



제 29회 한국반도체학술대회

The 29th Korean Conference on Semiconductors

2022년 1월 24일(월)~ 26일(수) | 강원도 하이원 그랜드호텔(컨벤션타워)

2022년 1월 25일(화), 09:00-18:00

하이원 그랜드호텔(컨벤션타워), 로비 (5층)

[TP1] 포스터 세션 1

A. Interconnect & Package

심사위원: 김사라은경 교수(서울과학기술대학교), 이소연 교수(금오공과대학교)

TP1-001	Effects of Polymer, Insert Material and New Manufacturing Process for CMP Performance of the CMP Retainer Ring Application Soon-Young Hyun ¹ , Hae-Kwon Kim ¹ , Sun Yanjie ¹ , Jaebok Lee ² , and Hyunjin Shin ² ¹ SABIC, ² WillbeS&T Co., Ltd.
TP1-002	KGSD Wafer Warpage(WPG) Characteristic for High Bandwidth Memory(HBM) Sooyeon Yoo, Hyoungchul Kwon, Seunghee Jo, and Woongsun Lee WLP Technology, SK Hynix
TP1-003	Thermal Reliability of Air-Gap TSV(Through Silicon Via) Eunsol Jo and Gu-Sung Kim Electronic Packaging Research Center, Kangnam University
TP1-004	Deposition Condition of Low Stress Tungsten in the Trench Mold Using Finite Element Analysis Jong-Sung Lee ¹ , Suncheul Kim ² , Donghoon Han ² , Myoung-Gyu Lee ^{1,3} , and Young-Chang Joo ^{1,3} ¹ Department of Materials Science & Engineering, Seoul National University, ² Samsung Electronics Co., Ltd., ³ Research Institute of Advanced Materials, Seoul National University
TP1-005	Improving Mechanical Stability of Al-Cu Ultrasonic Joint for Battery Tab by Adopting Ni Interlayer Jong-Min Jeong ^{1,2} , Jungsoo Kim ¹ , Yong-Jin Lee ¹ , Seung-Boo Jung ² , and Min-Su Kim ¹ ¹ Advanced Joining & Additive Manufacturing R&D Department, KITECH, ² School of Advanced Materials Science and Engineering, Sungkyunkwan University
TP1-006	A Modified Ladder-TLM Method for Precise Evaluation of the Contact Parameters of Ultrathin Semiconductor Devices Youngjin Park, Byeong-Gyu Park, Jiyeong Yun, and Hongsik Park School of Electronics Engineering, Kyungpook National University
TP1-007	웨어러블 전자소자용 니팅 머신기를 활용한 섬유 기반 인터커넥트 신재명 ¹ , 이미정 ² , 김윤희 ³ , 김병준 ¹ ¹ 한국산업기술대학교 신소재공학과, ² 국민대학교 신소재공학, ³ 국민대학교 융합디자인테크놀로지학과



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TP1-008	<p>Source/drain Contact Model for Scaled Vertical FET Structures with Consideration of Vertical Current Terms in the Contact Regions</p> <p>Byeong-Gyu Park, Youngjin Park, Jiyeong Yun, and Hongsik Park School of Electronic and Electrical Engineering, Kyungpook National University</p>
TP1-009	<p>Effect of Carbon Implantation on Thermal Stability of Metal-Insulator-Semiconductor Contact Using TiO₂ Interfacial Layer</p> <p>Donghun Lee¹, Iksoo Park¹, Jungsik Kim², and Jeong-Soo Lee¹ ¹Department of Electrical Engineering, POSTECH, ²Division of Electrical Engineering, Gyeongsang National University</p>
TP1-010	<p>고온방치시험을 통한 이종금속 초음파 접합부의 환경신뢰성 평가</p> <p>Taejoon Noh, Kyung-Yeol Kim, Dong-Gil Kang, and Seung-Boo Jung Sungkyunkwan University</p>
TP1-011	<p>Ni 프로브 핀에 Damage가 없는 고선택비의 Cu/Ni 습식 식각 공정</p> <p>Seungmin Park¹, Yoonho Kim¹, Yeongjun Park², Kwangsik Oh², and Sarah Eunkyung Kim³ ¹Department of Manufacturing System and Design Engineering, Seoul National University of Science and Technology, ²Department of Electrical and Information Engineering, Seoul National University of Science and Technology, ³Department of Semiconductor Engineering, Seoul National University of Science and Technology</p>
TP1-012	<p>다공성 Ag 나노층을 이용한 구리 웨이퍼 본딩</p> <p>Yoonho Kim¹, Seungmin Park¹, and Sarah Eunkyung Kim² ¹Department of Manufacturing System and Design Engineering, Seoul National University of Science and Technology, ²Department of Semiconductor Engineering, Seoul National University of Science and Technology</p>
TP1-013	<p>TiO₂나노구 단일층 구조를 활용한 폴리머 기반 Thermal Interface Material의 열전도 성능 향상</p> <p>문진욱¹, 정의진², 정복스민², 허원준², 박진섭^{1,2} ¹한양대학교 나노반도체공학과, ²한양대학교 융합전자공학과</p>
TP1-014	<p>Sn-0.7Cu-0.2Cr 솔더와 구리 기판 사이의 금속간화합물의 계면 반응 및 형태</p> <p>손준혁^{1,2}, 유동열^{1,2}, 김윤찬^{1,3}, 변동진², 방정환¹ ¹한국생산기술연구원 마이크로조이닝센터, ²고려대학교 신소재공학과, ³서울과학기술대학교 신소재공학과</p>
TP1-015	<p>Solvent 분자량에 따른 수용성 SAC305 솔더 페이스트의 젖음성 및 솔더링성 연구</p> <p>전소연, 유현주, 이태영, 유세훈 한국생산기술연구원 뿌리기술연구소 접합적층연구부문</p>
TP1-016	<p>Ni-less EPIG 표면처리와 Sn-3.0Ag-0.5Cu (SAC 305) 솔더 접합부 계면반응 및 기계적 특성</p> <p>이태영^{1,2}, 전소연¹, 김영호², 유세훈¹ ¹한국생산기술연구원 뿌리기술연구소 접합적층연구부문, ²한양대학교 신소재공학과</p>



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TP1-017	<p>핀 신뢰성 테스트 프로그램 보드 개발 Jin Su Kang¹, Yeon Jeong Ji², Hee Jin Woo¹, Song Hee Park¹, Dong Soo Jung³, and Young Hyung Kim² ¹Kumoh National Institute of Technology, ²Defense & IT Technology Research Institute, ³Raon Solution</p>
TP1-018	<p>Laser Debonding Process for Rework of OLED Displays 고명준^{1,2}, 김민수¹, 유세훈¹, 박영배², 이태익¹ ¹한국생산기술연구원 접합적층연구부문 마이크로조이닝센터, ²안동대학교 신소재공학부 전자재료신뢰성 연구실</p>

B. Patterning

심사위원: 이진균 교수(인하대학교), 임연호 교수(전북대학교)

TP1-019	<p>Characterization of Micro-Arcing and Plasma Impedance Monitoring with Discrete Wavelet Transform Seonghyeon Lee¹, Hojin Kang¹, Hojun Choi¹, Jaehyeon Kim¹, and Heeyeop Chae^{1,2} ¹School of Chemical Engineering, Sungkyunkwan University, ²SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University</p>
TP1-020	<p>Sensitivity Enhancement of Optical Signal for Plasma Etching Endpoint Detection by Modified Clustering Method with Discrete Wavelet Transform Hojun Choi¹, Seonghyeon Lee¹, Jaehyeon Kim¹, and Heeyeop Chae^{1,2} ¹School of Chemical Engineering, Sungkyunkwan University, ²SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University</p>
TP1-021	<p>Ceramic Heater Temperature Measurement with Heat Transfer Control Structure Attached Sun-Hee Lee, Hee-Tae Kwon, Woo-Jae Kim, Gi-Won Shin, Ji-Hwan Kim, In-Young Bang, and Gi-Chung Kwon Electrical and Biological Physics, Kwangwoon University</p>
TP1-022	<p>OLED 화소 형성을 위한 실리콘 원자 함유 고불소화 포토레지스트 개발 김가영¹, 최승수¹, 이의호², 이승택³, 정병준², 이정환³, 이진균¹ ¹Program in Environment and Polymer Engineering, Inha University, ²Department of Materials Science and Engineering, University of Seoul, ³Department of Materials Science and Engineering, Inha University</p>
TP1-023	<p>회절광의 위상 특성 최적화를 통한 극자외선 노광공정용 마스크 이미징 성능 향상 연구 조민선^{1,3}, 정동민^{2,3}, 김득규^{1,3}, 김연수^{2,3}, 안진호^{1,2,3} ¹한양대학교 나노반도체공학과, ²한양대학교 신소재공학과, ³EUV-IUCC (Industry University Collaboration Center)</p>
TP1-024	<p>EUV 펄리클 주름에 의한 마스크 회절 특성 변화가 마스크 이미지 전사 특성에 미치는 영향 이동기^{1,3}, 김영웅^{1,3}, 문승찬^{2,3}, 최진혁^{2,3}, 위성주^{1,3}, 안진호^{1,2,3} ¹한양대학교 신소재공학과, ²한양대학교 나노반도체공학과, ³EUV-IUCC (Industry University Collaboration Center)</p>



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<p>TP1-025</p>	<p>Plasma Atomic Layer Etching for Titanium Nitride at Low Temperatures Dahee Shim¹, Heeju Ha¹, Hojin Kang¹, and Heeyeop Chae^{1,2} ¹School of Chemical Engineering, Sungkyunkwan University, ²SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University</p>
<p>TP1-026</p>	<p>Atomic Layer Etching of Al₂O₃ with NF₃ Plasma Fluorination and Trimethylaluminum Ligand Exchange Jihyun Kim¹, Dahee Shim¹, Yongjae Kim², Hyeongwu Lee², and Heeyeop Chae^{1,2} ¹School of Chemical Engineering, Sungkyunkwan University, ²SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University</p>
<p>TP1-027</p>	<p>극자외선 및 심자외선 리소그래피용 포토레지스트 합성을 위한 연속 흐름 반응 공정 및 반응 속도론 연구 Kiyoungh Kwon¹, Jihoon Woo¹, Jiyeong Yeo², Seungyeon Choi², Myungwoong Kim², and Jinkyun Lee^{1,3} ¹Program in Environment and Polymer Engineering, Inha University, ²Department of Chemistry and Engineering, Inha University, ³Department of Polymer Science and Engineering, Inha University</p>
<p>TP1-028</p>	<p>금속을 함유한 고불소화 프탈로사이아닌의 EUV 레지스트로서의 가능성 최민규¹, 김준일¹, 구예진¹, 김강현³, 박병규⁴, 이상설⁴, 이진균^{1,2} ¹Program in Environmental and Polymer Engineering, Inha University, ²Department of Polymer Science and Engineering, Inha University, ³Department of Mechanical Engineering, POSTECH, ⁴Pohang Accelerator Laboratory, POSTECH</p>
<p>TP1-029</p>	<p>평판형 컷오프 프로브 측정 특성 분석 및 플라즈마 밀도 균일도 측정 염희중^{1,2}, 유광호¹, 윤민영¹, 채광석¹, 김정형¹, 이효창¹ ¹Korea Research Institute of Standards and Science, ²Department of Physics, Chungnam National University</p>
<p>TP1-030</p>	<p>세라믹 소재의 내플라즈마 특성과 플라즈마 변수의 상관관계 분석 홍성완^{1,2}, 김정형¹, 정종율², 이효창¹ ¹한국표준과학연구원, ²충남대학교</p>



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C. Material Growth & Characterization

심사위원: 김태헌 교수(울산대학교), 백승협 책임연구원(KIST)

TP1-031	<p>Defect-Mediated Control of Ferroelectric Hysteresis in Epitaxial $\text{Bi}_{1/2}(\text{Na}_{0.82}\text{K}_{0.18})_{1/2}\text{TiO}_3$ Thin Films</p> <p>Yong Jin Jo¹, Muhammad Sheeraz¹, Nguyen Xuan Duong¹, Gyeheon Kim², Changhee Sohn², Ill Won Kim¹, Chang Won Ahn¹, and Tae Heon Kim¹</p> <p>¹Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan, ²Department of Physics, UNIST</p>
TP1-032	<p>Solvent-Free Mechanochemical Synthesis of Ni-Based Fluoroperovskites</p> <p>Jin San Choi¹, Muhammad Sheeraz¹, Fazli Akram¹, Hyoung-Su Han², Jae-Shin Lee², Chang Won Ahn¹, and Tae Heon Kim¹</p> <p>¹Department of Physics and Energy Harvest-Storage Research Center, University of Ulsan, ²School of Materials Science and Engineering, University of Ulsan</p>
TP1-033	<p>졸-겔법에 의한 Ti 첨가 실리카 유리 제조와 그의 특성</p> <p>Seongmin Ju, U Sik Kim, Sang Yeol Shin, and Jaesun Kim</p> <p>Taihan Fiberoptics Co., Ltd.</p>
TP1-034	<p>Bandgap Alignment through $\alpha\text{-(Al}_x\text{Ga}_{1-x})_2\text{O}_3$ and $\alpha\text{-(In}_x\text{Ga}_{1-x})_2\text{O}_3$ Thin Films Solid Solution Grown by Mist CVD</p> <p>Kyoung-Ho Kim^{1,2}, Minh-Tan Ha¹, Yun-Ji Shin¹, Seong-Min Jeong¹, and Si-Young Bae¹</p> <p>¹KICET, ²Pusan National University</p>
TP1-035	<p>High Efficiency Perovskite Photovoltaic Cells with Bifacial Reflective Color-Tunability</p> <p>Jihyeon Heo^{1,2}, Incheol Jung³, Hyunwoo Park⁴, Ju Hwan Han⁴, Hyeonwoo Kim³, Hansol Park^{1,2}, Jin-Seong Park⁴, Hyeongtag Jeon⁴, Kyu-Tae Lee³, and Hui Joon Park^{1,2}</p> <p>¹Department of Organic and Nano Engineering, Hanyang University, ²Human-Tech Convergence Program, Hanyang University, ³Department of Physics, Inha University, ⁴Division of Materials Science and Engineering, Hanyang University</p>
TP1-036	<p>Comparative Study of Ferroelectric $\text{Hf}_{0.5}\text{Zr}_{0.5}\text{O}_2$ Capacitors with TiN, Ru, and RuO_2</p> <p>In Soo Lee¹, Beom Yong Kim^{1,2}, Hyeon Woo Park¹, Yong Bin Lee¹, Suk Hyun Lee¹, Minsik Oh¹, Seung Kyu Ryoo¹, Seung Yong Byun¹, Doo Sup Shim¹, and Cheol Seong Hwang¹</p> <p>¹Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University, ²R&D Division, SK Hynix</p>
TP1-037	<p>Atomistic Understanding of the Strain- and Temperature-Dependent Dielectric Constant of $\text{Be}_{0.25}\text{Mg}_{0.75}\text{O}$ Superlattice</p> <p>SeungJae Yoon^{1,2}, Gyuseung Han^{1,2}, Kun Hee Ye^{1,2}, Taeyoung Jeong^{1,2}, Cheol Seong Hwang², and Jung-Hae Choi¹</p> <p>¹Electronic Materials Research Center, KIST, ²Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University</p>
TP1-038	<p>Morphology Control of ZnO Microcrystals via Hydrothermal Remote Epitaxy</p> <p>Joonghoon Choi and Young Joon Hong</p> <p>Department of Nanotechnology and Advanced Materials Engineering, Sejong University</p>



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TP1-039	Thru-hole Epitaxy of GaN on Multi-layered-graphene/sapphire Templates for Readily Detachable Crystalline Films Hyunkyu Lee ¹ , Dongsoo Jang ² , and Chinkyoo Kim ^{1,2} ¹ Department of Information Display, Kyung Hee University, ² Department of Physics, Kyung Hee University
TP1-040	Effects of Preheated S as a Precursor of HfS₂ Chemical Vapor Deposition Using Three-Heater Zone Juchan Hwang and Kwangwook Park Jeonbuk National University
TP1-041	Epitaxial Growth of Ferroelectric HfO₂-Based Thin Films by RF Sputtering Hyung-Jin Choi, Sung-Jin Jung, Jun Young Lee, and Seung-Hyub Baek Electronic Materials Research Center, KIST
TP1-042	HfO₂ Epitaxy on Si-wafer by Sputtering for Ferroelectric Field Effect Transistor Sung-Jin Jung ¹ , Hyung-Jin Choi ¹ , Jun Young Lee ¹ , Soo Young Jung ¹ , Ruiguang Ning ¹ , Min seok Kim ¹ , Seong Keun Kim ¹ , and Seung Hyub Baek ^{1,2,3} ¹ KIST, ² Yonsei University, ³ Korea University of Science and Technology
TP1-043	Low Temperature Depositions of Vanadium Oxide Thin Films for Optoelectronic Applications Dae-Hwan Ahn, Seunghwi Koo, Dae-Kyu Han, and Donghee Park Center for Opto-Electronic Materials and Devices, Post-Silicon Semiconductor Institute, KIST
TP1-044	Direction Observation of Ferroelectric Effect on Ferroelectric Thin Film (SrMnO₃) by Using X-ray Micro Diffraction Rui He ¹ , Rui Tang ¹ , Shinkyu Lee ¹ , Sangmo Kim ² , and Chung Wung Bark ¹ ¹ Gachon University, ² Sejong University
TP1-045	Hetero-epitaxial Piezoelectric Film for Fingerprint and Vein Recognition System Soo Young Jung ^{1,2} , Jin Soo Park ^{3,4} , Byeong-hyeon Lee ⁵ , Sung-Ok Won ⁵ , Byung Chul Lee ³ , Ho Won Jang ² , and Seung-Hyub Baek ^{1,6} ¹ Electronic Materials Research Center, KIST, ² Department of Materials Science and Engineering, Seoul National University, ³ Creative Research Center for Brain Science, KIST, ⁴ Department of Electrical Engineering, Korea University, ⁵ Advanced Analysis Center, KIST, ⁶ Division of Nano and Information Technology, University of Science and Technology
TP1-046	Single Crystalline PMN-PZT Thin Film Bonding Technology for High-Performance MEMS Devices Development Ruiguang Ning ^{1,2} and Seung-Hyub Baek ^{1,2} ¹ University of Science and Technology, ² KIST
TP1-047	High-performance Dielectric ZnSnO₃/P(VDF-TrFE) Composite Films for Energy-harvesting Applications Fazli Akram ¹ , Amir Ullah ² , Tae Heon Kim ¹ , Ill Won Kim ¹ , and Chang Won Ahn ¹ ¹ Department of Physics and Energy Harvest-Storage Research Center (EHSRC), University of Ulsan, ² Department of Physics, Islamia College



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TP1-048	Lithium Nucleation and Growth Mechanism on Lithiophilic Surface Son Ha, Jong Chan Hyun, Dong Hyuk kang, Jimin Park, and Young Soo Yun <i>KU-KIST Graduate School of Converging Science and Technology, Korea University</i>
TP1-049	The Crystallization Mechanism of Organic Molecules by Physical Vapor Transport Process: Supercooled Liquid Intermediate State Youngkwan Yoon and Hee Cheul Choi <i>Department of Chemistry, POSTECH</i>
TP1-050	Defect States of $FA_{0.8}MA_{0.2}PbI_{3-x}Br_x$ Single Crystals Grown by Inverse-temperature Crystallization Kyoung Su Lee ¹ , Dae Young Park ² , Mun Seok Jeong ² , and Eun Kyu Kim ¹ ¹ <i>Department of Physics and Quantum-Function Research Laboratory, Hanyang University,</i> ² <i>Department of Physics and Semiconductor Nanophotonics Laboratory, Hanyang University</i>
TP1-051	Properties of Phase Transformations of Hexagonal Si Microneedle Jung Hyun Park ¹ , Kyoung Hwa Kim ¹ , Su Hyun Mun ¹ , Soyeong Kim ¹ , Gang Seok Lee ¹ , Jae Hak Lee ¹ , Hyung Soo Ahn ¹ , Young Tea Chun ¹ , Min Yang ¹ , Sam Nyung Yi ¹ , Sun-Lyeong Hwang ² , and Suck-Whan Kim ³ ¹ <i>Department of Electronic Material Engineering, Korea Maritime and Ocean University,</i> ² <i>Kangnam University,</i> ³ <i>Department of Physics, Andong National University</i>
TP1-052	Hexagonal Si Epilayer on 4H-SiC Substrate Grown by Mixed-Source HVPE Gang Seok Lee ¹ , Kyoung Hwa Kim ¹ , Soyeong Kim ¹ , Su Hyun Mun ¹ , Jung Hyun Park ¹ , Jae Hak Lee ¹ , Hyung Soo Ahn ¹ , Hunsoo Jeon ² , Ho-Young Cha ³ , Won Jae Lee ⁴ , Sang-Mo Koo ⁵ , and Suck-Whan Kim ⁶ ¹ <i>Department of Electronic Material Engineering, Korea Maritime and Ocean University,</i> ² <i>Power Semiconductor Commercialization Center,</i> ³ <i>School of Electrical and Electronic Engineering, Hongik University,</i> ⁴ <i>Department of Advanced Materials Engineering, Dong-Eui University,</i> ⁵ <i>Department of Electronic Materials Engineering, Kwangwoon University,</i> ⁶ <i>Department of Physics, Andong National University</i>
TP1-053	Rotation of Graphene on Cu(111) Surface and Stacking Angle-controlled Bilayer Graphene Hyeyeon Cho and Hee Cheul Choi <i>Department of Chemistry, POSTECH</i>
TP1-054	Synthesis of Highly Conductive 2D Metal-Organic Framework Thin Film by Chemical Vapor Deposition Myeonggeun Choe, Jin Young Koo, Sarah Sunah Park, and Hee Cheul Choi <i>Department of Chemistry, POSTECH</i>
TP1-055	Electron Doping of TCNQ-Based Cocrystals via Selective Reduction of TCNQ Hye Soo Kim ¹ , Jin Young Koo ² , and Hee Cheul Choi ² ¹ <i>Division of Advanced Materials Science, POSTECH,</i> ² <i>Department of Chemistry, POSTECH</i>
TP1-056	Ga₂O₃-Based Photodetector with Annealed Metal Buffer Layer on Sapphire Substrates Dong-Eon Kim ^{1,2} , Seong-Ho Cho ^{1,3} , Minh-Tan Ha ¹ , Yun-Ji Shin ¹ , Seong-Min Jeong ¹ , Min-Su Park ² , and Si-Young Bae ¹ ¹ <i>Energy and Environmental Division, KICET,</i> ² <i>Department of Electronics Engineering, Dong-A University,</i> ³ <i>Department of Materials Science and Engineering, Pusan National University</i>



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TP1-057	Electrical Properties of Metal-insulator-semiconductor Structure Diamond Schottky Barrier Diode Grown on Hetero-epitaxial Diamond Substrate Sanghun Han ¹ , Taemyung Kwak ¹ , Uiho Choi ¹ , Hyeonu Kang ¹ , Geunho Yoo ¹ , Seong-woo Kim ² , and Okhyun Nam ² ¹ Department of Nano & Semiconductor Engineering, Korea Polytechnic University (KPU), ² Adamant Namiki Precision Jewel Co., Ltd.
TP1-058	The Effect of AlGaN Interlayer on AlN-Based Double-Heterostructure HEMT Keono Kim, Minho Kim, Uiho Choi, Seongmin Kang, Yunseok Heo, and Okhyun Nam Convergence Center for Advanced Nano Semiconductor, Department of Nano-Semiconductor, Korea Polytechnic University
TP1-059	Growth of Carbon-doped p-type InGaAs Layers on InP(111)B Substrate Minwoo Kong ^{1,2} , Chang-Hun Song ^{3,4} , Hyunchul Jang ³ , Sang Tae Lee ³ , Chang Zoo Kim ³ , Shinkeun Kim ³ , Youngsu Choi ³ , Kwangseok Seo ^{1,3} , and Chan-Soo Shin ³ ¹ Department of Electrical and Computer Engineering, Seoul National University, ² Inter-university Semiconductor Research Center, Seoul National University, ³ KANC, ⁴ Department of Material Science and Engineering, Yonsei University
TP1-060	Study on the Growth of Gallium Oxide Thin Films Using Diamond Buffer Layer Grown by the Hot filament-CVD Ji-Yeon Seo ^{1,2} , Tae-Gyu Kim ³ , Yun-Ji Shin ¹ , Seong-Min Jeong ¹ , and Si-Young Bae ¹ ¹ Energy and Environmental Division, KICET, ² Department of Nano Fusion Technology, Pusan National University, ³ Department of Nano Mechatronics Technology, Pusan National University
TP1-061	Asymmetric Flow Rate Control for High-quality α-Ga₂O₃ on 2-inch Sapphire Substrate Sunjae Kim ^{1,2} , Hyeong-Yun Kim ^{1,3} , Jae-Hyeong Lee ^{1,4} , Min-Ji Oh ¹ , Dae-Woo Jeon ¹ , and Ji-Hyeon Park ¹ ¹ KICET, ² Korea Aerospace University, ³ Pukyong National University, ⁴ Andong National University
TP1-062	Fabrication and Characterization of ϵ-Ga₂O₃-Based Solar Blind UV Photodetector Seong-Ho Cho ^{1,2} , Dong-Eon Kim ^{1,3} , Yun-Ji Shin ¹ , Minh-Tan Ha ¹ , Seong-Min Jeong ¹ , Se Hun Kwon ² , Min-Su Park ³ , and Si-Young Bae ¹ ¹ KICET, ² Pusan National University, ³ Dong-A National University
TP1-063	Control of Mist Flow by Changing the Susceptor Design for the Growth of Ga₂O₃ Thin Films in Mist Chemical Vapor Deposition Sun-Young Park ^{1,2} , Minh-Tan Ha ¹ , Kyoung-Ho Kim ¹ , Yun-Ji Shin ¹ , Seong-Min Jeong ¹ , Se-Hun Kwon ² , and Si-Young Bae ¹ ¹ Energy and Environmental Division, KICET, ² School of Materials Science and Engineering, Pusan National University
TP1-064	Magnetic Properties of Granular Thin Films FePt-X(X= TiO₂, Ta₂O₅) according to Deposited Temperature Eun-ji Im, Donghyun Lee, Nyunjong Lee, Jungmin Park, and Sanghoon Kim Department of Physics, University of Ulsan
TP1-065	Effect of Insulator Layers on Domain Switching Dynamics in HfO₂-Based Metal-Ferroelectric-Insulator-Semiconductor Capacitors Yoon Ki Kim and Sang Mo Yang Department of Physics, Sogang University



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TP1-066	<p>리사이클링 CVD-SiC 소재를 이용한 고순도 SiC 단결정 성장</p> <p>김용현¹, 배시영¹, 이윤주¹, 김슬기¹, 신윤지¹, 이명현¹, 양인석², 김일곤², 김창민², 정성민¹</p> <p>¹한국세라믹기술원, 에너지환경본부, ²하나머티리얼즈</p>
TP1-067	<p>N-polar GaN HEMT Structure Growth Using Metal Organic Chemical Vapor Deposition</p> <p>Seongmin Kang, Yunseok Heo, Minho Kim, Keono Kim, Uiho Choi, and Okhyun Nam</p> <p>Convergence Center for Advanced Nano Semiconductor (CANS), Department of Nano-Semiconductor Engineering, Korea Polytechnic University (KPU)</p>
TP1-068	<p>Phase Engineering and High-crystalline Hetero Epitaxial Growth of α-Ga₂O₃ by Mist Chemical Vapor Deposition</p> <p>Joon Hui Park and You Seung Rim</p> <p>Department of Intelligent Mechatronics Engineering, and Convergence Engineering for Intelligent Drone, Sejong University</p>
TP1-069	<p>A Surface-Emitting Photonic Crystal Laser By InGaN Tunnel Junction Nanowire heterostructure</p> <p>Jeong-Kyun Oh, Dae-Young Um, Ji-Yeon Kim, Cheul-Ro Lee, and Yong-Ho Ra</p> <p>School of Advanced Materials Engineering, Engineering College, Jeonbuk National University</p>
TP1-070	<p>A 913 nm-wavelength InGaN Quasi-quantum Dot Fabricated On Non-polar GaN Nanowire Structures</p> <p>Ji-Yeon Kim, Dae-Young Um, Jeong-Kyun Oh, Cheul-Ro Lee, and Yong-Ho Ra</p> <p>School of Advanced Materials Engineering, Engineering College, Jeonbuk National University</p>

D. Thin Film Process Technology

심사위원: 김성근 책임(KIST), 한정환 교수(서울과학기술대학교), 안지훈 교수(한양대학교),
전우진 교수(경희대학교), 이웅규 교수(명지대학교)

TP1-071	<p>Enhanced Blue Fluorescent Protein (eBFP)/IGZO Thin Film-Based Phototransistors for Real-Time UV Monitoring Application</p> <p>Jongwon Yoon¹ and Woong-Ki Hong²</p> <p>¹Jeonju Center, Korea Basic Science Institute, ²Center for Scientific Instrumentation, Korea Basic Science Institute</p>
TP1-072	<p>Synaptic Device with Double-Structured Gate Dielectric of Ionic Behavior Showing Electrical Synaptic Characteristics</p> <p>Min A Park¹, Jung Wook Lim^{1,2}, and Sung Hoon Hong^{1,2}</p> <p>¹Nano New Materials Application Lab, ETRI, ²Department of Advanced Device Engineering, UST</p>
TP1-073	<p>Improvement of the Electrical Properties in Hf_{0.3}Zr_{0.7}O₂ with Al Doping Using Atomic Layer Deposition</p> <p>Min Ji Jeong, Seung Won Lee, and Ji-Hoon Ahn</p> <p>Department of Materials Science and Chemical Engineering, Hanyang University</p>



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TP1-074	Implementation of High Performance Al_2O_3 / IZO TFTs Under Various Diffusion Conditions Se Hyeong Lee, So-Young Bak, and Moonsuk Yi <i>Department of Electronics Engineering, Pusan National University</i>
TP1-075	Amorphous-IGZO TFT based on Yttrium-Doped Zirconia Dielectric Eun Kyung Jo, Jeong Hyun Ahn, Tae Eun Ha, Hwarim Im, and Yong-Sang Kim <i>Department of Electrical and Computer Engineering, Sungkyunkwan, University</i>
TP1-076	Phase Control of Two-Dimensional Tin Sulfide Compounds Deposited by Atomic Layer Deposition Dong Geun Kim, Jeong-Hun Choi, and Ji-Hoon Ahn <i>Department of Materials Science and Chemical Engineering, Hanyang University</i>
TP1-077	Implementation of High-Performance Potassium-Selective Sensor Platform based on IGZO Thin-Film Transistor by Resistive Coupling Effect Young Jun Lee and Won-Ju Cho <i>Department of Electronic Materials Engineering, Kwangwoon University</i>
TP1-078	Wake-up 현상 억제 강유전성 $\text{Mo}/\text{Hf}_{0.5}\text{Zr}_{0.5}\text{O}_2/\text{Mo}$ 캐패시터의 하부전극에 따른 영향 연구 Geun Taek Yu ¹ , Se Hyun Kim ¹ , Ju Yong Park ¹ , Dong Hyun Lee ¹ , and Min Hyuk Park ² <i>¹School of Materials Science and Engineering, Pusan National University, ²Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University</i>
TP1-079	A Study on the Development of Titanium-Based Thin Film Transistors Using Super-cycles of Plasma-enhanced Atomic Layer Deposition Chohyeon Park ^{1,2} and Jung Wook Lim ^{1,2} <i>¹ETRI, ²University of Science and Technology</i>
TP1-080	Wafer-Scaled Vertical Three-Terminal Oxygen-Based Synapse Device for High-Density Neuromorphic System Geonhui Han, Jongseon Seo, and Daeseok Lee <i>Department of Electronic Materials Engineering, Kwangwoon University</i>
TP1-081	Improvement of Atomic Layer Deposited TiO_2 Film Crystallinity by Plasma Atomic Layer Annealing with DC Biasing Jeong Woo Shin ¹ , Dohyun Go ² , Jaehyeong Lee ³ , Seunghyeon Lee ³ , and Jihwan An ^{2,3} <i>¹New Energy Engineering, Seoul National University of Science and Technology, ²Nano-Bio Engineering, Seoul National University of Science and Technology, ³MSDE, Seoul National University of Science and Technology</i>
TP1-082	Evaluation of Yttrium as an Acceptor Dopant in TiO_2 for DRAM Capacitor Applications Tae Kyun Kim, Dae Seon Kwon, Junil Lim, Haengha Seo, Heewon Paik, and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University</i>



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TP1-083	<p>Electrical Characteristics of Ge₂Sb₂Te₅ Phase Change Memory Line Cells with Thin Film Transistor Wonho Choi, Chanyoung Yoo, Woohyun Kim, Jeong Woo Jeon, Byongwoo Park, Gwangsik Jeon, Sangmin Jeon, and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University</i></p>
TP1-084	<p>Ferroelectricity of Hf_{1-x}Zr_xO₂ Thin Films Using Hf[Cp(NMe₂)₃] and Zr[Cp(NMe₂)₃] Precursors Depending on Zr Content via Atomic Layer Deposition Youkyoung Oh, Hyo-Bae Kim, and Ji-Hoon Ahn <i>Department of Materials Science and Chemical Engineering, Hanyang University</i></p>
TP1-085	<p>지속가능한 ALD 공정챔버 개발을 위한 공정갭에 따른 가스유동 평가 유경훈¹, 김춘식², 손범수², 송근수³, 이건형⁴ <i>¹한국생산기술연구원, ²(주)티엔지, ³(주)금영이엔지, ⁴삼성디스플레이</i></p>
TP1-086	<p>Controlling Charge Carrier Density for Complementary-like Inverter based on Solution-Processed Ambipolar Semiconductor Yeon Jun Kim¹, Jingwan Kim², Yongju Lee³, Swarup Biswas³, Hyeok Kim³, Yun-Hi Kim², and Jeonghun Kwak¹ <i>¹Department of Electrical and Computer Engineering and Inter-University Semiconductor Research Center, Seoul National University, ²Department of Chemistry, Gyeongsang National University, ³School of Electrical and Computer Engineering, University of Seoul</i></p>
TP1-087	<p>Non-Volatile Ambipolar Floating-Gate Memory Devices Using Small-Molecules Bilayer Yunchae Jeon¹, Seongjae Kim², and Hocheon Yoo² <i>¹Department of Biomedical Engineering, Gachon University, ²Department of Electronic Engineering, Gachon University</i></p>
TP1-088	<p>A Study on the Identification of Hydrogen Diffusion Mechanism in IGZO Thin Film Transistors and Its Electrical Characteristics Hee Yeon Noh, Joonwoo Kim, June-Seo Kim, Myoung-Jae Lee, and Hyeon-Jun Lee <i>Division of Nanotechnology, DGIST</i></p>
TP1-089	<p>Morphology-Dependent Negative Differential Resistance Behaviors of Zinc Oxide/p-Si Heterojunction Structures Somi Kim¹, Taehyun Park^{1,2}, and Hocheon Yoo¹ <i>¹Department of Electronic Engineering, Gachon University, ²Department of Chemical & Biological Engineering, Gachon University</i></p>
TP1-090	<p>Dielectric Surface-Dependent Photoresponsive Characteristics of C8-BTBT Thin-Film Phototransistors Jihyun Shin, Somi Kim, and Hocheon Yoo <i>Department of Electronic Engineering, Gachon University</i></p>
TP1-091	<p>Polycrystalline Al₂O₃ Thin Film by Aerosol Deposition Using A Sacrificial Layer for Flexible Device Hyeon Ho Cho and Hak Ki Yu <i>Department of Materials Science and Engineering and Department of Energy Systems Research, Ajou University</i></p>



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TP1-092	Carrier Transport Analysis of Quantum Dot/Metal Oxide Hybrid Phototransistors with Metal-Chalcogenide Interfaces Joon Bee Park ¹ , Jaehyun Kim ² , Chanho Jo ¹ , Young-Woo Jang ¹ , and Sung Kyu Park ¹ ¹ School of Electrical and Electronics Engineering, Chung-Ang University, ² Department of Chemistry and Materials Research Center, Northwestern University
TP1-093	Fully Transparent and Highly Sensitive Chemical Sensor based on a-IGZO Thin-Film Transistor with Coplanar Gates on Flexible Polyimide Substrates Tae-Hwan Hyun and Won-Ju Cho Department of Electronic Materials Engineering, Kwangwoon University
TP1-094	Atomic Layer Deposition of Ru Thin Films Using Novel Ru(II) Precursor with Enhanced Reactivity Seung Hoon Oh ^{1,2} , Seung Min Yeo ¹ , Hyeon Bin Park ¹ , Tae Joo Park ² , Taeyong Eom ¹ , and Taek-Mo Chung ¹ ¹ Division of Advanced Materials, KRICT, ² Department of Materials Science and Chemical Engineering, Hanyang University
TP1-095	IGZO Nanowire-Based High-Performance Field-Effect Transistors Using Electrospun PVP Nanofiber Template Transfer Ki-Woong Park and Won-Ju Cho Department of Electronic Materials Engineering, Kwangwoon University
TP1-096	NF₃ 및 F₃NO 플라즈마를 이용한 산화규소와 질화규소의 반응성 이온 식각 특성 연구 Woo-Jae Kim, Sun-Hee Lee, In Young Bang, Ji Hwan Kim, Yeon Soo Park, Hee Tae Kwon, Gi Won Shin, and Gi-Chung Kwon Kwangwoon University
TP1-097	Structural Rearrangement of Molecular Layer Deposited Metalcone to 2D like Carbon by Electron Beam Irradiation for Area Selective Deposition Seunghwan Lee ¹ , GeonHo Baek ² , and Jin-Seong Park ^{1,2} ¹ Division of Materials Science and Engineering, Hanyang University, ² Division of Nano-Scale Semiconductor Engineering, Hanyang University
TP1-098	Atomic Layer Deposition of Two-Dimensional (2D) Bismuth Oxyselenides (Bi₂O₂Se) Hyeon Bin Park ^{1,2} , Ki Bum Kang ² , Taeyong Eom ¹ , and Taek-Mo Chung ¹ ¹ Division of Advanced Materials, KRICT, ² Department of Materials Science and Engineering, KAIST
TP1-099	Analysis of the off-state Characteristics of In-Ga-Zn-Oxide TFTs with Additional Potential Barrier in Channel Region Jinsil Gong ¹ , Hyoungbeen Ju ² , Jiyoung Bang ² , Sehoon Oh ² , Yeonsu Lee ² , Hyeonjeong Sun ¹ , Minjin Kwon ¹ , Onejae Sul ³ , and Seung-Beck Lee ^{1,2,3} ¹ Department of Electronic Engineering, Hanyang University, ² Department of Nanoscale Semiconductor Engineering, Hanyang University, ³ Institute of Nano Science and Technology, Hanyang University
TP1-100	High Performance of IGZO Transistor Deposited by Plasma Enhanced Atomic Layer Deposition: In-Ga-Zn Sublayer Ratio Approach Seong Hun Yoon, Min Jae Kim, Yoon Ji Choi, and Jeong Eun Oh Department of Electronic Engineering, Hanyang University



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TP1-101	High-Performance Polycrystalline Indium Gallium Oxide Thin –Film Transistor with SiO₂ Passivation Layer Sangwon Chung, Cheolhee Choi, Gwangbok Kim, Dohyun Kim, and Jae Kyeong Jeong <i>Department of Electronic Engineering, Hanyang University</i>
TP1-102	Ferroelectric Lanthanum-Modified Bismuth Titanates Thin Film for High Efficiency Photovoltaic Rui Tang and Chung Wung Bark <i>Department of Electrical Engineering, Gachon University</i>
TP1-103	Voltage Pulse Dependence of Controllability for The Conduction Phase in Oxide Transistors with Dual Gate Dielectrics Jaehee Lee ^{1,2} and Jung Wook Lim ^{1,2} ¹ ETRI, ² University of Science and Technology
TP1-104	High-k Engineered Dielectric Layer Based Self-Sensitivity Amplifying Dual Gate Ion-Sensitive Field-Effect Transistor Yeong-Ung Kim and Won-Ju Cho <i>Department of Electronic Materials Engineering, Kwangwoon University</i>
TP1-105	Influence of External Oxide on Resistive Switching Properties of HfO₂-Based Memristors Ye Byeol An, Seung Hee Cha, Jeong A Lee, Tae Woong Moon, and Jae Kyeong Jeong <i>Department of Electronic Engineering, Hanyang University</i>
TP1-106	Improvement Contact Resistance of Oxide Semiconductors Using a Titanium Nitride Interlayer at High-Temperature Annealing Seungwan Seo ¹ , Taiky Kim ¹ , Hongwei Xu ¹ , Heesung Han ¹ , and Jae Kyeong Jeong ¹ ¹ Department of Electronic Engineering, Hanyang University
TP1-107	Improved Polysilicon Thin-film Transistor Characteristics Using Microwave Annealing Sun Hyeong Lee, Jongwon Lee, and Hyunsang Hwang POSTECH
TP1-108	Area-Selective Atomic Layer Deposition of Ru Thin Films Using Phosphonic Acid Self-Assembled Monolayers with Different Alkyl Chain Lengths Seo-Hyun Lee, Jeong-Min Lee, and Woo-Hee Kim <i>Department of Materials Science and Chemical Engineering, Hanyang University</i>
TP1-109	Area-Selective Atomic Layer Deposition of Ruthenium Thin Films Using Vapor-Phase Amino Group-Containing Inhibitors Jieun Oh, Jeong-Min Lee, and Woo-Hee Kim <i>Department of Materials Science and Chemical Engineering, Hanyang University</i>



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TP1-110	<p>Polymer Electret을 이용한 DNNT 기반의 비휘발성 OFET 메모리</p> <p>권희진, 이용수, 김승모, 이준호, 김시현, 권민규, 황현준, 이병훈 <i>Department of Electrical Engineering, POSTECH</i></p>
TP1-111	<p>SnO₂ 삼진 로직 소자 제작 및 시간에 따른 소자 안정성 연구</p> <p>이해원, 김소영, 이호인, 이용수, 김승모, 황현준, 이병훈 <i>Department of Electrical Engineering, POSTECH</i></p>
TP1-112	<p>저온 성장된 ZrO₂ MIM 커패시터의 전기적 특성 향상 방법에 관한 연구</p> <p>김승모, 이준호, 이용수, 이호인, 김시현, 권희진, 이해원, 황현준, Surajit Some, 이병훈 <i>Department of Electrical Engineering, POSTECH</i></p>
TP1-113	<p>2D 물질 기반 Band Modulation FET의 전기적 특성에 관한 연구</p> <p>이준호¹, 김승모¹, Muhammad Taqi², 이호인¹, 이용수¹, 권민규¹, 이해원¹, 황현준¹, 유원종², 이병훈¹ ¹Department of Electrical Engineering, POSTECH, ²Department of Nano Science and Engineering, Sungkyunkwan University</p>
TP1-114	<p>Performance Merits of Scaled ZnO Stacked Nanosheet Channel Ternary Field Effect Transistor</p> <p>Ho-In Lee, So-Young Kim, Seung-Mo Kim, Yongsu Lee, Hae-Won Lee, Heejin Kwon, Junho Lee, Hyeon Jun Hwang, and Byoung Hun Lee <i>Department of Electrical Engineering, POSTECH</i></p>
TP1-115	<p>전류 증폭/억제를 이용한 이중 채널 P형 삼진 소자</p> <p>이용수, 김승모, 김기영, 김소영, 이호인, 권희진, 이해원, 황현준, 이병훈 <i>Department of Electrical Engineering, POSTECH</i></p>
TP1-116	<p>A Study on the Physical Properties of Low-temperature Silicon Nitride Thin Films Deposited with PE-ALD</p> <p>Baek-Ju Lee, Dong-Won Seo, Jae-Soon Hwang, and Jae-Wook Choi <i>Advanced Technology TF, Hanwha Corporation</i></p>
TP1-117	<p>Enhancement in Electron Mobility through Band-Gap Engineering in Atomic-Layer-Deposited In-Ga-Zn-O Stacks</p> <p>Jae Hoon Cho, Min Hoe Cho, Jae Seok Hur, Seong hun Yoon, and Jae Kyeong Jeong <i>Department of Electronic Engineering, Hanyang University</i></p>
TP1-118	<p>An Artificial Receptor Using Diffusive Memristor based on Surface Electromigration</p> <p>Young Geun Song¹, Chong-Yun Kang^{1,2}, and Jung Ho Yoon¹ ¹Center for Electronic Materials, KIST, ²KU-KIST Graduate School of Converging Science and Technology, Korea University</p>



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TP1-120	차세대 Device Seamless Gap-fill 공정을 위해 Inhibitor를 이용한 SiO₂ PE-ALD 공정 개발 Yoenju Choi ^{1,2} , Taehoon Kim ² , Hangyul Lee ² , Jusung Park ² , Juhwan Park ² , Dongho Ryu ² , and Woojin Jeon ¹ ¹ Department of Advanced Materials Engineering for Information and Electronics, Kyung Hee University, ² Semiconductor R&D Center, WONIK IPS Co., Ltd.
TP1-121	Improvement of Reliability of Multi-Stacked Active Layer a-InGaZnO Thin Film Transistors Ayeon Jang and Byoungdeog Choi <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-122	Analysis of High-temperature Annealing Dependence of 7nm Channel IGZO TFTs Hyeonjeong Sun ¹ , Hyoungbeen Ju ² , Jiyoung Bang ² , Jinsil Gong ¹ , Sehoon Oh ² , Yeonsu Lee ² , Minjin Kwon ¹ , Onejae Sul ³ , and Seung-Beck Lee ^{1,2,3} ¹ Department of Electronic Engineering, Hanyang University, ² Department of Nanoscale Semiconductor Engineering, Hanyang University, ³ Institute of Nano Science and Technology (INST), Hanyang University
TP1-123	Threshold Switching Characteristics of Chromium Telluride Thin Film Deposited by RF Sputtering Minkyu Kang, Jaeyeon Kim, Wansun Kim, and Hyunchul Sohn <i>Department of Materials Science and Engineering, Yonsei University</i>
TP1-124	Non-Filamentary Forming-free Resistive Switching Characteristics of NiO Thin Film Deposited by RF Sputtering System Changho Yoon, Jeongwoo Lee, Jaeyeon Kim, and Hyunchul Sohn <i>Department of Materials Science and Engineering, Yonsei University</i>
TP1-125	Threshold Switching Characteristics of LaxNi_{1-x}O₃ Thin Film Deposited by RF Co-Sputtering System Jeongwoo Lee, Changho Yoon, and Hyunchul Sohn <i>Department of Materials Science and Engineering, Yonsei University</i>
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TP1-127	Roll-to-roll Process-Based Low-temperature Atmospheric Spatial Atomic Layer Deposition Technology and Applications Jae-Wook Lee, Kyung-Hwan Kim, and Kyung-Hyun Choi <i>Department of Mechatronics Engineering, Jeju National University</i>



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TP1-129	Effects of Electric Field on the Surface Adsorption of Al Precursors: a DFT Study Jiho Yang and Bonggeun Shong <i>Chemical Engineering, Hongik University</i>
TP1-130	A Wake-up-free Effect in Metal-ferroelectric-metal Capacitor Consisted of Hf_{0.5}Zr_{0.5}O₂ and TiN(200) Bottom Electrode Dong Hee Han ^{1,2} , Ae Jin Lee ^{1,2} , Minkyong Nam ^{1,2} , Taehwan Moon ³ , and Woojin Jeon ^{1,2} <i>¹Department of Advanced Materials Engineering for Information and Electronics, Kyung Hee University, ²Integrated Education Program for Frontier Science & Technology (BK21 Four), Kyung Hee University, ³Material Research Center, Samsung Advanced Institute of Technology</i>
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TP1-133	Mechanistic Analysis for an Alternative Low-Temperature Atomic Layer Deposition of Titanium Nitride Jinwoo Lee, Tran Thi Ngoc Van, and Bonggeun Shong <i>Chemical Engineering, Hongik University</i>
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TP1-135	Chemical Mechanism for Surface Passivation of Silicon Nitride with Aldehyde Jiwon Kim, Hongjun Oh, and Bonggeun Shong <i>Chemical Engineering, Hongik University</i>
TP1-136	Electronic Physically Unclonable Functions(PUFs) based on Solution-Processible Organic Thin-Film Transistor Arrays with Enhanced Stability for Advanced Hardware Security Technology Dongyoung Kim ^{1,2} , Seongil Im ^{2,3} , Hyunsu Ju ² , and Jung Ah Lim ^{1,2} <i>¹University of Science and Technology, ²KIST, ³Yonsei University</i>



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TP1-138	Surface Diffusion of Ru on Various Substrates: A DFT Study Changhyun Ahn and Bonggeun Shong <i>Chemical Engineering, Hongik University</i>
TP1-139	Gas Sensors for Hydrogen Detection Using Pt/TiO₂ Nanorods/Pt structure Suk Yeop Chun ^{1,2} , Young Geun Song ² , Chong-Yun Kang ^{1,2} , and Jung Ho Yoon ² ¹ <i>KU-KIST Graduate School of Converging Science and Technology, Korea University,</i> ² <i>Electronic Materials Research Center, KIST</i>
TP1-140	High-resolution Piezoresistive Film based on Anisotropically Aligned Ni/PDMS Composite for e-skin Applications Hanul Kim, Daesik Kim, Jiseok Seo, and Yongtaek Hong <i>Seoul National University</i>
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TP1-142	Effect of Atomic-Layer-Deposited HfO₂ or ZrO₂ Interlayer on the Electrical Performance of P-type SnO Thin Film Transistor Jina Kim ¹ , Hee Won Jang ¹ , Myeong Gil Chae ¹ , Wonho Jo ¹ , Bo Keun Park ² , Taek-Mo Chung ² , and Jeong Hwan Han ¹ ¹ <i>Department of Materials Science and Engineering, Seoul National University of Science and Technology,</i> ² <i>Division of Advanced Materials, KRICT</i>
TP1-143	Improving Functions of Tellurium-Based Ovonic Threshold Switch through Material Doping Hyun Kyu Seo ¹ , Jin Joo Ryu ² , Su Yeon Lee ¹ , Wooseok Song ² , Gun Hwan Kim ² , and Min Kyu Yang ¹ ¹ <i>Intelligent Electronic Device Lab, Sahmyook University,</i> ² <i>Division of Advanced Materials, KRICT</i>
TP1-144	Reduced Graphene Oxide Thin Film by Low-temperature Microwave-assisted Reduction Cheul Hyun Yoon and Byoung Don Kong <i>Department of Electrical Engineering, POSTECH</i>
TP1-145	MoO₂ Thin Film as a Conductive Oxide Electrode for the Next Generation DRAM Capacitor Using Atomic Layer Deposition Ye Won Kim ¹ , Dae Chol Lee ¹ , Ae Jin Lee ¹ , Gyu Hwa Hong ¹ , Songyi Moon ² , Taewon Youn ² , Minyung Lee ² , and Woojin Jeon ¹ ¹ <i>Department of Advanced Materials Engineering for Information and Electronics, and Integrated Education Program for Frontier Science & Technology (BK21 Four), Kyung Hee University,</i> ² <i>SK Hynix</i>



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TP1-146	Growth of Rutile TiO₂ Using VO₂ Thin Films Deposited by Atomic Layer Deposition Seungwoo Lee ¹ , Dong Hee Han ¹ , Min Kyeong Nam ¹ , Ye Won Kim ¹ , Dong Hyun Kim ² , Kyung Mog Kim ² , Yong Joo Park ² , and Woojin Jeon ¹ ¹ Department of Advanced Materials Engineering for Information and Electronics, and Integrated Education Program for Frontier Science & Technology (BK21 Four), Kyung Hee University, ² Advanced Research Development Team, SK Trichem Co., Ltd.
TP1-147	Enhancement of Y-doped HfO₂ Thin Film Atomic Layer Deposition Process Using Liquid Delivery System Young Uk Ryu ¹ , Jenam Kim ¹ , Hansol Oh ² , Inchun Hwang ² , Yong Joo Park ² , and Woojin Jeon ¹ ¹ Department of Advanced Materials Engineering for Information and Electronics, and Integrated Education Program for Frontier Science & Technology (BK21 Four), Kyung Hee University, ² Advanced Research Development Team, SK Trichem Co., Ltd.
TP1-148	Growth and Properties of Molybdenum Oxide Thin Film by rf Magnetron Sputtering Jae Hyeon Lee, Wangu Kang, and Jeong Hwan Han Department of Materials Science and Engineering, Seoul National University of Science and Technology
TP1-149	Improve HfO₂-TiN Interface Characteristics by Introducing a Passivation Layer to Suppress an Interfacial Layer Dae Cheol Lee ¹ , Byung Seok Kim ¹ , Ye Won Kim ¹ , Ji Hyeon Hwang ¹ , Dong Hee Han ¹ , Ae Jin Lee ¹ , Hansol Oh ² , Yong Joo Park ² , and Woojin Jeon ¹ ¹ Department of Advanced Materials Engineering for Information and Electronics, and Integrated Education Program for Frontier Science & Technology (BK21 Four), Kyung Hee University, ² Advanced Research Development Team, SK Trichem Co., Ltd.
TP1-150	Characteristics of Low Dielectric Constant SiCOH Films Deposited by PECVD Using Octamethylcyclotetrasiloxane and Phenyltrimethoxysilane Precursors Taesoon Jang, Namwuk Baek, Jihwan Cha, Shinwon Kang, Chanyong Seo, Gihoon Park, and Donggeun Jung Department of Physics, Sungkyunkwan University
TP1-151	Effects of Carbon Tetrafluoride/Oxygen (CF₄/O₂) Based Plasma Etching on low-k Thin Films Deposited with the 1,1,1,3,5,7,7 Octamethyl-3,5-Bis(trimethylsiloxy) Tetrasiloxane Precursor by PECVD Namwuk Beak ¹ , Hyuna Lim ² , Jihwan Cha ¹ , and Donggeun Jung ¹ ¹ Department of Physics, Sungkyunkwan University, ² ASM Korea Ltd.
TP1-152	High-mobility InGaSnO Thin Film Transistors Fabricated by Plasma-Enhanced Atomic Layer Deposition Jong Hyeon Won ¹ , Hyeonhui Jo ¹ , Pil Ju Youn ¹ , Heenang Choi ² , Bo Keun Park ² , Taek-Mo Chung ² , and Jeong Hwan Han ¹ ¹ Department of Materials Science and Engineering, Seoul National University of Science and Technology, ² Division of Advanced Materials, KRICT
TP1-153	Atomic Layer Deposition of SrO Thin Films with a Novel Sr Precursor and O₃ on Si Substrate Yeji Lee ¹ , Daeun Lim ¹ , Jonghyun Kim ¹ , Seungjo Yea ¹ , Chanwoo Park ² , Bo Keun Park ² , Taek-Mo Chung ² , and Woongkyu Lee ¹ ¹ Department of Electrical Engineering, Myongji University, ² Thin Film Materials Research Center, KRICT
TP1-154	Atomic Layer Deposition of Ga₂O₃ Thin Films by Two Consecutive Pulses of O₃ and H₂O 윤필주 ¹ , 조현희 ¹ , 원종현 ¹ , 박보근 ² , 정택모 ² , 한정환 ¹ ¹ Department of Materials Science and Engineering, Seoul National University of Science and Technology, ² Division of Advanced Materials, KRICT



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TP1-155	Annealing Effect of Li Based Diffusive Memristor in Various Ambient Ju Hwan Park, Gyu Min Park, and Byung Joon Choi <i>¹Department of Materials Science and Engineering, Seoul National University of Science and Technology</i>
TP1-156	Thermal Analysis of Chalcogenide Films for Ovonic Threshold Switch Ju Hwan Park ¹ , Myeong Jun Jung ¹ , Gun Hwan Kim ² , Min Kyu Yang ³ , and Byung Joon Choi ¹ <i>¹Department of Materials Science and Engineering, Seoul National University of Science and Technology, ²Thin-Film Materials Research Center, KRICT, ³Division of AI Convergence Engineering, Sahmyook University</i>
TP1-157	Low Temperature Growth of ZnO Thin Films by Atomic Layer Deposition Ye Bin Weon, Ji Young Park, Myeong Jun Jung, and Byung Joon Choi <i>Department of Materials Science and Engineering, Seoul National University of Science and Technology</i>
TP1-158	Bi-layered ZrO₂/Y₂O₃ Structure for Ge-Based Devices Grown by Atomic Layer Deposition Geun-Ha Oh and Il-Kwon Oh <i>Department of Electrical and Computer Engineering, Ajou University</i>
TP1-159	Growth of In-situ Crystallized Rutile-TiO₂ Thin Films on SnO₂ Layers for DRAM Capacitors Daeun Lim ¹ , Yeji Lee ¹ , Jonghyun Kim ¹ , Jina Kim ² , Jeong Hwan Han ² , and Woongkyu Lee ¹ <i>¹Department of Electrical Engineering, Myongji University, ²Department of Materials Science and Engineering, Seoul National University of Science and Technology</i>
TP1-160	1-Selector -1-Memristor(1S1R) Device with Low Power for Neuromorphic Computing Application Ji Eun Kim ^{1,2} , Sahn Nahm ² , and Jung Ho Yoon ¹ <i>¹Electronic Materials Research Center, KIST, ²Materials Science and Engineering, Korea University</i>
TP1-161	Atomic Layer Deposition of Molybdenum Carbides: The Influences of Mo Precursor and Post-reduction Annealing Ji Sang Ahn, Wangu Kang, and Jeong Hwan Han <i>Department of Materials Science and Engineering, Seoul National University of Science and Technology</i>
TP1-162	Effects of the Thickness and Deposition Temperature on the Resistivity of Atomic-Layer-Deposited Ruthenium Film Eun Chong Ko, Jae Yeon Kim, and Jeong Hwan Han <i>Department of Materials Science and Engineering, Seoul National University of Science and Technology</i>
TP1-163	Effects of Annealing Temperature on Electrical Properties of In-Ga-Sn-O Thin Films Changyong Oh, So Hee Park, and Bo Sung Kim <i>Department of Applied Physics, Korea University</i>



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TP1-164	The Formation of Dipole to Modulate Flatband Voltage (V_{FB}) Using ALD Al_2O_3 on the HfO_2-Based Si and Ge MOS Devices Yuanju Zhang, Moonsuk Choi, and Changhwan Choi <i>Division of Materials Science and Engineering, Hanyang University</i>
TP1-165	Study of Conduction Mechanism in SiO_2 Thin Films Deposited by Plasma Enhanced Atomic Layer Deposition Taehyeon Kim, Changyong Oh, So Hee Park, and Bo Sung Kim <i>Department of Applied Physics, Korea University</i>
TP1-166	Effects of Nd:YVO₄ Laser Beam Power on the Annealing of RF-Sputtered MoS_2 Layers Van Tuan Nguyen ¹ , Yuanrui Qi ¹ , Minseok Song ¹ , In Hwan Kim ¹ , Vu Binh Nam ² , DaeHo Lee ² , Sang Jik Kwon ¹ , and Eou-Sik Cho ¹ ¹ <i>Department of Electronic Engineering, Gachon University, </i> ² <i>Department of Mechanical Engineering, Gachon University</i>
TP1-167	Anti-Ferroelectric Properties of the ALD Si-doped HfO_2 Devices with Tungsten and Molybdenum Metal Contacts Tae Heun Kim ¹ , Duho Kim ¹ , Boncheol Ku ¹ , Chul Won Chung ² , and Changhwan Choi ¹ ¹ <i>Division of Materials Science & Engineering, Hanyang University, </i> ² <i>Department of Energy Engineering, Hanyang University</i>
TP1-168	Study of Activation and Deactivation Process in Heavily Phosphorus-Doped Epitaxial Si Film by High-Resolution X-ray Photoelectron Spectroscopy Hwa-yeon Ryu ¹ , Heungsoo Park ² , and Dae-Hong Ko ¹ ¹ <i>Department of Materials Science and Engineering, Yonsei University, </i> ² <i>BIO-IT Micro Fab Center, Yonsei University</i>
TP1-169	Cyclic Etching of Copper Thin Films Using Organic Compound/O_2/Ar Gas Seung Hyun Kim, Eun Taek Lim, Ji Soo Lee, Sung Yong Park, Hyun Mok Jeong, and Chee Won Chung <i>Department of Chemical Engineering, Inha University</i>
TP1-170	인간 두뇌 구조를 모방한 전 무기질 광시냅스 Go Eun Choi and You Seung Rim <i>Department of Intelligent Mechatronics Engineering, and Convergence Engineering for Intelligent Drone, Sejong University</i>
TP1-171	Improving the Stability of MgO-Based Capacitors by Inserting BeO Thin Film Grown via Atomic Layer Deposition Bo Wen Wang, Seungsoo Kim, Haewon Song, Haengha Seo, Xiangyuan Li, Jin Myung Choi, Jinwoo Choi, and Cheol Seong Hwang <i>Department of Materials Science and Engineering, and Inter-University Semiconductor Research Center, Seoul National University</i>
TP1-172	Infiltration Kinetics of Metalorganic Precursors in Polymers Probed by in-situ Fourier Transform Infrared Spectroscopy Jiwoong Ham, Min Kyoung Ko, and Nari Jeon <i>Department of Materials Science and Engineering, Chungnam National University</i>



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TP1-174	<p>The Electrical Characteristics of ALD Si-doped HfO₂ Ferroelectric FET Device</p> <p>Heedam Shin, Ye Rim Shin, Boncheol Ku, and Changhwan Choi <i>Division of Materials Science and Engineering, Hanyang University</i></p>
TP1-175	<p>Ferroelectricity of La-doped Hf_{0.5}Zr_{0.5}O₂ Films</p> <p>Yoogeun Han, Ju-Young Jeong, and Hyunchul Sohn <i>Department of Materials Science and Engineering, Yonsei University</i></p>
TP1-176	<p>Effect of La on Dielectric Constant of ZrO₂ Films Deposited by Atomic Layer Deposition</p> <p>Ju-young Jeong, Yoogeun Han, and Hyunchul Sohn <i>Department of Materials Science and Engineering, Yonsei University</i></p>
TP1-177	<p>Understanding the Role of Elements in Ge-Se System through Thin Film Analysis for Selector Device Application</p> <p>Young-Min Kim^{1,2}, Subong Lee^{1,2}, Deok-Jin Jeon^{1,2}, and Jong-Souk Yeo^{1,2} ¹<i>School of Integrated Technology, College of Engineering, Yonsei University, </i>²<i>Yonsei Institute of Convergence Technology, Yonsei University</i></p>
TP1-178	<p>Indium-Gallium-Zinc-Oxide Thin Film Transistor Using Ta₂O₅ Gate Insulator</p> <p>Eun Seong Yu, Jae Geun Woo, Hyuck Su Lee, Seo Jin Kang, Chan Min Jeong, Min Seong Kim, Seoung Gyun Kim, Jong Mo Lee, and Byung Seong Bae <i>Department of Electronic Display Engineering, Hoseo University</i></p>
TP1-179	<p>Density Functional Theory Study on the Surface Reaction of Aminosilane Precursors on an OH-terminated SiO₂ Surface</p> <p>Heeju Son¹, Khabib Khumaini^{1,2}, Hyeonsu Roh¹, Hye-Lee Kim¹, and Won-Jun Lee¹ ¹<i>Department of Nanotechnology and Advanced Materials Engineering, Sejong University, </i>²<i>Department of Chemistry, Univeritas Pertamina</i></p>
TP1-180	<p>Evaluation of a Novel Niobium Precursor for Atomic Layer Deposition of Niobium Oxide Films</p> <p>Hayeong Kim^{1,2}, Jiwon Park^{2,3}, Seon-Jeong Maeng¹, Sun Young Baik⁴, Cha Young Yoo⁴, and Ju-Young Yun^{1,2} ¹<i>Vacuum Materials Measurement Team, KRISS, </i>²<i>Division of Nano & Information Technology (Nanomaterials Science & Engineering), University of Science and Technology, </i>³<i>Department of Advanced Materials Engineering, Daejeon University, </i>⁴<i>EGTM Co., Ltd.</i></p>
TP1-181	<p>Bilayer Oxide Synaptic TFT for Operating Synaptic Plasticity under 10 fJ</p> <p>Seong-In Cho, Jae Beom Jeon, and Sang-Hee Ko Park <i>KAIST</i></p>



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TP1-183	<p>Highly Flexible Deep Ultraviolet Photodetectors Using Gallium Oxide Thin Films Grown by Atomic Layer Deposition</p> <p>Eun Seok Lee^{1,2}, Heung-Yoon Choi^{1,2}, Se Eun Kim^{1,2}, Jae Deock Jeon^{1,2}, and Sang Woon Lee^{1,2}</p> <p>¹Department of Energy Systems Research, Ajou University, ²Department of Physics, Ajou University</p>
TP1-184	<p>Low Temperature Fabrication of TFT Using Indium-Rich α-IGZO and SU-8 Gate Insulator</p> <p>Jae Geun Woo, Chan Min Jeong, Eun Seong Yu, Hyuck Su Lee, Kim Min Seong, Seoung Gyun Kim, Jong Mo Lee, Seo Jin Kang, and Byung Seong Bae</p> <p>Department of Electronic Display Engineering, Hoseo University</p>
TP1-185	<p>The Effect of UV Exposure Time on SU-8 Gate Insulator in Oxide TFT</p> <p>Chan-Min Jeong, Jae Geun Woo, Eun Seong Yu, Seo Jin Kang, Hyuck Su Lee, Seoung Gyun Kim, Min Seong Kim, and Byung Seong Bae</p> <p>School of Electronics and Display Engineering, Hoseo University</p>
TP1-186	<p>Atomic Layer Deposition of Heterogeneously-Doped Tin Oxides and Their Electrical Properties</p> <p>Myeong-Jin Lee, Jiwon Oh, Do-Hyeong Kim, Won Seok Ku, Soo-In Cho, and Jin-Ha Hwang</p> <p>Department of Materials Science and Engineering, Hongik University</p>
TP1-187	<p>Study on the Electrical Performance Change and Application of Indium Oxide Thin Film Transistor to Switching Circuit by MoO₃ Doping</p> <p>Anvar Tukhtaev, Jae-Yun Lee, Berdiev Jonibek Elmurodovich, Isamaddinov Shukhrat, Zhao Han Lin, Wang Xiao Lin, Jin-Hee Lee, Yong-Hwan Kim, Fei-Shan, and Sung-Jin Kim</p> <p>College of Electrical and Computer Engineering, Chungbuk National University</p>
TP1-188	<p>Study on the Electrical and Surface Properties According to the Fabrication Method and Concentration of Ambipolar Oxide Semiconductor Transistor</p> <p>Jae-Yun Lee, Anvar Tukhtaev, Berdiev Jonibek Elmurodovich, Isamaddinov Shukhrat, Zhao Han Lin, Wang Xiao Lin, Jin-Hee Lee, Yong-Hwan Kim, Fei-Shan, and Sung-Jin Kim</p> <p>College of Electrical and Computer Engineering, Chungbuk National University</p>



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TP1-190	TCAD Simulation Study of Proton Irradiation-Induced Displacement Damage in GaN-Based Electronics Young Jun Yoon ¹ , Jae Sang Lee ¹ , Yujong Kim ¹ , Ogyun Seok ² , and Dong-Seok Kim ¹ <i>¹Korea Multi-Purpose Accelerator Complex, KAERI, ²School of Electronic Engineering, Kumoh National Institute of Technology</i>
TP1-191	First-principles Study of Electron-phonon Interaction in Copper Iodide Min Hyeok Kim and Byoung Don Kong <i>Department of Electrical Engineering, POSTECH</i>
TP1-192	Fabrication and Characteristics of 28 GHz Low Noise Amplifier Using a mHEMT Technology Jong-Min Lee, Woo-jin Chang, Byoung-Gue Min, and Dong Min Kang <i>RF/Power Components Research Section, ETRI</i>
TP1-193	GaN-on-GaN 웨이퍼를 이용하여 제조된 HEMTs 소자 및 에피 특성 평가 김정진, 김태현, 김현지, 차호영 <i>홍익대학교</i>
TP1-194	Evaluations of Deep-level Traps in InAlAs Buffer Layers of InP HEMTs Using Transient Current Analysis Sang Tae Lee ¹ , Hyunchul Jang ¹ , Chang-Hun Song ^{1,3} , Shinkeun Kim ¹ , Donghyun Kim ¹ , Jae-Phil Shim ¹ , Kiyong-Shin ² , Minwoo Kong ⁴ , Tae-woo Kim ² , and Chan-Soo Shin ¹ <i>¹KANC, ²School of Electronics Engineering, University of Ulsan, ³Department of Material Science and Engineering, Yonsei University, ⁴Seoul National University</i>
TP1-195	Effect of Multi-cap Structure on Tunneling Resistance in Non-alloyed Ohmic Contact of InP-Based HEMTs Hyunchul Jang ¹ , Sang Tae Lee ¹ , Jaephil Shim ¹ , Ki-Yong Shin ² , Chang-Hun Song ^{1,3} , Minwoo Kong ⁴ , Tae-Woo Kim ² , Keun Man Song ¹ , Shinkeun Kim ¹ , Donghyun Kim ¹ , Kyung-Ho Park ¹ , and Chan-Soo Shin ¹ <i>¹KANC, ²University of Ulsan, ³Yonsei University, ⁴Seoul National University</i>
TP1-196	Growth of n-InAs(111) Thin Films with Te-assisted Nanoscale ELOG Method Chang-Hun Song ^{1,2} , Minwoo Kong ^{2,3} , Hyunchul Jang ¹ , Sang Tae Lee ¹ , Hyeong-Ho Park ¹ , Chang Zoo Kim ¹ , Keun Man Song ¹ , Shinkeun Kim ¹ , Youngsu Choi ¹ , Dae-Hong Ko ² , and Chan-Soo Shin ¹ <i>¹KANC, ²Department of Material Science and Engineering, Yonsei University, ³Department of Electrical and Computer Engineering, Seoul National University</i>



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TP1-197	<p>Hot electron에 의한 0.13 μm 고주파 GaN HEMT의 열화현상 김승환¹, 민병규², 조규준², 이종민², 장유진², 강동민², 김형탁¹ ¹전자전기공학과, ²RF/전력부품연구실, 전자통신연구원</p>
TP1-198	<p>The Dielectric Function of an Anisotropic SnSe at Low Temperature Xuan Au Nguyen¹, Tae Jung Kim^{1,2}, Van Long Le³, Hoang Tung Nguyen³, and Young Dong Kim¹ ¹Department of Physics, Kyung Hee University, ²Center for Converging Humanities, Kyung Hee University, ³Institute of Materials Science, Vietnam Academy of Science and Technology</p>
TP1-199	<p>Electrical Properties of Ni/β-Ga₂O₃ Schottky Barrier Diodes with Intermediate p-NiO_x Layer Ji Young Min and You Seung Rim Department of Intelligent Mechatronics Engineering, and Convergence Engineering for Intelligent Drone, Sejong University</p>
TP1-200	<p>Si (001) 기판 위 III-V layer 전사 후 MOCVD 재성장애 관한 연구 윤소연^{1,2}, 김호성², 한원석², 박민수¹ ¹Department of Electronics Engineering, Dong-A University, ²ETRI</p>
TP1-201	<p>β-Ga₂O₃ 기반 쇼트키배리어다이오드의 오믹 접합 특성 향상 연구 Won Jin Song and You Seung Rim Department of Intelligent Mechatronics Engineering, and Convergence Engineering for Intelligent Drone, Sejong University</p>
TP1-202	<p>Ferroelectric Gate AlGaIn/GaN HEMT for Reconfigurable RF Application Jeong Yong Yang, Min Jae Yeom, Jaeyong Lee, Changkun Park, and Geonwook Yoo Soongsil University</p>
TP1-203	<p>Crystalline/Polycrystalline HfO₂ Bilayer Gate Dielectric for AlGaIn/GaN MOS-HEMT Min Jae Yeom¹, Sang Hee Kim¹, Jong Yong Yang¹, Junseok Heo², and Geonwook Yoo¹ ¹Soonsil University, ²Ajou University</p>
TP1-204	<p>Proton Irradiation-Induced Performance Improvement in AlGaIn/GaN HEMTs Eunjin Kim¹, Jeong-Gil Kim¹, Dong-Seok Kim², and Jung-Hee Lee¹ ¹School of Electronic and Electrical Engineering, Kyungpook National University, ²KAERI</p>
TP1-205	<p>Growth of Rhin Barrier InAlGaIn/GaN Heterostructure and Its Excellent Device Performance. Seung-Hyeon Kang, Jeong-Gil Kim, Eun-Jin Kim, and Jung-Hee Lee School of Electronics Engineering, Kyungpook National University</p>



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TP1-206	<p>Hybrid Schottky-Ohmic Drain β-Ga₂O₃ Field-Effect Transistors in Extended Thermal Annealing Condition</p> <p>Yeong Je Jeong, Chan Ho Lee, Min Jae Yeom, Jeong Yong Yang, and Geonwook Yoo <i>Soongsil University</i></p>
TP1-207	<p>Importance of V_T Correction in the Extraction of Effective Mobility in In_{0.8}Ga_{0.2}As/In_{0.48}Al_{0.52}As QW HEMTs</p> <p>Wan-Soo Park, Ji-Hoon Yoo, Hyeon-Seok Jeong, Hyeon-Bhin Jo, In-Geun Lee, and Dae-Hyun Kim <i>School of Electronic and Electrical Engineering, Kyungpook National University</i></p>

F. Silicon and Group-IV Devices and Integration Technology

심사위원: 김명수 교수(UNIST), 박준영 교수(충북대학교)

TP1-208	<p>Ni-Al alloy for Ohmic Contact Formation on n-type 4H-SiC</p> <p>Young Jae Park, Seongjun Kim, Min-Jae Kang, Min-Je Sung, Dong-Eun Kim, Ju Young Kwak, Sung Woong Han, Nam Suk Lee, and Hoon-Kyu Shin <i>National Institute for Nanomaterials Technology, POSTECH</i></p>
TP1-209	<p>High Performance Plasmonic THz Detector with Additional Resistor</p> <p>Sang Hyo Ahn, Min Woo Ryu, Minjae Kim, and Kyung Rok Kim <i>Department of Electrical Engineering, UNIST</i></p>
TP1-210	<p>Hot-Carrier Injection Parameter Modeling in TCAD for Accurate Gate Leakage Current Prediction</p> <p>Yoo Bin Song and Kyung Rok Kim <i>Department of Electrical Engineering, UNIST</i></p>
TP1-211	<p>Design of Pass Diode-Based Low-Power Ternary Inverter Circuit</p> <p>Jae Hyeon Jun¹, Young Eun Choi¹, Woo-Seok Kim¹, Seung Woo Hong¹, Myoung Kim¹, Su Hyeon Jo¹, and Kyung Rok Kim^{1,2} <i>¹Department of Electrical Engineering, UNIST, ²Terrell Corp.</i></p>
TP1-212	<p>Ternary SRAM Using Tunneling-Based T-CMOS for Low Power Application</p> <p>Young-Eun Choi¹, Woo-Seok Kim¹, Jae Hyeon Jun¹, Seung Woo Hong¹, Myung Kim¹, Su Hyeon Jo¹, and Kyung Rok Kim^{1,2} <i>¹Department of Electrical Engineering, UNIST, ²Terrell Corp.</i></p>
TP1-213	<p>Highly-Scalable Ternary CMOS Technology in 28-nm Foundry Process</p> <p>Woo-Seok Kim¹, Young Eun Choi¹, Jae Hyeon Jun¹, Seung Woo Hong¹, Myoung Kim¹, Suhyeon Jo¹, and Kyung Rok Kim^{1,2} <i>¹Department of Electrical Engineering, UNIST, ²Terrell Corp.</i></p>



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TP1-214	Design of Novel Ternary Sense Amplifier for Low-Power Ternary SRAM Myoung Kim ¹ , Young Eun Choi ¹ , Woo-seok Kim ¹ , Jae Hyeon Jun ¹ , Seung Woo Hong ¹ , Su Hyeon Jo ¹ , and Kyung Rok Kim ^{1,2} <i>¹Department of Electrical Engineering, UNIST, ²Temell Corp.</i>
TP1-215	Band-to-Band Tunneling Analytical Model and Implications in Compact Modeling of Ternary CMOS Seung-Woo Hong ¹ , Young-Eun Choi ¹ , Woo-Seok Kim ¹ , Jae Hyeon Jun ¹ , Myoung Kim ¹ , Su Hyeon Jo ¹ , and Kyung Rok Kim ^{1,2} <i>¹Department of Electrical Engineering, UNIST, ²Temell Corp.</i>
TP1-216	Simulation of a Strained SiGe Optical Mach-Zehnder Modulator with a L Shaped Pn-junction in a Si Photonics Platform Youngjoo Bae, Tae Won Jin, Jaeung Jeong, and Younghyun Kim <i>Department of Photonics and Nanoelectronics, BK21 FOUR ERICA-ACE Center, Hanyang University</i>
TP1-217	Effects of Oxygen Plasma Treatment on Rapid-Thermal-Annealed HfO₂ Dielectric Characteristics Dongbin Kim and Byoungdeog Choi <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-218	Effect of Annealing Temperature on Trap Density and Off-current of Poly-Si TFT Youngrok Kim and Byoungdeog Choi <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-219	Performance Degradation with Tunneling Effect for a Feedback Field-effect Transistor Jong Hyeok Oh and Yun Seop Yu <i>Department of ICT Robot Engineering, Hankyong National University</i>
TP1-220	RF 송수신기 보호용 고전압 PIN Limiter 다이오드 원종일 ¹ , 정동윤 ² , 조두형 ² , 권성규 ² , 장현규 ² , 박건식 ² <i>¹반도체소부장기술센터, ²ETRI DMC 연구단</i>
TP1-221	Designing Microdisk-Based Optical Modulators with High Coupling Efficiency via Transformation Optics Jonghyung Lee, Honghwi Park, and Hongsik Park <i>School of Electronics and Electrical Engineering, Kyungpook National University</i>
TP1-222	모오스 구동 싸이리스터를 적용한 인체모델용 정전기방전 시험기 정동윤 ¹ , 박건식 ¹ , 김상인 ² , 권성규 ¹ , 장현규 ¹ , 조두형 ¹ , 원종일 ¹ , 임종원 ¹ <i>¹ETRI, ²갑승파워시스템</i>



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TP1-223	<p>Application of Silicon Based High Temperature Field Effect Transistor in Complementary Metal-Oxide-Semiconductor Logic Yunjae Oh, Taewoong Jeong, Seoyeon Chun, Inyoung Lee, Hyojin Park, and Ilhwan Cho <i>Department of Electronic Engineering, Myongji University</i></p>
TP1-224	<p>고전압 mesa형 PIN 리미터 다이오드 항복전압 특성 연구 권성규¹, 정동윤¹, 원종일², 조두형¹, 장현규¹, 박건식¹ ¹DMC 융합연구단, ETRI, ²반도체소부장기술센터, ETRI</p>
TP1-225	<p>Implementation of a Calcium-Based Plasticity Learning Model with Hybrid CMOS-Memristor Circuits Jae Gwang Lim^{1,2}, Dae Cheol Kang^{1,2}, Keonhee Kim^{1,2}, Yeonjoo Jeong¹, Jaewook Kim¹, Suyoun Lee¹, Joon Young Kwak¹, Jongkil Park¹, Gyu Weon Hwang¹, Kyeong-Seok Lee¹, Byeong-Kwon Ju², Inho Kim¹, and Jong Keuk Park¹ ¹Center for Neuromorphic Engineering, KIST, ²Display and Nanosystem Laboratory, School of Electrical Engineering, Korea University</p>
TP1-226	<p>TritCell™ Stability Enhancement by Subthreshold Swing based on T-CMOS Analytical Model Su Hyeon Jo¹, Young-Eun Choi¹, Woo-Seok Kim¹, Jae Hyeon Jun¹, Seung Woo Hong¹, Myoung Kim¹, and Kyung Rok Kim^{1,2} ¹Department of Electrical Engineering, UNIST, ²Ternell Corp.</p>
TP1-227	<p>ESD Characteristics Improvement of 7V GGNMOS Device Through the Suppression of Hot Carrier Degradation Youngkwon Kim, Jongmin Kim, Youngchul Kim, Heeguk.Chae, and Joontae Jang <i>Technology Enabling Design Support Team, DB HiTek</i></p>
TP1-228	<p>Comparison of Batch-Normalization and Layer-Normalization for Hardware-based Binary Neural Network Implementation Hyeongsu Kim^{1,2} and Jong-Ho Lee^{1,2} ¹Department of Electrical and Computer Engineering, Seoul National University, ²Inter-university Semiconductor Research Center, Seoul National University</p>
TP1-229	<p>pTFET의 주된 저주파 잡음 메커니즘 연구 Hyun-Jin Shin¹, Sunil Babu Eadi¹, Ji-Woon Yang², Jae-Woo Lee², Hyuk-Min Kwon³, and Hi-Deok Lee¹ ¹Department of Electronics Engineering, Chungnam National University, ²Department of Electronics & Information Engineering, Korea University, ³Department of Semiconductor Processing Equipment, Semiconductor Convergence Campus, Korea Polytechnics College</p>
TP1-230	<p>Integrate-and-Fire Neuron Circuit Simulation with 180-nm Technology for Si CMOS Spiking Neural Network Arati Kumari Shah, Seung Hyun Kim, and Seongjae Cho <i>Department of Electronic Engineering, Gachon University</i></p>
TP1-231	<p>Processing-in-Memory Architecture based on Low-Power Nonvolatile Memory and Its System-Level Evaluation Udaya Mohanan Kannan¹, Yeon-Joon Choi², Sibeom Kim¹, Seongjae Cho¹, and Byung-Gook Park² ¹Department of Electronic Engineering, Gachon University, ²Department of Electrical and Computer Engineering, Seoul National University</p>



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TP1-232	<p>Improving the Resistive Switching Uniformity Ta₂O₅-Based Memristors with Single-layer and Bi-layer Structures</p> <p>Ki-Woo Song¹, Sunil Babu Eadi¹, Seong-Hyun Kim¹, Kim Thahn Nguyen¹, Hyuk-Min Kwon², and Hi-Deok Lee¹</p> <p>¹Department of Electronics Engineering, Chungnam National University, ²Department of Semiconductor Processing Equipment, Semiconductor Convergence Campus of Korea Polytechnic College</p>
TP1-233	<p>Design and Compact Modeling of Metal-Oxide Memristor and System-Level Evaluation for Its Application in Spiking Neural Network Hardware</p> <p>Saurabh Suredra Joshi, Arati Kumari Shah, Seung Hyun Kim, and Seongjae Cho</p> <p>Department of Electronic Engineering, Gachon University</p>
TP1-234	<p>Analysis of Trantenna Impedance Matching with Channel Area</p> <p>Min Jae Kim, Min Woo Ryu, Sang Hyo Ahn, and Kyung Rok Kim</p> <p>Department of Electrical Engineering, UNIST</p>
TP1-235	<p>Analysis of Polarization Gradient Effect on Negative Capacitance Tunnel Field-Effect Transistor (NC-TFET)</p> <p>Dongkeun Lee and Sangwan Kim</p> <p>Department of Electrical and Computer Engineering, Ajou University</p>
TP1-236	<p>Hybrid M3D CMOS 로직 구현 및 인터페이스 개발</p> <p>Jong-Tack Kim and Byung-do Yang</p> <p>Department of Electronics Engineering, Chungbuk National University</p>

G. Device & Process Modeling, Simulation and Reliability

심사위원: 서지웅 TL(SK하이닉스), 이재우 교수(고려대학교)

TP1-237	<p>Vacuum Inner Spacer to Improve Power Efficiency of Nanosheet FETs during Electro-Thermal Annealing</p> <p>Dong-Hyun Wang and Jun-Young Park</p> <p>Chungbuk National University</p>
TP1-238	<p>A Simulation Study for Reducing Power Consumption during Using Punch-Through Current Annealing in Gate-All-Around MOSFETs</p> <p>Min-Gyeong Kim and Jun-Young Park</p> <p>Chungbuk National University</p>
TP1-239	<p>Reliable Artificial Synapse Using Multilevel HfO₂ RRAM for Neuromorphic Computing Applications</p> <p>Heebum Kang¹, Jinah Park², Do Kyung Lee², Hyun Wook Kim^{1,2}, Eun Ryeong Hong^{1,2}, Minjoon Ahn², Sol Jin², and Jiyong Woo^{1,2}</p> <p>¹School of Electronic and Electrical Engineering, Kyungpook National University, ²School of Electronics Engineering, Kyungpook National University</p>
TP1-240	<p>Enhancement of Radiation Hardness by Adopting Metal-Interlayer-Semiconductor Source/Drain Contact Structure on Ge Based SRAM Cell</p> <p>Seong-Ji Min and Hyun-Yong Yu</p> <p>School of Electrical Engineering, Korea University</p>



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TP1-241	<p>SPICE Modeling of Field Effect Transistor-Type Neuron Device with $\text{Al}_2\text{O}_3/\text{Si}_3\text{N}_4$ as a Gate Insulator Stack for Neuromorphic System</p> <p>Jeong-Hyun Kim, Min-Kyu Park, and Jong-Ho Lee <i>Department of ECE and ISRC, Seoul National University</i></p>
TP1-242	<p>Structural and Electrical Properties of Aggregated Charged Oxygen Vacancies in Rutile-Based TiO_{2-x} for Resistive Random Access Memory Device</p> <p>Tae Young Jeong^{1,2}, Kun Hee Ye^{1,2}, Seung Jae Yoon^{1,2}, Jihun Kim², Cheol Seong Hwang², and Jung-Hae Choi¹</p> <p>¹Electronic Materials Research Center, KIST, ²Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University</p>
TP1-243	<p>High-Voltage FinFET with Superior DC/RF Performance Using Dual Material Gate and High-k Field Plate</p> <p>Kyoungwan Oh¹, Hyangwoo Kim², and Chang-Ki Baek^{1,2}</p> <p>¹Department of Electrical Engineering, POSTECH, ²Department of Convergence IT Engineering, POSTECH</p>
TP1-244	<p>MIM Capacitor의 Hafnium Oxide 두께에 따른 S-Parameter 변화</p> <p>Jung-Rae Park, Seong-Won Seo, Cheong-Ha Jung, and Gu-Sung Kim <i>Electronic Package Research Center</i></p>
TP1-245	<p>낮은 턴온 전압으로 인한 오픈 드레인 구조 LDMOS 소자의 ESD 불량 분석</p> <p>Youngbum Eom, Myoungchul Lim, Joungcheul Choi, Sangwook Nam, and DongKyun Sohn <i>R&D Center, SK Hynix</i></p>
TP1-246	<p>SCR기반 ESD 보호 소자의 전류 감내 특성 향상을 위한 구조 설계 방법 연구</p> <p>Myoungchul Lim, Youngbum Eom, Joungchul Choi, Sangwook Nam, and Donggyun Son <i>R&D Center, SK Hynix</i></p>
TP1-247	<p>The Influence of Annealing Temperature and Time on HfZrO Ferro-Capacitor</p> <p>Seunghee Jin¹, Dong Geun Park¹, Jungchun Kim¹, Donghyun Kim¹, Seain Bang¹, Min Jung Kim¹, Seoyeon Choi¹, Kiseok Heo¹, Jiyong Woo², Jeong Hun Kim³, Jong-Pil Im³, Seung Eon Moon³, and Jae Woo Lee¹</p> <p>¹Department of Electronics and Information Engineering, Korea University, ²School of Electronics Engineering, Kyungpook National University, ³ICT Creative Research Laboratory, ETRI</p>
TP1-248	<p>Surge Current Capability and Dynamic Characteristics of 1.2kV 4H-SiC MPS Diodes against Thermal Runaway</p> <p>Min Seok Jang, Jee Hun Jeong, Sang Woo Kim, and Ho Jun Lee <i>Pusan National University</i></p>
TP1-249	<p>Dependence between Polarization Switching Properties of Ferroelectric and Subthreshold Swing in NCFET</p> <p>Woori Ham¹, Sungmun Song¹, Gyuil Park², Wonwoo Kho², Hyunjoo Hwang², Jisoo Kim², Hyo-Bae Kim³, Ji-Hoon Ahn³, and Seung-Eon Ahn^{1,2}</p> <p>¹Department of Nano & Semiconductor Eng, Korea Polytechnic University, ²Department of IT · Semiconductor Convergence Eng, Korea Polytechnic University, ³Department of Material Science and Chemical Eng, Hanyang University</p>



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TP1-250	<p>Design of Capacitorless DRAM-based on Storage Layer Separated Using Separation Oxide and Polycrystalline Silicon</p> <p>Geon Uk Kim¹, Young Jun Yoon², Jae Hwa Seo³, Min Su Cho¹, Sang Ho Lee¹, Jin Park¹, Hee Dae An¹, So Ra Min¹, Jaewon Jang¹, Jin-Hyuk Bae¹, Sin-Hyung Lee¹, and In Man Kang¹</p> <p>¹Electronic and Electrical Engineering, Kyungpook National University, ²KAERI, ³KERI</p>
TP1-251	<p>Stack Channel Ternary TFT 의 모델 개발과 응용</p> <p>김기영, 김소영, 이용수, 황현준, 이병훈</p> <p>Department of Electrical Engineering, POSTECH</p>
TP1-252	<p>Finite Element Modelling of Elasto-Capillary Bending in NAND Flash Structure</p> <p>Seonghwan Choi¹, Minjae Hur², Jongwon Baek², Jiwoong Sue², and Myoung-Gyu Lee¹</p> <p>¹Seoul National University, ²SK Hynix</p>
TP1-254	<p>Analysis of Threshold Voltage Shift and Field-Effect Mobility Behavior of IGZO TFTs under Current Stress at Cryogenic Temperature</p> <p>Sangwon Lee, Jingyu Park, Ga Won Yang, Dong Myong Kim, Sung-Jin Choi, Jong-Ho Bae, Changwook Kim, and Dae Hwan Kim</p> <p>School of Electrical Engineering, Kookmin University</p>
TP1-255	<p>Substrate-Biasing Effect on the Operation of Multi-layer MoS₂ Field-Effect Transistors with h-BN Dielectric</p> <p>Jimin Park, Chang Seon Park, Jangyup Son, Won Jun Jung, Min Park, Dong Su Lee, and Dae-Young Jeon</p> <p>Institute of Advanced Composite Materials, KIST</p>
TP1-256	<p>Suppression of the Floating Body Effect of the Double-Gate Transistor with the Buried Oxide Engineering Method</p> <p>Jaemin Gil, Ju Sung Kim, and Woongkyu Lee</p> <p>Department of Electrical Engineering, Myongji University</p>
TP1-257	<p>ESD Damage Analysis of ESD PNP for Bi-Directional ESD Protection</p> <p>Youngsang Son, Euiyoun Hong, Youngchul Kim, Jwoon Lee, Jongmin.kim, and Joontae Jang</p> <p>Technology Enabling Design Support Team, DB HiTek</p>
TP1-258	<p>Analysis of Self-heating Effect considering Circuit Operation and Reliability</p> <p>Changhyun Yoo and Jongwook Jeon</p> <p>Department of Electrical and Electronics Engineering, Konkuk University</p>
TP1-259	<p>Multiphysics Modeling of Edge-defined Film-fed Growth for Ga₂O₃ Single Crystal</p> <p>Su-Min Lim^{1,2}, Nhat-Minh Phung^{1,3}, Minh-Tan Ha¹, Yun-Ji Shin¹, Young-Soo Lim², Si-Young Bae¹, and Seong-Min Jeong¹</p> <p>¹KICET, ²Pukyong National University, ³Changwon National University</p>



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TP1-260	Circuit Analysis of 3nm GAA mNS-FET Considering Interconnect RC Wonyeong Jang, Yeji Lee, Kyung-bae Kwon, and Jongwook Jeon <i>Department of Electrical and Electronic Engineering, Konkuk University</i>
TP1-261	Alpha Particle Effect according to the Presence or Absence of Bottom Oxide in 3 nm Process Multi-Nanosheet Field Effect Transistor Haesu An, Hyeonjung Shim, Changhyun Yoo, and Jongwook Jeon <i>Department of Electrical and Electronic Engineering, Konkuk University</i>
TP1-262	The Future of Mono-layer MoS2 Channel Transistor without Stacking Jihun Park, Minsung Kim, and Jongwook Jeon <i>Department of Electrical and Electronic Engineering, Konkuk University</i>
TP1-263	Phase-field Modeling of Thin Film Growth by Chemical Vapor Deposition Hwan Wook Lee and Yongwoo Kwon <i>Hongik University</i>
TP1-264	향복 전압과 온-상태 전압 강하의 트레이드-오프 특성 개선을 위한 초접합 구조의 Carrier Stored Trench Bipolar Transistor 최적화에 관한 연구 허윤영, 조창현, 강이구 <i>극동대학교 에너지 IT 공학과</i>
TP1-265	Schottky Diode 내장형 Power MOSFET 전기적 특성 분석 Chang Hyeon Jo, Jong Mun Choi, and Ey Goo Kang <i>Far East University</i>
TP1-266	Analysis of the Static Characteristics of 4H-SiC Schottky Barrier Diode, Junction Barrier Diode, and Merged PiN Diode Using TCAD Simulation 유다희, 정지훈, 왕태희, 이호준 <i>부산대학교 전기공학과</i>



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H. Display and Imaging Technologies

심사위원: 오누리 교수(한양대학교), 박동욱 교수(서울시립대학교)

TP1-267	<p>이중 포토다이오드를 이용한 다중 대역 CMOS Image Sensor</p> <p>HyunJoon Sung¹ and Yunkyung Kim^{1,2}</p> <p>¹Department of ICT Integrated Safe Ocean Smart Cities Engineering, Dong-A University, ²Department of Electronics Engineering, Dong-A University</p>
TP1-268	<p>High-Stability Scan Driver Circuit based on a-IGZO TFT for Depletion Mode</p> <p>Sung-Hyuck Ahn, Eun Kyo Jung, Yong-Hoo Hong, Sara Hong, Eunho Kim, Ye-Rim Jeong, Hwarim Im, and Yong-Sang Kim</p> <p>Department of Electrical and Computer Engineering, Sungkyunkwan University</p>
TP1-269	<p>Influence of Dopant Concentration in Flrpic-Doped Blue Phosphorescent Organic Light Emitting Diodes</p> <p>Giyeon Lee and Byoungdeog Choi</p> <p>Department of Electrical and Computer Engineering, Sungkyunkwan University</p>
TP1-270	<p>Leakage Current Characteristics of Photo-Sensitive Siloxane Insulator</p> <p>Chanhee Han and Byoungdeog Choi</p> <p>Department of Electrical and Computer Engineering, Sungkyunkwan University</p>
TP1-271	<p>Enhancement of Emission Uniformity of Inkjet-printed Polymer Light-emitting Diodes via Drop-spacing Controlled Hole-injection Layers as Emission-defining Layers</p> <p>Hyungsoo Yoon^{1,2}, Dahyun Kim^{1,2}, Sujin Jeong^{1,2}, Geonhee Kim^{1,2}, and Yongtaek Hong^{1,2}</p> <p>¹Department of Electrical and Computer Engineering, Seoul National University, ²Inter-University Semiconductor Research Center, Seoul National University</p>
TP1-272	<p>Al₂O₃ 보호막 층의 증착두께와 방법이 IGZO TFT 의 내방사선성에 미치는 영향에 관한 연구</p> <p>황성현¹, 야쯔기에¹, 이동호¹, 배강환¹, 박익준², 권혁인¹</p> <p>¹중앙대학교 전자전기공학과, ²중부대학교 전기전자공학과</p>
TP1-273	<p>Analysis of Energy Transfer Between Quantum Dots and Exciton Harvesting Layers in Quantum Dot Light-Emitting Diodes</p> <p>Ahyoung Hong, Jaeyoul Kim, and Jeonghun Kwak</p> <p>Department of Electrical and Computer Engineering, Inter-university Semiconductor Research Center, Seoul National University</p>
TP1-274	<p>Chiroptical Diketopyrrolopyrrole(DPP)-Based Organogelators for Circularly Polarized Light Detection</p> <p>Hanna Lee^{1,2}, Hyemi Han¹, Jeong Ho Cho², and Jung Ah Lim¹</p> <p>¹Center for Opto-Electronic Materials and Devices, KIST, ²Department of Chemical and Biomolecular Engineering, Yonsei University</p>



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TP1-275	Understanding the Charge Carrier Transport in MoS₂ Transistors with Graphene Electrodes Jisu Jang and Do Kyung Hwang <i>KIST</i>
TP1-276	Novel Circularly Polarized Light-Sensing Near-Infrared Organic Phototransistors based on Chiroptical Narrow Bandgap π-Conjugated Polymer Thin-Films Hyemi Han, Jongtae Ahn, Do Kyung Hwang, and Jung Ah Lim <i>Center for Optoelectronic Materials and Devices, Post-Silicon Semiconductor Institute, KIST</i>
TP1-277	High Performance Linear Polarization-Sensitive Photodetector with 2D MoTe₂/ReS₂Heterostructure Byoung-Soo Yu ^{1,2} , Jongtae Ahn ¹ , and Do Kyung Hwang ^{1,2} ¹ <i>Center of Optoelectronic Materials and Devices, Post-Silicon Semiconductor Institute, KIST,</i> ² <i>Division of Nano and Information, KIST School, University of Science and Technology</i>
TP1-278	Lithium Ion Based IGZO Synaptic Transistor for Highly Linear Weight Update Kang-Hwan Bae ¹ , Seung-Hyun Lim ¹ , Chaeseon Jeong ¹ , Geun Ho Lee ² , Sangwook Youn ² , Felix Sunjoo Kim ¹ , Hyungjin Kim ² , and Hyuck-In Kwon ¹ ¹ <i>Chung-Ang University,</i> ² <i>Inha University</i>
TP1-279	a-IGZO TFT-Based Pixel Circuit for High Resolution OLED Display Eunho Kim, Eun Kyo Jung, Yong-Hoo Hong, Sung-Hyuck Ahn, Sara Hong, Ye-Rim Jeong, Hwarim Im, and Yong-Sang Kim <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-280	Wireless Stand-alone Sensing Display by Direct Capacitive Coupling Jihye Jang, Seung Won Lee, and Cheolmin Park <i>Department of Materials Science and Engineering, Yonsei University</i>
TP1-281	Universal Relationship between PECVD SiO₂ Gate Insulator Film Properties and a-ITZO TFT Characteristics Jun Su Lee and Saeroonter Oh <i>Department of Electrical and Electronic Engineering, Hanyang University</i>
TP1-282	Device Design of InGaZnO Floating Gate Thin-film Transistors for Threshold Voltage Control at Short Channel Lengths Mingoo Kim ¹ , Kihwan Kim ¹ , Joon Seok Park ² , Jun Hyung Lim ² , and Saeroonter Oh ¹ ¹ <i>Department of Electrical and Electronic Engineering, Hanyang University,</i> ² <i>R&D Center, Samsung Display Inc.</i>
TP1-283	Dual Function of Complementary Circuit based on Ambipolar Type 2D Materials Tae Wook Kim ^{1,2} , Jongtae Ahn ¹ , Jisu Jang ¹ , Seungho Song ^{1,3} , Byoung-soo Yu ¹ , and Do Kyung Hwang ¹ ¹ <i>Center for Opto-electronic Materials and Devices, KIST,</i> ² <i>School of Electrical Engineering, Korea University,</i> ³ <i>Advanced Materials Science and Engineering, Sungkyunkwan University</i>



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TP1-284	All-optically and Spatio-temporally Modulated Indium Gallium Zinc Oxide Optoelectronic Artificial Synaptic Device with Neuromorphic Applications Seungho Song ^{1,3} , Tae Wook Kim ^{1,2} , Jisu Jang ¹ , Jongtae Ahn ¹ , Byoungsoo Yu ¹ , Yong-hoon Kim ² , and Do Kyung Hwang ¹ <i>¹KIST, ²School of Electrical Engineering, Korea University, ³Sungkyunkwan University</i>
TP1-285	Trade-off between Hole Injection Efficiency and Electron-hole Pair Balance with Organic Light Emitting Diodes Using Chlorinated Anode Moonsoo Kim and Byoungdeog Choi <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-286	Simulation of Conduction Mechanism of Insulating Buffer Layer for Organic Light Emitting Diodes Min Jun Kim ¹ , Min Jung Park ² , and Min-Su Park ¹ <i>¹Department of Electronics Engineering, Dong-A University, ²Department of ICT integrated ocean Smart-City Engineering, Dong-A University</i>
TP1-287	Development of High-k Gate Insulator Deposition Process for Next-generation Thin Film Transistor Using Atomic Layer Deposition Min Kyeong Nam ^{1,2} , Dong Hee Han ^{1,2} , Seungwoo Lee ^{1,2} , and Woojin Jeon ^{1,2} <i>¹Department of Advanced Materials Engineering for Information and Electronics, Kyung Hee University, ²Integrated Education Program for Frontier Science & Technology (BK21 Four), Kyung Hee University</i>
TP1-288	A Study on the Conductivity of Al-doped Zinc Oxide Electrodes by Atmospheric Plasma Treatment and Subsequent Deposition DongWoon Lee, Sang Yeon Park, Haechang Lee, Sang Jik Kwon, and Eou-Sik Cho <i>Department of Electronic Engineering, Gachon University</i>
TP1-289	Design of Multifunctional Platforms in Single Eu³⁺-activated Ba₂LaTaO₆ Phosphors for Potential Optical Applications Yongbin Hua and Jae Su Yu <i>Department of Electronics and Information Convergence Engineering, Kyung Hee University</i>
TP1-290	Influence of Channel Layer Thickness on the Electrical Characteristics and Stability of In-Ga-Sn-O TFTs Dae-Hwan Kim, Hyun-Seok Cha, Hwan-Seok Jeong, Kie Yatsu, Chae-Eun Oh, and Hyuck-In Kwon <i>School of Electrical and Electronics Engineering, Chung-Ang University</i>
TP1-291	Electrical Properties and Stability of High-Mobility IGTO TFTs Depending on Annealing Atmosphere Hwan-Seok Jeong, Hyun-Seok Cha, Dong-Ho Lee, and Hyuck-In Kwon <i>School of Electrical and Electronics Engineering, Chung-Ang University</i>
TP1-292	Conduction Band Edge Energy Profile Probed by Hall Offset Voltage in IGZO Thin Films Hyo-Jun Joo, Kie Yatsu, Dae-Hwan Kim, Hyun-Seok Cha, Su-Hyeon Lee, and Sang-Hun Song <i>School of Electrical and Electronics Engineering, Chung-Ang University</i>



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TP1-293	다중 카메라를 활용한 스티칭 하드웨어 설계 Chang Yong Lee, Jin Su Kang, and Yong Hwan Lee <i>Kumoh National Institute of Technology</i>
TP1-294	Monolithic Integration of Photosensitive Inverters based on Fully Formed MOSFET Drivers and Multi-Layered MoS₂ Depletion Loads Seung Gi Seo, Hyunbin Cho, Jun Hui Cho, and Sung Hun Jin <i>Department of Electronic Engineering, Incheon National University</i>
TP1-295	Bottom-Emitting Nanowire LEDs Fabricated with Nanoscale Aluminum Core-shell Reflector Sung-Un Kim ^{1,2} and Yong-Ho Ra ³ ¹ Hanyang University, ² Korea Institute of Ceramic Engineering & Technology, ³ Jeonbuk National University
TP1-296	Geometrical Calibration for Multispectral Camera Giho Sung, Kyungwon Min, Haengseon Son, and Seonyoung Lee <i>Mobility Platform Research Center, KETI</i>
TP1-297	Real-time Color Histogram Equalization Using Digital Circuit in FPGA Ji-Heon Lee, Min Hyung Kang, and Young Kyu Hong <i>KETI</i>

I. MEMS & Sensor Systems

심사위원: 정예환 교수(한양대학교), 서민호 교수(부산대학교)

TP1-298	Highly Sensitive Pressure Sensor that Can Decouple Strain and Bending Force Wooseok Kim, Heekyu Lee, Janghoon Joo, and Sang Min Won <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-299	Transient Sensors based on Natural Silk Jeong Woo Chae ¹ , Dong geun Lee ² , Wi hyeong Lee ² , and Sang Min Won ¹ ¹ Sungkyunkwan University, ² Konkuk University
TP1-300	Fabrication of Dual-Annular-Array Capacitive Micro-Machined Ultrasonic Transducer Using Double Oxidation for 3D Volumetric Ultrasound Imaging Young Seok Kwon ^{1,2} , Hae Youn Kim ^{1,3} , Dong-Hyun Kang ⁴ , Jae-Woong Jeong ² , and Byung Chul Lee ¹ ¹ Creative Research Center for Brain Science, KIST, ² School of Electrical Engineering, KAIST, ³ Department of Electrical and Electronic Engineering, Yonsei University, ⁴ Micro-Nano Fabrication Center, KIST



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TP1-301	Soft, Wireless Micro-Heater for Sensor Application Jonam Cho and Gunchul Shin <i>School of Materials Science and Engineering, University of Ulsan</i>
TP1-302	Plasma Density Measurement with Reflected Power Measurement Yeon-Soo Park, Gi-Won Shin, Woo-Jae Kim, Hee-Tae Kwon, Sun-Hee Lee, Ji-Hwan Kim, In-Young Bang, and Gi-Chung Kwon <i>Electrical and Biological Physics, Kwangwoon University</i>
TP1-303	Demonstration of Adaptable Artificial Nerve Using 2Memristor-1Capacitor Structure Sung Keun Shim, Yoon Ho Jang, and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University</i>
TP1-304	Suppression of Cross-talk Effect in Ferroelectric Thin-film-Based Row-column Actuators Array Jin Soo Park ^{1,2} , Soo Young Jung ^{3,4} , Seung-Hyub Baek ³ , Tae Geun Kim ² , Jung Ho Park ² , and Byung Chul Lee ¹ <i>¹Creative Research Center for Brain Science, KIST, ²Department of Electrical Engineering, Korea University, ³Center for Electronic Materials, KIST, ⁴Department of Material Science and Engineering, Seoul National University</i>
TP1-305	Response Analysis of Resistor-type Gas Sensor with Read Bias Condition Kangwook Choi ^{1,2} , Gyuweon Jung ^{1,2} , Seongbin Hong ^{1,2} , Yujeong Jeong ^{1,2} , Wonjun Shin ^{1,2} , Jinwoo Park ^{1,2} , Donghee Kim ^{1,2} , Jong-Ho Bae ³ , Byung-Gook Park ^{1,2} , and Jong-Ho Lee ^{1,2} <i>¹Department of Electrical and Computer Engineering, Seoul National University, ²Inter-university Semiconductor Research Center, Seoul National University, ³Department of Electrical Engineering, Kookmin University</i>
TP1-306	Predictive TCAD Approach for Air Burst Test Jaehyun kim ¹ , Jongmin kim ¹ , Minhyun Jung ² , Youngchul Kim ¹ , and Joontae Jang ¹ <i>¹Technology Enabling Design Support Team, DB HiTek, ²MEMS Team, DB HiTek</i>
TP1-307	Effects of Annealing Temperature on Stability of FET-type Gas Sensor Jinwoo Park ^{1,2} , Seongbin Hong ^{1,2} , Yujeong Jeong ^{1,2} , Gyuweon Jung ^{1,2} , Wonjun Shin ^{1,2} , Donghee Kim ^{1,2} , Chayoung Lee ^{1,2} , and Jong-Ho Lee ^{1,2} <i>¹Department of Electrical and Computer Engineering, Seoul National University, ²Inter-University Semiconductor Research Center (ISRC), Seoul National University</i>
TP1-308	Microfabrication of a Fractal Resistive Thermometer for Thermal Characteristics of a Capacitive Micromachined Ultrasonic Transducer Jung Min Lee ^{1,2} , Jin Soo Park ^{2,3} , Woo Sung Park ¹ , and Byung Chul Lee ² <i>¹Department of Mechanical Systems Engineering, Sookmyung Women's University, ²Creative Research Center for Brain Science, KIST, ³Department of Electrical Engineering, Korea University</i>
TP1-309	바이오 센서를 위한 플렉서블 유기 박막 트랜지스터 어레이 개발 Kyung-Min Kim and Dong-Wook Park <i>School of Electrical and Computer Engineering, University of Seoul</i>



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TP1-310	<p>Fabrication of a Pb(Mg_{1/3},Nb_{2/3})O₃-Pb(Zr,Ti)O₃ (PMN-PZT) Thin-film Based Micro-dispenser</p> <p>Jungmin Lee^{1,2}, Jin Soo Park^{1,3}, Soo Young Jung^{4,5}, Seung-Hyub Baek⁴, and Byung Chul Lee¹</p> <p>¹Creative Research Center for Brain Science, KIST, ²Department of Advanced Materials Engineering for Information and Electronics, Kyung Hee University, ³Department of Electrical Engineering, Korea University, ⁴Center for Electronic Materials, KIST, ⁵Department of Material Science and Engineering, Seoul National University</p>
TP1-311	<p>Mechanically Enhanced 2D Capacitive Micromachined Ultrasonic Transducer Array Using SOG Trench-Insulation Technique</p> <p>Hae Youn Kim^{1,3}, Dong-Hyun Kang², Si Yeon Noh⁴, Shinyong Shim¹, Srikant Vainthilingam⁵, Jung Woo Choi⁵, Anshuman Bhuyan⁵, Butrus T. Khuri-Yakub⁵, Jungmok Seo³, and Byung Chul Lee¹</p> <p>¹Brain Science Institute, KIST, ²Micro-nano Fabrication Center, KIST, ³Electrical and Electronic Engineering, Yonsei University, ⁴Department of Electronic Engineering, Hanyang University, ⁵Electrical Engineering, Stanford University</p>
TP1-312	<p>새도 마스크를 활용한 실리콘 나노와이어 기반 MEMS 센서 전극형성방법</p> <p>김태엽^{1,2}, 이민재^{1,2}, 박정현^{1,2}, 조동일^{1,2}</p> <p>¹서울대학교 전기정보공학부, 자동화시스템공동연구소, ²서울대학교 반도체공동연구소</p>
TP1-313	<p>DC and AC Sensing Characteristics of a Si-nanowire BioFET for Urea Detection</p> <p>Jiwon Park¹, Donghoon Kim¹, Wonyeong Choi¹, Seonghwan Shin¹, Kihyun Kim^{2,3}, and Jeong-Soo Lee¹</p> <p>¹Department of Electrical Engineering, POSTECH, ²Division of Electronics Engineering, Jeonbuk National University, ³Future Semiconductor Convergence Technology Research Center, Jeonbuk National University</p>
TP1-314	<p>Detection of Surface Charge Difference of Microparticles using Dielectrophoresis based Technique</p> <p>Kang In Yeo¹, Gyeong Jun Min¹, and Sang Woo Lee¹</p> <p>Department of Biomedical Engineering, Yonsei University</p>
TP1-315	<p>Thickness Measurement of Highly Strained InGaAs/AlInAs Quantum Wells for Mid-wavelength Infrared Sensing Applications</p> <p>Sooseok Kang, Jongmin Kim, Youngsu Choi, Sang Tae Lee, Hyunchul Jang, Shinkeun Kim, Chan-Soo Shin, and Dong-Hwan Jun</p> <p>KANC</p>
TP1-316	<p>Miniaturized, Wireless, and In-ear Pulse Oximetry Sensor System</p> <p>Ah yeon Choi¹, Sung-Gu Kang², Joon-Woo Kim², and Jeonghyun Kim²</p> <p>¹Department of electric engineering, Kwangwoon University, ²Department of electronic Convergence Engineering, Kwangwoon University</p>
TP1-317	<p>Flexible Assembly-type Wireless Communication System for On-demand Sensor system</p> <p>Joon-Woo Kim, Sung-Gu Kang, Ah Yeon Choi, and Jeonghyun Kim</p> <p>Department of Electronics Convergence Engineering, Kwangwoon University</p>



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TP1-318	<p>Battery-less, Wireless, and Wearable Activity Measuring Device and Analysis System Yu-Jin Ahn, Jae-Ha Lee, Tae-Hyung Kim, Jun-Hee Lee, Joon-Woo Kim, and Jeonghyun Kim <i>Department of Electronics Convergence Engineering, Kwangwoon University</i></p>
TP1-319	<p>Capacitor-Based Gas Sensor with a ZnO Sensing Layer Seongbin Hong^{1,3}, Yujeong Jeong^{1,3}, Gyuweon Jung^{1,3}, Wonjun Shin^{1,3}, Jinwoo Park^{1,3}, Donghee Kim^{1,3}, Chayoung Lee^{1,3}, Kangwook Choi^{1,3}, Jun Shik Kim^{2,3}, Cheol Seong Hwang^{2,3}, and Jong-Ho Lee^{1,3} ¹Department of Electrical and Computer Engineering, Seoul National University, ²Department of Materials Science and Engineering, Seoul National University, ³Inter-university Semiconductor Research Center, Seoul National University</p>
TP1-320	<p>Variable Membrane Dielectric Polarization Property in Individual Live Cells Kang In Yeo¹, Insu Park^{1,2}, and Sang Woo Lee¹ ¹Department of Biomedical Engineering, Yonsei University, ²Micro and Nanotechnology Laboratory, University of Illinois</p>
TP1-321	<p>패치 안테나 파지에 따른 캐패시턴스 변화 측정 HyunWoo Son, Jiwon Kim, Jeon-Ung Yoo, Dong-gu Im, Hae-Won Son, and Jung-Mu Kim <i>Division of electronics and information Engineering, Jeonbuk National University</i></p>
TP1-322	<p>역오팔 형태의 MOF 구조체 제작 방법 김상훈¹, 김시혁², 이기근², 윤광석¹ ¹서강대학교 전자공학과, ²아주대학교 전자공학과</p>
TP1-323	<p>Total Organic Carbon Analysis Chip based on Photocatalyst Seung Deok Kim, Maeum Han, Soon Yeol Kwon, Jae Yong Lee, June Soo Kim, Hyun Seo Lee, Hyun Jun Kim, Da Ye Kim, and Seong Ho Kong <i>School of Electronic and Electrical Engineering, Kyungpook National University</i></p>
TP1-324	<p>Flexible and Stretchable sEMG Sensor for Amputee Jaeu Park, JinWoong Jeong, Seohyeon Lee, and Sanghoon Lee <i>Department of Robotics Engineering, DGIST</i></p>



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S. Chip Design Contest

심사위원: 고희호 교수(충남대학교), 양병도 교수(충북대학교), 이승은 교수(서울과학기술대학교),
신창환 교수(성균관대학교), 차혁규 교수(서울과학기술대학교)

TP1-325	A Fast and Efficient 3D Point Cloud-Based Neural Network Processor with Block-Based Point Processing for Regular DRAM Access Sangjin Kim, Juhyoung Lee, Dongseok Im, and Hoi-Jun Yoo <i>KAIST</i>
TP1-326	An Energy-efficient Hybrid Precision Deep Learning Processor with Outlier-aware Group Splitting Zhiyong Li, Dongseok Im, Jinsu Lee, and Hoi-Jun Yoo <i>KAIST</i>
TP1-327	Spike Sorting Processor Using Autoencoder Changyu Seong and Dongseok Jeon <i>Seoul National University</i>
TP1-328	A Trainable Neural Network Accelerator with Low Precision Number System Sunwoo Lee and Dongseok Jeon <i>Seoul National University</i>
TP1-329	An Ultra-Low-Jitter and Low Fractional Spur Fractional-N Subsampling PLL Using a Voltage-Domain Quantization-Error Cancellation Technique Juyeop Kim, Yongwoo Jo, Hangi Park, and Jaehyoun Choi <i>KAIST</i>
TP1-330	A 365fs_{rms} Jitter and -63dBc-Fractional Spur, 5.3GHz-Ring-DCO-Based Fractional-N DPLL Using a Probability Density Shaping $\Delta\Sigma$ Hangi Park, Chanwoong Hwang, Taeho Seong, and Jaehyoun Choi <i>KAIST</i>
TP1-331	A Low-Power Low-Noise Neural Recording Amplifier for ECoG Applications Jin-Young Son ^{1,2} , Donghoon Choi ² , and Hyouk-Kyu Cha ² ¹ Qualitas Semiconductor, ² Seoul National University of Science and Technology
TP1-332	270-GHz Lens-Antenna Feed-Detector Using 250-nm InP HBT Technology J. S. Kim, K. M. Lee, and M. Kim <i>School of Electrical Engineering, Korea University</i>



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TP1-333	A 0.57-pJ/Bit 18Gb/s/Pin Single-Ended PAM-4 Transceiver in 28nm CMOS with LIQ-Based 1-Tap Decision Feedback Equalizer Soyeon Park and Jintae Kim <i>Konkuk University</i>
TP1-334	Decibel-Linear Automatic Gain Control with Exponential Type VGA Dong-Han Ki, Yu-Rin Jin, Yeon-ho Seo, Sung-Mi Kim, and Seong-Ik Cho <i>Department of Electronic Engineering, Chonbuk National University</i>
TP1-335	Time-Interleaved Duobinary Transceiver for Low Power 3D I/O Jiyoung Kim, Taeryeong Kim, Jeonghyeok You, Sunghwan Joo, Jongha Park, Sumin Lee, Injun Jung, and Seong-Ook Jung <i>School of Electrical Engineering, Yonsei University</i>
TP1-336	A 57GHz 2-Stage Power Amplifier in Samsung 28nm CMOS In Cheol Yoo, Dong Ouk Cho, and Chul Woo Byeon <i>Department of Electronic Engineering, Wonkwang University</i>
TP1-337	Data Aware 12T SRAM Cell for Computing-in-Memory(CIM) Young Kyu Lee, Dong Han Ko, Sehee Lim, Seokhee Cho, Minjune Yeo, Hong Keun Ahn, Keonhee Cho, and Seong-Ook Jung <i>School of Electrical Engineering, Yonsei University</i>
TP1-338	An 88.9 dB Fully-Dynamic Noise-Shaping SAR Capacitance-to-Digital Converter Chaegang Lim and Chulwoo Kim <i>Korea University</i>
TP1-339	A 1-THz Triple-push Oscillator based on 250 -nm InP HBT Technology Heekang Son and Jae-Sung Rieh <i>School of Electrical Engineering, Korea University</i>
TP1-340	Single – Ended 12b 17MS/s SAR-ADC with Comparator Kickback Noise Reduction for Analog-CNN Jung Yeon Lee, Malik-Summair Asghar, and Hyung Won Kim <i>Department of Electronic Engineering, Chungbuk National University</i>
TP1-341	CNN Accelerator with Minimal On-Chip Memory based on Hierarchical Array Hyun Wook Son, Ali Abdel Hamid, Yong Seok Na, Dong Young Lee, and Hyung Won Kim <i>Mixed Signal Integrated System Lab, Chungbuk National University</i>



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2022년 1월 24일(월)~ 26일(수) | 강원도 하이원 그랜드호텔(컨벤션타워)

TP1-342	250 nm InP 공정을 이용한 증폭기가 결합된 H-대역 주파수 3 체배기 집적회로 설계 김형은, 장영민, 전영채, 정진호 <i>서강대학교 전자공학과</i>
TP1-343	Design of ASK RF Transceiver for ETCs with Hybrid ASK Modulator and Ultra Low Power Wake-up Receiver Hyoung-Jun Na, Tae-Seob Oh, Sang-Hee Yun, Jae-Bin Kim, Jong-Wan Jo, and, and Kang-Yoon Lee <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-344	Low-Power True Random Number Generator based on Silicon Nanowire Hyeong-Jin Yoo, Un-Shi An, Ye-Dam Kim, and Seung-Tak Ryu <i>KAIST</i>
TP1-345	Wide Input Range Wireless Ambient Power Receiver for Simultaneous Wireless Information and Power Transfer and Multi Energy Harvesting Systems Kee-Hoon Yang, Tae-Seob Oh, Sang-Hee Yun, Jae-Bin Kim, Jong-Wan Jo, and Kang-Yoon Lee <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-346	압축 센싱 복원을 위한 최소 제곱 솔버 구조 홍승우, 이영주 <i>포항공과대학교 전자전기공학과</i>
TP1-347	A 0.6-V 4 MS/s 2 bit/cycle Low Noise Asynchronous SAR ADC with VCO-Based Time Domain Comparator Sang-Hun Lee and Won-Young Lee <i>Seoul National University of Science and Technology</i>
TP1-348	A 2×2 CMOS Detector Array for Real-Time Terahertz Imaging System Ha-Neul Lee and Jong-Ryul Yang <i>Yeungnam University</i>
TP1-349	A Single-Ended Voltage-Mode Impedance Asymmetric Driver with 2-tap FFE in 28-nm CMOS Hyuntae Kim, Hyungmin Seo, and Jaeduk Han <i>Department of Electronic Engineering, Hanyang University</i>
TP1-350	A Cyclic Vernier-Based Dynamic Element Matching Time-to-Digital Converter In 180 nm CMOS Van-Nhan Nguyen and Jong-Wook Lee <i>Department of Electronic Engineering, Kyung Hee University</i>



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TP1-351	A 6 Gb/s Transceiver Design with Phase-Difference Modulation Signaling for Multi-drop DRAM Interface Changyoon Han, Sooeun Lee, Jaeyoung Seo, and Byungsub Kim <i>Department of Electrical Engineering, POSTECH</i>
TP1-352	Design of W-band Single-ended LNA using 65-nm CMOS Technology Dong Yeol Yang, Jae Hyun Park, Jun Pyo Lee, and Byung Sung Kim <i>Sungkyunkwan University</i>
TP1-353	Design of 94 GHz Receiver Using 65-nm CMOS Technology Jae Hyun Park, Se Jun Park, Seung Yeon Kim, and Byung Sung Kim <i>Sungkyunkwan University</i>
TP1-354	Dual Change-Sensing-based Ultra-Low Power Flip-Flops Jun Young Park, Suhyeon Lee, Minkyu Song, and Soo Youn Kim <i>Department of Semiconductor Science, Dongguk University</i>
TP1-355	900MHz 대역의 N-path 필터를 이용한 Wake-up 수신기 강민교 ¹ , 이윤기 ¹ , 김영식 ² <i>¹한동대학교 정보통신공학과, ²한동대학교 전산전자공학부</i>
TP1-356	Analysis of Chaotic True Random Number Generator Using 0.18um CMOS Process Yechan Jung ¹ , Chamindra Jayawickra ¹ , AlaaDdin Al-Shidaifat ¹ , Songwook Lee ¹ , Nihan Kahrama ² , and Hanjung Song ^{1,3} <i>¹Department of Nanosciences and Engineering, Inje University, ²Department of Electronic and Communication Engineering, Yildiz Technical University, ³Center for Nano Manufacturing, Inje University</i>
TP1-357	Low-Voltage MPPT Interface for DC-type Energy Harvesting Sources Hyeon-Jung Kim and Chong-Gun Yu <i>Department of Electronics Engineering, Incheon National University</i>
TP1-358	Spread Spectrum Clock Generator with Dual-Tone Hershey-Kiss Modulation Profile Seong-ho Kim, Hyun-in Kim, and Jin-Ku Kang <i>Department of Electrical and Computer Engineering, Inha University</i>
TP1-359	Successive Approximation Adaptive Threshold Voltage Control Block for PAM-4 Receiver Bong-Kyu Kim, Hwan-Ung Kim, and Jin-Ku Kang <i>Department of Electrical and Computer Engineering, Inha University</i>



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TP1-360	64bit RISC-V 기반 칩 검증 플랫폼 설계 변영훈, 이영주 <i>포항공과대학교 전자전기공학과</i>
TP1-361	A 0.61-pJ/bit and 6-Gb/s Receiver for MIPI D-PHY Standard v1.1 Woojung Kim ¹ , Jiwoon Do ² , Myunghee Lee ² , and Jae Joon Kim ¹ <i>¹Department of Electrical Engineering, UNIST, ²Sapien Semiconductors Inc.</i>
TP1-362	CAN 버스 내부 공격 대처 기법 Ji-Woong Choi and Seong-Soo Lee <i>Electronic Engineering, Soongsil University</i>
TP1-363	A 140-GHz Frequency Doubler Integrated with a Driving Amplifier based on 65-nm CMOS Junghwan Yoo and Jae-Sung Rieh <i>School of Electrical Engineering, Korea University</i>
TP1-364	1GHz Sub-Sampling Phase Locked Loop Using Binary Searching Frequency Algorithm for Wide Locking Range Jongchan An and Junyoung Song <i>Department of Electronics Engineering, Incheon National University</i>
TP1-365	A Broadband Transmitter for Miniaturized Complex Impedance Spectroscopy IC Sukju Yun and Kuduck Kwon <i>Department of Electronic Engineering, Kangwon National University</i>
TP1-366	A Balun-LNTA Employing Q-Enhanced LC Notch Filter for Advanced Cellular Applications Donggu Lee and Kuduck Kwon <i>Department of Electronic Engineering, Kangwon National University</i>
TP1-367	A 2.4-GHz Low-Power Current-Reused Low-Noise Amplifier for IoT Applications Hyeonjun Kim and Kuduck Kwon <i>Department of Electronic Engineering, Kangwon National University</i>
TP1-368	V-band Asymmetric Core-Based Reflection Amplifier for Reconfigurable Metasurface Seongwoog Oh and Jungsuek Oh <i>Department of ECE and INMC, Seoul National University</i>



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TP1-369	A Duobinary Receiver for High-speed Interfaces Jae-Woo Park and Jung-Hoon Chun <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TP1-370	Massive Media Communication System with Cyclic Redundancy Check of Accumulated Data Chang Yeop Han, Kwonneung Cho, Hyunwoo Oh, and Seung Eun Lee <i>Department of Electronic Engineering, Seoul National University of Science and Technology</i>
TP1-371	유동 변환비를 갖는 초 저전력 스위치 커패시터 DC-DC 변환기 양명규, Van-Thai Dang, 심용, 백광현 <i>중앙대학교</i>
TP1-372	위상 조절 샘플링 주파수 생성기를 이용한 레퍼런스 샘플링 기반의 Fractional-N 위상 동기 회로 Jae-Soub Han ¹ , Tae-Hyeok Eom ² , Kwang-Hyun Baek ¹ , and Yong Shim ¹ <i>¹Chung-Ang University, ²Samsung Electronics</i>
TP1-373	수렴 범위 평균 기법을 사용한 시간 기반의 최대전력지점 추적 DC-DC 변환기 Chung-Hee Jang, Van Thai Dang, Yong Shim, and Kwang-Hyun Baek <i>Chung-Ang University</i>
TP1-374	Current-Controlled Oscillator for Time-Based Quantization in Wide-Dynamic Range, Delta-Sigma Modulator Youngin Kim ¹ , Soon-Jae Kweon ^{1,2} , Injun Choi ¹ , Chongsoo Jung ¹ , Yoontae Jung ¹ , Jongyoon Choi ¹ , Sohmyung Ha ² , and Minkyu Je ¹ <i>¹Department of Electrical Engineering, KAIST, ²Electrical and Computer Engineering, New York University</i>
TP1-375	Performance Comparison of Monolithic Three-Dimensional (M3D) Nanoelectromechanical (NEM) Memory Switches Hyug Su Kwon and Woo Young Choi <i>Department of Electronic Engineering, Sogang University</i>
TP1-376	Nanoelectromechanical-Switch-Based Ternary Content-Addressable Memory (NEMTCAM) Jae Seong Lee and Woo Young Choi <i>Department of Electronic Engineering, Sogang University</i>
TP1-377	An On-Chip Cockcroft-Walton Switched-Capacitor Converter Using Split-Phase Control for Improved Soft-Charging with 9.72 Conversion Gain Jongmyeong Lee and Minkyu Je <i>KAIST</i>



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TP1-378	E-band Transceiver Chip for Point-to-Point Communication in 65-nm RFCMOS Technology Trinh Van Son, Hyohyun Nam, Jeong-Moon Song, Tae-Wha Hong, and Jung-Dong Park <i>Division of Electronics and Electrical Engineering, Dongguk University</i>
TP1-379	A 1.2V Low-Power Bio-Impedance Monitoring System with Wireless Network Yuri Kim, Chae-Eun Lee, Joon Young Lim, and Yoon-Kyu Song <i>Department of Nano Science and Technology, Graduate School of Convergence Science and Technology, Seoul National University</i>
TP1-380	Multimodal Portable Functional Brain Imaging Chip Chanhyung Lee, Bumjun Koh, and Hyeon-Min Bae <i>KAIST</i>
TP1-381	A 246 GHz Transmitter for Sensing System in 65-nm RFCMOS Technology Trinh Van Son, Hyohyun Nam, Jeong-Moon Song, and Jung-Dong Park <i>Division of Electronics and Electrical Engineering, Dongguk University</i>
TP1-382	A 280-GHz Receiver for Communication Application in 65-nm CMOS Technology Trinh Van Son, Hyohyun Nam, Jeong-Moon Song, and Jung-Dong Park <i>Division of Electronics and Electrical Engineering, Dongguk University</i>
TP1-383	A 280-GHz Receiver for Communication Application in 130-nm SiGe Technology Trinh Van Son, Hyohyun Nam, Jeong-Moon Song, and Jung-Dong Park <i>Division of Electronics and Electrical Engineering, Dongguk University</i>
TP1-384	Design of a 915MHz Wake-Up Receiver Using N-Path Filter Sung Min Jang ¹ , Min Gyo Kang ¹ , and Young Sik Kim ² ¹ <i>Department of Information and Communication Engineering, Handong Global University,</i> ² <i>School of Computer Science and Electrical Engineering, Handong Global University</i>
TP1-385	단일 모드 작동 및 무 중단 출력 전류 전달 기능을 갖춘 96.6% 효율 연속 입력 전류 하이브리드 이중 경로 벅부스트 컨버터 신홍석, 제민규 <i>한국과학기술원</i>
TP1-386	Trust-Hub Benchmark 기반 하드웨어 백도어 IC칩 설계 Seon Bhin Kim and Dong Kyue Kim <i>Department of Electronic Engineering, Hanyang University</i>



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TP1-387	PQC 암호 및 NTRU 기반 시스템 구현 Seon Bhin Kim and Dong Kyue Kim <i>Department of Electronic Engineering, Hanyang University</i>
TP1-388	웨어러블 빛 치료 기기용 OLED 램프의 전류 구동을 위한 로드 전류 제어 방식의 직류-직류 전력변환 회로 조동희, 제민규 <i>한국과학기술원</i>
TP1-389	C-DAC 가변 샘플링 신호를 사용한 12-bit, 10-Msps SAR A/D 변환기 설계 심민수, 강민성, 오성광, 윤광섭 <i>인하대학교</i>
TP1-390	A Wideband Circulator Leakage Canceller for Retro-directive RF System Tan-Binh Ngo, Quang-Huy Do, and Sang-Woong Yoon <i>Department of Electronic Engineering, Kyung Hee University</i>
TP1-391	IQ Subsampling-Based Distance Measurement System Using Impulse Signals Hanseul Yi <i>School of Electrical and Electronics Engineering, Yonsei University</i>
TP1-392	65-nm CMOS 공정 기반 67-GHz 전압 제어 발진기 Wooyong Keum, Junghwan Yoo, and Jae-Sung Rieh <i>School of Electrical Engineering, Korea University</i>
TP1-393	6G 통신 시스템의 D-band 대역 140-GHz 전압 제어 발진기 민상기, 이재성 <i>고려대학교 전기전자공학과</i>
TP1-394	A V-band Frequency Tripler in 250-nm InP HBT Gihyun Lim and Jae-Sung Rieh <i>School of Electrical Engineering, Korea University</i>
TP1-395	28 nm CMOS 공정 기반 600 GHz 직접 이미징 검출기 설계 Minje Cho and Jae-Sung Rieh <i>Department of Electronic Engineering, Korea University</i>



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TP1-396	VCO 와 Counter 사용한 DCPWM CMOS 벅 변환기 설계 양흥렬, 양제이, 문철우, 윤광섭 <i>인하대학교</i>
TP1-397	A Dynamic Wide-Bandwidth Compensation for Non-Inverting Buck-Boost Converter Huan Nguyen and Wanyeong Jung <i>KAIST</i>
TP1-398	Digital LDO with Reference-less Adaptive CLK Generation and Bit-shifting Coarse-Fine-control Wooyoung Choi, Seung-Myeong Yu, Yunha Kang, and Junyoung Song <i>Department of Electronics Engineering, Incheon National University</i>
TP1-399	능동 EMI 필터 구동을 위한 전력관리회로 IC Sangyeong Jeong ^{1,2} , Jo Ji Won ² , and Jinguok Kim ^{1,2} <i>¹UNIST, ²EMcoretech Co.</i>
TP1-400	100Mbit/s QPSK Transceiver Design in 180nm CMOS Technology Jin-Woo Kim ^{1,2} , Tae-won Jung ² , Ho-sung Sung ² , and Joon-Yub Kim ¹ <i>¹Sejong University, ²Berex</i>
TP1-401	A Ka Band High Performance Vector Modulator with Miniaturized Coupler Jinhyun Kim and Jungsuek Oh <i>Department of ECE and INMC, Seoul National University</i>
TP1-402	A Wideband LNA Using Shunt Resistive Feedback and Series Inductive Peaking with Forward Body Biasing Uichan Park and Jungsuek Oh <i>Department of ECE and INMC, Seoul National University</i>
TP1-403	DC Block 스위칭을 통한 K / Ka 이중대역 저잡음증폭기 윤태영 ^{1,2} , 오정석 ^{1,2} <i>¹서울대학교 전기정보공학부, ²서울대학교 뉴미디어통신공동연구소</i>