiho Kim, and Junghyup Lee DGIST
TP-153	**A Switching Battery Charger with Ripple-Based Real-Time Built-In-Resistance Compensation for Fast-Charging** Geuntae Park, Seongil Yeo, Chanjung Park, and Kunhee Cho Kyungpook National University
TP-154	**High Accuracy Analog Spiking Neural Network with Offset Voltage Cancellated Neuron Circuit** Yun-Su Kim, Dong-Won Lee, Min-Woo Kim, Yu-Guan Kim, Won-Jo Lee, Jung-Hwan Hwang, and Byung-Do Yang School of Semiconductor Engineering, Chungbuk National University
TP-155	**An Ultra-Compact and Energy-Efficient Synapse and LIF Neuron Circuit for On-chip Spiking Neural Networks** Gaurav Mehra, Abdey Munaf, Hyeon Woo Jin, and Han Jung Song [1]Department of Nanoscience and Engineering, Center for Nano Manufacturing, Inje University
TP-156	**A Dual-Output Hybrid Charger Providing Simultaneous Two-Cell Battery Charging and System Supply Voltage with Input Current Limiting Feature** Chanjung Park, Seongil Yeo, Geuntae Park, and Kunhee Cho Kyungpook National University
TP-157	**Area and Power Efficient Counter Mode DRBG Architecture through Feedback-Based AES Integration** Van-Khanh Pham, Chi-Trung Ngo, Sang-Tran, Ji-Woo Choi, and Jong-Phil Hong Chungbuk National University

TP-158	A 1.7-pJ/bit 64Gb/s PAM-4 transmitter in 28nm CMOS with Tail-less current mode driver Jonghyeok Won and Jintae Kim Konkuk University
TP-159	Single-Inductor Multiple-Output DC-DC Converter Hohyun Kim, Donghyun Kim, Seoyeon Park, Heejin Lee, Jisoo Kim, Minseok Kim, Haechan Park, Jiho Jung, Minkwang Ji, Jooyun Oh, and Joongho Choi University of Seoul
TP-160	주입 잠금 오실레이터 기반 물리적 복제 불가능 함수의 설계 Kang-Min Kim and Min-Seong Choo Hanyang University
TP-161	A CI-C Asynchronous SAR ADC with Common-mode Level Shifting Seungjun Song and Hyungil Chae Konkuk University
TP-162	A High-Speed V-Band Distributed OOK Modulator in 65 nm CMOS Zubair Mehmood, Jingbo Zhang, and Munkyo Seo School of Electronic and Electrical Engineering, Sungkyunkwan University
TP-163	A High-Speed V-Band Distributed OOK Demodulator in 65 nm CMOS Zubair Mehmood, Atiq Ben Ahmed, and Munkyo Seo School of Electronic and Electrical Engineering, Sungkyunkwan University
TP-164	CMOS N-path Circulator and Blocker Tolerant Balun-Low Noise Amplifier with Time-Domain RF Self-Interference Cancellation Chaerin Park, Seungyeon Kim, and Kuduck Kwon Department of Electronics Engineering, Kangwon University
TP-165	Design of SSB mixer with improved Harmonic Rejection Hyun-Seok Jeong, SungHwan Park, Jun-Kyo Park, and Byung-Sung Kim RF Microelectronic Design Lab., Sungkyunkwan University

TP-166	A 128x128x4 CMOS Active Microelectrode Array System for EIS Hyunseo Shin, Jun-Seok Beom, and Nam-Seog Kim Chungbuk National University
TP-167	Analysis of Proton-Irradiation Effects on 28nm MOSFETs Jisung Im[1], Hansol Kim[1], Sung Yun Woo[1], Haesung Kim[2], Sung-Jin Choi[2], Dae Hwan Kim[2], Jong-Ho Bae[2], Yu-Mi Kim[3], Dong Myong Kim[2,4], Young Jun Yoon[5], and Kwanseo Park[6] [1]School of Electronic and Electrical Engineering, Kyungpook National University, [2]School of the Electronic Engineering, Kookmin University, [3]KAERI, Korea Atomic Energy Research Institute, [4]Department of Advanced Technology, DGIST, [5]Department of Electronic Engineering, Andong National University, [6]Department of Systems Semiconductor Engineering, Yonsei University
TP-168	A Galvanically-Coupled Body-Channel-Communication Transmitter with Passive Charge Balancing for Implanatable Device Dong-Hwi Choi, Dongyoon Lee, Yunchul Chung[1], Hyunyeop Lee[1], and Minkyu Je[1] KAIST
TP-170	High-Performance 3D Object Detection Accelerator Using Sparse Pillar Mapping Minjae Lee, Dowon Kim, and Jungwook Choi Hanyang University
TP-171	Design of Refresh Prediction Circuits for DRAM Applications Byeongyu Kim, Sewoong Ahn, Eojin Kim, Yeongo Kim, and Young-Jae Min Department of Electric and Electronic Engineering, Halla University
TP-172	A Low-Area, High-Speed, and High-Uniformity 10b Source-Driver IC for OLED-on-Silicon Displays Junghwan Oh, Wiman Yoo, Dong-Kun Lee, and Jong-Seok Kim Department of Electrical and Electronic Engineering, Hanyang University ERICA
TP-173	A 28nm Reconfigurable and Memory-Efficient Digital Neuromorphic Processor ChangMin Ye[1], Choongseok Song[1], Yongwook Sim[1], and Doo Seok Jeong[1,2] [1]Division of Materials Science and Engineering, Hanyang University, [2]Department of Semiconductor Engineering, Hanyang University

TP-174	24-43 GHz Down-Conversion Mixer and Dual-Band LO Buffer with Switchable Inductor for 5G New Radio FR2 Cellular Applications Yunji Seong, Heesu Lee, and Kuduck Kwon Depatment of Electronics Engineering, Kangwon National University
TP-175	Wide Input Range Readout Integrated Circuit for Efficient Signal Extraction in Gas Sensor Systems Jang Su Hyeon, Soon Kyu Kwon, and Hyeon June Kim [1]Seoul National University of Science and Technology
TP-176	Triple-stacked Distributed Amplifiers Using CMOS 28 nm process Hosung Kang, Seungyoon Han, and Jihoon Kim Kyonggi University
TP-177	Novel ADC Design for MRAM-Based PiM Systems: Enhancing Performance, Energy Efficiency, and Accuracy Seoyoung Lee, Donghyeon Yi, and Minkyu Je School of Electrical Engineering, KAIST
TP-178	A Current-Mode Denoising Autoencoder for On-Chip Learning with Weight-Specific Gradient Accumulation Storage Jeong-Min Woo, Hyungmin Kang, and Hyunwoo Son chool of Electronic Engineering, Gyeongsang National University
TP-179	A Duty-Cycled Bandwidth and Power Scalable CTDSM for ExG Biopotential Recording Woo Yub Chun and Jung Hyup Lee DGIST
TP-180	An 8-Channel Low-Power Distributed Stimulation Chip for Electroceutical Application Joonyoung Lim, Chae-Eun Lee, Chieun Choi, Jong-hyun Park, Gwang-ho Choi, Seok-won Joo, and Yoon-Kyu Song Graduate School of Convergence Science and Technology, Seoul National University
TP-181	Module Designs of an Analog Adaptive Spike Detection System Joonyoung Lim, Chae-Eun Lee, Chieun Choi[1], Jong-hyun Park, Gwang-ho Choi, Seok-won Joo, and Yoon-Kyu Song Graduate School of Convergence Science and Technology, Seoul National University

TP-182	**Optimized ROIC Design with SNR Enhancement for SWIR Imaging Systems** Dong-Yeon Lee, Min-Jun Park, and Hyeon-June Kim Seoul National University of Science and Technology
TP-183	**Layout Pattern Optimization for Reducing Coupling Noise in Column-Parallel CMOS Image Sensors** Hyeong-Min Park, Sang-Hyeon Kim, and Hyeon-June Kim Seoul National University of Science and Technology
TP-184	**RF 에너지 하베스팅 시스템을 위한 100 nA의 대기 전류 및 고속 과도 응답 특성을 갖는 출력 커패시터 없는 LDO 레귤레이터** Jiho Jung[1], and Ickjin Kwon[2] Department of Electrical and Computer Engineering, Ajou University
I. MEMS & Sensor Systems	
TP-185	**Nonlinear and Bipolar Photoresponse Multifunctional Logic Gate Using p-Type Doped MAPbI3 for 8 Logic Operations in a Single Device** Dante Ahn[1,2], Minz Lee[1,3], and Yusin Pak[1] [1]Sensor System Research Center, KIST, [2]KU-KIST Graduate School of Converging Science and Technology, Korea University, [3]Department of Materials Science and Engineering, Korea University
TP-186	**Enhancing the Resistive Switching Properties of Transparent HfO_2-Based Memristor Devices for Reliable Gasistor Applications** Taegi Kim[1], Doowon Lee[2], and Hee-Dong Kim[1] [1]Department of Electrical Engineering and Convergence Engineering for Intelligent Drone, Sejong University, [2]Division of Electrical, Electronic and Control Engineering, Kongju National University
TP-187	**Heater for In-vehicle NO2 Quality Monitoring System** Ik-Geun Kwon[1], Doowon Lee[2], and Hee-Dong Kim[1] [1]Department of Electrical Engineering and Convergence Engineering for Intelligent Drone, Sejong University, [2]Division of Electrical, Electronic and Control Engineering, Kongju National University

TP-188	**Photosynaptic Characteristics of IGZO Field-Effect Transistors with Different IGZO Sputtering Conditions** Hojoon Jeong[1], Changyong Oh[2], and Bo Sung Kim[1] [1]Division of Display and Semiconductor Physics, Korea University, [2]DRAM PA Team, Samsung Electronics Co., Ltd.
TP-189	**Enhanced Response And Recovery Observed in CNTs Gas Sensors Using ZnO/HfO_2 Bilayer Memristor Heater** Mohsin Ali[1], Doowon Lee[2], and Hee-Dong Kim[1] [1]Department of Semiconductor Systems Engineering, Convergence Engineering for Intelligent Drone, and Institute of Semiconductor and System IC, Sejong University, [2]Division of Electrical, Electronic and Control Engineering, Kongju National University
TP-190	**Self-Clocking True Random Number Generator with Enhanced Stochasticity in Polymer-Blended Perovskite** Minz Lee[1,2], Yeon Kyung Lee[1], and Yusin Pak[1] [1]Sensor System Research Center, KIST, [2]Department of Materials Science and Engineering, Korea University
TP-191	**Advanced Humidity Resistance and Rapid Recovery in CNTs Gas Sensor via Filament Heater Integration** Ibtisam Ahmad[1], Doowon Lee[2], and Hee-Dong Kim[1] [1]Department of Semiconductor Systems Engineering and Convergence Engineering for Intelligent Drone, Sejong University, [2]Division of Electrical, Electronic and Control Engineering, Kongju National University
TP-192	**Implementation of Bayesian Network and Bayesian Inference using $Cu_{0.1}Te_{0.9}/HfO_2$/Pt Threshold Switching Memristor** In Kyung Baek[1,2], Soo Hyung Lee[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-193	**16 x 16 Active Matrix Temperature Sensor Array Using IGZO Thin-Film Transistors** Hyunsoo Kim[1], Hyerin Jo[2], Jaegoo Lee[2], and Hongseok Oh[1,2] [1]Depertment of Intelligent Semiconductor, Soongsil University, [2]Depertment of Physics, Soongsil University
TP-194	**High-Performance Dual-Gate Field Effect Transistor for Enhanced Cortisol Detection in Biosensor Platform** Seong-Hwan Lim, Seung-Jin Lee, and Won-Ju Cho Department of Electronic Materials Engineering, Kwangwoon University

TP-195	Reconfigurable Ion-Sensitive Field-Effect Transistors based CMOS-Compatible Biosensor Platform Seung-Hwa Choi, Tae-Hwan Hyun, and Won-Ju Cho Department of Electronic Materials Engineering, Kwangwoon University
TP-196	Effect of asymmetric air-gap on dual FET-type gas sensor considering thermoelectric effect Hunhee Shin, Jinwoo Park, Donghee Kim, Jaehyeon Kim, Kangwook Choi, and Jong-Ho Lee Department of Electrical and Computer Engineering and Inter-University Semiconductor Research Center (ISRC), Seoul National University
TP-197	Dynamic Reconfigurable pH-Sensing Device Based on Organic-Inorganic Hybrid MSQ Electric-Double Layer with CMOS Compatibility Tae-Gyu Hwang, Seung-Hyun Lee, and Won-Ju Cho Department of Electronic Materials Engineering, Kwangwoon University
TP-198	Reliable NO_2 Gas Identification Across Humidity Levels Using a Neuromorphic Olfactory System with p- and n-Type SnOx gas Sensors Donghee Kim and Jong-Ho Lee Department of Electrical and Computer Engineering and ISRC, Seoul National University
TP-199	Polycrystalline Silicon-based Electrically Doped Fin Structure Programmable Photodiode for Convolution Neural Network Seungyeob Kim, Giuk Kim, Seonjae Park, Taeseung Jeong, and Sanghun Jeon School of Electrical Engineering, KAIST
TP-200	Vacancy Modulated Memristive Sensor for Risk-Level Detection Yujin Nam[1], June Soo Kim[1], Seung Deok Kim[1], Noah Jang[1], Hyunjun Kim[1], Da Ye Kim[1], Jinkyung Kim[1], Jin Park[1], Kihyun Kim[1], Seong Ho Kong[1], and Maeum Han[2] [1]School of Electronic and Electrical Engineering, Kyungpook National University, [2]Institute of Semiconductor Fusion Technology, Kyungpook National University
TP-201	A Micro Ionic Wind Generator Using Plasma-on-chip Jisu Shin, Himchan Lee, and Youngmin Kim Hongik University

TP-202	전극두께의 최적화를 통한 $Ag_2O/\beta\text{-}Ga_2O_3$ 이종접합 기반 DUV 광검출기성능 향상 오혜성, 김기환, 김지형, 김해찬, 신성민, 홍정수 가천대학교 IT 융합대학 전기공학과
TP-203	Enhanced Room-Temperature Gas Sensing of TiO_2 and Au Nanoparticles from Nanocomposite Jin Park[1], Jinkyung Kim[1], Kihyun Kim[1], Seong Ho Kong[1], June Soo Kim[2], Seung Deok Kim[2], Noah Jang[2], Hyunjun Kim[2], Da Ye Kim[2], Yujin Nam[2], and Maeum Han[3] [1]Department of Semiconductor science, Kyungpook National University, [2]School of Electronic and Electrical Engineering, Kyungpook National University, [3]Institute of Semiconductor Fusion Technology, Kyungpook National University
TP-204	Freestanding Waveguide-Integrated Bolometer on Germanium-on-Insulator Platform for Mid-infrared on-Chip Gas Sensor Inki Kim, Joonsup Shim, Jinha Lim, Jaeyong Jeong, Bong Ho Kim, and SangHyeon Kim School of Electrical Engineering, KAIST
TP-205	Memristor-based Artificial Neuron for the Gustatory System Da Ye Kim[1], June Soo Kim[1], Hyunjun Kim[1], Noah Jang[1], Yujin Nam[1], Jinkyung Kim[1], Jin Park[1], Kihyun Kim[1], Seong Ho Kong[1], and Maeum Han[2] [1]Kyungpook National University, [2]Institute of Semiconductor Fusion Technology
TP-206	Elastomeric Substrates for the Assembly of Freestanding 3D Mesostructures Yeonhee Heo, Gooyoon Chung, and Yoonseok Park Department of Advanced Materials Engineering, Kyung Hee University
TP-207	The DPP-DTT Thin-Film Transistor-Based Glucose Sensor with Parylene-C Gate Dielectric Min-Joon Kim, Dong-Jun Han, Gwang-Eun Choi, Ra-Yeong Park, and Dong-Wook Park School of Electrical and Computer Engineering, University of Seoul
TP-208	Minimal-Invasive, Magnetically Targetable and Controllable Neural Interfaces Jeongmin Yoo[1], Gyuri Shin[1], Gooyoon Chung[1], Yoonseok Park[1], Sang Hoon Park[2], Ji Won Lee[2], and Ki Jun Yu[2] [1]Department of Advanced Materials Engineering, Kyung Hee University, [2]School of Electrical and Electronic Engineering, Yonsei University

TP-209	**Wide-range and selective detection of SARS-CoV-2 DNA via surface modification of electrolyte-gated IGZO thin-film transistors** Chuljin Hwang[1], Seokhyeon Baek[1], and Sungjun Park[1], and Won-June Lee[2] [1]Department of Electrical and Computer Engineering, Ajou University, [2]Department of Chemistry, Purdue University
TP-210	**A CMOS Temperature Sensor with a Reduced-Component Delta-Sigma Modulator** 조영민, 범진욱 Department of Electronic Engineering, Sogang University
TP-211	**Soft and Porous Wireless Hydration Sensor for Skin-Friendly Wearables** Hyejun Kim, Seongu Kim, and Jeonghyun Kim Department of Electronic Convergence Engineering, Kwangwoon University
TP-212	**Machine Learning-Based Cardiac Motion Monitoring Using Magnets and Magnetometers** Sunjin Lee[1], Eojin Lee[1], Youn-Kyoung Baek[2], Ji-Hoon Kim[3], and Yoonseok Park[1] [1]Kung Hee University, Department of Materials Engineering, [2]KIMS, [3]KIST
TP-213	**Graphene-PEDOT:PSS Bilayer Bioelectronic Interface for Accurate Electromyography Monitoring in Wearable Sensors** Rayoung Park, Sookyeong Kim, and Dong-Wook Park University of Seoul
TP-214	**초음파의 비선형 특성을 활용한 고 대조도 이미징을 위한 컴팩트 정전 용량형 미세가공 초음파 트랜스듀서 시스템** 허근영[1,2], 김동훈[1], 강동현[1], 편주영[1], 이병철[1,3,4] [1]한국과학기술연구원, 바이오닉스 연구센터, [2]고려대학교, 전기전자공학부 [3]과학기술연합대학원대학교, 바이오-메디컬 융합, [4]경희대학교, KHU-KIST 융합과학기술학과
TP-215	**Triphenylene-Based 2D cMOFs-Metal Oxide Nanocomposite for Chemiresistive Gas Sensing at Room Temperature** Min-Woo Kim[1,3], M. Jamir Ahemad[1], Jae-Hyun Lee[2], Byung-Joon Moon[1,4], and Sukang Bae[1,4] [1]Functional Composite Materials Research Center, KIST, [2]Department of Material Science and Engineering and Department of Energy Systems Research, Ajou University, [3]Department of Material Science and Engineering, Ajou University, [4]Department of JBNU, KIST

L. Analog Design	
TP-216	Design of Physically Unclonable Function Operation Circuit without Using a Reference Based on NAND Flash Structure Jun Hwa Jeong Tae Yeong Kim, Gyung Tae Ryu, and Ick Hyun Song Hanyang University
TP-217	Design Methodologies for Mass Production of Power Management Integrated Circuits (PMICs): Development Process, Design, and Reliability Verification Min Yong Jung KERI
TP-218	A 64-Gb/s 0.818-pJ/b C-PHY Transmitter Using Tri-Level Signaling Young-Wook Kim, Junhak Kim, Junsu Park, and Kwanseo Park Yonsei University
TP-219	14 GHz-to-16GHz Sub-sampling LC PLL 주파수 합성기 설계 MIN CHAN PARK, JUNG-HOON CHUN SungKyunKwan University
TP-220	An 8.7nW CMOS Current Reference with a Supply/Reference Current Ratio of 1.5 MinJi Jung, Youngwoo Ji Department of Electronic Engineering, Hanbat National University
TP-221	Digital Electro-Optical PLL with 4GHz Laser Modulation Range 신도현, 김종현, 범진욱 Sogang University
TP-222	A Novel Automatic Power Control Scheme for LiDAR Transmitter Yejin Choi[1,2], Juntong Li[1,2], and Sung Min Park[1,2] [1]Division of Electronic & Semiconductor Engineering, Ewha Womans University, [2]Graudate Program in Smart Factory, Ewha Womans University

TP-223	FMCW LiDAR 수신부 시스템에서 입력 DC 전류를 제거하는 피드백 루프를 가진 Analog-Front-End 회로 안예현, 이승주, 범진욱 Department of Electronic Engineering, Sogang University
TP-224	A Bias Generator Based On Beta-Multiplier With Line Sensitivity Subtraction Kyeongmin Min, Youngwoo Ji Department of Electronic Engineering, Hanbat National University
TP-225	Push-Pull Voltage Regulator를 활용하여 Gamma Reference Voltage의 Settling Time을 줄인 OLED 소스드라이버 IC Won-Jo Lee, Yu-Guan Kim, Min-Woo Kim, Yun-Su Kim, Jung-Hwan Hwang, and Byung-do Yang School of Semiconductor Engineering, Chungbuk National University
TP-226	10-Bit 4-MS/s R-C Hybrid DAC Based Differential SAR ADC With Digital Error Collection Logic Wooseok Jung, Hyukjin Kim, and Jinwook Burm Sogang University
TP-227	High-Impedance Read-Out IC for DC Measurements Using Impedance Boosting and Noise Suppression Techniques Chanhyuck Kang and Jooyeol Rhee Department of Semiconductor Engineering, Gachon University
TP-228	Wide-range Multi-phase Clock Generator with Successive Clock Comparison Daeun Yun and Kwanseo Park Yonsei University
TP-229	Zero Injection Technique for Enhancing Stability and PSR Performance in Analog LDOs Yunbeom Hwang and Jun-Eun Park Department of Electrical and Computer Engineering, Sungkyunkwan University
TP-230	RF 에너지 하베스팅 시스템을 위한 동적 게이트 및 바디 바이어싱을 활용한 저전압 커패시티브 DC-DC 컨버터 Ji Won Kang and Ickjin Kwon Department of Electrical and Computer Engineering, Ajou University

TP-231	A 25Gb/s Wireline NRZ Transmitter with 3-Tap FFE in 28nm CMOS Jun Kyeong Cha and Kee Won Kwon Department of Semiconductor and Display Engineering,Sungkyunkwan University
TP-232	Dual-Path Output-Capacitorless LDO With Fast-Transient Response Dong-Wook Jeong and Ickjin Kwon Department of Electrical and Computer Engineering, Ajou University
TP-233	A 28-nm 0.4-1-V Capacitor-Less LDO with Low-Power High Slew-Rate Class-AB OTA Hyungmin Kang, Jeong-Min Woo, Yunho Park, and Hyunwoo Son School of Electronic Engineering, Gyeongsang National University
TP-234	Isolated Phase shifted Full bridge DC-DC Converter Jisoo Kim, Heejin Lee, Hohyun Kim, Minseok Kim, Minkwang Ji, and Joongho Choi University of Seoul
TP-235	A Modeling of High Jitter Tolerance Oversampling CDR Based on Event-Driven System Verilog Simulator Soyoung Yang[1], Minkyu Song[2], Seokhyeon Moon[1], and Jun-Eun Park[2] [1]Department of Semiconductor Convergence Engineering, Sungkyunkwan University, [2]Department of Electrical and Computer Engineering, Sungkyunkwan University
R. Semiconductor Software	
TP-236	Implementation of an Improved SAN Framework to improve Backup Storage Performance Jung Kyu Park Daejin University
T. AI	
TP-237	경량 회귀 신경망 추론 시스템을 이용한 레이더 이미지 분류 구현 이준형, 김태환 한국항공대학교

TP-238	**Probability Controllable Stochastic Neuron for Stochastic SNN** Geonwoo Kum[1], Hyeyeon Jeon[1], Yoon Kim[1,2], and Minsuk Koo[1,2] [1]University of Seoul, [2]IM Electronics Co., Ltd.
TP-239	**An ADC-Free Page Buffer-based CMOS Neuron** Jinhyeok Kim[1], Minsuk Koo[2,3], and Yoon Kim[1,3] [1]School of Electrical and Computer Engineering, University of Seoul, [2]School of Advanced Fusion Studies and AI Semiconductor, University of Seoul, [3]IM Electronics Co., Ltd.
TP-240	**Adaptive Dual-Mode Processing Unit for Efficient DRAM-PIM with Partial BNN Support** Seonggeun Kim[1,2], Jin Shin[1,2], and Hyun Kim[1,2] [1]Department of Electrical and Information Engineering, Seoul National University of Science and Technology, [2]Research Center for Electrical and Information Technology, Seoul National University of Science and Technology
TP-241	**ViT-PatchCore: Transformer를 활용한 패치 기반 이상 탐지** 신지수, 김현진 단국대학교 전자전기공학과
TP-242	**An Efficient Computing Unit Integrating Floating Point and Posit for Transformer Accelerators** Sungsoo Han, Dahun Choi, and Hyun Kim Department of Electrical and Information Engineering, Research Center for Electrical and Information Technology, Seoul National University of Science and Technology
TP-243	**Implementation of Spiking Neural Network Characteristics in a-SZTO-Based Thin-Film Transistors for Optimized Neuromorphic Computing Applications** Hyeon Dong Kim[1,3], Sang Ji Kim[2,3], Tae Ho Kim[2,3], Ju Young Lee[2,3], Seong Eun Song[2,3], and Sang Yeol Lee[1,3] [1]Department of Semiconductor Engineering, Gachon University, [2]Department of Electronic Engineering, Gachon University, [3]Gachon Advanced Institute of Semiconductor Technology

TP-244	**Optimizing Hardware Footprint: A Versatile Multi-Precision Arithmetic Unit for FP and INT Operations** Chaewon Park, Jihoon Jang, Inseong Hwang, and Hyun Kim Department of Electrical and Information Engineering, Research Center for Electrical and Information Technology, Seoul National University of Science and Technology
TP-245	**Object Detection based on Super-Resolution Algorithms for Edge Imaging Devices** Chan-Myeong Ryu, Tae-Hoon Eom, and Hyeon-June Kim Department of Intelligent Semiconductor, Seoul National University of Science and Technology
TP-246	**Batch Training Optimization Method on Neuromorphic Hardware** In-Seok Lee and Jong-Ho Lee Department of Electrical and Computer, Seoul National University
TP-247	**Real-Time Military Wall-Penetrating Radar System Using 60-64 GHz band mmWave Radar and FPGA-Based Deep Learning Accelerator** Jinwoo Park[1], Gimin Bae[2], Dongyoon Kim[1], Jaeheon Kim[1] and Janghyong Lee[1] [1]Institute of Innovation for Future Army, [2]Kluge Herre
TP-248	**Vision Transformer with Checkerboard Self-Attention** Seungju Lee and Byung-soo Kim SoC Platform Research Center, KETI
TP-249	**Capacitor-Based ReLU Neuron Circuit with Successive Integration and Rescaling** Sojoong Kim[1], Minsuk Koo[1,2], and Yoon Kim[1,2] [1]University of Seoul, Korea, [2]IM Electronics
TP-250	**Noise Robust Analog Matrix-Vector Multiplication Accelerator Architecture Using Capacitive Coupling Principle** Yong Woo Kim[1], Jung Nam Kim[1], Minsuk Koo[2,3], and Yoon Kim[1,3] [1]Department of Electrical and Computer Engineering, University of Seoul, [2]School of Advanced Fusion Studies and AI Semiconductor, University of Seoul, [3]IM Electronics
TP-251	**Operation Methodologies and Device Specifications for Analog AI Training Accelerator with Resistive Cross-Point Arrays** Jinho Byun, Seungkun Kim, Doyoon Kim, Jimin Lee, Wonjae Ji, and Seyoung Kim Department of Materials Science and Engineering, POSTECH

C. Material Growth & Characterization

TP-252	**Protonation-driven Polarization Retention Failure in Nano-columnar Lead-free Ferroelectric Thin Films** Muhammad Sheeraz[1], Chang Won Ahn[1], Nguyen Xuan Duong[1], Soo-Yoon Hwang[2], Ji-Soo Jang[3], Eun-Young Kim[4], Yoon Ki Kim[5], Jaeyeong Lee[6], Jong Sung Jin[6], Jong-Seong Bae[6], Myang Hwan Lee[7], Hyoung-Su Han[8], Gi-Yeop Kim[2], Shinuk Cho[1], Tae Kwon Song[7], Sang Mo Yang[5], Sang Don Bu[4], Seung-Hyub Baek[3,9], Si-Young Choi[2,10,11], Ill Won Kim[1], and Tae Heon Kim[1,3] [1]Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan, [2]Department of Materials Science and Engineering, POSTECH, [3]Electronic Materials Research Center, KIST, [4]Department of Physics, Research Institute of Physics and Chemistry, Jeonbuk National University, [5]Department of Physics, Sogang University, [6]Busan Center, KBSI, [7]School of Materials Science and Engineering, Changwon National University, [8]School of Materials Science and Engineering, University of Ulsan, [9]Division of Nano & Information Technology, KIST School, University of Science and Technology, [10]Center for Van der Waals Quantum Solids, Institute for Basic Science, [11]Department of Semiconductor Engineering, POSTECH
TP-253	**Stress Effects on (Hf, Zr)O_2 Ferroelectrics Induced by Different Substrates** Hyun Woo Jeong[1], Dong Hee Han[1], Younghwan Lee[2], and Min Hyuk Park[1] [1]Seoul National University, [2]Chonnam National University
TP-254	**Gallium Arsenide Nanowires with Embedded Quantum Dots for Single Photon Emission** Illia Tikhonov[1,2], Sung-Yul L. Park[1], Ga Hyun Cho[1,3], Jindong Song[1,2] [1]KIST, [2]University of Science and Technology, [3]Hanyang University
TP-255	**Wafer-Scale MOCVD Growth of MoS2 Films for 2D TMDs FET Applications** Jong Min Song[1,2], Dong Hyun Seo[1,2], Ji Won Heo[1], Jin Hoo Seong[3,4], and Tae Wan Kim[1,2,5] [1]Department of Intelligent Semiconductor Engineering, University of Seoul, [22]D Epi inc., [3]KRISS, [4]Department of Semiconductor Science, Engineering and Technology, Korea Aerospace University, [5]School of Advanced Fusion Studies, University of Seoul
TP-256	**Defect Analyses of Oxide Semiconductor Materials by Photo-Induced Current Transient Spectroscopy and Artificial Intelligence 1D Convolutional Neural Networks** Hui Gu Lee[1] and Jinpyo Hong[1, 2]

	[1]Division of Nano-scale Semiconductor Engineering, Hanyang University, [2]Department of Physics, Hanyang University
TP-257	**Characterization of InAs QDs Filled in Ga-Droplet Etched Nanoholes** You Jin Lee[1,2], Suk In Park[1], Moritz Meinecke[3], Andreas Pfenning[3], Tobias Huber-Loyola[3], Sven Höfling[3], Peter Gschwandtner[3], and Jindong Song[1] [1]Korea Institute of Science and Technology, [2]KIST School at University of Science and Technology, [3]Julius-Maximilians-Universität Würzburg
TP-258	**Direct Measurement of Polarization-Electric Field Hysteresis Loops in Two-Dimensional Sliding Ferroelectrics** June Hee Shin[1], Sae-A Kim[1], Kahyun Ko[1], Byunghyun Kim[1], Hyobin Yoo[2], and Sang Mo Yang[1] [1]Sogang University, [2]Seoul National University
TP-259	**Substitutional Doping for P-type $MoS2_2$ with Liquid Phase Metal** Dong-Yeong Kim[1], TaeJoon Mo[1,2], GunWoo Yoo[1,2], Min-Yeong Choi[1,2], and Cheol-Joo Kim[1,2] [1]Department of Chemical Engineering, POSTECH, [2]Center for Van der Waals Quantum Solids, IBS
TP-260	**Oxidized Si-terminated Diamond MOSFET with High-k Dielectric** Yoonseok Nam[1], Taemyung Kwak[1], Geunho Yoo[1], Seong-Woo Kim[2], and Okhyun Nam[1] [1]Department of Nano & Semiconductor Engineering, Tech University of Korea, [2]Orbray Co., Ltd.
TP-261	**Control of Polarization Switching Dynamics in Ferroelectric $Hf_{0.7}Zr_{0.3}O_2$ Thin Films by Using Oxygen Scavenging Effect** Sang Won An, June Hee Shin, and Sang Mo Yang Department of Physics, Sogang University
TP-262	**Promoter Effects in Crystal Growth of MoS_2 Monolayer Films synthesized by Atomic Layer Deposition** Su Jin Kim and Hyun Seok Lee Department of Physics, Chungbuk National University
TP-263	**$NOBF_4$ Treatment Effects of Optical Properties in CVD-grown MoS_2 Monolayers** Tae Yeon Kim and Hyun Seok Lee Department of Physics, Chungbuk National University

TP-264	**Tellurium Based p-Type Material Growth for Electronic Device** Min Soo Moon[2], Gang Hee Han[2], Ju Hwan Baek[3],Jin Young Park[1,3], Yonas Tsegaye Megra[1,3], Hoon Hahn Yoon[1,3], Hyeon-Jin Shin[1,3], and Dong-Ho Kang[1,3] [1]Department of Semiconductor Engineering, GIST, [2]Department of Physics, Incheon National University, [3]School of Electrical Engineering and Computer Science, GIST
TP-265	**Comparative Analysis of Electrical and Morphological Properties of ZnSnN2 Films Deposited by RF Sputtering on GaAs, Sapphire, and GaN Substrates** Ju Chan Hwang[1], and Kwang Wook Park[1,2] [1]Division of Electronics and Information Engineering, Jeonbuk National University, [2]Division of Advanced Materials Engineering, Jeonbuk National University
TP-266	**Nitridation Effects in Strong Photoluminescence Enhancement for Monolayers and Stacked Bilayers of MoS_2** Min Choi, Han Dong Lee, and Hyun Seok Lee Department of Physics, Chungbuk National University
TP-267	**Understanding Growth Mechanism of MOCVD-grown MoS_2 on SiO_2 under BEOL Compatible Temperature** Minsu Jeon[1], Wonjae Choi[1], Jihun Mun[1], Taehyeon Kim[1,2], Jaemin Myoung[1,2], Taesung Kim[2], and Jong Moon Ha[3] [1]Korea Research Institute of Standards and Science, [2]Sungkyunkwan University, [3]Ajou University
TP-268	**Strong SWIR Photoluminescence of MOCVD Grown (In)GaAs/Ge/(In)GaAs** Minseong Seo[1], Wook Kim[1], Sujong Kim[1], Younghan Yook[1], Doyoung Yuk[1], Haoyan Rong[1], and Jaejin Lee[1,2], and Sunghyun Moon[2] [1]Department of Intelligence Semiconductor Engineering, Ajou University, [2]Department of Electrical and Computer Engineering, Ajou University
TP-269	**Manipulation of P-Type Doping and Reduced Charge Trapping in MoS_2 Monolayers via Mild N_2 Plasma Treatment** Su Jin Kim, Min Choi, and Hyun Seok Lee Department of Physics, Chungbuk National University
TP-270	**Analysis of Crystalline Phase Transformation in Ga_2O_3 Thin Films Grown on GaN Templates by MOCVD** Dong Ho Lee, Seon Jin Mun, Si Gwang Kim, Jun Ha Park, Hyung Soo Ahn, and Min yang Department of Nano-Semiconductor Engineering, National Korea Maritime and Ocean University

TP-271	**Electromagnetic Interference Shielding with Oxidation- and Water-resistant Functionalized MXene films** Jaeeun Park[1], Shi-Hyun Seok[1], Yujin Chae[1], Yeoseon Sim[1], Hyeonwoo Lee[1], Haeng Un Yeo[1], Soon-Yong Kwon[1], Young Ho Jin[1], Ju-Hyoung Han[1], Mincheal Kim[2], EunMi Choi[2], Sangjin Seo[3], Taesung Kim[3], and Sung Hyun Park[4] [1]Department of Materials Science and Engineering and Graduate School of Semiconductor Materials and Devices Engineering, UNIST, [2]Department of Electrical Engineering, UNIST, [3]Department of Mechanical Engineering, UNIST, [4]Sustainable Technology and Wellness R&D Group, KITECH
TP-272	**Simultaneous synthetic metallization for constructing pure edge-contact metal-semiconductor junction transistor arrays** Sora Jang[1], Juwon Han[1], Changwook Jeong[1], Soon-Yong Kwon[1], Seunguk Song[1,2], Aram Yoon[1,3], and Zonghoon Lee[1,3] [1]Department of Materials Science and Engineering & Graduate School of Semiconductor Materials and Devices Engineering, UNIST, [2]Depeartment of Energy Science & Department of Energy, Sungkyunkwan University, [3]CMCM, IBS
TP-273	**Effect of Top Electrode Materials on Polarization Switching in Post-deposition Annealed $Hf_{0.5}Zr_{0.5}O_2$ Capacitors** Yu Bin Park[1], Tae Hyun Jung[1], Jung Kyu Lee[1], Beomjun Kim[1], Sang Mo Yang[1], and Hyobin Yoo[2] [1]Sognag University, [2]Seoul National University
TP-274	**높은 비표면적을 가지는 TiO_2 나노 구조체 합성 최적화 및 특성 평가** Inhee Cho[1], Jai Chan Lee[2], Seong Hyeon Kim[1,2], Hyeon Sik Kim[1,3], and Han Young Yang[1,4] [1]KORAM, Korea Institute of Industrial Technology, [2]School of Materials science and engineering Sungkyunkwan University, [3]School of Electrical Engineering, Kookmin University, [4]School of Chemical and Biological Engineering, Korea University
TP-275	**Synthesis of $Ti_4N_3T_x$ MXene Using Diverse Fluoride Salts-assisted Etching Solution** Yujin Chae[1], Jaeeun Park[1], Shi-Hyun Seok[1], Yeoseon Sim[1], Ju-Hyoung Han[1], Young Ho Jin[1], and Soon-Yong Kwon[1,2] [1]Department of Materials Science and Engineering, UNIST, [2]Graduate School of Semiconductor Materials and Devices Engineering, UNIST

TP-276	**Correlation between Phase Transition Behavior and Growth Parameters of Sputtered Vanadium Dioxide Thin Films** Hyesoo Jin and Donghee Park Center for Quantum Technology, Post-Silicon Semiconductor Institute, KIST
TP-277	**Precise Measurements of Polarization States and Piezoelectric Coefficient in Sliding Ferroelectrics** Saea Kim, June Hee Shin, Tae Hyun Jung, and Sang Mo Yang Department of Physics, Sogang University
TP-278	**Harmonic Measurement Methods for Evaluation of Spin-orbit Torque Efficiency** Hongwon Jeon[1], Woojin Kim[1], Seongjong Yoon[1], Soogil Lee[1,2], Gunwoo Jung[1,3], Heungrae Cho[1,3], and Daeun Woo[1,4] [1]Department of Semiconductor Engineering, Gachon University, [2]Department of Electronic Engineering, Gachon University, [3]Department of Electrical Engineering, Gachon University, [4]Department of Physics, Gachon University
TP-279	**Growth of cation-controlled epitaxial nickelate thin films by co-sputtering** Changhwan Kim[1], Min Young Jung[1], Kyeong Jun Lee[1], Seo Hyoung Chang[1], Yeong Gwang Khim[2], Young Jun Chang[2], and Ji-Hwan Kwon[3] [1]Department of Physics, Chung-Ang University, [2]Department of Physics, University of Seoul, [3]KRISS
TP-280	**Heteroepitaxial Growth of Single Crystal (111) Diamond on Al_2O_3 Substrate** Seolyoung Oh, Taemyung Kwak, ,Yeonghwa Kwon, Yoonseok Nam, Eonhee Roh, Geunho Yoo, and Okhyun Nam CANS, Department of Nano-Semiconductor Engineering, Tech university of Korea
TP-281	**Boron-doped Diamond Metal Semiconductor Field Effect Transistor Using Selectively Grown P+ Layer** Eonhee Roh[1], Taemyung Kwak[1], Seolyoung Oh[1], Yeonghwa Kwon[1], Yoonseok Nam[1], Geunho Yoo[1], Seongwoo Kim[2], and Okhyun Nam[1] [1]CANS, Department of Nano-SemiconductorE ngineering, Tech university of Korea (TU-Korea), Korea, [2]Orbray Company
TP-282	**Thickness Dependent Structural Evolution in Epitaxial $CaZrO_3$ Thin Films** Dong-Hun Han[1], [2], Ho-Won Jang[2], Tae-Heon Kim[1], and Seung-Hyub Baek [1]Electronic Materials Research Center, KIST, [2]Department of Materials Science and Engineering, Research Institute of Advanced Materials, Seoul National University

TP-283	**Heteroepitaxial Diamond Grown on Compliant Substrate Using SOI Air-void Structure** Yeonghwa Kwon, Taemyung Kwak, Geunho Yoo, and Okhyun Nam Department of Nano & Semiconductor Engineering, Tech University of Korea
TP-284	**$VO_2(B)/V_2O_5$ Nanocomposite Thermistor for Enhanced High-Temperature Performance in Microbolometers** Jeongeun Mo[1,2], Donghee Park[1], Jeong Min Baik[2], and Won Jun Choi[1] [1]Center for Quantum Technology, KIST, [2]School of Advanced Materials Science and Engineering, Sungkyunkwan University
TP-285	**Epitaxial Growth, Bandgap, and Work function of 1T-$HfSe_2$ Thin Films** Min Cheol Kim[1], Tae Gyu Rhee[1,2], Young Rok Khim[1], Young hoon Khim[1], Dang Nguyen Hoang[3], Nguyen Huu Lam[3], Ganbat Duvjir[3], Hyuk Jin Kim[1], Jungdae Kim[3], Young Jun Chang[1] [1]University of Seoul, [2]KIST, [3]University of Ulsan
TP-286	**Thermal Conductivity Measurements of h-BN Thin Films** Taeyeon Kim[1], Sungsan Kang[2], Minkyu Je[1], Jihyun Kim[1], Sangyeon Pak[2], and Jungwan Cho[1] [1]Sungkyunkwan University, [2]Hongik University
TP-287	**Dielectric and lattice dynamics of ultra-wide bandgap $BaZrO_3$** Yoon Seok Oh[1], Syed Bilal Junaid[2], Furqanul Hassan Naqvi[2], Joon Woo Lee[1], Hei Woong Lee[1], Byeong-Gwan Cho[3], Tae-Yeong Koo[3], Dirk Wulferding[4], and Jae-Hyeon Ko[2] [1]UNIST, [2]Hallym University, [3]Pohang Accelerator Laboratory, [4]Seoul National University
TP-288	**Thermal Conductivity Measurements of Thin Metal Alloy Films** Minkyu Je, Ajin Jo, Taeyeon Kim, Chan Kim, Jihyun Kim, Dongwoo Lee, and Jungwan Cho Sungkyunkwan University
TP-289	**Efficient Photocurrent Generation in 50 nm Thin Sn Halide Perovskite by Overlapping Absorption with Fabry-Perot Resonances** Jia Choi[1,2], Donggyu Lim[3], Hansol Park[1,2], Kyu-Tae Lee[3], and Hui Joon Park[1,2,4] [1]Department of Organic and Nano Engineering, Hanyang University, [2]Human-Tech Convergence Program, Hanyang University, [3]Department of Physics, Inha University, [4]Department of Semiconductor Engineering, Hanyang University

TP-290	2D Copper@Carbon Core-Shell Nanosheets for Electromagnetic Interference Shielding Jaewon Yeom[1,2], Byung Joon Moon[1,2], Tae-Wook Kim[2,3], and Sukang Bae[1,2] [1]Functional Composite Materials Research Center, KIST, [2]Department of JBNU-KIST Industry-Academia Convergence Research, Jeonbuk National University, [3]Department of Flexible and Printable Electronics, Jeonbuk National University
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