

D. Thin Film Process Technology 분과

2017년 2월 14일 (화), 08:30-10:00
Room A (에메랄드, 2층)

[TA1-D] Hybrid Oxide Thin Films

좌장: 전상훈(고려대학교), 박정훈(SK 하이닉스)

TA1-D-1 08:30-08:45	Characterization of Photo-Responsive Mechanism through Subgap Density-of-States in a-IGZO TFTs for Possible Infrared Light Detection Heesung Lee, Junyeap Kim, Jaewon Kim, Seong Kwang Kim, Sung-Jin Choi, Dae Hwan Kim, and Dong Myong Kim <i>School of Electrical Engineering, Kookmin University</i>
TA1-D-2 08:45-09:00	Improved Gas Sensing Properties of Solution-Processed Hybrid IGZO/CNT Films Jun-Young Jeon ¹ , Rawat Jaisutti ² , Ban-Suk Park ¹ , Yong-Hoon Kim ^{2,3} , and Tae-Jun Ha ¹ <i>¹Department of Electronic Materials Engineering, Kwangwoon University, ²School of Advanced Materials Science and Engineering, Sungkyunkwan University, ³SKKU Advanced Institute of Nanotechnology(SAINT), Sungkyunkwan University</i>
TA1-D-3 09:00-09:15	Atomic Layer Deposition of α-Ga₂O₃ Thin Films for Solar-Blind UV Detector Seung Hyun Lee and Sang Woon Lee <i>Department of Physics and Division of Energy Systems Research, Ajou University</i>
TA1-D-4 09:15-09:30	Hydrogen Sensor Using Pd-Decorated Al₂O₃/SrTiO₃ Heterostructure Hae Jun Jung and Sang Woon Lee <i>Department of Physics and Division of Energy Systems Research, Ajou University</i>
TA1-D-5 09:30-09:45	진공 열처리를 통한 ITO 투명 전도성 산화물 박막의 특성 향상에 대한 연구 Sejong Seong ¹ , Yong Chan Jung ¹ , Taehoon Lee ¹ , Bo Li ² , In-Sung Park ^{1,3} , and Jinho Ahn ^{1,3} <i>¹Division of Materials Science and Engineering, Hanyang University, ²Department of Convergence Nanoscience, Hanyang University, ³Institute of Nano Science and Technology, Hanyang University</i>

K. Memory (Design & Process Technology) 분과

2017년 2월 14일 (화), 08:30-10:00
Room B (토파즈, 2층)

[TB1-K] Unconventional Approaches in Resistance Switching Memories

좌장: 손용훈(삼성전자), 강명곤(한국교통대학교)

TB1-K-1 08:30-08:45	Improving Resistive Switching Uniformity by Embedding Au Nanodots in the Pt/Ta₂O₅/HfO_{2-x}/TiN Structure Young Jae Kwon, Jung Ho Yoon, Yu Min Kim, Dae Eun Kwon, Tae Hyung Park, Kyung Jin Yoon, Hae Jin Kim, Xing Long Shao and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University</i>
TB1-K-2 08:45-09:00	Investigation of Bipolar Resistive Switching Behaviors based on Solution Processed AlO_x Thin Film Using Microwave Irradiation Seung-Tae Kim and Won-Ju Cho <i>Department of Electronic Materials Engineering, Kwangwoon University</i>
TB1-K-3 09:00-09:15	The Effect of Oxygen-Content in LaAlO₃ Layer on the Synaptic Behavior of Pt/LaAlO₃/Nb:SrTiO₃ Memristors for Neuromorphic Applications Jun Tae Jang ¹ , Daehyun Ko ¹ , Geumho Ahn ¹ , Hyery Yu ¹ , Yeon Soo Kim ² , Chansoo Yoon ² , Sangik Lee ² , Bae Ho Park ² , Sung-Jin Choi ¹ , Dong Myong Kim ¹ , and Dae Hwan Kim ¹ <i>¹School of Electrical Engineering, Kookmin University, ²Department of Physics, Konkuk University</i>
TB1-K-4 09:15-09:30	The Influence of Oxygen-Content on the Synaptic Behavior of InGaZnO Memristors for Neuromorphic Applications Geumho Ahn, Jun Tae Jang, Daehyun Ko, Hyeri Yu, Sung-Jin Choi, Dong Myong Kim, and Dae Hwan Kim <i>School of Electrical Engineering, Kookmin University</i>
TB1-K-5 09:30-09:45	Flexible Resistive Memory Array on Plastics via Laser Lift-off Seungjun Kim, Dohyun Kim, and Keon Jae Lee <i>Department of Materials Science and Engineering, KAIST</i>
TB1-K-6 09:45-10:00	열 변성 단백질을 이용한 비휘발성 스위칭 소자 Sookyung Kim, Sung Kyu Jang, Sumin Jeon, and Sungjoo Lee <i>SKKU Advanced Institute of Nano Technology(SAINT), Sungkyungwan University</i>

G. Device & Process Modeling, Simulation and Reliability 분과

2017년 2월 14일 (화), 08:30-10:00
Room C (사파이어, 2층)

[TC1-G] Device Physics and Characterization 1

좌장: 김대환(국민대학교), 조인욱(SK 하이닉스)

TC1-G-1 08:30-08:45	DFT Study on the Clean-Up Mechanism of InGaAs(001) Native Oxides in Atomic Layer Deposition In Won Yeu ^{1,2} , Cheol Seong Hwang ^{2,3} , and Jung-Hae Choi ¹ <i>¹Center for Electronic Materials, Korea Institute of Science and Technology, ²Department of Materials Science and Engineering, Seoul National University, ³Inter-University Semiconductor Research Center, Seoul National University</i>
TC1-G-2 08:45-09:00	Analysis of Hysteresis Characteristic in 3-D NAND Flash Memory Cells Ho-Jung Kang, Nagyong Choi, Byung-Gook Park, and Jong-Ho Lee <i>Department of EECS and ISRC, Seoul National University</i>
TC1-G-3 09:00-09:15	Charge Transport Mechanism and Low-Frequency Noise Properties in High Mobility ZnON Thin-Film Transistors Chan-Yong Jeong ¹ , Hee-Joong Kim ¹ , Dae-Hwan Kim ¹ , Hyun-Suk Kim ² , Eok Su Kim ³ , Tae Sang Kim ³ , Joon Seok Park ³ , Jong-Baek Seon ³ , Kyoung Seok Son ³ , Sunhee Lee ³ , Seong-Ho Cho ³ , Young Soo Park ³ , Dae Hwan Kim ⁴ , and Hyuck-In Kwon ¹ <i>¹School of Electrical and Electronics Engineering, Chung-Ang University, ²Department of Material Science and Engineering, Chungnam National University, ³Samsung Advanced Institute of Technology, ⁴School of Electrical Engineering, Kookmin University</i>
TC1-G-4 09:15-09:30	HfO₂(Field Effect Passivation Layer)를 적용한 CMOS image sensor의 Dark current 특성 연구 Seon Man Hwang and Yong Hoon Choi <i>SK Hynix Inc.</i>
TC1-G-5 09:30-09:45	A Trap Characterization Method for Float Body PMOSFET Using Pulsed Drain Current Transient Manh-Cuong Nguyen, Hack-Yeon Kim, Jae-Won Choi, Soo-Yeun Han, An Hoang-Thuy Nguyen, Jungyeon Kim, Sang-Woo Kim, Su-Jin Choi, Jong-Kyu Jun, and Rino Choi <i>Department of Materials Science and Engineering, Inha University</i>
TC1-G-6 09:45-10:00	Influence of Active Layer Thickness on the Abnormal Output Characteristics in Amorphous In-Ga-Zn-O TFTs under High Current-Flowing Operation Hye Ri Yu, Jun Tae Jang, Sungju Choi, Hara Kang, Daehyun Ko, Jaeyoung Kim, Geumho Ahn, Jihyun Lee, Sung-Jin Choi, Dong Myong Kim, and Dae Hwan Kim <i>School of Electrical Engineering, Kookmin University</i>

S. Chip Design Contest **분과**

2017년 2월 14일 (화), 08:30-10:00
Room D (크리스탈, 2층)

[TD1-S] Chip Design Contest

좌장: 김태욱(연세대학교), 심재윤(포항공과대학교)

TD1-S-1 08:30-08:45	A Process Compensating Analog PIE Decoder for EPC Gen2 UHF RFID Tag IC Jae-Hun Lee, Dasom Park, Hyun-Sik Lee, Woo-Jin Jo, and Jong-Wook Lee <i>Department of Electronics and Radio Engineering, Kyung Hee University</i>
TD1-S-2 08:45-09:00	300 GHz 7×7 배열 CMOS 이미지 검출기 송기룡, 김정수, 서명교, 이재성 <i>고려대학교 전기전자공학과</i>
TD1-S-3 09:00-09:15	10Gbps Serial-link Transmitter for 10G-EPON Dong-Hyun Yoon, Yo Han Hong, Dong-Gyu Jung, Ngoc-Son Pham, and Kwang-Hyun Baek <i>School of Electrical and Electronics Engineering, Chung-Ang University</i>
TD1-S-4 09:15-09:30	A Single-Ended 6T1D SRAM Cell With Feedback-fade Write Access Kyungho Shin and Jongsun Park <i>School of Electrical Engineering, Korea University</i>
TD1-S-5 09:30-09:45	1GHz에서 동작하는 고성능 EISC 프로세서 설계 김창현, 전재영, 김인식, 민경일, 김선욱 <i>고려대학교 전기전자공학과</i>
TD1-S-6 09:45-10:00	A Mixed-Signal ASIC Chip Design for Peripheral Neural Stimulation for Miniaturized Implantable Devices Jungmin Seo, Jeong-Hoan Park, and Sung June Kim <i>Department of Electrical and Computer Engineering, Seoul National University</i>

F. Silicon and Group-IV Devices and Integration Technology 분과

2017년 2월 14일 (화), 08:30-10:00
Room E (루비, 2층)

[TE1-F] Advanced CMOS Devices I

좌장: 김소영(성균관대학교), 이내인(삼성전자)

TE1-F-1 08:30-08:45	Super Steep Switching FinFET Technology for Ultra-Low Power Operation Eunah Ko and Changhwan Shin <i>Department of Electrical and Computer Engineering, University of Seoul</i>
TE1-F-2 08:45-09:00	Approach for Advancement of Transistor: Vertically Integrated Gate-All-Around Junctionless Nanowire FET Byung-Hyun Lee and Yang-Kyu Choi <i>School of Electrical Engineering, KAIST</i>
TE1-F-3 09:00-09:15	Hump Effects of Triple-Gate Tunnel FETs Encapsulated with an Epitaxial Layer (EL TFETs) Jang Woo Lee and Woo Young Choi <i>¹Department of Electronic Engineering, Sogang University, ²Flash Device Technology Team, SK Hynix Inc.</i>
TE1-F-4 09:15-09:30	Fully Formed, Releasable Single-Crystal Silicon-Metal Oxide Field Effect Transistors based on (100) Silicon Bulk Wafer Kyu-Bong Choi, Byung-Gook Park, and Jong-Ho Lee <i>Department of ECE and ISRC, Seoul National University</i>
TE1-F-5 09:30-09:45	Vertical Gate-All-Around Transistor with Wrapped Contact and Vertically-Stacked Dual Metal Gate for High Current Memory Applications Dongyeon Oh, Junkyo Suh, Kangsik Choi, Sangyong Kim, Seong-Dong Kim, Seokkiu Lee, and Sungjoo Hong <i>R&D Division, SK Hynix Inc.</i>
TE1-F-6 09:45-10:00	Improved Characteristics and V_{TH} Modulation of FD-SOI Tunnel Field Effect Transistor (TFET) Using ALD $HfAlO_x$ and TiN Gate Stack Donghwan Lim, Jae Ho Lee, Myeong Gyoon Chae, Hoon Hee Han, Yu-Rim Jeon, Andrey Sokolov Sergeevich, and Changhwan Choi <i>Division of Materials Science and Engineering, Hanyang University</i>

[TG1-J] Graphene Base Nanofabrications

좌장: 안지훈(한국해양대학교), 송명훈(UNIST)

<p>TG1-J-1 08:30-09:00</p>	<p>[초청] Aberration-Corrected Transmission Electron Microscopy and Its Application to Liquid Specimens Jong Min Yuk <i>Department of Materials Science and Engineering, KAIST</i></p>
<p>TG1-J-2 09:00-09:15</p>	<p>The Reliable and Controllable Graphene Doping Method Compatible with Current CMOS Technology and the Demonstration of Its Device Applications Seonyeong Kim¹, Somyeong Shin¹, Taekwang Kim¹, Hyewon Du¹, Minho Song¹, Sangmin Kim¹, Seungjun Kim¹, Ki Soo Kim², Seungmin Cho², Sang Wook Lee³, and Sunae Seo¹ <i>¹Department of Physics, Sejong University, ²Hanwha Techwin R&D Center, ³Department of Physics, Ewha Woman's University</i></p>
<p>TG1-J-3 09:15-09:30</p>	<p>3-aminopropyltriethoxysilane (APTES)를 이용한 그래핀- MoS₂ 배리스터 최적화 Seyong Oh, Jaewoo Shim, and Jin-Hong Park <i>Sungkyunkwan University</i></p>
<p>TG1-J-4 09:30-10:00</p>	<p>[초청] Local Probing of Adhesion Force for Evenly Transferred Graphene Membrane Yunseok Kim <i>School of Advanced Materials Science and Engineering, Sungkyunkwan University</i></p>
<p>TG1-J-5 10:00-10:15</p>	<p>Gate-Tunable Graphene Mesh on Si Schottky Junction Solar Cells for Photovoltaic Performance Optimization Jae Hyung Lee, Su Han Kim, Won Jun Chang, and Won Il Park <i>Division of Materials Science and Engineering, Hanyang University</i></p>
<p>TG1-J-6 10:15-10:30</p>	<p>Cobalt based Active Materials Decorated on Reduced Graphene Oxide Aerogel for Hydrogen Evolution Reaction Sung Hwan Koo and Sang Ouk Kim <i>Department of Materials Science and Engineering, KAIST</i></p>

D. Thin Film Process Technology **분과**

2017년 2월 14일 (화), 10:10-11:40
Room A (에메랄드, 2층)

[TA2-D] Emerging Thin Film Technology

좌장: 김형섭(성균관대학교), 윤성민(경희대학교)

TA2-D-1 10:10-10:25	The Low Temperature and Ion Implantation-Based Large-Scale Wafer Bonding for the Monolithic 3D Integration Platform HoonHee Han, Yu-Rim Jeon, Donghwan Lim, Jaeho Lee, So Hyun Kim, and Changhwan Choi <i>Division of Materials Science and Engineering, Hanyang University</i>
TA2-D-2 10:25-10:40	Hardmask Carbon의 Raman Band와 물성과의 상호관계 평가 김경원, 이준필, 최민기, 송병목, 연태원, 광경익, 손성규, 이기정 <i>SK하이닉스</i>
TA2-D-3 10:40-10:55	유기금속화합물-반도체 나노소재 복합화를 통한 소자성능 향상 연구 전인수 ^{1,2} , 김성준 ¹ , 송우석 ¹ , 명성 ¹ , 이선숙 ¹ , 임종선 ¹ , 안기석 ¹ <i>¹한국화학연구원 박막재료연구센터, ²홍익대학교 신소재공학과</i>
TA2-D-4 10:55-11:10	Advanced Titanium Nitride (TiN) Film as a Metal Hard Mask (MHM) by VHF(Very High Frequency) Sputtering for 1X nm Node and Beyond Byeong-Hwa Jeong, Eun-Kyoung Ma, Chang-Min Jeong, Hyun-Ji Cho, Jouji Hiroishi, Seung-Su Choi, and In-Sang Jeon <i>Korea Institute for Super Materials (KISM), ULVAC KOREA, Co.Ltd.</i>
TA2-D-5 11:10-11:25	Non-Planar Split-Gate Ambipolar Organic Thin-Film Transistors and Logic Circuits Hocheon Yoo and Jae-Joon Kim <i>Department of Creative IT engineering, Pohang University of Science and Technology</i>
TA2-D-6 11:25-11:40	The Process of Wafer Bonding and De-Bonding for Monolithic 3D Technology Yu-Rim Jeon, HoonHee Han, and Changhwan Choi <i>Division of Materials Science and Engineering, Hanyang University</i>

K. Memory (Design & Process Technology) 분과

2017년 2월 14일 (화), 10:10-11:40
Room B (토파즈, 2층)

[TB2-K] Dielectric, Ferromagnetic, and Phase Change Materials For Memory Application

좌장: 이재구(삼성전자), 김윤(부산대학교)

TB2-K-1 10:10-10:25	Effect of ALD Growth Cycle for $\text{HfO}_2/\text{Al}_2\text{O}_3$ Multi-Stack on the Memory Characteristics in MAHAOS Structure Heedo Na, Juyoung Jeong, Tae Ho Kim, and Hyunchul Sohn <i>Department of Materials Science and Engineering, Yonsei University</i>
TB2-K-2 10:25-10:40	Power and Cost-effective Transmitter and Receiver Schemes of NAND Flash for Enterprise SSD Application Kwansu Shon, Yohan Jeong, Daehan Kwon, and Junhyun Chun <i>SK Hynix Inc.</i>
TB2-K-3 10:40-10:55	La_2O_3-capped SiO_2의 Effective Workfunction 거동 연구 김형철, 이승미, 조흥재, 장세억 <i>SK하이닉스 미래기술연구소</i>
TB2-K-4 10:55-11:10	Investigation on High Performance SONOS Flash Memory with Silicon Nanocrystals Embedded in Silicon Nitride Charge Trapping Layer Jae-Gab Lim ¹ , Seung-Dong Yang ¹ , Ho-Jin Yun ¹ , Jun-Kyo Jeong ¹ , Jung-Hyun Park ¹ , Yu-Jeong Kim ¹ , Chan Lim ² , Gyu-seok Cho ² , Seong-gye Park ² , Chul Huh ³ , Hi-Deok Lee ¹ , and Ga-Won Lee ¹ ¹ <i>Department of Electronics Engineering, Chungnam National University</i> , ² <i>SK Hynix Inc.</i> , ³ <i>Electronics and Telecommunications Research Institute</i>
TB2-K-5 11:10-11:25	Thermally Induced Magnetization Switching Behavior by Spin-Orbit-Torque in W/CoFeB/MgO Frames for STT-MRAM Application. SeungMo Yang ¹ , GwangGuk An ¹ , WooSeong Chung ³ , Haesoo Park ¹ , Wonbae Ko ¹ , and JinPyo Hong ^{1,2} ¹ <i>Novel Functional Materials and Devices Lab, The Research Institute for Natural Science, Department of Physics, Hanyang University</i> , ² <i>Division of Nano-Scale Semiconductor Engineering, Hanyang University</i> , ³ <i>Nano Quantum Electronics Lab, Department of Electronics and Computer Engineering, Hanyang University</i>
TB2-K-6 11:25-11:40	Design of In_3SbTe_2 Phase-Change Material with Local Distortion for Memory and Neuromorphic System Minho Choi ¹ , Heechae Choi ^{2,3} , Seungchul Kim ² , Yong Tae Kim ⁴ , and Jinho Ahn ¹ ¹ <i>Division of Materials Science and Engineering, Hanyang University</i> , ² <i>Center for Computational Science, Korea Institute of Science and Technology</i> , ³ <i>Virtual Lab Company</i> , ⁴ <i>Semiconductor Materials and Device Laboratory, Korea Institute of Science and Technology</i>

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

2017년 2월 14일 (화), 10:10-11:40
Room C (사파이어, 2층)

[TC2-G] Reliability Analysis

좌장: 김성동(SK 하이닉스), 유현용(고려대학교)

TC2-G-1 10:10-10:25	3차원 시뮬레이션을 이용한 Gate-All-Around Nanowire FET의 PVE(Process Variation Effect)에 의한 GIDL분석 김신근 ¹ , 서영수 ¹ , 강명곤 ² , 신형철 ¹ <i>¹School of Electrical Engineering and Computer Science, Seoul National University,</i> <i>²Department of Electronics Engineering, Korea National University of Transportation</i>
TC2-G-2 10:25-10:40	Mitigation of Grain Boundary Effect in 3D Vertical NAND Flash with Macaroni Structure Hyeongwan Oh ¹ , Jiwon Kim ¹ , Seabyuk Jeong ² , Taehee Kim ¹ , Hojoon Lee ¹ , Junyoung Lee ¹ , Wonyeong Choi ¹ , and Jeong-Soo Lee ¹ <i>¹Department of Electrical Engineering, Pohang University of Science and Technology,</i> <i>²Division of IT Convergence Engineering, Pohang University of Science and Technology</i>
TC2-G-3 10:40-10:55	Low Leakage III-V/Ge CMOS FinFET Design with High-K Spacer Technology E-San Jang, Sunhae Shin, Jae Won Jung, and Kyung Rok Kim <i>Department of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology</i>
TC2-G-4 10:55-11:10	ESD Damage Caused by Non-Uniform Metal Resistance in Big Switch Youngchul Kim, Jungwoo Han, Jwoon Lee, Youngsang Son, Joonghyeok Byeon, Joontae Jang, Geuntae Kwon, and Yoonjong Lee <i>TE team, Dongbu HiTecks Co., Ltd.</i>
TC2-G-5 11:10-11:25	Field-Effect-Passivation for Backside Illuminated CMOS Sensor by High K Material Jin-woo Sung <i>Department of Process integration, SK Hynix Inc.</i>

E. Compound Semiconductors 분과

2017년 2월 14일 (화), 10:10-11:40
Room D (크리스탈, 2층)

[TD2-E] WBG High Frequency Device

좌장: 민병규(한국전자통신연구원), 차호영(홍익대학교)

TD2-E-1 10:10-10:25	Growth of 10 nm-thick AlIn(Ga)N/GaN Heterostructure with High Electron Mobility and Low Sheet Resistance Seung-Hyeon Kang, Chul-Ho Won, Young-Woo Jo, Ryun-Hwi Kim, Jun-Hyeok Lee, Jeong-Gil Kim, Dai Quan, Chan Heo, Gokhan Atmaca, Dong Yan, and Jung-Hee Lee <i>School of Electrical Engineering, Kyungpook National University</i>
TD2-E-2 10:25-10:40	Improvement of Thermal Reliability for GaN Microwave Device Using Molybdenum Insertion Gate Metal Dong-Hwan Kim, Su-Keun Eom, Ho-Young Cha, and Kwang-Seok Seo <i>Department of Electrical and Computer Engineering, Seoul National University</i>
TD2-E-3 10:40-10:55	Gate Capacitance Modeling in InGaAs Quantum-Well MOSFETs Jung Ho Park, Do-Kywn Kim, Ji Min Baek, Seung-Woo Son, Jung-Hee Lee, and Dae-Hyun Kim <i>School of Electronics Engineering, Kyungpook National University</i>
TD2-E-4 10:55-11:10	$L_g = 0.5 \mu\text{m}$ In_{0.7}Ga_{0.3}As PHEMTs with $f_T = 126 \text{ GHz}$ and $f_{\text{max}} = 352 \text{ GHz}$ Ji Min Baek ¹ , Seung Woo Son ¹ , Jung Ho Park ¹ , Do-Kywn Kim ¹ , Jacoby Yoon ² , Jong-Keun Park ² , Jeong-Geun Kwak ² , Dong-Soo Bang ² , and Dae-Hyun Kim ¹ ¹ <i>School of Electronics Engineering, Kyungpook National University</i> , ² <i>Quantum Semiconductor International (QSI) Co., Ltd.</i>
TD2-E-5 11:10-11:25	Record Carrier Transport Properties in InGaAs Quantum-Well MOSFETs on 300-mm Si Substrate Seung-Woo Son, Jung Ho Park, Ji Min Baek, Do-Kywn Kim, Jung-Hee Lee, and Dae-Hyun Kim <i>School of Electronics Engineering, Kyungpook National University</i>

F. Silicon and Group-IV Devices and Integration Technology 분과

2017년 2월 14일 (화), 10:10-11:40
Room E (루비, 2층)

[TE2-F] Advanced CMOS Devices II

좌장: 양지운(고려대학교), 정성웅(SK 하이닉스)

TE2-F-1 10:10-10:25	Demonstration of CMOS with Gate-Bias Independent Junction Band-to-Band Tunneling Current for Standard Ternary Inverter Sunhae Shin, Esan Jang, Jae Won Jeong, and Kyung Rok Kim <i>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology</i>
TE2-F-2 10:25-10:40	Switching Voltage Modeling of Nano-Electromechanical (NEM) Memory Switches Ho Moon Lee and Woo Young Choi <i>Department of Electronic Engineering, Sogang University</i>
TE2-F-3 10:40-10:55	Influence of Temperature and Doping Concentration on the Energy Filtering Effects of Tunnel Field-Effect Transistors In Huh and Woo Young Choi <i>Department of Electronic Engineering, Sogang University</i>
TE2-F-4 10:55-11:10	Optimal Design of Si Dual-Gate Junctionless Tunneling Field-Effect Transistor Junsoo Lee ¹ and Seongjae Cho ^{1,2} <i>¹Graduate School of IT Convergence Engineering, ²Department of Electronics Engineering Gachon University</i>
TE2-F-5 11:10-11:25	Resistive Switching Characteristics of a Ni/WO_x/p⁺-Si RRAM by Pulse Analysis Tae-Hyeon Kim, Sungjun Kim, Min-Hwi Kim, Su-Hyun Bang, Dong Keun Lee, and Byung-Gook Park <i>Inter-University Semiconductor Research Center (ISRC) and the Department of Electrical and Computer Engineering, Seoul National University</i>
TE2-F-6 11:25-11:40	Current-Voltage Characterization of Ultra-Thin Floating-Body MOSFETs Eunseon Yu ¹ , Seongjae Cho ^{1,2} , and Byung-Gook Park ³ <i>¹Graduate School of IT Convergence Engineering, Gachon University, ¹Graduate School of IT Convergence Engineering, ²Department of Electronics Engineering, Gachon University, ³Department of Electrical and Computer Engineering, Seoul National University</i>

[TG2-J] Two-Dimensional Materials Beyond Graphene (1)

좌장: 김윤석(성균관대학교)

<p>TG2-J-1 10:40-11:10</p>	<p>[초청] Interface and Surface Control of MoS₂-based Nanoelectronic Devices Takhee Lee <i>Department of Physics and Astronomy, Seoul National University</i></p>
<p>TG2-J-2 11:10-11:25</p>	<p>분자도핑을 이용한 이황화 텅스텐의 전기적/광학적 특성 제어 연구 지상수, 손명우, 손기철, 장한별, 함문호 <i>광주과학기술원 신소재공학부</i></p>
<p>TG2-J-3 11:25-11:40</p>	<p>Improved Air-Stability of Encapsulation-Free, Monolayer WS₂ Using Graphene Substrate Se-Yang Kim¹, Jinsung Kwak¹, Jung Hwa Kim¹, Jae-Ung Lee², Yongsu Jo¹, Sung Youb Kim³, Hyeonsik Cheong², Zonghoon Lee¹, and Soon-Yong Kwon¹ <i>¹School of Materials Science and Engineering, Low Dimensional Carbon Materials Center, Ulsan National Institute of Science and Technology (UNIST), ²Department of Physics, Sogang University, ³School of Mechanical and Nuclear Engineering, Ulsan National Institute of Science and Technology (UNIST)</i></p>

D. Thin Film Process Technology 분과

2017년 2월 14일 (화), 16:00-17:30
Room A (에메랄드, 2층)

[TA3-D] Oxide Thin Film Transistors

좌장: 최리노(인하대학교), 김성근(한국과학기술연구원)

TA3-D-1 16:00-16:15	Characterization of P-Type SnO Thin Films Grown by Atomic Layer Deposition and its Application to TFTs Younjin Jang, Junshik Kim, Eunsuk Hwang, Seungjun Lee, and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University</i>
TA3-D-2 16:15-16:30	Effect of Microwave Irradiation on the Charge Trapping and Detrapping Characteristics in Amorphous in-Ga-ZnO Thin-Film-Transistors. Hyun-Woo Lee and Won-Ju Cho <i>Department of Electrical Materials Engineering, Kwnagwoon University</i>
TA3-D-3 16:30-16:45	Analysis of Defects and Charge Trapping Behavior of Double Active Layer In-Zn-O and Al-Sn-Zn-O Thin Film Transistor Youngin Goh ¹ , Teaho Kim ¹ , Jong-Heon Yang ² , Ji Hun Choi ² , Chi-Sun Hwang ² , Sung Haeng Cho ² , and Sanghun Jeon ¹ <i>¹Department of Applied Physics, Korea University, ²Electronics Telecommunications Research Institute (ETRI)</i>
TA3-D-4 16:45-17:00	Investigation on Low Temperature Sol-Gel Derived ZnO Thin Film Transistors Seong-Won Chae ¹ , Ho-Jin Yun ² , Seung-Dong Yang ² , Jae-Gab Lim ² , Jun-Kyo Jeong ² , Jung-Hyun Park ² , Yu-Jeong Kim ² , Hyo-Jin Kim ³ and Ga-Won Lee ^{1,2} <i>¹Graduate school of Advanced Circuit Substrate Engineering, Chungnam National University, ²Department of Electronics Engineering, Chungnam National University, ³Department of Materials Science and Engineering, Chungnam National University</i>
TA3-D-5 17:00-17:15	Channel Shape Dependency on Device Reliability of Amorphous Indium-Gallium-Zinc-Oxide Thin Film Transistors Seung Jae Yu, Jae Hyun Ryu, Geun Woo Baek, Jong Hun Hong, and Sung Hun Jin <i>Department of Electronic Engineering, Incheon National University</i>

H. Display and Imaging Technologies 분과

2017년 2월 14일 (화), 16:00-17:30
Room B (토파즈, 2층)

[TB3-H] Display and Imaging Technologies

좌장: 구본원(삼성종합기술원), 전상훈(고려대학교)

TB3-H-1 16:00-16:15	Phase Difference Auto-Focusing System Using CMOS Image Sensor with 4-Directional Phase Masks Jinbeum Jang, Sangwoo Park, and Joonki Paik <i>Department of Imaging, Chung-Ang University</i>
TB3-H-2 16:15-16:30	Single Image Sensor based Optical Range-Finding System Using a Liquid Crystal Display Aperture Sangwoo Park, Jinbeum Jang, and Joonki Paik <i>Department of Image, Chung-Ang University</i>
TB3-H-3 16:30-16:45	Improved Efficiency in Quantum Dot Light-Emitting Diodes by Triethanolamine Treatment onto Electron Transport Layer Jaeyun Kim ¹ , Jin Young Yun ² , Gyutae Kim ² , and Jeonghun Kwak ¹ <i>¹School of Electrical and Computer Engineering, The University of Seoul, ²School of Electrical Engineering, Korea University</i>
TB3-H-4 16:45-17:00	Direct Patterning of Quantum Dots for Quantum Dot Emissive Display Joon-Suh Park ¹ , Jihoon Kyhm ² , Shinyoung Jeong ¹ , Jin Dong Song ³ , and Il Ki Han ¹ <i>¹Nanophotonics Research Center, Korea Institute of Science and Technology, ²Department of Physics, Dongguk University, ³Center for Optoelectronic Materials and Devices, Korea Institute of Science and Technology</i>
TB3-H-5 17:00-17:15	새로운 대면적 열처리 시스템을 이용한 비정질 실리콘의 균일한 탈수소화에 관한 연구 정용찬 ¹ , 성세종 ¹ , 이태훈 ¹ , 박인성 ² , 김태현 ³ , 여원재 ⁴ , 안진호 ^{1,2} <i>¹한양대학교 신소재공학과, ²한양대학교 나노과학연구소, ³국방과학연구소, ⁴쥬에스티</i>
TB3-H-6 17:15-17:30	Channel Shape Dependency on Low Frequency Noise Characteristics for Amorphous Indium-Gallium Zinc Oxide Thin Film Transistors Jong Hun Hong, Jae Hyun Ryu, Geun Woo Baek, Seung Jae Yu, and Sung Hun Jin <i>Department of Electronic Engineering, Incheon National University</i>

G. Device & Process Modeling, Simulation and Reliability 분과

2017년 2월 14일 (화), 16:00-17:30
Room C (사파이어, 2층)

[TC3-G] Device Modeling and Simulation 1

좌장: 김대환(국민대학교), 최성진(국민대학교)

TC3-G-1 16:00-16:15	Surface Potential Model for L-shaped Tunnel Field-Effect-Transistor Faraz Najam and Yun Seop Yu <i>Department of Electrical, Electronic and Control Engineering and ITC, Hankyong National University</i>
TC3-G-2 16:15-16:30	Density-Functional Theory Based Simulation of Biaxial Strained Silicon Ultra-Thin-Body FETs Seonghyun Heo, Hyo-Eun Jung, and Mincheol Shin <i>Department of Electrical Engineering, KAIST</i>
TC3-G-3 16:30-16:45	TCAD-based Analysis on the Relationship between the Physical Parameters in charge Trapping and the Stretched Exponential Model Parameters in Amorphous InGaZnO TFTs under the Positive Gate Bias Temperature Stress Jihyun Rhee, Sungju Choi, Hara Kang, Jae-Young Kim, Jun Tae Jang, Daehyun Ko, Sung-Jin Choi, Dong Myong Kim, and Dae Hwan Kim <i>School of Electrical Engineering, Kookmin University</i>
TC3-G-4 16:45-17:00	Simulation Study on Drain Current Characteristics in Linear and Saturation Region of Tunnel Field Effect Transistor (TFET) Ryoongbin Lee, Dae Woong Kwon, Euyhwan Park, Junil Lee, Sihyun Kim, and Byung-Gook Park <i>Department of Electrical and Computer Engineering, Seoul National University</i>
TC3-G-5 17:00-17:15	A Development of New CDM SPICE Simulation Model Jung-woo Han, Young-chul Kim, Young-sang Son, Joong-hyeok Byeon, Joon-tae Jan, Geun-tae Kwon, and Yoon-jong Lee <i>TE team, Dongbu HiTecks Co., Ltd.</i>
TC3-G-6 17:15-17:30	TCAD-based Comparative Study on the Positive Bias Stress Instability between the Single-Gate and Double-Gate Structured In-Ga-Zn-O TFTs Sungju Choi, Jun Tae Jang, Hara Kang, Jae-Young Kim, Daehyun Ko, Jihyun Rhee, Jun Tae Jang, Hye Ri Yu, Jisun Park, Sung-Jin Choi, Dong Myong Kim, and Dae Hwan Kim <i>School of Electrical Engineering, Kookmin University</i>

E. Compound Semiconductors 분과

2017년 2월 14일 (화), 16:00-17:30
Room D (크리스탈, 2층)

[TD3-E] WBG Power Device

좌장: 문재경(한국전자통신연구원), 장태훈(전북대학교)

TD3-E-1 16:00-16:15	PECVD SiON for Normally-off AlGaIn/GaN-on-Si Recessed MIS-HFETs Hyun-Seop Kim ¹ , Sang-Woo Han ¹ , Won-Ho Jang ¹ , Kwang-Seok Seo ² , and Ho-Young Cha ¹ <i>¹School of Electronic and Electrical Engineering, Hongik University, ²Department of Electrical Engineering and Computer Science, Seoul National University</i>
TD3-E-2 16:15-16:30	Normally-off GaN-based MOSFET realized by TMAH Solution for both Selective Recess and Etch Stop Processes Dong-Hyeok Son, Young-Woo Jo, Won-Sang Park, Chan Heo, Chul-Ho Won, Dai Quan, Jeong-Gil Kim, Jae Hwa Seo, In Man Kang, and Jung-Hee Lee <i>School of electronics engineering, Kyungpook National University</i>
TD3-E-3 16:30-16:45	Study for Reliability of Threshold Voltage in E-Mode AlGaIn / GaN MOS-HEMT with Al₂O₃ Dielectric Il-Hwan Hwang ¹ , Kwang-Ho Choi ¹ , Ho-Young Cha ² , and Kwang-Seok Seo ¹ <i>¹Seoul national University and ISRC. Department of Electrical and Computer Engineering, ²Hongik University. Electronic and Electrical Engineering</i>
TD3-E-4 16:45-17:00	600 V/10A GaN Power Transistors for High Efficiency and Power Density Hyung-Seok Lee, Hyun-Gyu Jang, Jeho Na, JinSig Kim, Seong-Bum Bae, Woojin Chang, Eunsoo Nam, and Jae-Kyoung Mun <i>GaN Power Electronics Research Section, Electronics and Telecommunications Research Institute</i>
TD3-E-5 17:00-17:15	A Low Forward Voltage Drop of 4H-SiC TSBS Employing Poly-Si/Ni Dual Metals 김동영 ^{1,2} , 박힘찬 ² , 방욱 ² , 박기철 ¹ , 석오균 ² <i>¹경상대학교 반도체 공학과, ²한국전기연구원 전력반도체연구센터</i>
TD3-E-6 17:15-17:30	Investigation of Threshold Voltage Variation under Negative-Bias Stress Condition of SiC Double-Implanted MOSFETs Sangwon Baek ¹ , Bo Jin ¹ , Junyoung Lee ¹ , Jiwon Kim ¹ , Hyeongwan Oh ¹ , Chanoh Park ² , Donghoon Kim ¹ , and Jeong-Soo Lee ¹ <i>¹Department of Electrical Engineering, Pohang University of Science and Technology, ²Division of IT Convergence Engineering, Pohang University of Science and Technology</i>

F. Silicon and Group-IV Devices and Integration Technology 분과

2017년 2월 14일 (화), 16:00-17:30
Room E (루비, 2층)

[TE3-F] Flash and Si Memory Technologies

좌장: 이종호(서울대학교), 임준희(삼성전자)

TE3-F-1 16:00-16:15	Intercell Trapped Charge (ITC) Suppression of Vertical NAND (VNAND) Flash Memory Hyug Su Kwon ¹ , Sangmoo Choi ² , Sung-Yong Chung ² , Gyu-Seog Cho ² , Sung-Kye Park ² , and Woo Young Choi ¹ <i>Department of Electronic Engineering, Sogang University</i>
TE3-F-2 16:15-16:30	A Boosted Common Source Line Program Scheme in Channel Stacked NAND Flash Memory with Layer Selection by Multilevel Operation Do-Bin Kim, Dae Woong Kwon, and Byung-Gook Park <i>Inter-University Semiconductor Research Center (ISRC) and the Department of Electrical and Computer Engineering, Seoul National University</i>
TE3-F-3 16:30-16:45	Simulation Study of the Dependence of Word-Line Stacked NAND Flash Memory Electrical Characteristics on Grain Boundary Traps Sang Ho Lee, Dae Woong Kwon, Seung Hyun Kim, Sangku Park, Myung Hyun Baek, and Byung-Gook Park <i>Inter-University Semiconductor Research Center (ISRC) and the Department of Electrical and Computer Engineering, Seoul National University</i>
TE3-F-4 16:45-17:00	Compact Modeling of NAND Flash Memory Operation through Accurate Locating the Vertical Position of Trapped Charges Seunghyun Kim ¹ , Do-Bin Kim ¹ , Sang-Ho Lee ¹ , Sang-Ku Park ¹ , Youngmin Kim ² , Seongjae Cho ² , and Byung-Gook Park ¹ ¹ <i>Department of Electrical and Computer Engineering, Seoul National University,</i> ² <i>Department of Electronics Engineering, Gachon University</i>
TE3-F-5 17:00-17:15	Design and Operation of Capacitorless Si Volatile Memory Based on 2-Terminal Thyristor (2-T TRAM) Youngmin Kim ¹ , Seongjae Cho ¹ , Hyungsoon Shin ² , and Byung-Gook Park ³ ¹ <i>Graduate School of IT Convergence Engineering, Gachon University,</i> ² <i>Department of Electronics Engineering, Ewha Womans University,</i> ³ <i>Department of Electrical and Computer Engineering, Seoul National University</i>
TE3-F-6 17:15-17:30	Fabrication and Resistive Switching Characteristics of Silicon Nano-Wedge Structure RRAM Min-Hwi Kim ¹ , Sungjun Kim ¹ , Suhyun Bang ¹ , Tae-hyeon Kim ¹ , Dong Keun Lee ¹ , Seongjae Cho ² , and Byung-Gook Park ¹ ¹ <i>Inter-University Semiconductor Research Center (ISRC) and the Department of Electrical and Computer Engineering, Seoul National University,</i> ² <i>Department of Electronic Engineering, Gachon University</i>

R. Semiconductor Software 분과

2017년 2월 14일 (화), 16:00-17:30
Room F (제이드, 2층)

[TF3-R] Semiconductor Software 1

좌장: 김태석(광운대학교), 정선화(이화여자대학교)

TF3-R-1 16:00-16:13	Challenges in PCM-based Swapping for Future Smartphone Systems Yunjoo Park and Hyokyung Bahn <i>Department of Computer Science and Engineering, Ewha Womans University</i>
TF3-R-2 16:13-16:26	비휘발성 메모리를 이용한 스마트 디바이스의 스왑 지원 방안 Jisun Kim and Hyokyung Bahn <i>Department of Computer Science and Engineering, Ewha Womans University</i>
TF3-R-3 16:26-16:39	Efficient Memory Management for Big Data Processing in Large Scale NVDIMM Seogmin Kwon and Hyokyung Bahn <i>Department of Computer Science and Engineering, Ewha Womans University</i>
TF3-R-4 16:39-16:52	Two-Level Logging with Non-Volatile Byte-Addressable Memory to Improve Performance of Log-Structured File System Hyunho Gwak and Dongkun Shin <i>Department of Electrical and Computer Engineering, Sungkyunkwan University</i>
TF3-R-5 16:52-17:05	Hotness Classification Policy based on Migration Count Jaeho Kim, Eunjae Lee, and Sam H. Noh <i>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology</i>
TF3-R-6 17:05-17:18	손목 팔찌의 가속도 자료를 사용한 자동 수면단계 감지 방법 여민수, 류지우, 박철수 <i>광운대학교 컴퓨터공학과</i>
TF3-R-7 17:18-17:31	NDAS를 이용한 확장성 있는 분산 파일시스템 개발 Keun Hak Lim, Jung Kyu Park, and Sam H. Noh <i>Department of Computer Engineering, Ulsan National Institute of Science and Technology</i>

[TG3-J] Two-Dimensional Materials Beyond Graphene (2)

좌장: 육종민(KAIST)

<p>TG3-J-1 16:00-16:30</p>	<p>[초청] Synthetic Methods for 2D Tin Sulfides and Their Versatile Applications Ji-Hoon Ahn <i>Department of Electronic Material Engineering, Korea Maritime and Ocean University</i></p>
<p>TG3-J-2 16:30-16:45</p>	<p>Large Scale Growth of Vertically Standing MoS₂ Flakes on 2D Nanosheet Using Organic Promoter Min A Kang, Chong-Yun Park, Sung Myung, Wooseok Song, Sun Sook Lee, Jongsun Lim, and Ki-seok An <i>Thin Film Materials Research Center, Korea Research Institute of Chemical Technology</i></p>
<p>TG3-J-3 16:45-17:15</p>	<p>[초청] Two-dimensional Semiconductor Optoelectronics based on Van Der Waals Heterostructures Chul-Ho Lee <i>KU-KIST Graduate School of Converging Science and Technology, Korea University</i></p>
<p>TG3-J-4 17:15-17:30</p>	<p>Improved Photosensitivity of MoS₂ Field Effect Transistors by Surface Treatment with Copper Phthalocyanine Jinsu Pak, Jingon Jang, Tae-Young Kim, Kyungjune Cho, Jae-Keun Kim, Barbara Yuri Choi, Jiwon Shin, Seungjun Chung, and Takhee Lee <i>Department of Physics, Seoul National University</i></p>

D. Thin Film Process Technology **분과**

2017년 2월 15일 (수), 08:30-10:00
Room A (에메랄드, 2층)

[WA1-D] Thin Films for Memories and Transistors

좌장: 최창환(한양대학교)

WA1-D-1 08:30-08:45	Development of a Reduction-Resistant Oxide Electrode for Dynamic Random Access Memory Capacitor Cheol Jin Cho ^{1,2} , Jin-Sang Kim ¹ , Cheol Seong Hwang ^{2,3} , and Seong Keun Kim ¹ <i>¹Center for Electronic Materials, Korea Institute of Science and Technology, ²Department of Materials Science and Engineering, Seoul National University, ³Inter-University Semiconductor Research Center, Seoul National University</i>
WA1-D-2 08:45-09:00	The Influence of Ti Buffer Layer on the Cu-Se Based Atomic Switch Hyun suk Woo and Sanghun Jeon <i>Department of Applied Physics, Korea University</i>
WA1-D-3 09:00-09:15	Novel Forming-Free and Multilevel Resistive Switching Device with SiO_x/ZnO Thin Film Oxide Heterostructures Andrey Sokolov Sergeevich, Seokki Son, Donghwan Lim, Youngjin Kim, Hoonhee Han, Jaeho Lee, Yu-Rim Jeon, and Changhwan Choi <i>Division of Materials Science and Engineering, Hanyang University</i>
WA1-D-4 09:15-09:30	Low-Temperature Annealing Effects on the Memory Retention Properties of the Oxide Memory TFTs Using ZnO Nanoparticle Charge-Trap Sites Gi-Ho Seo and Sung-Min Yoon <i>Kyung Hee University</i>
WA1-D-5 09:30-09:45	Improvement in Gas Sensing Response via Introduction of ALD-Grown ZnO Nanoparticles with Top-Gate In-Ga-Zn-O Thin-Film Transistor Da-Jeong Yun, Gi-Ho Seo, Won Ho Lee, and Sung-min Yoon <i>Department of Advanced Materials Engineering for Information and Electronics, Kyung Hee University</i>

A. Interconnect & Package 분과

2017년 2월 15일 (수), 08:30-10:00
Room B (토파즈, 2층)

[WB1-A] Packaging and Design

좌장: 이후정(성균관대학교)

WB1-A-1 08:30-08:45	Mechanical Reliability of Sn-Ag-Cu and Sn-Bi BGA Solder Joints with Epoxy During Temperature-Humidity Treatments Kyung-Yeol Kim ¹ , Woo-Ram Myung ² , Haksan Jeong ¹ , and Seung-Boo Jung ¹ <i>¹School of Advanced Materials Science & Engineering, Sungkyunkwan University,</i> <i>²SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University</i>
WB1-A-2 08:45-09:00	Interposer-Level Wireless Power Transfer Scheme Design on Active Silicon Interposer in 2.5-D and 3-D IC Jinwook Song, Seungtaek Jung, Shinyoung Park, Subin Kim, and Joungho Kim <i>Department of Electrical Engineering, KAIST</i>
WB1-A-3 09:00-09:15	Signal Integrity Design of High Bandwidth Memory Interposer in 2.5D Terabyte/s Bandwidth Graphics Module Hyunsuk Lee and Joungho Kim <i>School of Electrical Engineering, KAIST</i>
WB1-A-4 09:15-09:30	New Verification Method Considering Process Variation in NAND Flash Memory Young Sang Ahn, Gun Gi Song, Jin Yong Seong, Jae Won Cha, Seung Geon Yu, and Sang Hoo Hong <i>Nand Product Verification Team, Nand Tech Development Division, SK Hynix Inc.</i>
WB1-A-5 09:30-09:45	3D Packaging System에서 저온 공정의 필요성 및 절연 박막의 특성 연구 손성민, 안진호, 정덕영, 진정기, 장근호, 박병률, 이내인, 황기현, 강호규, 정은승 <i>삼성전자 반도체 연구소</i>
WB1-A-6 09:45-10:00	Chip Guard Ring 구조 최적화 연구 Min-Soo Park, Jea Hyun Son, Young Geon Kwon, and Nam Seog Kim <i>SK Hynix Inc.</i>

G. Device & Process Modeling, Simulation and Reliability 분과

2017년 2월 15일 (수), 08:30-10:00
Room C (사파이어, 2층)

[WC1-G] Device Physics and Characterization 2

좌장: 김대환(국민대학교), 홍성민(광주과학기술원)

WC1-G-1 08:30-08:45	Performance of Black Phosphorous Tunnel FETs under Uniaxial Strain: First-Principles Study Sungwoo Jung, Junbeom Seo, and Mincheol Shin <i>School of Electrical Engineering, KAIST</i>
WC1-G-2 08:45-09:00	Ab Initio Study on the Atomic and Electronic Structures of MoS₂/oxide Interface Jaehong Park ^{1,2} , Cheol Seong Hwang ^{2,3} , and Jung-Hae Choi ¹ ¹ <i>Center for Electronic Materials, Korea Institute of Science and Technology,</i> ² <i>Department of Materials Science and Engineering, Seoul National University,</i> ³ <i>Inter-University Semiconductor Research Center, Seoul National University</i>
WC1-G-3 09:00-09:15	Determination of Bulk and Interface Density of States in a-IGZO TFTs Chan-Yong Jeong ¹ , Hee-Joong Kim ¹ , Jong In Kim ² , Jong-Ho Lee ² , and Hyuck-In Kwon ¹ ¹ <i>School of Electrical and Electronics Engineering, Chung-Ang University,</i> ² <i>School of Electrical Engineering and Computer Science, Seoul National University</i>
WC1-G-4 09:15-09:30	Giant Electroresistance in Edge Metal-Insulator-Metal Tunnel Junction Induced by Electric Fringe Fields from Underlying Ferroelectric Layer Sungchul Jung ¹ , Youngeun Jeon ² , Hanbyul Jin ² , Jung-Yong Lee ¹ , Jae-Hyun Ko ³ , Nam Kim ⁴ , Daejin Eom ⁴ , and Kibog Park ^{1,2} ¹ <i>Department of Physics, Ulsan National Institute of Science and Technology,</i> ² <i>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology,</i> ³ <i>Department of Physics, Hallym University,</i> ⁴ <i>Korea Research Institute of Standar</i>
WC1-G-5 09:30-09:45	Experimental Investigation of Physical Mechanism for Asymmetrical Degradation and Related Noise Properties in a-IGZO TFTs under Simultaneous Gate and Drain Bias Stresses Hee-Joong Kim, Chan-Yong Jeong, and Hyuck-in Kwon <i>School of Electrical and Electronics Engineering, Chung-Ang University</i>

I. MEMS & Sensor Systems 분과

2017년 2월 15일 (수), 08:30-10:00
Room D (크리스탈, 2층)

[WD1-I] Flexible Sensors

좌장: 박경호(KANC)

WD1-I-1 08:30-08:45	Flexible Inorganic-based Piezoelectric Acoustic Nanosensors Inspired by Human Cochlea Jae Hyun Han, Daniel Juhyung Joe, and Keon Jae Lee <i>Department of Materials Science and Engineering, KAIST</i>
WD1-I-2 08:45-09:00	A Highly Sensitive AgNW/CNT/PDMS-based Wearable In-ear EEG Sensor for Smart EEG Recording Joong Hoon Lee ¹ , Ji-Young Hwang ² , Seung Min Lee ³ , Ha Ryeon Hwang ¹ , Han-Seop Kim ¹ , Sang Hoon Lee ^{1,2} , and Suk-Won Hwang ¹ ¹ <i>KU-KIST Graduate School of Converging Science and Technology, Korea University,</i> ² <i>Department of Biomedical Engineering, College of Health Science, Korea University,</i> ³ <i>Department of Materials Science and Engineering, Frederick Seitz Materials Research Labor</i>
WD1-I-3 09:00-09:15	Highly Flexible Pressure Sensor based on Double Electrode Layer for E-skin Applications Kyungkwan Kim, Minhyun Jung, Taeho Kim, and Sanghun Jeon <i>Department of Applied Physics, Korea University</i>
WD1-I-4 09:15-09:30	Flexible Microdevices for Localized and Controlled-Release Drug Delivery Implanted on Cerebral Cortex Sanghyun Sung, Beomho Mun, and Keon Jae Lee <i>Department of Materials Sciences and Engineering, KAIST</i>

F. Silicon and Group-IV Devices and Integration Technology 분과

2017년 2월 15일 (수), 08:30-10:00

Room E (루비, 2층)

[WE1-F] Advanced CMOS Processing and Reliability

좌장: 신창환(서울시립대학교), 김춘환(SK 하이닉스)

WE1-F-1 08:30-08:45	Improvement of TDDB in 28nm Logic NFET Transistor by the Surface Oxidation of eWF Metal Seung Wook Ryu, Young Tae Yoo, Sung Hun Son, Hun Sung Lee, Tae Yong Park, Seon Haeng Lee, Sang-wan Jin, Moon Sig Joo, Seung Woo Jin, and Choon Hwan Kim <i>SK Hynix Inc.</i>
WE1-F-2 08:45-09:00	Substrate and Layout Engineering to Suppress Self-Heating SangHoon Shin ¹ , SangHyeon Kim ² , Seongkwang Kim ² , Heng Wu ¹ , P. D. Ye ¹ , and M. A. Alam ¹ <i>¹Department of ECE, Purdue University, ²Korea Institute of Science and Technology</i>
WE1-F-3 09:00-09:15	The Interaction of Fin Edge Roughness and Side Wall Roughness and Its Impacts on FinFET Sangheon Oh and Changhwan Shin <i>Department of Electrical and Computer Engineering, University of Seoul</i>
WE1-F-4 09:15-09:30	Effect of Process Induced Damage of Porous Low-k SiOCH Films on RVST and TDDB Performance of Logic BEOL Modules Sang-wan Jin, Tae Yeon Jung, Hyo Seok Lee, Hyunah Lee, Chai O Chung, In Cheol Ryu, Seong Wook Ryu, Jung Hyuk Kim, Seung Woo Jin, and Choon Hwan Kim <i>SK Hynix Inc.</i>
WE1-F-5 09:30-09:45	Novel Method to Form Thin Silicon Channel on Bulk Silicon Substrate for Low-Cost Tunnel Field Effect Transistor Fabrication Junil Lee, Dae Woong Kwon, Euyhwan Park, Sihyun Kim, Ryoongbin Lee, Taehyung Park, Hyun-Min Kim, Kitae Lee, and Byung-Gook Park <i>Inter-University Semiconductor Research Center (ISRC), Seoul National University, Department of Electrical and Computer Engineering(ECE), Seoul National University</i>
WE1-F-6 09:45-10:00	Laser Spike Anneal Impact on Bias Temperature Instability for 28nm Replacement Metal Gate CMOS Seon Haeng Lee, Myung Hee Nam, Yu Jun Lee, Seong Jun Lee, Hei Mi Kwon, Sang Eun You, Seung Wook Ryu, Jeong Soo Park, and Joong Smith Jeon <i>SK Hynix Inc.</i>

B. Patterning 분과

2017년 2월 15일 (수), 08:30-10:00
Room F (제이드, 2층)

[WF1-B] Plasma and Patterning Processes

좌장: 김현우(한양대학교), 유원종(성균관대학교)

WF1-B-1 08:30-08:45	Work-Function Control of Ultrathin Transition Metal Dichalcogenides by Using Argon Plasma Treatment and Kelvin Probe Force Microscopy Inyong Moon and Won Jong Yoo <i>Sungkyunkwan Advanced Institute of Nano-Technology, Sungkyunkwan University</i>
WF1-B-2 08:45-09:00	Y₂O₃:Eu³⁺ 박막형광체 발광 효율을 향상시키는 유·무기 하이브리드 나노재료를 포함하는 2차원 나노구조체 연구 김효준 ¹ , 고기영 ² , 박인성 ³ , 안진호 ^{1,3} <i>¹한양대학교 신소재공학과, ²한국특허정보원, ³한양대학교 나노반도체공학과</i>
WF1-B-3 09:00-09:15	Analytical Study of Bowing Effect in Fluorocarbon Plasma Etching for Nanoscale Trenches Using Polymer Re-Emission and Re-Deposition Model Sun-Woo Kim ¹ , June Park ¹ , Hwan-Jun Zang ¹ , Gwang-Sik Kim ² , Min Woo Ha ³ , Sang Soo Park ³ , Choon Hwan Kim ³ , and Hyun-Yong Yu ² <i>¹Department of Nano-Semiconductor, Korea University, ²School of Electrical Engineering, Korea University</i>
WF1-B-4 09:15-09:30	Transistor CD Uniformity 열화 원인 분석 및 개선 방법 연구 Hyunseong Kim, Minae Yoo, Kyujin Choi, Jaeseung Choi, Chanha Park, and Hyunjo Yang <i>Research & Development Division, SK Hynix Inc.</i>
WF1-B-5 09:30-09:45	물중탕 습식 식각 공정을 이용한 대면적 EUVL용 SiNx 펠리클 제작 정성훈 ¹ , 김정환 ² , 김지은 ¹ , 안진호 ² <i>¹한양대학교 나노융합과학과, ²한양대학교 신소재공학과</i>
WF1-B-6 09:45-10:00	OES 데이터 분석을 통한 플라즈마 진단 방법론 개발 Gwanjoong Kim, Yongjin Kim, Youngcheol Kim, Mihye Lee, Donggoo Choi <i>Research & Development Division, SK Hynix Inc.</i>

C. Materials Growth & Characterization 분과

2017년 2월 15일 (수), 08:30-10:00
Room G (코럴, 3층)

[WG1-C] Materials Growth & Characterization I

좌장: 송진동(한국과학기술원), 천승현(세종대학교)

WG1-C-1 08:30-08:45	Study on the Wafer Warpage Due to Multi-Layer Film for 3D NAND Byung-Wook Nam ^{1,2} , Sung-Young Lee ¹ , Ki-Sang Lee ¹ , Sung-Wook Lee ¹ , Chung-Hyun Lee ¹ , Ja-Young Kim ¹ , and Jea-Gun Park ² <i>¹Technology Development Center, LG Siltron, ²Department of Electronics and Computer Engineering, Hanyang University</i>
WG1-C-2 08:45-09:00	Synthesis of Single-Crystalline Tungsten Ditelluride (WTe₂) Nanostructures Using Eutectic Metal Alloys Jong Hwa Lee, Jinsung Kwak, Seunguk Song, Yongsu Jo, Se-Yang Kim, Hyung Duk Yun, and Soon-Yong Kwon <i>School of Materials Science and Engineering and Low Dimensional Carbon Materials Center, Ulsan National Institute of Science and Technology</i>
WG1-C-3 09:00-09:15	Facile Observation of Intrinsic Graphene Defects of Different Origins through Selective Oxygen Transport Yongsu Jo ¹ , Jinsung Kwak ¹ , Soon-Dong Park ¹ , Na Yeon Kim ¹ , Se-Yang Kim ¹ , Zonghoon Lee ¹ , Sung Youb Kim ² , and Soon-Yong Kwon ^{1,2} <i>¹School of Materials Science and Engineering & Low-Dimensional Carbon Materials Center, ²School of Mechanical and Nuclear Engineering, Ulsan National Institute of Science and Technology</i>
WG1-C-4 09:15-09:30	N-Doped Graphene Synthesis on SiC Substrate by Excimer Laser Annealing Tae Hong Im, Insung Choi, and Keon Jae Lee <i>Department of Materials Science and Engineering, KAIST</i>
WG1-C-5 09:30-09:45	Flat GaAs Epitaxial Layers grown on Si (001) Substrates with Nanoscale Strained Layer by MOCVD In-Geun Lee ^{1,2} , Young-Dae Cho ^{1,2} , Dae-Hong Ko ¹ , Sewoung Oh ² , Yong-Ha Kim ² , Young Su Choi ² , Gyu-Beom Lee ² , Chan-Soo Shin ² , Won-Kyu Park ² , Do Sun Lee ³ , and Dong Soo Lee ³ <i>¹Department of Materials Science and Engineering, Yonsei University, ²Korea Advanced Nano Fab Center, ³Semiconductor R&D Center, Samsung Electronics Co., Ltd.</i>
WG1-C-6 09:45-10:00	Precise Controllable Growth of Graphene Layer and Fine Pattern by Using MgO and Ni Hetero Catalyst Aram Lee, Jaeyeong Lee, Jin Heon Park, and Hak Ki Yu <i>Department of energy systems Research, Ajou University</i>

O. System LSI Design 분과

2017년 2월 15일 (수), 08:30-10:00
Room H (다이아몬드1, 3층)

[WH1-O] VLSI System Design and Applications 1

좌장: 김경기(대구대학교), 김지훈(서울과학기술대학교)

WH1-O-1 08:30-08:45	Area-Efficient SC FFT with CORDIC-based Approximations Seokha Hwang and Youngjoo Lee <i>Department of Electronics Engineering, Kwangwoon University</i>
WH1-O-2 08:45-09:00	Low-Complexity 3-Channel FFT Processor for Hand Gesture Recognition Radar Systems Yongchul Jung, Euibeen Lim, and Yunho Jung <i>School of Electronics and Information Engineering, Korea Aerospace University</i>
WH1-O-3 09:00-09:15	ASIC based DSP Platform for a High Performance Hearing-Aid SoC Minjoon Kim, Jaehyuk So, Sangwon Kim, Byungcheol Kang, and Jaeseok Kim <i>Department of Electrical and Electronic Engineering, Yonsei University</i>
WH1-O-4 09:15-09:30	주성분 분석을 위한 저전력 행렬 곱셈 가속기 설계 변우석 ¹ , 김현수 ¹ , 김지훈 ² ¹ <i>Department of Electronics Engineering, Chungnam National University</i> , ² <i>Department of Electrical and Information Engineering, Seoul National University of Science and Technology</i>
WH1-O-5 09:30-09:45	Zynq Implementation for Efficient Image Registration based on Generalized Hough Transform Jun Won Mun, Yoo Jun Nam, Yune Seok Jang, and Jae Seok Kim <i>Department of Electrical and Electronic Engineering, Yonsei University</i>

D. Thin Film Process Technology 분과

2017년 2월 15일 (수), 10:10-11:40
Room A (에메랄드, 2층)

[WA2-D] 2D Materials and Devices

좌장: 민요셉(건국대학교), 김성근(한국과학기술연구원)

WA2-D-1 10:10-10:25	Two-Dimensional SnS_x Growth by Sulfurization of Atomic Layer Deposited SnO_x Jung Joon Pyeon ^{1,2} , In-Hwan Baek ¹ , Chong-Yun Kang ^{1,2} , and Seong Keun Kim ¹ <i>¹Center for Electronic Materials, Korea Institute of Science and Technology, ²KU-KIST Graduate School of Converging Science and Technology, Korea University</i>
WA2-D-2 10:25-10:40	Alignment of Solution-Processed Single Walled Carbon Nanotubes via Dielectrophoresis with Removable Carbon Electrodes Min Young Jeong, Geun Woo Baek, Seung Yeob Kim, Jong Ik Baek, and Sung Hun Jin <i>Department of Electronic Engineering, Incheon National University</i>
WA2-D-3 10:40-10:55	Enhanced High Photoconductivity Gain MoS₂ Hetero Junction Photo Sensor TFT with Transparent Electrodes Junghak Park ¹ and Sanghun Jeon ² <i>¹Department of Applied Physics, Korea University, ²Department of Display and Semiconductor Physics, Korea University</i>
WA2-D-4 10:55-11:10	Multi-Layer WSe₂ Field Effect Transistor with Improved Carrier-Injection Contact by Using Oxygen Plasma Treatment Won-Mook Kang, SungTae Lee, In-Tak Cho, Tae Hyung Park, Hyeonwoo Shin, Cheol Seong Hwang, Changhee Lee, Byung-Gook Park, and Jong-Ho Lee <i>Department of ECE and ISRC, Seoul National University</i>
WA2-D-5 11:10-11:25	A Comparative Study on Photo-Sensitive Inverters Based on Amorphous Si and MoS₂ Thin Film Transistors Seng Gi Seo, Jae Hyun Ryu, Geun Woo Baek, and Sung Hun Jin <i>Department of Electronic Engineering, Incheon National University</i>
WA2-D-6 11:25-11:40	The Effect of Interfacial Transition Metal Oxide Layer Grown by Oxygen Plasma on Tungsten Diselenide Field-Effect Transistor Sang Min Kim, Tae Kwang Kim, So Myeong Shin, Hye Won Du, Seon Yeong Kim, Min Ho Siong, Seung Jun Kim, and Sun Ae Seo <i>Department of Physics, Sejong University</i>

A. Interconnect & Package 분과

2017년 2월 15일 (수), 10:10-11:40
Room B (토파즈, 2층)

[WB2-A] Process Issues of Interconnect

좌장: 이용선(SK 하이닉스), 이원준(세종대학교)

WB2-A-1 10:10-10:25	Potential of Tungsten as Next-Generation Semiconductor Interconnects Dooho Choi <i>School of Advanced Materials Engineering, Dong-Eui University</i>
WB2-A-2 10:25-10:40	Effect of None-TMAH Based Chemical as Post-Clean Chemical on Cu CMP Min Cehol Kang, Hee Jin Kim, Jong Hwa Baek, Young Jun Kim, Kyung Cheol Jung, Choon Hwan Kim, and Joo Young Lee <i>SK Hynix Inc.</i>
WB2-A-3 10:40-10:55	개시제를 통한 고분자 기상증착기법을 활용한 다공성 초절연물질 (k = 2.0) 표면 실링 방법 Seong Jun Yoon ¹ , Kwanyong Pak ² , Taewook Nam ³ , Alexander Yoon ⁴ , Hyungjun Kim ³ , Sung Gap Im ² , and Byung Jin Cho ¹ ¹ <i>Department of Electrical Engineering, KAIST</i> , ² <i>Department of Chemical and Biomolecular Engineering, KAIST</i> , ³ <i>School of Electrical Engineering, Yonsei University</i> , ⁴ <i>Lam Research Corporation, Fremont</i>
WB2-A-4 10:55-11:10	CMP Conditioning 조건 최적화를 통한 Pad Life Time 연장 Hong-joo Lee, Kyung-ho Hwang, Hyung-hwan Kim, and Chang-rock Song <i>DRAM C&C, Process Center, SK Hynix Inc.</i>
WB2-A-5 11:10-11:25	Laser Source를 이용한 Wafer 가공 및 분리기술 최적화 이강원, 민복규, 이충진, 안미래, 김재면 <i>NAND Package Development, SK Hynix Inc.</i>
WB2-A-6 11:25-11:40	고 용량 메모리 모듈의 고속동작 특성 개선을 위한 Ci 저감기술 연구 엄주일, 임상준, 김남석 <i>IPT Development Project, SK Hynix Inc.</i>

G. Device & Process Modeling, Simulation and Reliability 분과

2017년 2월 15일 (수), 10:10-11:40
Room C (사파이어, 2층)

[WC2-G] Device Modeling and Simulation 2

좌장: 박찬형(광운대학교), 나현철(동부하이텍)

WC2-G-1 10:10-10:25	New Modeling Method for the Dielectric Relaxation of a DRAM Cell Capacitor Sujin Choi, Wookyung Sun, and Hyungsoon Shin <i>Department of Electronic and Electrical Engineering, Ewha Womans University</i>
WC2-G-2 10:25-10:40	Compact Model for Positive Gain-Embedded Voltage Transfer Curve of Inverter based on Novel I-V Curves for Multi-Peak NDR Jaewon Jeong, Sunhae Shin, Esan Jang, and Kyung Rok Kim <i>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology</i>
WC2-G-3 10:40-10:55	Tunneling Current Density in Ge/GeO₂/Ge from First-Principles Eunjung Ko ¹ , Liu Kai ^{1,2} , and Jung-Hae Choi ¹ ¹ <i>Center of Electronic Materials, Korea Institute of Science and Technology,</i> ² <i>Department of Materials Science and Engineering, Seoul National University</i>
WC2-G-4 10:55-11:10	Interfacial Properties of Ge (111)/ La₂O₃ by Density Functional Calculations Liu ^{1,2} , Eunjung Ko ¹ , Cheol Seong Hwang ² , and Jung-Hae Choi ¹ ¹ <i>Center for Electronic Materials, Korea Institute of Science and Technology,</i> ² <i>Department of Materials Science and Engineering, and Inter-university Semiconductor Research Center, Seoul National University</i>
WC2-G-5 11:10-11:25	Universal Bias Stress-Induced Instability Model in the Inkjet-Printed Carbon Nanotube Network FETs Haesun Jung, Sungju Choi, Jun Tae Jang, Bongsik Choi, Jinsu Yoon, Juhee Lee, Yongwoo Lee, Dong Myong Kim, Sung-Jin Choi, and Dae Hwan Kim <i>School of Electrical Engineering, Kookmin University</i>

I. MEMS & Sensor Systems 분과

2017년 2월 15일 (수), 10:10-11:40
Room D (크리스탈, 2층)

[WD2-I] Bio/Gas/Pressure Sensors

좌장: 조원주(광운대학교)

WD2-I-1 10:10-10:25	Polymer based Dry-type Ion Selective Sensor in Siloxane Bonding for Long-term Biopotential Measurements Jongmin Jang, Byungjik Kim, and Hounkyung Kim <i>Ybrain Research Institute</i>
WD2-I-2 10:25-10:40	Gas Sensitivity Variation with Different Defect Density and Dimensions in Single ZnO Nanowire Gas Sensor Wooju Jeong ¹ , Jun-Sik Yoon ² , Kihyun Kim ² , and Chang-Ki Baek ^{1,2} ¹ <i>Department of Electronic Engineering, Pohang University of Science and Technology,</i> ² <i>Department of Creative IT Engineering, Pohang University of Science and Technology</i>
WD2-I-3 10:40-10:55	Effect of the Polarity of Pre-bias on the Gas Sensing Performance Meile Wu ¹ , Chang-Hee Kim ² , Jongmin Shin ¹ , Yoonki Hong ¹ , Xiaoshi Jin ³ , and Jong-Ho Lee ¹ ¹ <i>Department of Physics and Astronomy, Seoul National University,</i> ² <i>Samsung Advanced Institute of Technology, Samsung Electronics Co., Ltd,</i> ³ <i>College of Information Science and Engineering, Shenyang University of Technology</i>
WD2-I-4 10:55-11:10	Highly Sensitive Pressure Sensors with Microstructured Ionic Gels Sung Hwan Cho, Seung Won Lee, Ihn Hwang, and Cheolmin Park <i>Department of Materials Science and Engineering, Yonsei University</i>
WD2-I-5 11:10-11:25	The Investigation of the Responsivity on Silicon Photodetector Depend on Deposition Technique: LPCVD vs. UHVCVD Sol Yoon ¹ , Kihyun Kim ² , Junsik Yoon ² , and Changki Baek ^{1,2} ¹ <i>Department of Electrical Engineering, Pohang University of Science and Technology,</i> ² <i>Department of Creative IT Engineering, Pohang University of Science and Technology</i>
WD2-I-6 11:25-11:40	Analysis of Optogenetically Generated Absence Seizure with Flexible Multi-Electrode Array Jung Ho Shin, Seung Hyun Lee, Han Eol Lee, and Keon Jae Lee <i>Department of Mat. Sci., KAIST</i>

F. Silicon and Group-IV Devices and Integration Technology 분과

2017년 2월 15일 (수), 10:10-11:40
Room E (루비, 2층)

[WE2-F] Advanced CMOS Materials

좌장: 안동환(국민대학교), 전인상(한국알박)

WE2-F-1 10:10-10:25	Metal/Al₂O₃/GeO₂/Ge 구조의 열처리에 따른 유효 일함수에 대한 연구 Tae In Lee, Yujin Seo, Jungmin Moon, Hyun Jun Ahn, Hyun-Young Yu, Wan Sik Hwang, and Byung Jin Cho <i>School of Electrical Engineering, KAIST</i>
WE2-F-2 10:25-10:40	V_{TH} Modulation of HfO₂-MOSFETs with ALD TiN Using TiCl₄ and NH₃ Younjin Kim ¹ , Donghwan Lim ¹ , Myeong Gyoon Chae ¹ , Dongkyun Kang ² , Jaesang Lee ² , Hojin Cho ² , Sunggon Jin ² , Euseong Hwang ² , and Changhwan Choi ¹ <i>¹Division of Materials Science and Engineering, Hanyang University, ²SK Hynix Inc.</i>
WE2-F-3 10:40-10:55	Metal-Interlayer-Semiconductor Structure Using Al-Doped ZnO for Non-Alloyed Ohmic Contacts on Silicon Seung-Hwan Kim ¹ and Hyun-Yong Yu ¹ <i>¹School of Electrical Engineering, Korea University</i>
WE2-F-4 10:55-11:10	An Analysis of Carrier Trapping at Grain Boundary of Polysilicon Taejin Jang, Myung-Hyun Baek, Hyungjin Kim, and Byung-Gook Park <i>Department of Electrical Engineering, Seoul National University</i>
WE2-F-5 11:10-11:25	Study on Material Properties of Tensile-Strained Ge and Sn-Incorporated Ge through First-Principle Simulation for Advanced Si CMOS Technology Yongbeom Cho ¹ and Seongjae Cho ^{1,2} <i>¹Graduate School of IT Convergence Engineering, Gachon University, ²Department of Electronics Engineering, Gachon University</i>
WE2-F-6 11:25-11:40	Impact of Equivalent Oxide Thickness on Threshold Voltage Variation Induced by Work-Function Variation in FinFET Youngtaek Lee, Gihun Choe, Hyunjae Lee, and Changhwan Shin <i>Department of Electrical and Computer Engineering, University of Seoul</i>

B. Patterning 분과

2017년 2월 15일 (수), 10:10-11:40
Room F (제이드, 2층)

[WF2-B] Patterning and Lithography

좌장: 양현조(SK 하이닉스), 안창남(ASML)

WF2-B-1 10:10-10:25	Influence of Develop Process on the Blob Defect Ji il Kim, Jinil Kim, Hyungju Jin, Yeongsun Hwang, Dongheok Park, Keundo Ban, Youngsik Kim, and Byoungki Lee <i>R&D Division, SK hynix Inc.</i>
WF2-B-2 10:25-10:40	Line-Edge Roughness of Mesoscale Simulation based on Polymer Chain in Extreme Ultra Violet Lithography Sang-Kon Kim <i>Department of Science, Hongik University</i>
WF2-B-3 10:40-10:55	Using Design Based Metrology for Detecting Potential Failure Points of 2D Flash Memory Min Woo Park, Soo Kyeong Jung, Sun Keun Ji, Hyun Woo Kang, Sang Woo Kim, Jae Kyung Im, Jung Chan Kim, Cheol Kyun Kim, Hyun Jo Yang, and Dong Gyu Yim <i>R&D Division, SK Hynix Inc.</i>
WF2-B-4 10:55-11:10	Development of XXnm Defect Inspection System with UV Line Scanning Camera and Anamorphic Illumination Jin Hwan Kim ¹ , Han Mo Yang ¹ , Woo Jun Han ¹ , Seong Chul Oh ² , Seung Yong Chu ² , and Jai Soon Kim ¹ <i>¹NEMO Lab, Department of physics, Myongji University, ²AUROS Technology</i>
WF2-B-5 11:10-11:25	Optical System Design for the Repair Process of Flat Panel Display Sang Chul Lee ¹ , Oh Hyung Kwon ¹ , Ji Hun Woo ² , Keun Haeng Lee ² , and Jai Soon Kim ¹ <i>¹NEMO Lab. Department of physic. Myongji University, ²Charm Engineering Co.Ltd</i>
WF2-B-6 11:25-11:40	EUV Mask 3D Effect 최소화를 위한 최적 노광 조명계 기술 개발 Inhwan Lee, Yoonsuk Hyun, Sarohan Park, and Changmoon Lim <i>Research & Development Division, SK Hynix Inc.</i>

C. Materials Growth & Characterization 분과

2017년 2월 15일 (수), 10:10-11:40
Room G (코릴, 3층)

[WG2-C] Materials Growth & Characterization II

좌장: 권순용(UNIST), 박일규(서울과학기술대학교)

WG2-C-1 10:10-10:25	A Study of Atomic Layer deposited F-doped ZnO Transparent Conducting Oxides Thin Films Kyung-Mun Kang and Hyung-Ho Park <i>Department of Materials Science and Engineering, Yonsei University</i>
WG2-C-2 10:25-10:40	DRAM Poly/SiON Gate에서 Plasma Nitridation공정 최적화를 통한 NBTI 신뢰성 개선 이승미, 김형철, 조흥재, 장세억 <i>SK하이닉스 미래기술연구원</i>
WG2-C-3 10:40-10:55	Dislocation Deformation under High Compressive Growth Stress in GaN 양민호 ¹ , 유원택 ² , 조예원 ¹ , 백현석 ¹ <i>¹Analytical Research Division, Korean Basic Science Institute, ²Center for Inter-University Research Facility, Kookmin university</i>
WG2-C-4 10:55-11:10	Mechanical Hysteresis Study of VO₂ Single Crystal Micro-Plate Grown by Reductive Phase Conversion Using Graphene Kyungchan Min, Dong Kyu Lee, Wook Jin Jeon, Young Ho Kim, and Hak Ki Yu <i>Department of Materials Science and Engineering, Ajou University, Department of Energy Systems Research, Ajou University</i>
WG2-C-5 11:10-11:25	Carbon-Doping of GaN Buffer Layer in AlGaIn/GaN HEMTs on Si-SiC Substrate Kyeongjae Lee, Kwangsae Go, Jaeyeon Han, and Okhyun Nam <i>Convergence Center for Advanced Nano Semiconductors (CANS), Department of Nano-Optical Engineering, Korea Polytechnic University</i>

O. System LSI Design 분과

2017년 2월 15일 (수), 10:10-11:40
Room H (다이아몬드1, 3층)

[WH2-O] VLSI System Design and Applications 2

좌장: 이영주(광운대학교), 박종선(고려대학교)

WH2-O-1 10:10-10:25	Area Efficient Neuromorphic Circuit based on Stochastic Computation Kiwon Yoon, Suhyeong Choi, and Youngsoo Shin <i>School of Electrical Engineering, KAIST</i>
WH2-O-2 10:25-10:40	Demonstration of Unsupervised Learning with Spike-Timing Dependent Plasticity for Neuromorphic System Chul-Heung Kim, Suhwan Lim, Sung Yun Woo, Byung-Gook Park, and Jong-Ho Lee <i>Department of Electrical and Computer Engineering, Seoul National University, Inter-University Semiconductor Research Center, Seoul National University</i>
WH2-O-3 10:40-10:55	Approximate Computation Sharing Multiplier for Low Power Convolutional Neural Networks Design Cheolhwan Kim, Gyuseong Kang, and Jongsun Park <i>School of Electrical Engineering, Korea University</i>
WH2-O-4 10:55-11:10	인공 신경망을 이용한 차선 곡률 검출에 대한 연구 이보경, 김기주, 이영주 <i>광운대학교 전자공학과</i>
WH2-O-5 11:10-11:25	Moving Object Detector for UAV Collision Avoidance Jaechan Cho and Yunho Jung <i>School of Electronics and Information Engineering, Korea Aerospace University</i>
WH2-O-6 11:25-11:40	Low Power Asynchronous NCL Pipeline Design Jin Kyung Lee and Kyung Ki Kim <i>Department of Electronic Engineering, Daegu University</i>

D. Thin Film Process Technology 분과

2017년 2월 15일 (수), 12:40-14:25
Room A (에메랄드, 2층)

[WA3-D] ALD/CVD Thin Films

좌장: 민요셉(건국대학교), 박태주(한양대학교)

WA3-D-1 12:40-12:55	High Performance p-type Thin Film Transistors with Atomic Layer Deposited SnO Films In Hwan Baek ^{1,2} , Soo Hyun Kim ¹ , Jung Jun Pyeon ¹ , Taek Mo Chung ³ , Jeong Hwan Han ³ , Cheol Seong Hwang ² , and Seong Keun Kim ¹ <i>¹Center for Electronic Materials, Korea Institute of Science and Technology, ²Department of Materials Science and Engineering, and Inter-University Semiconductor Research Center, Seoul National University, ³Division of Advanced Materials, Korea Research</i>
WA3-D-2 12:55-13:10	Stabilization of Tetragonal Phase in Hf_{0.5}Zr_{0.5}O₂ Thin Films induced by Low Deposition Temperature during Atomic Layer Deposition Keum Do Kim, Min Hyuk Park, Yu Jin Kim, Han Joon Kim, Taehwan Moon, Seung Dam Hyun, Hyeonwoo Park, and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University</i>
WA3-D-3 13:10-13:25	In Situ Suppression of Impurity Contamination for High Quality Thin Film Deposition Using Atmospheric Pressure PECVD Gwihyun Kim and Seung Jae Baik <i>Department of Electrical, Electronic, and Control Engineering, Hankyong National University</i>
WA3-D-4 13:25-13:40	Mechanism Study on The Atomic Layer Deposition of GeTe Films Using Ge[N[Si(CH₃)₃]₂]₂, {(CH₃)₃Si}₂Te, and Methanol Taehong Gwon ¹ , Taeyong Eom ¹ , Sijung Yoo ¹ , Eui-sang Park ¹ , Sanggyun Kim ¹ , Chanyoung Yoo ¹ , Han-Koo Lee ² , Deok-Yong Cho ³ , Moo-sung Kim ⁴ , Iain Buchanan ⁵ , Manchao Xiao ⁵ , Sergei Ivanov ⁵ , and Cheol Seong Hwang ¹ <i>¹Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, National University, ²Pohang Accelerator Laboratory, ³IPIT & Department of Physics, Chonbuk National University, ⁴Versum Materials Korea, ⁵Versum Materials, Inc</i>
WA3-D-5 13:40-13:55	Involvement of an Intermediate Nonpolar Phase during Polarization Switching in the Hf_{0.4}Zr_{0.6}O₂ Thin Films Han Joon Kim, Min Hyuk Park, Young Hwan Lee, Yu Jin Kim, Taehwan Moon, Keum Do Kim, Seung Dam Hyun, and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University</i>
WA3-D-6 13:55-14:10	Plasma Information Based Virtual Metrology (PI-VM) of Nitride Deposition in the Multi-Stack Plasma-Enhanced Chemical Vapor Deposition (PECVD) Hyun-Joon Roh ¹ , Seolhye Park ¹ , Yunchang Jang ¹ , Sangwon Ryu ¹ , Nam-Kyun Kim ¹ , Hyun-Chul Wang ² , Jaihyung Won ² , and Gon-Ho Kim ¹ <i>¹Department of Energy Systems Engineering, Seoul National University, ²Wonik IPS Ltd.</i>
WA3-D-7 14:10-14:25	The Growth Characteristics and Electrical Properties of Dy-Doped HfO₂ Thin Film by Atomic Layer Deposition Il-Kwon Oh and Hyungjun Kim <i>Electrical and Electronic Engineering, Yonsei University</i>

K. Memory (Design & Process Technology) 분과

2017년 2월 15일 (수), 12:40-14:25
Room B (토파즈, 2층)

[WB3-K] Resistance Switching Memories

좌장: 김수길(SK 하이닉스), 민경식(국민대학교)

WB3-K-1 12:40-12:55	Atomic Layer Deposition of 14-15-16 Group Ternary and Quaternary Thin Films for Ovonic Threshold Switching Selector Device Sijung Yoo, Taeyong Eom, Taehong Gwon, Sanggyun kim, Euisang Park, Chanyoung Yoo, and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University</i>
WB3-K-2 12:55-13:25	[초청] Memory Devices based on Self-Assembled Materials and Processes Jang-Sik Lee <i>Department of Materials Science and Engineering, Pohang University of Science and Technology</i>
WB3-K-3 13:25-13:40	A New Concept of Stateful Logic Using CRS//BRS Sub-Circuit Nuo Xu ^{1,2} , Kyung Min Kim ³ , Kyung Jean Yoon ¹ , Hae Jin Kim ¹ , Xing Long Shao ¹ , Xi Wen Hu ¹ , Liang Fang ² , and Cheol Seong Hwang ¹ <i>¹Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University, ²State Key Laboratory of High Performance Computing, National University of Defense Technology, ³Hewlett-Packard Laboratories,</i>
WB3-K-4 13:40-13:55	Low Power and Forming-Free Resistive Switching Property of Pt/Al₂O₃/SiN_x/Ti Device Daeun Kwon, Jung Ho Yoon, Kyung Jean Yoon, Tae Hyung Park, Hae Jin Kim, Xinglong Shao, Yumin Kim, Young Jae Kwon, and Cheol Seong Hwang <i>Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University</i>
WB3-K-5 13:55-14:10	Controllable Non-Reactive TaN Materials as a Promising Resistive Switches Electrode Tae Yoon Kim ¹ , Gwang Ho Baek ² , and Jin Pyo Hong ^{1,2} <i>¹Novel Functional Materials and Devices Lab, The Research Institute for Natural Science, Department of Physics, Hanyang University, ²Division of Nano-Scale Semiconductor Engineering, Hanyang University</i>
WB3-K-6 14:10-14:25	Improved Controllability of Conductance by Inserting Al₂O₃ in SiN-based Resistive Switching Memory Sungjun Kim ¹ , Min-Hwi Kim ¹ , Hee-Dong Kim ² , Seongjae Cho ³ , and Byung-Gook Park ¹ <i>¹Inter-university Semiconductor Research Center (ISRC) and the Department of Electrical and Computer Engineering, Seoul National University, ²Department of Electrical Engineering, Sejong University, ³Department of Electronic Engineering, Gachon University</i>

Q. Metrology, Inspection, and Yield Enhancement **분과**

2017년 2월 15일 (수), 12:40-14:25
Room C (사파이어, 2층)

[WC3-Q] Metrology and Inspection (I)

좌장: 유형원(SK 하이닉스), 양준모(나노종합기술원)

WC3-Q-1 12:40-13:10	[초청] New Methodology for Accurate and Robust Overlay Measurement Suk-Joo Lee, Arie den Boef, Kaustuve Bhattacharyya, and Marc Noot <i>CS-NPI Apps, ASML Korea</i>
WC3-Q-2 13:10-13:25	Improvement of Geometry-Induced Overlay Using Patterned Wafer Geometry (PWG) Keunjun Kim, Yiseul Kwon, Kitaek Kang, Deokkyun Park, Jeongsu Park, Sungkoo Lee, and Hyeongsoo Kim <i>R&D Division, SK Hynix Inc.</i>
WC3-Q-3 13:25-13:40	Process Induced Overlay Error 개선을 위한 PWG IPD & GEN3 Jun-beom Park, Hong-goo Lee, Sang-jun Han, and Chang-rok Song <i>R&D Division, SK Hynix Semiconductor Inc.</i>
WC3-Q-4 13:40-14:10	[초청] 3D Metrology & Inspection beyond the Optical Resolution Limit by Through-focus Scanning Optical Microscope Jun Ho Lee ¹ , Myungjoo Kang ² , Joonghwee Cho ³ , Hwi Kim ⁴ , and Eun Ji Shin ⁵ <i>¹Department of Optical Eng., Kongju National University, ²Department of Math. Sciences, Seoul National University, ³Department of Elec. & Info. Eng., Korea University, ⁴Department of Embedded Systems Eng., Incheon National University</i>
WC3-Q-5 14:10-14:25	Experimental TSOM Image based DB Construction and Measurement Heechul Choi, Junhee Kang, Seungil Shin, and Joonghwee Cho <i>Department of Embedded Systems Engineering, Incheon National University</i>

I. MEMS & Sensor Systems 분과

2017년 2월 15일 (수), 12:40-14:25
Room D (크리스탈, 2층)

[WD3-I] Fet-based Sensors

좌장: 백창기(포항공과대학교)

WD3-I-1 12:40-12:55	Process Parameter Effects on the Stress of Micro-bolometer Array Integrated Monolithically on CMOS Readout Integrate Circuit Wan-Gyu Lee and Ho-Seung Jeon <i>Department of Global Nanotechnology Development, National NanoFab Center</i>
WD3-I-2 12:55-13:10	Sensing Characteristics of MOSFET Gas Sensor having Inkjet-Printed CNT as a Sensing Layer Young-tak Seo, Yoonki Hong, Jongmin Shin, Dongkyu Jang, Yujeong Jeong, Seongbin Oh, and Jong-Ho Lee <i>Department of Electrical and Computer Engineering and Inter-university Semiconductor Research Center, Seoul National University</i>
WD3-I-3 13:10-13:25	Introduced Novel In-Plane Structure for Excellent Sensitivity based Extended Gate Field-Effect Transistor Ju-Young Pyo and Won-Ju Cho <i>Department of Electrical Materials Engineering, Kwnagwoon University</i>
WD3-I-4 13:25-13:40	Development of AlGaIn/GaN HEMT Platform for Sensor Applications Kyung-Ho Park ¹ , Chu-Young Cho ¹ , Yumin Koh ¹ , Hyeong-Ho Park ¹ , Do-Kywn Kim ¹ , Young Tae Jo ¹ , Sunwoo Jung ² , Soohwan Jang ² , and Won-Kyu Park ¹ <i>¹Device Platforms Lab., Korea Advanced Nano Fab Center, ²Department of Chemical Engineering, Dankook University</i>
WD3-I-5 13:40-13:55	Response Characteristics of Si FET-Type Humidity Sensor Having Sputtered MoS₂ Film as a Sensing Layer Jongmin Shin, Yoonki Hong, Meile Wu, Byung-Gook Park, and Jong-Ho Lee <i>School of ECE and ISRC, Seoul National University</i>
WD3-I-6 13:55-14:10	Influence of Oxygen-Content on the Characteristics in Amorphous InGaZnO TFT-based Temperature Sensors Seohyeon Kim, Jun Tae Jang, Sungju Choi, Jungkyu Jang, Jungmok Kim, Hyun-Sun Mo, Dong Myong Kim, Sung-Jin Choi, and Dae Hwan Kim <i>School of Electrical Engineering, Kookmin University</i>
WD3-I-7 14:10-14:25	Experimental Analysis on the Setup/Hold Time in Readout Condition of Si Nanowire FET-based Biosensors for Detecting Ion and/or Biomolecule in Analyte Solution Jungkyu Jang ¹ , Jungmok Kim ¹ , Hyun-Sun Mo ¹ , Jisun Park ¹ , Byung-Gook Park ² , Sung-Jin Choi ¹ , Dong Myung Kim ¹ , and Dae Hwan Kim ¹ <i>¹School of Electrical Engineering, Kookmin University, ²Inter-university Semiconductor Research Center (ISRC), Seoul National University</i>

F. Silicon and Group-IV Devices and Integration Technology 분과

2017년 2월 15일 (수), 12:40-14:25
Room E (루비, 2층)

[WE3-F] Advanced CMOS Integrated Circuits

좌장: 조성재(가천대학교), 조일환(명지대학교)

WE3-F-1 12:40-12:55	Analysis on Switching Characteristic of Tunnel Field-Effect Transistor NAND and NOR Circuit Dae Woong Kwon, Junil Lee, Euyhwan Park, Sihyun Kim, Ryoongbin Lee, and Byung-Gook Park <i>Department of Electrical and Computer Engineering, Seoul National University</i>
WE3-F-2 12:55-13:10	Learning with Neuron-Synapse Connection in Neuromorphic System Jeong-Jun Lee, Jungjin Park, Hyungjin Kim, and Byung-Gook Park <i>Department of Electrical Engineering, Seoul National University</i>
WE3-F-3 13:10-13:25	Synaptic Devices based on Reconfigurable Gated Schottky Diodes for Highly-Linear Potentiation Suhwan Lim, Jong-Ho Bae, Jun-Mo Park, Jai-Ho Eum, Won-Mook Kang, Chul-Heung Kim, Myoung-Sun Lee, Sung Yun Woo, Byung-Gook Park, and Jong-Ho Lee <i>Department of ECE and ISRC, Seoul National University</i>
WE3-F-4 13:25-13:40	Reconfigurable Device with Programmable Bottom Gate Array Jong-Ho Bae, Jun-Mo Park, Jai-Ho Eum, Won-Mook Kang, Jaeha Kim, Byung-Gook Park, and Jong-Ho Lee <i>Department of Electrical and Computer Engineering, Seoul National University and Inter-university Semiconductor Research Center, Seoul National University</i>
WE3-F-5 13:40-13:55	Enhanced Signal Acquisition Design for Complex Electrophysiological Interface Woojin Ahn, Cheonju Ko, Byungjik Kim, Suji Lee, Jiyoon Kim, and Seunghoon Lee <i>Ybrain Research Institute</i>
WE3-F-6 13:55-14:10	Integrate-and-Fire (I&F) Neuron Circuit Using Positive Feedback Field Effect Transistor (FBFET) Min-Woo Kwon, Sungmin Hwang, Myung-Hyun Baek, Jungjin Park, and Byung-Gook Park <i>Department of Electrical and Computer Engineering, Seoul National University</i>
WE3-F-7 14:10-14:25	Light Emission from a P-Diffused Inverted-rib Germanium Laser Structure Chan-Hyuck Park ¹ , Motoki Yako ² , Yasuhiko Ishikawa ² , Kazumi Wada ² , and Donghwan Ahn ¹ <i>¹School of Materials Science and Engineering, Kookmin University, ²Department of Materials Engineering, University of Tokyo</i>

R. Semiconductor Software 분과

2017년 2월 15일 (수), 12:40-14:25
Room F (제이드, 2층)

[WF3-R] Semiconductor Software 2

좌장: 반효경(이화여자대학교), 조경운(이화여자대학교)

WF3-R-1 12:40-12:55	비휘발성 메모리 기반 프리로딩 기법을 활용한 웹페이지 로딩 시간 개선 김규식, 양승원, 윤태원, 이호영, 이동현, 김태석 <i>광운대학교 컴퓨터공학과</i>
WF3-R-2 12:55-13:10	Don't Delete, Replicate, or Chase; Use What You Can Seungjae Baek ¹ , Yujae Song ¹ , Wooyeol Choi ¹ , and Sangyeun Cho ² <i>¹ICT R&D Unit, KIOST, ²Memory Division, Samsung Electronics Co., Ltd.</i>
WF3-R-3 13:10-13:25	NVMe 인터페이스를 고려한 신뢰성과 기능 검증 프레임워크 Dong Hwa Suh, Yong Jae Choi, Se Woog Kim, and Jong Moo Choi <i>Department of Computer Science, Dankook University</i>
WF3-R-4 13:25-13:40	웹브라우저 성능 저하를 막기 위한 NVRAM 기반 캐시 설계 김성민, 김태석 <i>광운대학교 컴퓨터공학과</i>
WF3-R-5 13:40-13:55	Feature Extraction Using Correlation Preserving Transform Based on Complex Common Spatial Patterns Youngjoo Kim and Cheolsoo Park <i>Department of Computer Engineering, Kwangwoon University</i>
WF3-R-6 13:55-14:10	Building Reliable Massive Capacity SSDs Eunjae Lee, Jaeho Kim, and Sam H. Noh <i>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology</i>
WF3-R-7 14:10-14:25	Evaluation of I/O Resource Allocation on Flash based SSDs Akylbek Tokon uulu and Jaeho Kim <i>School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology</i>

[WG3-J] Nanofabrication for Next Generation Device Applications (1)

좌장: 이철호(고려대학교)

WG3-J-1 12:40-13:10	[초청] 'Transient Electronics': Biocompatible/Biodegradable Electronic Devices Dissolve in Body, Environment Suk-Won Hwang <i>KU-KIST Graduate School of Converging Science and Technology, Korea University</i>
WG3-J-2 13:10-13:25	Configurable Resistive Switching Properties based on Albumen Proteins Sung-Jo Kim, Bohee Hwang, Myoungjoo Park, and Jang-Sik Lee <i>Department of Materials Science and Engineering, Pohang University of Science and Technology (POSTECH)</i>
WG3-J-3 13:25-13:55	[초청] Spin-Orbit Torque based Magnetic Random Access Memory Byong-Guk Park <i>Department of Materials Science and Engineering, KAIST</i>
WG3-J-4 13:55-14:10	Asymmetric Nanoporous Ta₂O_{5-x} Memristor for Neuromorphic System Seonghoon Jang and Gunuk Wang <i>KU-KIST Graduate School of Converging Science & Technology, Korea University</i>
WG3-J-5 14:10-14:25	Ultrafast Creation and Manipulation of a Magnetic Skyrmion for Next Generation Magnetic Memory and Logic Changhoon Heo and Theo Rasing <i>Institute for Molecules and Materials Nijmegen, Radboud University</i>

M. RF Design 분과

2017년 2월 15일 (수), 12:40-14:25
Room H (다이아몬드1, 3층)

[WH3-M] RF and Wireless System and Components

좌장: 이종욱(경희대학교), 이민재(광주과학기술원)

WH3-M-1 12:40-12:55	A Single Photon Avalanche Diode Structure with Low Dark Count and 100 ns Dead Time for Light Sensing Applications Woo-Jin Jo, Jae-Hun Lee, and Jong-Wook Lee <i>Department of Electronics and Radio Engineering, Kyung Hee University</i>
WH3-M-2 12:55-13:10	A 10-Bit Low-Power SAR ADC with Self-Calibration for Class-1 Generation-2 UHF-Band RFID Tag IC Jae-Hun Lee, Woo-Jin Jo, and Jong-Wook Lee <i>Department of Electronics and Radio Engineering, Kyung Hee University</i>
WH3-M-3 13:10-13:25	High Efficiency DC-DC Buck Converter with PFM/PWM Controller for Wireless Power Transfer System Seong-Mun Park, Young-Jun Park, Sang-Yun Kim, and Kang-Yoon Lee <i>School of Information and Communication Engineering, Sungkyunkwan University</i>
WH3-M-4 13:25-13:40	Reduction of Nonlinear Effects for Phase Interpolator Based Fractional-N PLLs Junsoo Ko and Minjae Lee <i>School of Electrical Engineering and Computer Science, Gwangju Institute of Science and Technology</i>
WH3-M-5 13:40-13:55	A Low Power 10-Bit SAR ADC Design Using Dual Sampling Capacitive DAC Deeksha Verma, Behnam Samadpoor Rikan, Zaffar Hayat Nawaz Khan, and Kang Yoon Lee <i>Information and Communication engineering, Sungkyunkwan University</i>
WH3-M-6 13:55-14:10	Design of the Phase Selector Driving Amplifier for a 5G Application Sangyong Park, Seung-Gi Lee, Jeongyun Lee, Keum-won Ha, Jongyeon Lee, Woong-ki Jung, and Donghyun Baek <i>School of Electrical Engineering, Chung-Ang University</i>

P. Device for Energy (Solar Cell, Power Device, Battery, etc.) 분과

2017년 2월 15일 (수), 15:25-17:10
Room A (에메랄드, 2층)

[WA4-P] Materials and Devices for Energy

좌장: 이미정(국민대학교), 손정곤(한국과학기술연구원)

WA4-P-1 15:25-15:40	Effect of Surface Passivation on Breakdown Voltages of 4H-SiC Schottky Barrier Diodes Ho Kang, Moon Kyong Na, Ogyun Seok, Jeong Hyun Moon, H. W. Kim, Sang Cheol Kim, Wook Bahng, Nam Kyun Kim, and Him-Chan Park <i>Power Semiconductor Research Center, Korea Electrotechnology Research Institute</i>
WA4-P-2 15:40-15:55	Differential 3ω Method for Measuring Thermal Conductivity of Silicon Nanowire Seungho Lee ¹ , Kihyun Kim ² , Jun-Sik Yoon ² , and Chang-Ki Baek ^{1,2} ¹ <i>Department of Electronic Engineering, Pohang University of Science and Technology,</i> ² <i>Department of Creative IT Engineering, Pohang University of Science and Technology</i>
WA4-P-3 15:55-16:10	Large Area Fabrication of ZnO/Ag Nanowire Composite Transparent Conductive Thin Films with Low Temperature Processing Methods 조원기, 백승재 <i>Department of Electrical, Electronic and control engineering, Hankyong National University</i>
WA4-P-4 16:10-16:25	The Hole Transport Layers of Organic Photovoltaic Cells Derived from $(\text{NH}_4)_2\text{MeS}_4$ Quyet Van Le and Soo Young Kim <i>School of Chemical Engineering and Materials Science, Chung-Ang University</i>
WA4-P-5 16:25-16:40	Synergetic Effect of MoS_2 and WS_2 in a Hybrid Nanostructure for Hydrogen Evolution Reaction Seong Ku Kim, Wooseok Song, Seulgi Ji, Yi Rang Lim, Young Bum Lee, Sung Myung, Jongsun Lim, Ki-Seok An, and Sun Sook Lee <i>Thin Film Materials Research Center, Korea Research Institute of Chemical Technology</i>
WA4-P-6 16:40-16:55	Fiber-Type Piezoelectric Nanogenerators Using PbTiO_3 Nanotube Arrays for Harvesting Wind Energy Jin Kyu Han ¹ , Young Bum Lee ¹ , Suttinart Noothongkaew ² , Seong Ku Kim ¹ , Wooseok Song ¹ , Sung Myung ¹ , Sun Sook Lee ¹ , Jongsun Lim ¹ , and Ki-Seok An ¹ ¹ <i>Thin Film Materials Research Center, Korea Research Institute of Chemical Technology,</i> ² <i>Faculty of Science, Ubon Ratchathani University</i>
WA4-P-7 16:55-17:10	In Vivo Self-Powered Wireless Data Transmission Using Biocompatible Flexible Piezoelectric Nanogenerators Dong Hyun Kim and Keon Jae Lee <i>Department of Material Science and Engineering, KAIST</i>

K. Memory (Design & Process Technology) 분과

2017년 2월 15일 (수), 15:25-17:10
Room B (토파즈, 2층)

[WB4-K] Understanding Resistance Switching Phenomena

좌장: 백인규(삼성전자), 권용우(홍익대학교)

WB4-K-1 15:25-15:40	Anomalous Quantum Conductance in Ta₂O₅ and HfO₂ Resistance Switching Memory Tae Hyung Park ¹ , Hae Jin Kim ¹ , Soo Gil Kim ² , Byung Joon Choi ³ , and Cheol Seong Hwang ¹ <i>¹Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University, ²SK Hynix Inc., ³Department of Materials Science and Engineering, Seoul National University of Science and Technology</i>
WB4-K-2 15:40-16:10	[초청] Analog Resistive Switching Devices for Artificial Synapse in Neuromorphic Systems Hyung Jun Kim, Hong Zheng, Paul Yang, and Tae-Sik Yoon <i>Department of Materials Science and Engineering, Myongji University</i>
WB4-K-3 16:10-16:25	A Study of the Transition between the Non-Polar and Bipolar Resistance Switching Mechanisms in the TiN/TiO₂/Al Memory Xing Long Shao ¹ , Kyung Min Kim ² , Kyung Jean Yoon ¹ , Seul Ji Song ¹ , Jung Ho Yoon ¹ , Hae Jin Kim ¹ , Tae Hyung Park ¹ , Dae Eun Kwon ¹ , Young Jae Kwon ¹ , Yu Min Kim ¹ , Nuo Xu ¹ , Xi Wen Hu ³ , Jin Shi Zhao ³ , and Cheol Seong Hwang ¹ <i>¹Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University, ²Hewlett-Packard Laboratories, Hewlett-Packard Company, ³School of Electronics Information Engineering, Tianjin Key Laboratory</i>
WB4-K-4 16:25-16:40	Understanding of Relaxation Characteristic in Filament-type ReRAM 박용택, 이재연, 하태정, 박우영, 김경완, 김수길 <i>SK Hynix R&D 부문</i>
WB4-K-5 16:40-16:55	A Study on Switching Fail Mechanism of Ta/HfO₂ for ReRAM Woo Young Park ¹ , Tae Jung Ha ¹ , Jae Yeon Lee ¹ , Yong Taek Park ¹ , Su Hyun Lee ¹ , Tae One Youn ² , Min Ki Choi ² , Soo Gil Kim ¹ , and Hyeong Soo Kim ¹ <i>¹Advanced Cell Research Team, R&D Division, SK Hynix Semiconductor Inc., ²AT Team, R&D Division, SK Hynix Semiconductor Inc.</i>
WB4-K-6 16:55-17:10	Filament Growth Controlled Memristive Switching Memory Device via Nanocone Patterning Byoung Kuk You, Tae Jin Kim, Jong Min Kim, Daniel J. Joe, and Keon Jae Lee <i>Department of Material Science and Engineering, KAIST</i>

Q. Metrology, Inspection, and Yield Enhancement **분과**

2017년 2월 15일 (수), 15:25-17:10
Room C (사파이어, 2층)

[WC4-Q] Metrology and Inspection (II)

좌장: 김진승(전북대학교), 조용재(한국반도체연구조합)

WC4-Q-1 15:25-15:55	[초청] A Multi-Beam Scanning Electron Microscope for High Resolution and High Throughput Byung Joon Park <i>Microscopy Division, Carl Zeiss Korea</i>
WC4-Q-2 15:55-16:10	In-Line Scatterometry for Dynamic Nano-Pattern Uniformity Evaluation Daesuk Kim ¹ , Vamara Dembele ¹ , Inho Choi ¹ , Ramachandran Kasu ¹ , HyungJoon Lim ² , GeeHong Kim ² , and Jaejong Lee ² <i>¹Division of Mechanical System Engineering, Chonbuk National University, ²Nano-Mechanical Systems Research Center, Korea Institute of Machinery and Materials</i>
WC4-Q-3 13:25-13:40	Close Loop to Fix the Systematic Failure Using Volume Diagnostics Jeongsu Park ¹ , Kiheung Park ² , and Joohyun Park ² <i>¹Synopsys, Inc., SEG, Yield and Failure Analysis, ²Design Service Team, System LSI, Samsung Electronics Co., Ltd.</i>
WC4-Q-4 16:25-16:55	[초청] Room Temperature Photoluminescence (RTPL) Characterization of Silicon Wafers towards In-Line Inspection and Monitoring Woo Sik Yoo <i>WaferMasters, Inc.</i>
WC4-Q-5 16:55-17:10	Strain Mapping in a Nanoscale-Triangular SiGe Pattern by Dark-Field Electron Holography with Medium Magnification Mode Van Vuong Hoang ^{1,2} , Jung Ho Yoo ¹ , Soon-Ku Hong ³ , and Jun-Mo Yang ¹ <i>¹Department of Measurement & Analysis, National Nanofab Center, ²Department of Materials Science and Engineering, Chungnam National University</i>

E. Compound Semiconductors 분과

2017년 2월 15일 (수), 15:25-17:10
Room D (크리스탈, 2층)

[WD4-E] WBG Characterization Technology

좌장: 장우진(한국전자통신연구원), 김정진(전북대학교)

WD4-E-1 15:25-15:40	Effect of TMAH Surface Treatment on AlGaIn/GaN HEMT Won-Sang Park, Do-Kywn Kim, Dong-Hyeok Son, Chul-Ho Won, Jun-Hyeok Lee, Ki-Sik Im, and Jung-Hee Lee <i>School of Electrical Engineering, Kyungpook National University</i>
WD4-E-2 15:40-15:55	Effects of Passivation Layers on Carrier Transport in AlGaIn/GaN HFETs Sejoon Oh, Taehoon Jang, and Jaehee Cho <i>School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University</i>
WD4-E-3 15:55-16:10	Characterization of Heterojunction Interface Traps in AlGaIn/GaN HEMTs through Sub-Bandgap Photonic Response and Subthreshold Ideality Factor Jaewon Kim ¹ , Heesung Lee ¹ , Hagyoul Bae ² , Ogyun Seok ³ , Sung-Jun Choi ¹ , Dae Hwan Kim ¹ , and Dong Myong Kim ¹ <i>¹School of Electrical Engineering, Kookmin University, ²School of Electrical Engineering, KAIST, ³Korea Electrotechnology Research Institute</i>
WD4-E-4 16:10-16:25	Leakage Current Reduction of Gated Ohmic Anode AlGaIn/GaN Schottky Barrier Diode by Applying Anode Edge Termination Ra-Seong Ki ¹ , Min-Woo Kong ¹ , Jun-Seok Jung ¹ , Ho-Young Cha ² , and Kwang-Seok Seo ¹ <i>¹Department of Electrical Engineering and Computer Science, Seoul National University, ²Department of Electronic and Electrical Engineering, Hongik University</i>
WD4-E-5 16:25-16:40	Current Collapse-Free AlGaIn/GaN Nanowire Gate-All-Around FETs Chul-Ho Won, Sindhuri Vodapally, Ki-Sik Im, and Jung-Hee Lee <i>School of Electronics Engineering and Institute of Semiconductor Fusion Technology, Kyungpook National University</i>
WD4-E-6 16:40-16:55	Photoresist Removal on GaAs Surface Using Organic Solvents Eunseok Oh, Sehyun Oh, Junwoo Lee, and Sangwoo Lim <i>Department of Chemical and Biomolecular Engineering, Yonsei University</i>
WD4-E-7 16:55-17:10	High-Performance In_{0.53}Ga_{0.47}As-OI MOSFET on Si Substrates Seong Kwang Kim ^{1,2} , Jae-Phil Shim ¹ , Dae-Myeong Geum ^{1,3} , Chang Zoo Kim ⁴ , Han-Sung Kim ¹ , Yeon-Su Kim ¹ , Hang-Kyu Kang ¹ , Jin-Dong Song ¹ , Sung-Jin Choi ² , Dae Hwan Kim ² , Won Jun Choi ¹ , Hyung-jun Kim ¹ , Dong Myong Kim ² , and SangHyeon Kim ¹ <i>¹Korea Institute of Science and Technology, ²School of Electrical Engineering, Kookmin University, ³Department of Materials Science and Engineering, Seoul National University, ⁴Korea Advanced Nano Fab Center</i>

L. Analog Design 분과

2017년 2월 15일 (수), 15:25-17:10
Room E (루비, 2층)

[WE4-L] Analog Circuit Design

좌장: 김종선(홍익대학교), 허승찬(삼성전자)

WE4-L-1 15:25-15:40	A 15mV/°C High Sensitivity Temperature Sensor with -40dB Noise Rejection Tei Cho, Seunghyeon Park, Hyungchul Park, and Kwyro Lee <i>School of Electrical Engineering, KAIST</i>
WE4-L-2 15:40-15:55	Design of a Nano-Ampere Current Sensing Technique for OLED Panels Minhyun Jin, Daehyeok Kim, and Minkyu Song <i>Department of Semiconductor Science, Dongguk University</i>
WE4-L-3 15:55-16:10	Pre-Emphasis with Capacitive Peaking Technique for 10-Gb/s Serial-Link Transmitter Yohan Hong, Dong-Hyun Yoon, Dong-Kyu Jung, and Kwang-Hyun Baek <i>School of Electrical and Electronics Engineering, Chung-Ang University</i>
WE4-L-4 16:10-16:25	A 4-Channel 6-Gb/s VCSEL Driver Array for Active Optical Cables Chaerin Hong and Sung Min Park <i>Department of Electronics Engineering, Ewha Womans University</i>
WE4-L-5 16:25-16:40	Design of DC-DC BUCK Converter with Adaptive Dead-Time Controller Muhammad Riaz ur Rehama, Hamed Abbasizadeh, and Kang-Yoon Lee <i>Information and Communication Engineering, Sungkyunkwan University</i>
WE4-L-6 16:40-16:55	Design of a High Speed Full-HD CMOS Image Sensor with a New Column Parallel SAR ADC Ohhun Kwon, Daehyeok Kim, and Minkyu Song <i>Department of Semiconductor Science, Dongguk University</i>
WE4-L-7 16:55-17:10	A 1.5-Gb/s CMOS TX and RX Chipset for Coaxial Cables with 20 dB Loss Kyungmin Lee and Sung Min Park <i>Department of Electronics Engineering, Ewha Womans University</i>

R. Semiconductor Software 분과

2017년 2월 15일 (수), 15:25-17:10
Room F (제이드, 2층)

[WF4-R] Semiconductor Software 3

좌장: 김재호(UNIST), 박정규(UNIST)

WF4-R-1 15:25-15:40	NVMe의 End-to-End Data Protection 기능을 활용한 파일시스템 신뢰성 향상 기법 Yong Jae Choi, Dong Hwa Suh, Se Woog Kim, and Jongmoo Choi <i>Department of Computer Science, Dankook University</i>
WF4-R-2 15:40-15:55	가상화 환경에서 NVMe SSD 성능 분석 Se Woog Kim, Dong Hwa Suh, Yong Jae Choi, and Jong Moo Choi <i>Department of Computer Science, Dankook University</i>
WF4-R-3 15:55-16:10	Management Policies for Hybrid Volatile and Nonvolatile Buffer Cache Hyunyoung Choi and Hyokyung Bahn <i>Department of Computer Science and Engineering, Ewha Womans University</i>
WF4-R-4 16:10-16:25	비휘발성램 기반 스토리지 내부 버퍼 사용을 통한 성능향상 효과 분석 Minseong Jeong and Eunji Lee <i>Chungbuk National University</i>
WF4-R-5 16:25-16:40	Repository-based Caching for Hybrid Cloud Computing Kyung Woon Cho ¹ , Yong-Hyeon Shin ² , Hyokyung Bahn ¹ <i>¹Department of Computer Science, Ewha Womans University, ²Department of Computer Science and Engineering, Seoul National University of Technology</i>
WF4-R-6 16:40-16:55	An Accurate Real-time ECG/PPG Peak Detection Using Viterbi Algorithm Jiwoo Ryu and Choelsoo Park <i>Department of Computer Engineering, Kwangwoon University</i>
WF4-R-7 16:55-17:10	Energy Aware Real Time Task VFS-EDF Scheduling in Hybrid Main Memory Sunhwa A. Nam and Hyokyung Bahn <i>Department of Computer Science and Engineering, Ewha Womans University</i>

[WG4-J] Nanofabrication for Next Generation Device Applications (2)

좌장: 이택희(서울대학교)

WG4-J-1 15:25-15:55	<p>[초청] High-Performance Perovskite Light-Emitting Diodes through Morphological Control of Perovskite Films</p> <p>Jae Choul Yu, Seung jin Lee, Da Bin Kim, Eui Dae Jung, Dae Woo Kim, and Myoung Hoon Song <i>School of Materials Science Engineering/KIST-UNIST Ulsan Center for Convergent Materials, Ulsan National Institute of Science and Technology (UNIST)</i></p>
WG4-J-2 15:55-16:25	<p>[초청] Next LEDs: Metal Halide Perovskite Light-Emitting Diodes</p> <p>Himchan Cho, Su-Hun Jeong, Min-Ho Park, and Tae-Woo Lee <i>Department of Materials Science and Engineering, Seoul National University</i></p>
WG4-J-3 16:25-16:40	<p>Diode Characteristics of the Pt/Al₂O₃/SrTiO₃ Structure with Two-Dimensional Electron Gas and Its Time-Dependent Resistance Evolution</p> <p>Taehwan Moon¹, Hae Jun Jung², Yu Jin Kim¹, Min Hyuk Park¹, Han Joon Kim¹, Keum Do Kim¹, Young Hwan Lee¹, Seung Dam Hyun¹, Hyeon Woo Park¹, Sang Woon Lee², and Cheol Seong Hwang¹ <i>¹Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University, ²Department of Physics and Division of Energy Systems Research, Ajou University</i></p>
WG4-J-4 16:40-17:10	<p>[초청] Flexible, Complex Functional Nanopatterning by Block Copolymer Lithography and Its Applications</p> <p>Ju Young Kim¹, Sang Ouk Kim² <i>¹Nano Convergence Devices Research Department, Electronics and Telecommunications Research Institute, ²Department of Materials Science & Engineering, KAIST</i></p>
WG4-J-5 17:10-17:25	<p>Plasmonic-Tuned Flash Cu Nanowelding for Ultrafast Photochemical-Reducing and Interlocking on Flexible Plastics</p> <p>Jung Hwan Park and Keon Jae Lee <i>Department of Materials Science and Engineering, KAIST</i></p>

N. VLSI CAD 분과

2017년 2월 15일 (수), 15:25-17:10
Room H (다이아몬드1, 3층)

[WH4-N] Advances in Design Automation and Test

좌장: 정재용(인천대학교), 이종은(UNIST)

WH4-N-1 15:25-15:40	High-Level Synthesis for Neuromorphic Computing: Convolutional Neural Network Case Study Daewoo Kim and Jongeun Lee <i>School of Electrical & Computer Engineering, Ulsan National Institute of Science and Technology</i>
WH4-N-2 15:40-15:55	Efficient Execution of Streaming Application by the Approach of Packet Structure based on Coarse-Grained Reconfigurable Architecture Sangyun Oh and Jongeun Lee <i>School of Electrical & Computer Engineering, Ulsan National Institute of Science and Technology</i>
WH4-N-3 15:55-16:10	Full-Chip Level Estimation of Temperature-Dependent Leakage Power Suhyeong Choi ¹ , Seongbo Shim ² , and Youngsoo Shin ¹ <i>¹School of Electrical Engineering, KAIST, ²Samsung Electronics Co., Ltd.</i>
WH4-N-4 16:10-16:25	Cube-based TSV Redundancy Architecture for Yield Improvement of 3D-ICs Minho Cheong, Ingeol Lee, Jaewon Jang, Jaeseok Park, and Sungho Kang <i>Department of Electrical & Electronic, Yonsei University</i>
WH4-N-5 16:25-16:40	고장 그룹화 및 고장 그룹 분류 기반 메모리 수리 방법론 이하영, 김주영, 김동현, 강성호 <i>Department of Electrical and Electronics Engineering, Yonsei University</i>
WH4-N-6 16:40-16:55	다중 전원 영역 기반 SoC의 모듈러 스캔 테스트를 위한 IEEE std. 1149.1-2013 기반의 테스트 전원 제어 기술 김영성, 김두영, 정지훈, 김진욱, 박성주 <i>Department of Computer Science and Engineering, Hanyang University</i>
WH4-N-7 16:55-17:10	복수의 디코더들을 이용한 X-비트 제거 스캔체인 압축 법 김새은, 양준성 <i>성균관대학교 반도체디스플레이공학과</i>



S. Chip Design Contest 분과

2017년 2월 14일 (화)
로비 (3층)

Chip Design Contest Demo 전시

CDC-1	<p>GBT를 이용한 Logarithmic CMOS Image Sensor의 Dynamic Range 확장 Myunghan Bae, and Jang-Kyoo Shin <i>School of Electronics Engineering, Kyungpook National University</i></p>
CDC-2	<p>65nm CMOS 공정을 이용한 수동 NFC 태그의 고효율 Analog Front-End 설계 장준범, 문용 <i>송실대학교 전자공학과</i></p>
CDC-3	<p>A Census Transform Based Stereo Matching Processor Using Sparse Multi-Windows 민경국, 문병인 <i>경북대학교 전자공학부</i></p>
CDC-4	<p>Capacitive Readout IC with High Accuracy Automatic Offset Calibration Loop Yeongjin Mun, Yunjong Park, Hyungseup Kim, Youngwoon Ko, and Hyoungcho Ko <i>Department of Electronics Engineering, Chungnam National University</i></p>