J. Nano-Science & Technology 분과

Room A (블루벨홀)

일 시 : 2월 25일(목) 09:00-10:20

세션명 : [TA1] Graphene

좌 장: 정현종(삼성종합기술원), 이탁희(광주과학기술원)

TA1-1 09:00-09:40 [Invited Talk] Dirac Transport Properties of Graphene
저자: Hu-Jong Lee and Dong-Keun Ki
소속: Department of Physics, Pohang University of Science and Technology

TA1-2 09:40-10:00 Synthesized High-Quality Graphene Films as Transparent Conducting Electrodes of GaN Light-Emitting Diodes
저자: 조건호[1], 최민혁[1], 조주영[1], 김진호[2], 박우진[1], 이상철[1], 홍웅기[1], 박성주[1], 홍병희[2], 강영호[1], 이탁희[1]
소속: [1]광주과학기술원 신소재공학과, [2]성균관대학교 화학과

TA1-3 10:00-10:20 Wafer-Scale Graphene Field-Effect Transistors
저자: 이영빈[1,3], 배수강[1,3], 장호욱[2], 장석재[1,3], 주수은[2], 심성현[4], 송영일[5], 홍병희[1,3,4], 안종현[1,2,3]
소속: [1]성균관대학교 성균나노과학기술원, [2]성균관대학교 신소재공학부, [3]성균관대학교 나노소재기반 휴먼인터페이스융합연구센터, [4]성균관대학교 화학과, [5]삼성테크윈

J. Nano-Science & Technology 분과

Room A (블루벨홀)

일 시 : 2월 25일(목) 10:40-12:00

세션명 : [TA2] Fabrication

좌 장: 성명모(한양대학교), 조문호(포항공과대학교)

TA2-1 10:40-11:00 Vectorially Integrated Nanowire Growth by the Local Temperature Manipulation

저자: Geunhee Lee[1], Yun Sung Woo[1], Jee-Eun Yang[1], Donghun Lee[1], Kibum Kang[1], Cheol-Joo Kim[1], and Moon-Ho Jo[1,2]
소속: [1]Department of Materials Science and Engineering, Pohang University of Science and Technology, [2]Graduate Institute of Advanced Materials Science, Pohang University of Science and Technology

TA2-2 11:00-11:20 Fabrication of Adhesion Controllable Bio-Inspired Micro Structure

저자: 곽문규, 서갑양
소속: 서울대학교 기계항공공학부

TA2-3 11:20-11:40 Hetero-Gate-Dielectric Tunneling Field-Effect Transistors (HG TFETs) for High Performance and Low-Power Consumption

저자: Woojun Lee and Woo Young Choi
소속: Department of Electronic Engineering., Sogang University

J. Nano-Science & Technology 분과

Room A (블루벨홀)

일 시 : 2월 25일(목) 15:00-16:20

세션명 : [TA3] NW Device I

좌 장 :김상식(고려대학교), 부경호(특허청)

TA3-1 15:00-15:20 **Accurate Extraction of Volume Trap Density from Si-Nanowire FET using the Newly Developed Cylindrical Coordinate Based 1/f Noise Model**

저자: R. H. Baek[1], C. K. Baek[2], H.-S. Choi[1], J.-S. Lee[1,4], Y. Y. Yeoh[3], K. H. Yeo[3], D.-W. Kim[3], Kinam Kim[3], Dae M. Kim[2], and Y. H. Jeong[1,4]

소속: [1]Department of Electrical Engineering, Pohang University of Science and Technology, [2]Korea Institute for Advanced Study, [3]Semiconductor R&D Center, Samsung Electronics Company, [4]National Center for Nanomaterials and Technology

TA3-2 15:20-15:40 **Internal Gain in Ge Nanowire Field-Effect Transistors with Axially Modulated Charge Trap Density**

저자: Hyun-Seung Lee, Kibum Kang, Cheol-Joo Kim, Young-Jun Cho, and Moon-Ho Jo

소속: Department of Materials Science and Engineering, Pohang University of Science and Technology

TA3-3 15:40-16:00 **Single-Electron-based Flexible Multi-valued Half Adder**

저자: S. J. Kim[1,2], S. J. Shin[1], J. B. Choi[1], and Y.-S. Yu[3]

소속: [1]Department of Physics & Institute for Nano Science & Technology, Chungbuk National University, [2]Hynix Semiconductor Inc., [3] Department of Information & Control Engineering, Hankyong National University

TA3-4 16:00-16:20 **P-N Homo-Junction Arrays of Aligned SWCNTs**

저자: Jaehyun Park, Jangyeul Yoon, and Jeong Sook Ha

소속: Department of Chemical and Biological Engineering, Korea University

J. Nano-Science & Technology 분과

Room A (블루벨홀)

일 시 : 2월 25일(목) 16:40-18:00

세션명 : [TA4] NW Device II

좌 장 : 정인영(광운대학교), 최우영(서강대학교)

TA4-1 16:40-17:00 Charge Transport and Vibronic Effect in Single-Molecule Break Junctions Formed by Electromigrated Nanogap Electrodes

저자: Hyunwook Song and Takhee Lee
소속: Department of Nanobio Materials and Electronics, Department of Materials Science and Engineering, Gwangju Institute of Science and Technology

TA4-2 17:00-17:20 Low Operating Voltage of SnO_2 Nanowire FET with a High-k Al-Doped TiO_2 Gate Insulator

저자: Hyun Hee Park[1], Pil Soo Kang[2], Gyu Tae Kim[2], and Jeong Sook Ha[1]
소속: [1]Department of Chemical and Biological Engineering, Korea University, [2]School of Electrical Engineering, Korea University

TA4-3 17:20-17:40 Photogenerated Carrier Dynamics in Semiconductor Nanowires: Drift vs. Diffusion by Scanning Optical Probes

저자: Cheol-Joo Kim[1], Yong-Jun Cho[1], Hyun-Seung Lee[1] and Moon-Ho Jo[1,2],
소속: [1]Department of Materials Science and Engineering, Pohang University of Science and Technology, [2]Division of Advanced Materials Science, Pohang University of Science and Technology

TA4-4 17:40-18:00 Quantum Simulation of Hole Transport in Si Nanowire pMOSFETs

저자: Mincheol Shin
소속: Department of Electrical Engineering, KAIST

K. Memory (Design & Process Technology) 분과

Room B (아이리스홀)

일 시 : 2월 25일(목) 09:00-10:20

세션명 : [TB1] Emerging Memories

좌 장 : 홍상훈(경희대학교), 공배선(성균관대학교)

TB1-1 09:00-09:20 **A Study of BJT Based Capacitorless 1T-DRAM with Consideration of Geometrical Dependence**
저자: Dong-Il Moon, Sung-Jin Choi, Jin-Woo Han, and Yang-Kyu Choi
소속: Department of Electrical Engineering, KAIST

TB1-2 09:20-09:40 **Novel Electromechanical Nonvolatile Memory Cell (H Cell) for Multi-Bit Operation**
저자: Woo Young Choi
소속: Department of Electronic Engineering, Sogang University

TB1-3 09:40-10:00 **Introduction to a New Class of Charge Trap Flash Memory: Combination of SONOS and ReRAM Functions**
저자: Ho-Myoung An, Eui Bok Lee, Yu Jeong Seo, Hee Dong Kim, and Tae Geun Kim
소속: School of Electrical Engineering, Korea University

TB1-4 10:00-10:20 **3-D Stacked NAND Flash String with Common Gate Structure by Adopting Si/SiGe Selective Etch Process**
저자: Min-Kyu Jeong, Joo-Wan Lee, Byung-Gook Park, Hyung-Cheol Shin, and Jong-Ho Lee
소속: School of Electrical Engineering and Computer Science and Inter-university Semiconductor Research Center, Seoul National University

K. Memory (Design & Process Technology) 분과

Room B (아이리스홀)

일 시 : 2월 25일(목) 10:40-12:00

세션명 : [TB2] Flash Memories

좌 장 : 홍 권(하이닉스반도체), 곽동화(삼성전자)

TB2-1 10:40-11:00 Improvement of Data Retention and Erase Speed Using Cubic-Structured HfO_2 for Charge-trap Type Flash Memory Device

저자: 박종경[1], 박영민[1], 송명호[2], 임성규[2], 오재섭[2], 주문식[3], 홍권[3], 조병진[1]

소속: [1]KAIST 전기 및 전자공학과, [2]국가나노종합팹센터 확산박막팀, [3] 하이닉스 반도체 메모리 연구소

TB2-2 11:00-11:20 Three Dimensional Stacked Bit-line NAND Flash Array and Inter-layer Interference

저자: Jang-Gn Yun, Seongjae Cho, Jung Hoon Lee, Gil Sung Lee, Yoon Kim, Dong-Hua Lee, Se-Hwan Park, Won-Bo Sim, Wandong Kim, Jong-Duk Lee, Hyungcheol Shin, and Byung-Gook Park

소속: Inter-University Semiconductor Research Center and School of Electrical Engineering and Computer Science, Seoul National University

TB2-3 11:20-11:40 Arch SONOS NAND Flash Memory Array with Improved Virtual Source and Drain Performance Due to the Field Concentration Effect

저자: Wandong Kim, Jung Hoon Lee, Seongjae Cho, Jang-Gn Yun, Se-Hwan Park, Yoon Kim, Dong Hua Li, Doo-Hyun Kim, Gil Sung Lee, Won Bo Sim, and Byung-Gook Park

소속: Inter-University Semiconductor Research Center and School of Electrical Engineering and Computer Science, Seoul National University

TB2-4 11:40-12:00 Data Retention Characteristics Dependent on Surrounding Cell's State in a NAND Flash Memory

저자: K. H. Kim, S. O. Seo, B. H. Lee, H. J. Yang, H. S. Kim, N. Y. Park, K. H. Noh, and S. K. Park

소속: F-device, R&D Center, Hynix Semiconductor Inc.

K. Memory (Design & Process Technology) 분과

Room B (아이리스홀)

일 시 : 2월 25일(목) 15:00-16:20

세션명 : [TB3] Resistive Memories

좌 장 : 최우영(서강대학교), 조우영(삼성전자)

TB3-1 15:00-15:20 **Program Current Establishment in View of Retention Characteristics in Phase Change Memory**

저자: 김수길, 김명섭, 도갑석, 심준섭, 이현정, 박남균, 홍성빈, 전영호, 최강식, 박해찬, 김태훈, 이장욱, 김형우, 최미라, 이승윤, 이세호, 김성철, 이정훈, 홍성주, 박성욱

소속: R & D Division, Device & PI Technology group, Hynix Semiconductor Inc.

TB3-2 15:20-15:40 **Influence of the Capacitive Charge on the Set-State Resistance in TiO_2 Resistive Switching Memory**

저자: Seul Ji Song[1], Kyung Min Kim[1], Gun Hwan Kim[1], Jun Young Seok[1], Ranju Jung[2], and Cheol Seong Hwang[1]

소속: [1]Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University, [2]Department of Electrophysics, Kwangwoon University

TB3-3 15:40-16:00 **Resistive-Switching Behavior in Ti/Si_3N_4/Ti Memory Structures for ReRAM Applications**

저자: Hee-Dong Kim, Ho-Myoung An, Yujeong Seo, Yongjie Zhang, and T. G. Kim

소속: School of Electrical Engineering, Korea University

TB3-4 16:00-16:20 **Rewritable Switching Characteristics of 1 Diode-1 Resistor Non-volatile Organic Memory Devices**

저자: 조병진[1], 김태욱[1], 송성훈[1], 지용성[1], 정건영[1], 이탁희[2]

소속: [1]광주과학기술원 신소재공학과, [2]광주과학기술원 나노바이오 전자재료공학과

K. Memory (Design & Process Technology) 분과

Room B (아이리스홀)

일 시 : 2월 25일(목) 16:40-18:00

세션명 : [TB4] Memory Design

좌 장 : 민경식(국민대학교), 강희복(하이닉스반도체)

TB4-1 16:40-17:00 **A Bit Line Sense Amplifier without Data Pattern Noise**
저자: Myoung Jin Lee, Ki Myung Kyung, Hyung Sik Won, Myoung Su Lee, and Kun Woo Park
소속: R&D Division, Hynix Semiconductor Inc.

TB4-2 17:00-17:20 **DCAM (Dynamic Content Addressable Memory)**
저자: 채민아, 한창훈, 홍상훈
소속: 경희대학교 전자전파공학과

TB4-3 17:20-17:40 **A Spin-Transfer Torque Magnetoresistive Nonvolatile Flip-Flop**
저자: 류경호[1], 김지수[1], Kang, Seung H.[2], and 정성욱[1]
소속: [1]연세대학교, [2]Qualcomm, inc.,

TB4-4 17:40-18:00 **낸드 플래시 메모리 기반 저성능 저장장치를 위한 Flash Translation Layer의 확장**
저자: 박상훈, 하승환, 방관후, 정의영
소속: 연세대학교 전기전자공학과

D. Thin Film Technology 분과

Room C (B101)

일 시 : 2월 25일(목) 09:00-10:20

세션명 : [TC1] Memory-1: ReRAM

좌 장 : 윤성민(한국전자통신연구원), 황현상(광주과학기술원)

TC1-1 09:00-09:20 **Excellent Switching Reliability and Uniformity of ReRAM Device with Bi-Layers of Binary Oxides**

저자: J. Lee[1], W. Lee[1], E. Bourim[1], M. Jo[1], J. Park[1], D.-J. Seong[1], S. Jung[1], S. Kim[1], J. Shin[1], S. Park[2], and H. Hwang[1,2]

소속: [1]Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, [2]Department of Nanobio Materials and Electronics, Gwangju Institute of Science and Technology

TC1-2 09:20-09:40 **State Instability Analysis in Cu Ionic based Resistive Memory**

저자: Jubong Park[1], El Mostafa Bourim[1], Minseok Jo[1], Joonmyoung Lee[1], Dong-jun Seong[1], Wootae Lee[1], Sangsu Park[2], Jungho Shin[1], and Hyunsang Hwang[1,2]

소속: [1]Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, [2]Nanobio Materials and Electronics, Gwangju Institute of Science and Technology

TC1-3 09:40-10:00 **Influence of Electrode Material on the Interconnect Line Resistance and Performance of Resistive Cross Bar Array**

저자: Gun Hwan Kim, Jun Yeong Seok, Kyung Min Kim, and Cheol Seong Hwang

소속: Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

TC1-4 10:00-10:20 **Impedance Spectroscopy Observation for Examining Resistive Switching Mechanism in TiO_2 Thin Films**

저자: Min Hwan Lee, Kyung Min Kim, Jung Ho Yoon, and Cheol Seong Hwang

소속: School of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

D. Thin Film Technology 분과

Room C (B101)

일 시 : 2월 25일(목) 10:40-12:00

세션명 : [TC2] Memory-2: FLASH & PRAM

좌 장 : 황윤택(하이닉스반도체), 전상훈(삼성종합기술원)

TC2-1 10:40-11:00 **Advanced Impurity Trap Memory for Next Generation Nonvolatile Memory Application**

저자: Seungjae Jung[1], Man Chang[1], Minseok Jo[1], Hyejung Choi[1], Seonghyun Kim[1], Tae-wook Kim[1], Sangsu Park[2], Joonmyoung Lee[1], Takhee Lee[1,2], Choongman Lee[3], and Hyunsang Hwang[1,2]
소속: [1]Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, [2]Department of Nanobio Materials and Electronics, Gwangju Institute of Science and Technology, [3]Memory Division, Semiconductor Business, Samsung Electronics Co., Ltd.

TC2-2 11:00-11:20 **Fabrication and Characterization of "See-Through" Nonvolatile Memory Transistors Using Ferroelectric Poly(Vinylidene Fluoride-Trifluoroethylene) and Transparent Oxide Semiconductor**

저자: S. M. Yoon, S. Yang, C. W. Byun, S. H. Ko Park, D. H. Cho, S. W. Jung, O. S. Kwon, and C. S. Hwang
소속: Convergence Components & Material Research Laboratory, Electronics and Telecommunications Research Institute

TC2-3 11:20-11:40 **Growth and Crystallization Behaviors of Ge Doped Sb-Te Thin Films Deposited by a Combined Plasma Enhanced CVD and ALD**

저자: Seol Choi, Byung Joon Choi, Taeyong Eom, Sangho Rha, Woogkyu Lee, and Cheol Seong Hwang
소속: Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

TC2-4 11:40-12:00 **Growth and Characteristics of Antimony Telluride Thin Films by Thermal CVD**

저자: 이 근, 김진혁, 권영석, 이기정, 구자춘, 홍 권, 박성기
소속: Research and Development Division, Hynix Semiconductor Inc.

D. Thin Film Technology 분과

Room C (B101)

일 시 : 2월 25일(목) 15:00-16:20

세션명 : [TC3] ALD & CVD

좌 장 : 김형준(연세대학교), 김형섭(성균관대학교)

TC3-1 15:00-15:20 Improved Growth Characteristics of $SrTiO_3$ Thin Films Deposited by Atomic Layer Deposition Using $Sr(iPr_3Cp)_2$ and $Ti(O-iPr)_2(thd)_2$

저자: Sang Woon Lee, Jeong Hwan Han, So Ra Han and Cheol Seong Hwang
소속: Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

TC3-2 15:20-15:40 Enhanced Electrical Properties by Crystal Structure Modulation of Hf-Aluminate Thin Films

저자: 안지훈, 박경웅, 도관우, 이기정, 홍 권, 박성기
소속: Research and Development Division, Hynix Semiconductor Inc.

TC3-3 15:40-16:00 The Effect of ALD Grown La_2O_3 Layer on V_{FB} Modulation of HfO_2, ZrO_2 and $HfZrO_x$ High- *k* Films

저자: Sang Young Lee, Hyung-Suk Jung, Yu Jin Choi, Jeong Hwan Kim, Joohwi Lee, Un Ki Kim, Seok Jun Won, and Cheol Seong Hwang
소속: Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

TC3-4 16:00-16:20 Pulse CVD of RuO_2 Thin Films Using a Noble Ru Precursor for Memory Applications

저자: Jeong Hwan Han, Sang Woon Lee, Seong Keun Kim, and Cheol Seong Hwang
소속: Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

D. Thin Film Technology 분과

Room C (B101)

일 시 : 2월 25일(목) 16:40-18:00

세션명 : [TC4] Characterization

좌 장: 최리노(인하대학교), 민요셉(건국대학교)

TC4-1 16:40-17:00 Quantitative & Chemical State Analysis for Advanced Gate Electrode of Nonvolatile Memory

저자: 김가영, 황성진, 유종희, 박태수, 김원, 김호정
소속: (주)하이닉스반도체 연구소

TC4-2 17:00-17:20 Trap-Depth Profiling of nMOSFETs with Hafnium Based Dielectric Using Pulse Measurement Techniques

저자: Tae Young Jang, Tea Wan Kim, and Rino Choi
소속: Department of Materials Science and Engineering, Inha University

TC4-3 17:20-17:40 Polarization Reversal in the Pt/Pb(Zr,Ti)O_3/Pt and Pt/Al_2O_3/Pb(Zr,Ti)O_3/Pt Ferroelectric Capacitors

저자: Hyun Ju Lee, Gun Hwan Kim, Min Hyuk Park, and Cheol Seong Hwang
소속: Inter-university Semiconductor Research Center and Department of Materials Science and Engineering, Seoul National University

TC4-4 17:40-18:00 TiN MOCVD 공정 진단 연구

저자: 노승완[1,2], 나정길[3], 신재수[2], 강상우[1], 신용현[1], 윤주영[1]
소속: [1]한국표준과학연구원 진공센터, [2]대전대학교 신소재공학과, [3]성균관대학교 기계공학과

B. Patterning 분과

Room D (B102)

일 시 : 2월 25일(목) 09:00-10:20

세션명 : [TD1] Advanced Lithography

좌 장 : 이승걸(인하대학교)

TD1-1 09:00-09:20 Pattern Shape Dependency of Mask Shadowing Effect and It's Correction

저자: 박준택, 임창문, 현윤석, 김석균, 반근도, 구선영, 남병호, 김창열, 김형수, 박성기
소속: 하이닉스 반도체 선행공정 1팀

TD1-2 09:20-09:40 Exploring Contact Hole Patterning Processes in ArF Immersion Lithography

저자: 복철규, 이기령, 허중군, 김재헌, 이정형, 심현경, 김형수, 박성기
소속: 하이닉스 반도체 선행공정 1팀

TD1-3 09:40-10:00 Development of Mask Contamination/Inspection System for Extreme Ultra Violet Lithography

저자: 이상설[1,2], 정창영[1], 신현덕[3], 도종걸[1], 이동근[4], 김성수[4], 조한구[4], 나승유[5], 안진호[1]
소속: [1]한양대학교 신소재공학부, [2]한양대학교 디스플레이공학연구소, [3]한양대학교 나노반도체공학과, [4]삼성전자 포토마스크팀, [5]포항가속기연구소

B. Patterning 분과

Room D (B102)

일 시 : 2월 25일(목) 10:40-12:00

세션명 : [TD2] Advanced Etching

좌 장 : 김곤호(서울대학교), 유원종(성균관대학교)

TD2-1 10:40-11:00 **811.5311nm 빛의 세기를 이용한 미량 아르곤 포함 플라즈마의 EEDF 변화 감지를 통한 식각 공정 결과 진단 방법 개발**

저자: 박설혜, 김곤호

소속: 서울대학교 에너지시스템공학부

TD2-2 11:00-11:20 **High Selective Si_3N_4 Etching over SiO_2 in CH_3F and O_2 Plasma Condition**

저자: 고경보, 김원규, 신창희, 조성윤, 이상오, 강혜란, 김욱, 정태우, 정진기, 이성권, 김형수, 박성기

소속: R&D Division, Hynix Semiconductor Inc.

TD2-3 11:20-11:40 **Study on Deep Si Etching Mechanism Using *In-situ* Surface Temperature Monitoring in SF_6/O_2 Plasma**

저자: 임영대, 이승환, 유원종

소속: 성균관대학교 성균나노과학기술원

TD2-4 11:40-12:00 **Real-time In-Situ Plasma Etch Process Monitoring for Sensor-Based-Advanced Process Control using PECS™**

저자: Jong Hwan Ahn[1], Dongeun Ryu[2], Jaeseop Oh[2], Sang Yeol Lee[3], Kang Lee[3], and Sang Jeen Hong[1]

소속: [1]Department of Electronic Engineering, Myongji University, [2]Division of Nano-Patterning, National Nanofab Center, [3]Division of Electronic Product R&D, Hwabaek Engineering

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

Room D (B102)

일 시 : 2월 25일(목) 15:00-16:20

세션명 : [TD3] For Upgrade Efficiency Development

좌 장 : 명재민(연세대학교), 김윤기(삼성전자)

TD3-1 15:00-15:20 **Emitter와 BSF의 농도 및 기판 두께가 후면전극 태양전지에 미치는 영향**

저자: 조성훈[1], 김지수[1], 장종현[2], 박정호[1,2]

소속: [1]고려대학교 마이크로/나노시스템 협동과정, [2]고려대학교 전기전자전파공학과

TD3-2 15:20-15:40 **Vacuum-Free All Solution Processed Inverted Polymer Solar Cells**

저자: Mijung Choi[1], Woon-Hyuk Baek[1], Tae-Sik Yoon[1], Hyun Ho Lee[2], and Yong-Sang Kim[1,3]

소속: [1]Department of Nano Science & Engineering, Myongji University, [2]Department of Chemical Engineering, Myongji University, [3]Department of Electrical Engineering, Myongji University

TD3-3 15:40-16:00 **Fabrication of a-Si:H/a-$Si_{(1-x)}Ge_x$:H/μc-Si:H Triple Junction Solar Cells using Large Scale 13.56MHz PECVD**

저자: 박보환, 이창호, 이희찬, 임미화, 이희용, 서준영, 김동진, 서보람, 신명훈, 김병준

소속: 삼성전자, LCD 사업부

TD3-4 16:00-16:20 **Synthesis and Characterization of Metal-Free Organic Sensitizers Containing Pentadeuterophenyl Moiety for the Dye Sensitized Solar Cell**

저자: 정소미, 주성훈, 박성기, 김기용, 황용기

소속: R&D Center, LG Display Co., Ltd.

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

Room D (B102)

일 시 : 2월 25일(목) 16:40-18:00

세션명 : [TD4] 차세대 솔라 & Power Device

좌 장 : 박성기(LG디스플레이), 박규찬(KAIST)

TD4-1 16:40-17:00 Photocurrent Control by Surface Energy in Organic Hybrid Solar Cell
저자: Xavier Bulliard, S. G. Ihn, S. Y. Yun, D. K. Kim, Y. G. Kim, and S. Y. Park
소속: Solar Cell Group, Samsung Advanced Institute of Technology, Samsung Electronics Co., Ltd.

TD4-2 17:00-17:20 High Peak Current Density Tunnel Diode for Multijunction Solar Cells
저자: Dong-Ho Kim, Myoung Gyun Suh, Jieun Chang, Yungi Kim, and Seung-Yong Park
소속: Solar Cell Group, Emerging Technology Research Center, Samsung Advanced Institute of Technology

TD4-3 17:20-17:40 8-60V Rated Low P-ch Vgs LDMOS with Sallow Pwell
저자: Choul-Joo Ko, Cheol-Ho Cho, Hee-Bae Lee, Yong-Jun Lee, Min-Woo Kim, Sun-Kyung Bang, Han-Geon Kim, Sang-Chul Shim, Nam-Joo Kim, and Kwang-Dong Yoo
소속: Dongbu Hitek

TD4-4 17:40-18:00 Implementation of 8V - 60V Rated Low Vgs nLDMOS with Enhanced Specific On-resistance in 0.35um BCD Technology
저자: Cheol-Ho Cho, Choul-Joo Ko, Hee-Bae Lee, Yong-Jun Lee, Min-Woo Kim, Sun-Kyung Bang, Han-Geon Kim, Sang-Chul Shim, Nam-Joo Kim, and Kwang-Dong Yoo
소속: Dongbu Hitek

A. Interconnect & Package 분과

Room E (B103)

일 시 : 2월 25일(목) 09:00-10:20

세션명 : [TE1] 반도체배선

좌 장 : 김수현(영남대학교), 김형준(연세대학교)

TE1-1 09:00-09:20 Plasma-Enhanced Atomic Layer Deposition of Amorphous Ru-Si-N Thin Film as a Diffusion Barrier of Direct Plating of Cu

저자: Tae-Kwang Eom, Windu Sari, and Soo-Hyun Kim
소속: School of Materials Science and Engineering, Yeungnam University

TE1-2 09:20-09:40 나노기공형 초저유전물질에 대한 자외선 조사 효과 연구

저자: 최규윤, 신보라, 김범석, 이희우
소속: 서강대학교 화공생명공학과

TE1-3 09:40-10:00 The Effect of Thermal Treatment on Microstructure Evolution and Electrical Property of Inkjet-printed Cu Interconnects

저자: Ji-Hoon Lee[1], Na-Rae Kim[1], Seol-Min Yi[1], Donghoon Kim[2], Sungil Oh[2], Seonhee Jang[2], Jaewoo Joung[2], and Young-Chang Joo[1]
소속: [1]Deptartment of Materials Science and Engineering, Seoul National University, [2]Central R&D Institute, Samsung Electro-Mechanics

TE1-4 10:00-10:20 Ru/Co/Si Nanowire Core-Shell Structure by Atomic Layer Deposition for Si Nanowire Contact

저자: 이한보람[1], 구길호[2], 박찬경[2], 김형준[1]
소속: [1]연세대학교 전기전자공학부, [2]포항공과대학교 신소재공학과

A. Interconnect & Package 분과

Room E (B103)

일 시 : 2월 25일(목) 10:40-12:00

세션명 : [TE2] 차세대 패키징

좌 장 : 박영배(안동대학교), 주영창(서울대학교)

TE2-1 10:40-11:00 An Efficient Method of Post-Package TSV Failure Repair for 3D Stacked ICs
저자: 김태호, 예석민, 김성우, 정덕균
소속: 서울대학교 전기공학부

TE2-2 11:00-11:20 Thermal Stress in 3-D Packaging and Its Reliability with Various Packaging Structure Using Finite Element Analysis
저자: 황성환, 김병준, 정성엽, 이호영, 주영창
소속: 서울대학교

TE2-3 11:20-11:40 **폴리이미드 연성회로기판의 초발수화를 통한 트렌치 금속배선 기술**
저자: 나종주
소속: 재료연구소 융합공정연구본부

TE2-4 11:40-12:00 **HF/H_2SO_4 습식 전처리에 따른 Cu-Cu 웨이퍼 접합강도 평가**
저자: 김재원, 정명혁, 박영배
소속: 안동대학교 신소재공학부 청정소재기술연구센터

F. CMOS Device & Process Technology 분과

Room E (B103)

일 시 : 2월 25일(목) 15:00-16:20

세션명 : [TE3] Advanced CMOS Technology

좌 장 : 홍성주(하이닉스반도체), 이병훈(광주과학기술원)

TE3-1 15:00-15:20 **Dual Stress Liner Technology for High Performance Sub-28nm Logic Device**

저자: Yong-kuk Jeong, Seuggab Park, Jonghun Kim, Hyunkwan Yu, Ki-Eun Kim, Pankwi Park, Donghyun Roh, Byoung Jin Lee, Donghwan Han, Dong Suk Shin, Nae-In Lee, and ES Jung
소속: System LSI Division, Samsung Electronics Co., Ltd.

TE3-2 15:20-15:40 **Improvement of Performance Using Post High Pressure Hydrogen Annealing in Silicon Nanowire MOSFET with Multi-Wires**

저자: Seonghyun Kim[1], Minseok Jo[1], Seungjae Jung[1], Hyejung Choi[1], Joonmyoung Lee[1], and Hyunsang Hwang[1,2]
소속: [1]Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, [2]Department of Nanobio Materials and Electronics, Gwangju Institute of Science and Technology

TE3-3 15:40-16:00 **MOS Transistor의 Layout에 따른 Stress Effect에 관한 연구**

저자: 최영식, 장동열, 황호익, 신화숙, 김병선, 강호규
소속: 삼성전자 System LSI DDI PA 팀

TE3-4 16:00-16:20 **A Schottky-Barrier FinFET with Narrow-Trench-Filled Source/Drain Contacts**

저자: 정재현[1], 이헌복[2], 최우철[1], 김민형[1], 김태현[1], 하종봉[1], 이정희[1], 함성호[1]
소속: [1]경북대학교 대학원 전자전기컴퓨터학부, [2]한국과학기술원 전자공학과

F. CMOS Device & Process Technology 분과

Room E (B103)

일 시 : 2월 25일(목) 16:40-18:00

세션명 : [TE4] ZRAM, Analog, High-k and Graphene

좌 장 : 이희덕(충남대학교), 노태문(한국전자통신연구원)

TE4-1 16:40-17:00 **Recessed Source/Drain SOI MOSFET for ZRAM Cell Transistor**

저자: Joong-Sik Kim, Tae-Su Jang, Seung-Hwan Lee, Sung-Woong Chung, Sung-Joo Hong, and Sung-Wook Park
소속: R&D Division, Hynix Semiconductor Inc.

TE4-2 17:00-17:20 **W/TiN Gate 전극 층의 열적 안정성 분석 및 개선에 관한 연구**

저자: 김민수, 김태윤, 도관우, 은용석, 박은실, 이기정, 홍 권
소속: Hynix Semiconductor Inc., Research and Development Division

TE4-3 17:20-17:40 **Carbon Condensation and Germanium Sublimation in GeC Films during a Pulsed KrF Laser Annealing**

저자: 조천흠[1], 김성현[1], 임성관[1], 이승용[1], 황현준[1], 황현상[1,2], 이병훈[1,2]
소속: [1]광주과학기술원 신소재공학과, [2]광주과학기술원 나노바이오재료전자과

TE4-4 17:40-18:00 **Enhanced Interface and Bulk Properties of HfO_2 Film at Metal-Insulator-Ge Capacitors**

저자: 최영재, 고기영, 박인성, 안진호
소속: 한양대학교 신소재공학과

L. Analog Design 분과

Room F (B108)

일 시 : 2월 25일(목) 09:00-10:20

세션명 : [TF1] Power Management Circuits

좌 장 : 김시호(충북대학교), 송민규(동국대학교)

TF1-1 09:00-09:20 **빠른 모드 전환을 가지는 저전력 벅 변환기 설계**
저자: 남현석, 안영국, 노정진
소속: 한양대학교 전기전자제어계측공학과

TF1-2 09:20-09:40 **열전 발전 소자의 MPPT 구동 회로**
저자: 조성규, 박순서, 남기훈, 김시호
소속: 충북대학교 전기공학과

TF1-3 09:40-10:00 Adaptive Off-Time Control Method on Floating Buck Converter for LED Lighting Application
저자: 이용학, 홍석인, 권오경
소속: 한양대학교 전자컴퓨터통신공학과

TF1-4 10:00-10:20 Design of Power Management Blocks for UHF-band Semi-Passive Tag IC
저자: Hung Quoc Huynh, Duong Huynh Thai Vo, Quoc-Tai Duong, Sang-Hoon Hong, and Jong-Wook Lee
소속: School of Electronics and Information, Kyung Hee University

L. Analog Design 분과

Room F (B108)

일 시 : 2월 25일(목) 10:40-12:00

세션명 : [TF2] 데이터 변환기와 필터 회로 설계

좌 장 : 노정진(한양대학교), 문 용(숭실대학교)

TF2-1 10:40-11:00 **A 1.2V 10b 500MS/s Single-Channel Folding CMOS ADC**
저자: 문준호, 박성현, 송민규
소속: 동국대학교 반도체과학과

TF2-2 11:00-11:20 **2단 시간 증폭기를 이용한 버니어 Coarse-Fine 시간 디지털 변환기**
저자: 이종석, 문용
소속: 숭실대학교 전자공학과

TF2-3 11:20-11:40 **A 6-bit 4-GS/s DAC Design for Wideband Dynamic Linearity**
저자: 김시내, 이창교, 조상현, 류승탁
소속: 한국과학기술원 전기 및 전자공학과

TF2-4 11:40-12:00 **A 2mW 4th-order 1.1GHz Source-Follower-Based LPF Design by Bandwidth/Power Ratio Optimization**
저자: Hun-Do Shin and Seung-Tak Ryu
소속: KAIST

L. Analog Design 분과

Room F (B108)

일 시 : 2월 25일(목) 15:00-16:20

세션명 : [TF3] Advanced Analog Techniques

좌 장 : 이종욱(경희대학교), 류승탁(KAIST)

TF3-1 15:00-15:20 1.62 Gb/s and 2.7 Gb/s Adaptive Equalizer for DisplayPort 1.1a Standard

저자: J. S. Rhim, C. K. Seong, W. S. Kim, and W.Y. Choi
소속: School of Electrical and Electronical Engineering, Yonsei University

TF3-2 15:20-15:40 An 8-channel 8-Gb/s Optical Receiver Analog Front-End in a 0.13- μm CMOS Technology

저자: 박규상 [1], 황문상 [1], 유병주 [1], 김현창 [1], 정덕균 [1], 박정우 [2], 김경옥 [2]
소속: [1] 서울대학교 반도체 공동 연구소 집적 시스템 설계 연구실, [2] 한국전자통신연구원

TF3-3 15:40-16:00 A Design Technique of Low Power Digitally Controlled Oscillator

저자: 이두찬[1], 김훈기[2], 민영재[2], 김규영[2], 김수원[1,2]
소속: [1]고려대학교 나노반도체공학과, [2]고려대학교 전기전자전파공학과

TF3-4 16:00-16:20 An Inherent dB-linear Variable Gain Amplifier with 1.1GHz Signal Bandwidth

저자: 권지욱, 류승탁
소속: 한국과학기술원 전기 및 전기공학과

M. RF Design 분과

Room F (B108)

일 시 : 2월 25일(목) 16:40-18:00

세션명 : [TF4] RF Design

좌 장 : 이재성(고려대학교), 박준배(GCT Semiconductor Inc.)

TF4-1 16:40-17:00 **A CMOS PA Supply Modulator Robust to Battery Depletion**
저자: J. Choi, D. Kim, D. Kang, J. Park, B. Jin, and B. Kim
소속: Department of Electrical Engineering, Pohang University of Science and Technology

TF4-2 17:00-17:20 **Dual Field Communication Scheme for UHF (860-960MHz) Gen2 RFID Chip**
저자: Hee-Bok Kang, Miseok Lee, Jeong-Ok Ki, Sungyeon Hwang, Yoonjung Kim, Seokhyeon Kim, Daemin Kim, Sahong Park, Kipyung Kim, Hyoungnam Lim, Jisun Kwon, Jonghyun Choi, Changyeub Song, Sunkyu Ko, Youngjo Park, Jonghyun Nam, Sangyoub Park, Youngwug Kim, and Jinseog Choi
소속: RFID, Hynix Semiconductor Inc.

TF4-3 17:20-17:40 **A 30 GHz Divide-by-3 Ring-based Injection Locked Frequency Divider with a Wide Locking Range**
저자: Seungwoo Seo, Hyogi Seo, and Jae-Sung Rieh
소속: School of Electrical Engineering, Korea University

TF4-4 17:40-18:00 **1.2Gbps Clock-Edge Modulation Receiver 설계**
저자: 장성천, 송희수, 김성우, 정덕균
소속: 서울대학교 전기공학부 집적시스템설계연구실

EXCO 지하 1F Lobby

일 시 : 2월 25일(목) 09:00-13:00

세션명 : [TP1] Poster Session I

D. Thin Film Technology 분과

TP1-1 **Application of Micro Corona-Kelvin Technique to Non-contact Monitoring of Advanced ONO Type Flash Device**
저자: Jae Hyun Kim, Seong Jun Heo, Chang Hwan Lee, Koon Ho Bae, Hyung Won Yoo, and Chul Hong Kim
소속: Hynix Semiconductor Inc.

TP1-2 **잉크젯 프린팅을 이용한 OTFT 인버터**
저자: 김민규, 강찬모, 이창희
소속: 서울대학교 전기컴퓨터공학부, 반도체공동연구소(ISRC)

TP1-3 **Enhanced Tunneling Efficiency of VARIOT type $(ZrO_2)_x(SiO_2)_{1-x}/SiO_2$ Stacks for Flash Memory Devices**
저자: 강해윤, 허민영, 손현철
소속: 연세대학교 신소재공학과

TP1-4 **Rapid Atomic Layer Deposition of Various High-k Dielectric Films Using Nitrous Oxide Plasma and Metal-Organic Precursors**
저자: Seok-Jun Won[1,2], Yu Jin Choi[1], Sungin Suh[1], and Hyeong Joon Kim[1]
소속: [1]Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University, [2]Advanced Process Development Team, System-LSI division, Samsung Electronics Co. Ltd.

TP1-5 **Electrical and Chemical Properties of Lanthanum Silicate Films Deposited Using $La[N(SiMe_3)_2]_3$ and H_2O in Atomic Layer Deposition with Liquid Delivery System**
저자: Yu Jin Choi, Seok-Jun Won, Hyung-Suk Jung, Sungin Suh, and Hyeong Joon Kim
소속: Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University

TP1-6 **Study on Particle Formation and Decomposition Characteristics of Co Precursors Decomposed by the Thermal and Plasma Treatments**
저자: 서경천[1,2], 나정길[1,3], 윤주영[1], 신재수[2], 김태성[3], 강상우[1]
소속: [1]한국표준과학연구원 진공센터, [2]대전대학교 신소재공학과, [3]성균관대학교 기계공학과

TP1-7 **Comparison of Electrical Properties of MIM Capacitors with Multi-layer High-k Dielectrics**
저자: 박상욱, 권혁민, 한인식, 박병석, 복정득, 이희덕
소속: 충남대학교 전자전파정보통신

TP1-8 **Ferroelectric Properties of Pt/Pb(Zr, Ti)O_3/Al_2O_3/ZnO/Pt Stack Capacitors for Nonvolatile Memory Applications**

저자: Min Hyuk Park, Hyun Ju Lee, and Cheol Seong Hwang
소속: Department of Material Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

TP1-9 **Thickness Dependency of MAHONOS Structure TBE-CTF Memory**

저자: Se-Man Oh and Won-Ju Cho
소속: Department of Electronic Materials Engineering, Kwangwoon University

TP1-10 **Atomic Layer Deposition of $(GeTe_2)_x(Sb_2Te_3)_y$ Films Using Novel Precursors**

저자: Taeyong Eom[1], Seol Choi[1], Byung Joon Choi[1], Sangho Rha[1], Woongkyu Lee[1], Cheol Seong Hwang[1], and Moo Seong Kim[2]
소속: [1]Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University [2]Air Products and Chemicals Korea inc.,

TP1-11 **Initial ALD on Hydroxylized Si (001) Surface with TMA: A First Principles Study**

저자: Dae-Hee Kim[1], Dae-Hyun Kim[1], Yong-Chan Jeong[1], Hwa-Il Seo[2], and Yeong-Cheol Kim[1]
소속: [1]Department of Materials Engineering, Korea University of Technology and Education, [2]School of Information Technology, Korea University of Technology and Education

TP1-12 **Structural Study of HfO_2/TiO_2 Stacked Films Grown by Atomic Layer Deposition**

저자: Minha Seo, Seong Keun Kim, and Cheol Seong Hwang
소속: Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

TP1-13 **Chemical Mechanical Polishing of GST Film with Different Types of Abrasives**

저자: 신동희[1], 정민군[2], 이충현[2], 박형순[3], 임대순[1,2]
소속: [1]고려대학교 나노반도체공학과, [2]고려대학교 신소재공학과, [3]하이닉스반도체 선행공정팀

TP1-14 **Asymmetric Effect of Thermal Annealing on Unipolar and Bipolar Resistance Switching of ALD ZrO_2 Films**

저자: 김종기, 나희도, 유정호, 고대홍, 손현철
소속: 연세대학교 신소재공학과

TP1-15 **Inductive Coupled Plasma Dry Etching of ZnO Thin Film Using a Diluted CF_4 Gas**

저자: Doyoung Kim[1], Inchan Hwang[2], Jongyeog Son[2], and Hyungjun Kim[1]
소속: [1]School of Electrical and Electronic Engineering, Yonsei University, [2]Materials Science and Engineering, Pohang University of Science and Technology

TP1-16 **Silicon-rich Silicon Nitride Film Floating-gate Nonvolatile Memory Device with SiO_2/SiNx Stacked Tunneling Barrier**

저자: Eunkyeom Kim[1], Seungman An[2], Taekyung Yim[2], Won-Ju Cho[3], and Kyoungwan Park[1,2]
소속: [1]Department of Nano Engineering, University of Seoul, [2]Department of Nano Science and Technology, University of Seoul, [3]Department of

Electronic Materials Engineering, Kwangwoon University

TP1-17 The Effect of the Plasma Pretreatment on Cu Thin Film Growth using the $Cu(dmamb)_2$ Precursor
저자: 최종문[1], 이도한[1], 진성언[1], 변동진[1,2], 정택모[3], 김창균[3], 김백만[4]
소속: [1]고려대학교 신소재공학과, [2]고려대학교 나노반도체공학과, [3]한국화학연구원, [4]하이닉스 반도체

TP1-18 Initial Oxidation of GaAs (001)-β2(2×4) Surface: A First Principles Study
저자: Dae-Hyun Kim[1], Dae-Hee Kim[1], Yong-Chan Jeong[1], Hwa-Il Seo[2], and Yeong-Cheol Kim[1]
소속: [1]Department of Materials Engineering, Korea University of Technology and Education, [2]School of Information Technology, Korea University of Technology and Education

F. CMOS Device & Process Technology 분과

TP1-19 Memory Characteristics of Strained-silicon-on-insulator (sSOI) Capacitorless 1T-DRAM Cells Depending on Thermal Annealing Conditions
저자: M. S. Kim and W. J. Cho
소속: Department of Electronic Materials Engineering, Kwangwoon University

TP1-20 Impact of Arsenic Deactivation Enhanced Diffusion on Reverse Short-Channel Effect of Deep Submicron PMOS Devices
저자: 신은종, 김현진, 김태우
소속: 동부하이텍 반도체사업부 공정개발 2팀

TP1-21 Cost-Effective 0.18um Analog CMOS Process for Power Management Applications
저자: Y. K. Choi, I. Y. Park, K. M. Park, H. C. Lim, J. H. Moon, C. J. Yoon, N. J. Kim, and K. D. Yoo
소속: Dongbu HiTek

TP1-22 Electrical Characteristics of NiSi/Si Junction Using Sb Interlayer
저자: 전명심, 박영삼, 현영훈, 장문규
소속: 한국전자통신연구원 차세대 I-MEMS 팀

J. Nano-Science & Technology 분과

TP1-23 Low-frequency Noise Characteristics in Multilayer Graphene Transistors
저자: [1]Jung-Kyu Lee, [1]In-Tak Cho, [2]Dae-Young Jeon, [2]Sunae Seo, [3]Hyuck-In Kwon, and [4]Jong-Ho Lee
소속: [1]School of Electrical Engineering and Computer Science, Kyungpook National University, [2]Samsung Advanced Institute of Technology, [3]Department of Electronic Engineering, Daegu University, [4]School of Electrical Engineering and Computer Science and Inter-university Semiconductor Research Center, Seoul National University

TP1-24 Fabrication of Al Thin Films with Water-mediated Nano Transfer Printing for

Thin Film Transistors
저자: Jeong M. Dang, Eun B. Kwak, and Myung M. Sung
소속: Department of Chemistry, Hanyang University

TP1-25 Selective Gas Sensors Made of a Multiple ZnO Nanorods via a Simple Solution Process
저자: Junghwan Huh[1], Jonghyurk Park[2], Hyeyoung Kim[1], and Gyu Tae Kim[1]
소속: [1]School of Electrical Engineering, Korea University, [2]Electronics and Telecommunications Research Institute

TP1-26 ZnO Nanowire Field-effect Transistors with Pt Nanocrystals Fabricated on Plastic Substrates for a Non-volatile Memory Application
저자: Myeongwon Lee[1], Sungsu Kim[1], Sang-Hyun Oh[3], Suk-Goo Kim[3] and Sangsig Kim[1,2]
소속: [1]Department of Electrical Engineering, Korea University, [2]Nano Semiconductor Engineering, Korea University, [3]Research and Development Division, Hynix Semiconductor Inc.

TP1-27 Effective Reduction of Leakage Currents in Single-walled Carbon Nanotube Network Thin-film Transistors
저자: Junhyuk Lee[1], Min-Ho Jeong[2], Eun-Suk Choi[2], Kunhak Lee[2], Chaehyun Lim[1], and Seung-Beck Lee[1,2]
소속: [1]Department of Nanoscale Semiconductor Engineering, Hanyang University, [2]Department of Electronic Engineering and Institute of Nano Science and Technology, Hanyang University

TP1-28 The Investigation of Electrical Hysteresis in ZnO Devices
저자: Hyunjin Ji[1], Jaewan Choi[1], Insung Hwang[2], Jongheon Lee[2] , Siegmar Roth[1], Gyu-Tae Kim[1]
소속: [1]School of Electrical Engineering, Korea University, [2]Department of Material Science, Korea University

TP1-29 Growth Behaviors of Silica Nanowires using Heteroleptic Precursor and Water Vapor
저자: Sanghyun Park, Jaeyeong Heo, and Hyeong Joon Kim
소속: Department of Materials Science and Engineering, Seoul National University

TP1-30 불규칙하게 분포된 Ag 나노입자를 이용한 무반사 ITO SWS 나노구조 제작
저자: 박경철, 최은실, 송영민, 이용탁
소속: 광주과학기술원 정보통신공학과

TP1-31 Microfluidic System 을 이용한 Electrochemical Cell Lysis
저자: 장유철[1], 주기성[1], Kamrul Islam[1], 이현호[2], 김용상[1,3]
소속: [1]명지대학교 나노공학과, [2]명지대학교 화학공학과, [3]명지대학교 전기공학과

M. RF Design 분과

TP1-32 Design of High Security HF-band Passive RFID Tag IC
저자: Duong Huynh Thai Vo, Hung Quoc Huynh, Quoc Tai Duong, Sang-Hoon

Hong, and Jong-Wook Lee
소속: School of Electronics and Information, Kyung Hee University

TP1-33 **De-embedding Accuracy for Interconnection Variation**

저자: Jaeho Lee, Jaehong Lee, Byung Gook Park, Jong Duk Lee, and Hyungcheol Shin
소속: Inter-university Semiconductor Research Center and School of Electrical Engineering, Seoul National University

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

TP1-34 **Effect of LiF Interlayer and Thickness Variation of the Conjugated Polymer/Fullerene Photoactive Layers on Organic Solar Cell Devices**

저자: Seungju Kim and Sangouk Ryu
소속: Electronic Engineering, Dankook University

TP1-35 **Transparent Conductive Indium Zinc Tin Oxide Thin Films for Organic Solar Cell Applications**

저자: Hong Chan Ma[1], Jeong-Joo Kim[2], and Hee Young Lee[1]
소속: [1]School of Materials Science and Engineering, Yeungnam University, [2]School of Materials Science and Engineering, Kyungpook National University

EXCO 지하 1F Lobby

일 시 : 2월 25일(목) 14:40-18:20

세션명 : [TP2] Poster Session II

A. Interconnect & Package 분과

TP2-1 **High Power LED Packaging by MOAMP (Multi-chip on Aluminum Metal Plate) Technology**
저자: 지미희, 남충모
소속: 한국산업기술대학교 전자공학과

TP2-2 **Atomic Layer Deposition of Nickel Thin Films and Application to Area Selective Deposition for Nanoscale Contact**
저자: Woo-Hee Kim[1], Han-Bo-Ram Lee[1], Young Kuk Lee[2], Taek-Mo Chung[2], Chang Gyoun Kim[2], and Hyungjun Kim[1]
소속: [1]School of Materials Science and Engineering, Yonsei University, [2]Advanced Materials Division, Korea Research Institute of Chemical Technology

TP2-3 **Improvement of Electrochemical Migration Resistance by Sn Protective Barrier on Cu electrode in Printed Circuit Board**
저자: Min-Suk Jung[1], Shin-Bok Lee[1], Ho-Young Lee[1], ChangSup Ryu[2], YoungGwan Ko[2], HongSeok Min[2], and Young-Chang Joo[1]
소속: [1]Department of Materials Science and Engineering, Seoul National University, [2]ACI Division, Samsung Electro-Mechanics Co., Ltd.

TP2-4 **A Novel Positive Type Photosensitive Polyimide for Buffer Coat Film**
저자: Sang Woo Kim, Chan Hyo Park, Se Jin Shin, Hye Won Jeong, Jung Ho Jo, and Kyung Jun Kim
소속: IT & E Materials R&D, LG Chem Research Park

TP2-5 **열 응력 흡수 구조체를 이용한 칩 내장형 인쇄회로기판 제조방법**
저자: 서원[1], 구영모[2], 박세훈[3], 강남기[3], 김구성[1]
소속: [1]강남대학교, [2]ESIP Lab., EPWorks Co.,Ltd., [3]전자부품연구원

TP2-6 **Effects of Accelerator on the Cu Metallization Using Electroplating Process**
저자: Sung-kyu Kang[1], Sa-Kyun Rha[1], Jung-Hye Seo[2], Youn-Seoung Lee[2], Young-Ho Ryu[3], and Kimin Hong[3]
소속: [1]Department of Materials Engineering, Hanbat National University, [2]Department of Information Communication Engineering, Hanbat National University, [3]Department of Physics, Chungnam National University

B. Patterning 분과

TP2-7 **부유형 탐침법을 이용한 전자온도, 이온밀도의 2 차원 공간분포의 실시간 진단**

저자: 김영철, 장성호, 김건호, 정진욱
소속: 한양대학교 반도체 공정제어 연구실

TP2-8 **Fabrication of Highly Conductive Micro-wires on Templated Flexible Substrate by Inkjet Printing Technique**
저자: Jinbo Shim, Yu-Jin Na, Seong-Min Cho, and Sin-Doo Lee
소속: School of Electrical Engineering and Computer Science, Seoul National University

TP2-9 **A Study of the Mechanisms Responsible for Black Silicon Phenomenon in Deep Trench Gate Etching with SF_6 /O_2 / HBr Mixture**
저자: 홍정표, 김재승, 하승철, 장영민, 정지훈, 강동우, 이정관, 김재영
소속: 동부하이텍 Etch팀

TP2-10 **Inorganic Thin Film Transfer Printing Using Atomic Layer Deposition**
저자: Su H. Kim, Byoung H. Lee, and Myung M. Sung
소속: Department of Chemistry, Hanyang University

TP2-12 **Inert Gas Control을 이용한 SOH (Spin On Hard mask) Patterning 공정특성 연구**
저자: 사공영채, 김진영, 안주현
소속: 삼성전자공과대학교 반도체공학과 / 삼성전자 반도체연구소 공정개발팀

K. Memory (Design & Process Technology) 분과

TP2-13 **3-D Stacked NAND Flash String with Single-Crystal Si Channel by Adopting Si/SiGe Selective Etch Process**
저자: Ju-Wan Lee[1], Min-Kyu Jeong[1], Hyuck-In Kwon[2], Byung-Gook Park[1], Hyungcheol Shin[1], and Jong-Ho Lee[1]
소속: [1] School of Electrical Engineering and Computer Science and Inter-university Semiconductor Research Center, Seoul National University, [2]School of Electronic Engineering, Daegu University

TP2-14 **Thickness Dependence of Bias Field in Ferroelectric Polymer Thin Film**
저자: Woo Young Kim[1], Du Youn Ka[2], Yong Soo Lee[1], Sang Youl Kim[2], and Hee Chul Lee[1]
소속: [1]Electrical Engineering, KAIST, [2]Chemistry, KAIST

TP2-15 **Fluctuation-Robust Extended Word-line and Extended Bit-line (EWEB) NAND Flash Memory**
저자: Jang-Gn Yun, Il Han Park, Jong Duk Lee, Hyungcheol Shin, and Byung-Gook Park
소속: Inter-university Semiconductor Research Center and School of Electrical Engineering, Seoul National University

TP2-16 **One-Time Programmable Nonvolatile Memory Device and Its Array Based on Metal-Insulator-Semiconductor Structure: Operation and Fabrication Method**
저자: Seongjae Cho, Jung Hoon Lee, Won Bo Shim, Se Hwan Park, and Byung-Gook Park
소속: Inter-university Semiconductor Research Center and School of Electrical Engineering and Computer Science, Seoul National University

TP2-17 Scaling of Nano-Electro-Mechanical System (NEMS) Nonvolatile Memory Cells Based on Finite Element Analysis (FEA)
저자: Seung Hyeun Roh and Woo Young Choi
소속: Department of Electronic Engineering, Sogang University

TP2-18 A Novel Self-Aligned 4-bit SONOS-Type Non-Volatile Memory Cell with T-Gate and I-Shaped FinFET Structure and Low Current Sense Amplifier
저자: Sunyeong. Lee, Y.W. Jeon, J. Jang, J.S. Sin, H.J. Kim, H.Y. Bae, D.H. Yun, D.H. Kim, and D.M. Kim
소속: School of Electrical Engineering, Kookmin University

TP2-19 Charge Transport in Charge Trap Flash Memory Utilizing Gate Injection Switching Method
저자: Yujeong Seo[1], Ho Myoung An[1], Hee Dong Kim[1], Yongjie Zhang[1], In Rok Hwang[2], Sa Hwan Hong[2], Bae Ho Park[2], and Tae Geun Kim[1]
소속: [1]School of Electrical Engineering, Korea University, [2]School of Physics, Konkuk University

TP2-20 Current Bistable Behavior of Polyimide Layer with In_2O_3 Nanocrystals Formed on Sapphire Substrate
저자: Dong Uk Lee[1], Seon Pil Kim[1], Dong Seok Han[1], Eun Kyu Kim[1], Min Soo Kim[2], Won-Ju Cho[2], and Young-Ho Kim[3]
소속: [1]Quantum-Function Spinics Laboratory and Department of Physics, Hanyang University, [2]Department of Electronic Materials Engineering, Kwangwoon University, [3]Devision of Materials Science and Engineering, Hanyang University

TP2-21 Characteristics of SONOS Embedded Flash Memory by Logic Gate Oxidation Method
저자: 선종원, 신희재, 박지환, 정희돈, 권영준, 김대일, 김남윤, 주인제, 박성근, 금동렬, 이윤종, 양택승, 한재원
소속: 동부하이텍 반도체부문 MF공정개발팀

TP2-22 Charge Trapping Characteristics of HfO_2 Compared to Si_3N_4 Layer with Various Thicknesses for Non Volatile Flash Memory
저자: H. W. You and W. J. Cho
소속: Department of Electronic Materials Engineering, Kwangwoon University

L. Analog Design 분과

TP2-23 A CMOS Baseband Circuit with Digitally Controlled DC-offset Cancellation for Multi-band and Multi-mode Direct Conversion Receiver
저자: 유병주, 지한규, 박규상, 정덕균
소속: 서울대학교 반도체 공동 연구소 집적 시스템 설계 연구실

TP2-24 A Design of Wide Range and Fast Locking ADPLL
저자: 지한규, 유병주, 박규상, 김현창, 정덕균
소속: 서울대학교 반도체 공동 연구소 집적 시스템 설계 연구실

TP2-25 A Monitoring Circuit for the Random Variations of MOSFET Parameters Using Time Delay Amplifier, VCDL and TDC

저자: 권혜정, 이재승, 심재윤, 박홍준
소속: Analog IC Systems Lab., Pohang University of Science and Technology

TP2-26 A Low Power PDP Driver Interface Utilizing Idle Periods for Mass-Production

저자: Sangcheol Lee, Kwangsun Yoon, Wookon Son, Hong Shik Moon, and Kuk Tae Hong
소속: System IC Business Team, LG Electronics Inc.

TP2-27 A Low Jitter PLL Design Using Voltage Supplied VCO

저자: 김지현, 박용현, 이승현, 홍국태
소속: LG전자 System IC MCS Gr. Circuit Core part

TP2-28 Video Signal (YC) Mixing and Low Impedance Driving Circuit in Digital TV System

저자: Jung-Suk Shim, Jae-Yup Lee, Jong-Chul Lim, Woo-Yol Lee, and Kirt Hong
소속: Mixed Core Solution Group, System IC Business Team, LG Electronics Inc.

TP2-29 Open-Loop Mode에서 동작하는 DLL을 사용한 고해상도 Time-to-Digital 변환기

저자: 이형민, 신우열, Nan Xing, 김선권, 심대용, 홍기문, 김수환
소속: 서울대학교 반도체공동연구소 집적시스템연구실

TP2-30 A Low-Voltage Differential BGR with Reference Voltage Driver for High-Performance Pipelined ADC

저자: 이현중, 이상훈, 우종관, 이상윤, 임동혁, 정덕균, 김수환
소속: 서울대학교 반도체공동연구소 집적시스템설계연구실

TP2-31 DiplayPort 1.1a Standard용 2.7Gb/s 송신기의 설계

저자: 김두호, 박영석, 성창경, 김왕수, 임진수, 최우영
소속: 연세대학교 전기전자공학과

Chip Contest Design

EXCO 지하 1층 Lobby

일 시 : 2월 25일(목) 10:00 - 16:00

CDC1 A 1.8V 1GSP/s 7-bit Folding/Interpolation CMOS A/D Converter
저자: 이동헌, 김대윤, 송민규
소속: 동국대학교 반도체학과

CDC2 A Fully CMOS Integrated Carbon Nanotube Sensor Array with Transient Measurement Capability
저자: Seok Hyang Kim, Jun-Myung Woo, Jung Woo Ko, Jae Heung Lim, Jin Hong Ahn, and Young June Park
소속: School of Electrical Engineering Computer Science and Nano-Systems Institute, Seoul National University

CDC3 A Full Digital Capacitive Sensor for Touch Key Applications
저자: Mu-Jin Lee and Kwang-Su Seong
소속: Department of Electronic Engineering, University of Yeungnam

CDC4 A Fully-integrated Reader System for Mobile UHF RFID
저자: 이영주, 김태환, 박강우, 임고은, 박인철
소속: KAIST 전기 및 전자공학과

CDC5 Antenna Measurement Techniques Applied to 40 GHz On-chip CMOS Monopole
저자: 김진용, 임승균, 김성한, 김문일
소속: 고려대학교 전기전자전파 공학부

CDC6 내장된 이중 포트 메모리를 위한 Programmable 메모리 BIST
저자: 박영규, 박재석, 강성호
소속: 연세대학교 전기전자공학과

CDC7 CMOS 스마트 온도센서 설계
저자: 이덕환, 고승오, 박종태, 유종근
소속: 인천대학교 전자공학과

CDC8 A Single-Bit Third -Order Delta-Sigma Modulator with Switched Operational Amplifier
저자: 박현묵, 김 원, 윤광섭
소속: 인하대학교 전자공학과

CDC9 무선 송수신기 응용을 위한 광대역 시그마-델타 변조기의 설계
저자: 최정수, 장기창, 정우주, 박정의, 이준상, 최중호
소속: 서울시립대학교 혼성신호집적회로연구실

CDC10 An Adaptive Equalizer for Display Interface
저자: 이원영, 김이섭
소속: KAIST Multimedia VLSI 연구실

CDC11 **심전도, 광전용적맥파 측정을 위한 생체 신호 처리 전용 프로세서**
저자: 정환목, 이규열, 배윤섭, 최 평
소속: 경북대학교 전자전기컴퓨터학부

CDC12 **CMOS 고속 고해상도 Time-to-Digital Converter**
저자: 민영재, Nyguyen Thanh Trung, 김훈기, 권찬근, 김수원
소속: 고려대학교 전자전기공학과

CDC13 **Delta-Sigma Modulator using Delayed Chopper-Stabilization Technique**
저자: 권찬근[1], 민영재[2], 김용환[3], 김훈기[2], 김수원[2]
소속: [1]고려대학교 마이크로/나노시스템 협동과정, [2]고려대학교 전자전기공학부, [3]삼성전자 메모리사업부 DRAM 설계팀

CDC14 **Chip Implementation of PICO Processor**
저자: 나여울, 추지호, 손종욱, 한영선, 김선욱
소속: 고려대학교 전기전자전파공학과

CDC15 **실시간 변이추출 프로세서의 ASIC 구현**
저자: 신완수, 최현준, 서영호, 김동욱
소속: 광운대학교 실감미디어 연구소

CDC16 **A CMOS Wide Liniear-in-dB Range Variable Gain Amplifier with Temperature Compensation**
저자: Won-Seon Sim, Jong-Gyu Park, Han-Yeol Yu, Sung-Sun Choi, and Yong-Hoon Kim
소속: The Department of Mechatronics, Gwangju Institute of Science and Technology

CDC17 **An 8-channel 8-Gb/s Optical Receiver Analog Front-End in a 0.13-μm CMOS Technology**
저자: 박규상[1], 황문상[1], 유병주[1], 김현창[1], 정덕균[1], 박정우[2], 김경옥[2]
소속: [1]서울대학교 반도체 공동 연구소 집적 시스템 설계 연구실, [2]한국전자통신연구원

CDC18 **Capacitive Microphone을 위한 CMOS 신호 검출 회로**
저자: 이상윤, 최우석, 임동혁, 정덕균
소속: 서울대학교 집적시스템 설계 연구실

CDC19 **음성 합성용 ADPCM 및 움직임 벡터 검출 블록 설계**
저자: 안중서[1], 박민형[2], 허정화[1], 박상봉[1]
소속: [1]세명대학교 정보통신학과, [2](주)애트랩

CDC20 **변형된 적응적 탐색영역 결정기법과 조기중단 기법을 사용하는저연산량 H.264 용 움직임 추정기**
저자: 양현철, 이성수
소속: 숭실대학교 정보통신전자공학부

CDC21 **디지털-아날로그 변환기의 내장 자체 테스트 설계**
저자: 김인철, 장재원, 손현욱, 김기철, 강성호
소속: 연세대학교 전기전자공학과

CDC22 **2.5Gbps CMOS 광수신기 전단부 설계**

저자: 전지호, 서희택, 박종태, 유종근
소속: 인천대학교 전자공학과

CDC23 A 10Bit 50MS/s Current Steering D/A Converter for Mobile Communication
저자: 황정진, 윤광섭
소속: 인하대학교 전자공학과

CDC24 A VLSI Implementation of QOC Signal Detector for Spatially Multiplexed MIMO Systems
저자: I. Park, T. H. Im, S. Lee, H. Park, Y. S. Cho, and S. Yu
소속: School of Electrical and Electronics Engineering, Chung-Ang University

CDC25 DSP 명령어를 갖는 32-bit Embedded Processor Core 설계
저자: 김석만, 박종민, 조경록
소속: 충북대학교 정보통신공학과

CDC26 Implementation of Buck DC-DC Converter for Improved Load Regulation
저자: 김종규, 김연상, 박용식, 곽계달
소속: 한양대학교 전자컴퓨터통신과

CDC27 LCD Panel 구동을 위한 12-bit Charge Redistribution D/A Conveter
저자: 김효상, 김대윤, 송민규
소속: 동국대학교 반도체과학과

CDC28 증강현실을 위한 자세추정엔진을 포함한 그래픽스와 비젼 통합 프로세서
저자: 윤재성, 김정현, 김효은, 이원영, 김석훈, 정규식, 박준석, 김이섭
소속: KAIST 전기 및 전자공학과

CDC29 Micro-bolometer Readout Circuit with High Signal-to-Noise Ratio by using Multiple Integration Method
저자: W. S. Park, Y. S. Lee, and H. C. Lee
소속: Department of Electrical Engineering, KAIST

CDC30 Core-A AMBA 인터페이스를 갖는 암호모듈의 UART 검증
저자: 성광주, 하창수, 최병윤
소속: 동의대학교 컴퓨터공학과

CDC31 디지털 오디오 프로세서를 위한 2채널 비동기 샘플레이트 변환기
저자: 조 정, 이재진, 유양모, 송태경
소속: 서강대학교 전자공학과

CDC32 초소형 초음파 영상장치에 적합한 B-모드 신호처리부의 설계 및 구현
저자: 이다영, 윤창한, 유양모, 송태경
소속: 서강대학교 전자공학과

CDC33 초소형 의료용 초음파 영상 장치를 위한 다채널 수신 빔 집속기 구현
저자: 강지운, 이유화, 유양모, 송태경
소속: 서강대학교 전자공학과

CDC34 Implementation of IEEE 802.11 a/g OFDM PHY
저자: 우정훈, 김영식
소속: 한동대학교 정보통신 공학부

CDC35

PCI 버스의 칩 제작 및 인터페이스 설계

저자: 이상택, 전민제, 정의영
소속: 연세대학교 전기전자공학과

E. Compound Semiconductors 분과

Room A (블루벨홀)

일 시 : 2월 26일(금) 09:00-10:20

세션명 : [FA1] Optoelectronic Devices

좌 장 : 김현수(전북대학교), 김제원(삼성LED)

FA1-1 09:00-09:20 **Fabrication of InGaN-based Light Emitting Diodes Using Femtosecond Laser-Scribing Technology**

저자: 이재훈[1], 김남승[1], 홍상수[2], 공문헌[1], 노재철[1], 윤석길[1], 이송호[1], 석종욱[1]

소속: [1]Manufacturing Technology Group, Samsung LED Co., Ltd., [2]Technology Planning Group, Samsung Electro-Mechanics Co., Ltd.

FA1-2 09:20-09:40 **전기화학적 p-GaN 활성화법을 이용한 blue-LED의 효율 개선**

저자: 김봉준[1], 이학형[1], 홍기철[1], Karthikeyan Giri Sadasivam[1], 권광우[2], 김영호[2], 손성진[3], 이준기[1]

소속: [1]전남대학교 신소재공학부, [2]한양대학교, [2]LG Innotek

FA1-3 09:40-10:00 **Optical Enhancement of InGaN/GaN Multiple Quantum Well by Reducing Defect of Non-Polar a-Plane GaN/r-Sapphire**

저자: 이성남, 김경국, 남옥현

소속: 한국산업기술대학교 나노-광공학과 KPU-LED 센터

FA1-4 10:00-10:20 **Concave Shaped ITO Layer Fabricated by Holographic Lithography for Eenhancing Light Extraction of LED**

저자: Tae Hoon Seo[1], Tae Su Oh[2], Yong Seok Lee[1], Hyun Jeong[1], Jan Di Kim[1], Hun Kim[1], Ah Hyun Park[1], Kang Jea Lee[1], Eun-Kyung Suh[1,2]

소속: [1]School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University, [2]Departement of Nano Semiconductor and Display, Semiconductor Physics Research Center, Chonbuk National University

E. Compound Semiconductors 분과

Room A (블루벨홀)

일 시 : 2월 26일(금) 10:40-12:00

세션명 : [FA2] Electronic Devices

좌 장 : 심규환(전북대학교)

FA2-1 10:40-11:00 The Characteristics of AlGaN/GaN HFETs on Si (111) Substrate Grown by Using Low Temperature AlN Interlayers

저자: E. H. Kwak[1], S. N. Kim[1], D. S. Kim[1], K. W. Kim[1], J. S. Lee[1], K. S. Im[1], S. G. Lee[2], C. M. Yang[1], J.B. Ha[1], and J. H. Lee[1]
소속: [1]School of Electrical Engineering & Computer Science, Kyungpook National University, [2]Department of Sensor & Display Engineering, Kyungpook National University

FA2-2 11:00-11:20 InxGa1-xN에서의 상분리 현상 분석: 원자단위 시뮬레이션

저자: 도은철, 이병주
소속: 포항공과대학교 신소재공학과

FA2-3 11:20-11:40 Study on Analysis of Thermal Treatment for Low Gate Leakage Current of Ni-gate AlGaN/GaN HEMT

저자: Jinhong Park, Ungbi Son, Kang-il Lee, Jeongmin Sung, Jongwook Kim, and Kwangseok Seo
소속: School of Electrical Engineering and Computer Science, Seoul National University

FA2-4 11:40-12:00 Characteristics of the Enhancement-Mode GaN MOSFETs Using Al_2O_3 Gate Oxide with Recessed Gate Structure Grown on Silicon Substrate

저자: Sung-Nam Kim, Jong-Bong Ha, Ki-Sik Im, Ki-Won Kim, Jong-Sub Lee, Dong-Seok Kim, Hee-Sung Kang, Eun-Hwan Kwak, and Jung-Hee Lee
소속: School of Electrical Engineering & Computer Science, Kyungpook National University

E. Compound Semiconductors 분과

Room A (블루벨홀)

일 시 : 2월 26일(금) 13:00-14:20

세션명 : [FA3] Quantum, Processes and Others

좌 장 : 이종람(포항공과대학교)

FA3-1 13:00-13:20 **P 형 GaN 위에 Mg 첨가된 Ag 전극의 오믹특성 연구**
저자: 송양희, 손준호, 김범준, 정관호, 이종람
소속: 포항공과대학교 신소재공학과, 첨단재료과학부

FA3-2 13:20-13:40 **원추형 사파이어 기판 위에 MOCVD방법으로 성장한 GaN 박막과 LED 구조의 광학적, 구조적 특성**
저자: 이규승[1], 곽호상[1], 이재훈[2], 김용천[2], 조용훈[1]
소속: [1]Department of Physics and Graduate School of Nanoscience & Technology, Korea Advanced Institute of Science and Technology, [2]Samsung LED Co., Ltd.

FA3-3 13:40-14:00 **Fabrication and Characterization of MoOx/4H-SiC Schottky Barrier Diodes**
저자: Myeong Sook Oh, Myung Soo Huh, Bong Seop Yang, Do Hyun Lee, Jeong Hyun Moon, Seung Ha Oh, and Hyeong Joon Kim
소속: Department of Materials Science and Engineering, Seoul National University

FA3-4 14:00-14:20 **P형 GaN에서 Ag 반사막 오믹 전극의 Agglomeration 기구**
저자: 손준호, 송양희, 김범준, 이종람
소속: 포항공과대학교 신소재공학과, 첨단재료과학부

H. Display and Imaging Technologies 분과

Room B (아이리스홀)

일 시 : 2월 26일(금) 09:00-10:20

세션명 : [FB1] Organic 소자 & Printing

좌 장 : 강진규(대구경북과학기술원)

FB1-1 09:00-09:20 **High Performance Inkjet Printed Polymer CMOS Integrated Circuits**

저자: Kang-Jun Baeg[2], Dong-Yu Kim[2], Soon-Won Jung[3], Jae-Bon Koo[3], In-Kyo You[3], and Yong-Young Noh[1,3]

소속: [1]Department of Chemical Engineering, Hanbat National University, [2]Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, [3]Convergence Components & Materials Research Laboratory, Electronics Telecommunications Research Institute

FB1-2 09:20-09:40 **직접인쇄공정을 이용한 인쇄유기박막구동소자 제작**

저자: 조정대, 유종수, 윤성만, 김광영, 김동수

소속: 한국기계연구원 나노융합생산시스템연구본부

FB1-3 09:40-10:00 **알칼리 금속이 도핑 된 유기물의 전자 구조 변화**

저자: K. Kim, K. Hong, and J.-L. Lee

소속: Graduate Institute of Advanced Materials Science, Pohang University of Science and Technology

FB1-4 10:00-10:20 **Organic Thin Film Transistor with Au Transfer-Printed Electrodes**

저자: 조현덕[1], 윤현식[2], 차국헌[2], 홍용택[1], 이창희[1]

소속: [1]서울대학교 전기컴퓨터공학부, 서울대학교 반도체공동연구소, [2]서울대학교 화학생물공학부

H. Display and Imaging Technologies 분과

Room B (아이리스홀)

일 시 : 2월 26일(금) 10:40-12:00

세션명 : [FB2] 산화물

좌 장 : 박상희(한국전자통신연구원), 정재경(인하대학교)

FB2-1 10:40-11:00 The Effect of NH_3 Annealing on Electrical Property and Hydration Related Degradation of the Bottom Gate TFT with ZnO Channel Layer
저자: 김정환, 김언기, 오힘찬, 황철성
소속: 서울대학교 재료공학부, 반도체 공동 연구소

FB2-2 11:00-11:20 Mechanically Stretchable and Transparent Zinc Oxide Thin Film Transistor
저자: 박경애[1], 권병혁[2], 안종현[1,2]
소속: [1]성균관대학교 신소재공학부, [2]성균나노과학기술원

FB2-3 11:20-11:40 산화 주석 박막과 Copper-phthalocyanine 계면 Dipole 에너지 및 정공 주입 효율에 대한 연구
저자: Kihyon Hong, Kisoo Kim, Sungjun Kim, Il-Hwan Lee, and Jong-Lam Lee
소속: Division of Advanced Materials Science and Department of Materials Science and Engineering, Pohang University of Science and Technology

FB2-4 11:40-12:00 전면발광 유기발광다이오드에서 열증착 산화구리 정공 주입층에 대한 연구
저자: 김성준, 홍기현, 김기수, 이일환, 이종람
소속: Division of Advanced Materials Science and Department of Materials Science and Engineering, Pohang University of Science and Technology

H. Display and Imaging Technologies 분과

Room B (아이리스홀)

일 시 : 2월 26일(금) 13:00-14:20

세션명 : [FB3] 여러가지 Display 응용

좌 장 : 노용영(한밭대학교),

FB3-1 13:00-13:20 **이차전자 방출 향상을 위한 새로운 보호막 형성방법에 관한 연구**
저자: 이태호, 정해윤, 정희운, 정재철, 황기웅
소속: 서울대학교 전기컴퓨터공학부 플라즈마연구실

FB3-2 13:20-13:40 **Nanowire-based Electronic Nose Using Heterogeneous Catalysis as a Functionalization Strategy**
저자: J. M. Baik[1], M. H. Kim[2], A. M. Wodtke[3], and M. Moskovits[3]
소속: [1]School of Advanced Materials and Systems Engineering, Kumoh National Institute of Technology, [2]Department of Chemistry & Nano Science, Ewha Womans University, [3]Department of Chemistry & Biochemistry, University of California

FB3-3 13:40-14:00 **자기조립단분자막을 이용한 선경사각을 가지는 수직 배향 액정 계면 효과**
저자: 박지섭, 석근영, 김학린
소속: 경북대학교 전자전기컴퓨터학부

FB3-4 14:00-14:20 **MgO Deposited by Ion Plating Technology and Its Application to AC PDPs**
저자: 정희운, 정해윤, 이태호, 정재철, 황기웅
소속: 서울대학교 전기컴퓨터공학부 플라즈마 연구실

N. VLSI CAD 분과

Room C (B101)

일 시 : 2월 26일(금) 09:00-10:20

세션명 : [FC1] VLSI CAD and System Design

좌 장 : 김주호(서강대학교)

FC1-1 09:00-09:20 [Invited Talk] JTAG-Driven Hard Macro IP Test Method
저자: Kun-Young Chung[1], Beomik Cheon[1], and Kyu-Myung Choi[2]
소속: [1]DR_X Group, Samsung Electronics Co., Ltd., [2]Design Technology Team, Samsung Electronics Co., Ltd.

FC1-2 09:20-09:40 [Invited Talk] Efficient Statistical Gate Delay Modeling with Aging Effects
저자: Sangwoo Han and Juho Kim
소속: Sogang University

FC1-3 09:40-10:00 [Invited Talk] Timing Effect of Instantantaneous Voltage Drop (IVD) in ASIC/SoC Design
저자: 진우진, 이병현, 류순걸, 전응철, 임철, 최흥복, 원효식, 최규명
소속: 삼성전자 System LSI DT팀

FC1-4 10:00-10:20 Simultaneous Allocation, Scheduling and Binding for High-level Synthesis
저자: 이석현, 신동엽, 최기영
소속: 서울대학교 전기 컴퓨터 공학부

O. System LSI Design 분과

Room C (B101)

일 시 : 2월 26일(금) 10:40-12:00

세션명 : [FC2] System-Level Algorithm & Architecture

좌 장 : 이광엽(서경대학교)

FC2-1 10:40-11:00 **MPSoC 의 Task Scheduling 및 Binding 에서의 개선된 Performance Yield 계산**
저자: 박상도, 김태환
소속: 서울대학교 전기컴퓨터공학부

FC2-2 11:00-11:20 **Open Source Cycle-Accurate System-Level Timing and Energy Simulator**
저자: 박상용, 박재현, 서주은, 서재암, 장래혁
소속: 서울대학교 컴퓨터공학부

FC2-3 11:20-11:40 **Core-A 기반 제어용 MCU의 개발과 저온형 연료전지 제어에의 응용**
저자: 서주은, 서재암, 신동화, 김현진, 김병호, 장래혁
소속: 서울대학교 전기컴퓨터 공학부 내장형저전력시스템 연구실

FC2-4 11:40-12:00 **FPGA Implementation of a Full-Programmable GPU**
저자: 여동영, 박재규, 이보행, 이광엽
소속: 서경대학교 전자컴퓨터공학과

O. System LSI Design 분과

Room C (B101)

일 시 : 2월 26일(금) 13:00-14:20

세션명 : [FC3] Application-Specific Architecture

좌 장 : 박종선(고려대학교), 김진상(경희대학교)

FC3-1 13:00-13:20 **Routing-aware Application Mapping with Integer Linear Programming for Coarse-grained Reconfigurable Array Architecture**
저자: Ganghee Lee, Seokhyun Lee, and Kiyoung Choi
소속: School of Electrical Engineering and Computer Science, Seoul National University

FC3-2 13:20-13:40 **High Performance CORDIC Architecture Using Sign-Select Lookahead Approach**
저자: 이민우[1], 박종선[1,2]
소속: [1]고려대학교 전기전자전파공학과, [2]고려대학교 나노반도체 공학과

FC3-3 13:40-14:00 **HiBM 알고리즘을 이용한 고성능 BCH 복호기 설계**
저자: 조경진, 조경순
소속: 한국외국어대학교 전자정보공학부

FC3-4 14:00-14:20 **3차원 적층형 DRAM의 성능 향상을 위한 데이터 배치 기법**
저자: 이광준, 전민제, 정의영
소속: 연세대학교 전기전자공학부

I. MEMS & Sensors 분과

Room D (B102)

일 시 : 2월 26일(금) 09:00-10:20

세션명 : [FD1] Bio-MEMS

좌 장 : 권세진(KAIST), 공성호(경북대학교)

FD1-1 09:00-09:20 **MEMS-based Paraffin Tool Fabricated by Deep X-Ray Synchrotron Lithography, for Retracting Biopsied Tissues in Capsular Endoscope**

저자: 정효영[1,2], 구교인[1,3], 이상민[1,3], 반재원[1,3], 박호수[1,3], 홍석준[1,3], 방승민[4], 송시영[4], 조동일[1,2,3]

소속: [1]서울대학교 자동화시스템공동연구소, 서울대학교 반도체 공동연구소, [2]서울대학교 바이오엔지니어링 협동과정, [3]서울대학교 전기·컴퓨터공학부, [4]연세대학교 소화기내과

FD1-2 09:20-09:40 **PMMA Micro Pumping Tool Fabricated by Deep X-Ray Synchrotron Lithography, for Suctioning Gastro-intestinal Juice in Capsular Endoscope**

저자: 박호수[1,2], 구교인[1,2], 이상민[1,2], 반재원[1,2], 정효영[1,3], 홍석준[1,2], 조동일[1,2,3]

소속: [1]서울대학교 자동화시스템공동연구소, 서울대학교 반도체공동연구소, [2]서울대학교 전기·컴퓨터공학부, [3]서울대학교 바이오엔지니어링 협동과정

FD1-3 09:40-10:00 **Manipulation of Polydiacetylene Immobilized Beads using Dielectrophoresis (DEP)**

저자: Yeong Tai Seo[1], Bong-Hyun Jun[1,2], Jae-Hyoung Park[3], Yoon-Sik Lee[2], and Yong-Kwon Kim [1]

소속: [1]School of Electrical Engineering and Computer Science, Seoul National University, [2]School of Chemical and biological Engineering, Seoul National University, [3]School of Electronic and Electrical Engineering, Dankook University

FD1-4 10:00-10:20 **Photosensitive Biosensor Array Chips Not Having the Addressing Circuit**

저자: 안창근, 아칠성, 박찬우, 양종헌, 김안순, 김태엽, 성건용

소속: 한국전자통신연구원 BT융합연구부 바이오센서연구팀

I. MEMS & Sensors 분과

Room D (B102)

일 시 : 2월 26일(금) 10:40-12:00

세션명 : [FD2] Power MEMS/Micromechanics

좌 장 : 성건용(한국전자통신연구원), 김용권(서울대학교)

FD2-1 10:40-11:00 **MEMS-Based Microelectrodes Fabricated on Flexible Polymer, for *in vitro* Model of Supra-Choroidal Implantation in Retinal Prostheses**

저자: 구교인[1], 이상민[1], 반재원[1], 정효영[1], 박호수[1], 홍석준[1], 예장희[2], 류상백[3], 김경환[3], 구용숙[2], 조동일[2]
소속: [1]서울대학교 전기·컴퓨터공학부, 반도체공동연구소, 자동화시스템공동연구소, [2]충북대학교 의과대학 생리학교실, [3]연세대학교 의공학부

FD2-2 11:00-11:20 **Bulk Micromachined Electromagnetic Energy Harvester for Low Ambient Vibration**

저자: J. C. Park, D. H. Bang, and J. Y. Park
소속: Department of Electronic Engineering, Kwangwoon University

FD2-3 11:20-11:40 **금속 구조물에 적용 가능한 박막형 다결정 실리콘 게이지의 성능 평가 및 모델링**

저자: 김용대, 권세진
소속: 카이스트 항공우주공학과

FD2-4 11:40-12:00 **고온용 박막 크롬실리사이드 열전대의 제작 및 성능 평가**

저자: 박현철,김용대,권세진
소속: 한국과학기술원 항공우주공학과

C. Material Growth & Characterization 분과

Room E (B103)

일 시 : 2월 26일(금) 09:00-10:20

세션명 : [FE1] III-Nitride Growth

좌 장 : 조용훈(KAIST), 손철수(삼성LED)

FE1-1 09:00-09:20 **On Origin of Efficiency Droop of GaInN/GaN MQW Light-emitting Diodes and Its Possible Solution**

저자: Min-Ho Kim[1], Hun-Jae Chung[1], Cheolsoo Sone[1], Yongjo Park[1], and E. Fred Schubert[2]

소속: [1]Corporate R&D Institute, Samsung LED Co., Ltd., [2]Department of Electrical, Computer, and Systems Engineering, Rensselaer Polytechnic Institute

FE1-2 09:20-09:40 **Analysis of InGaN Cluster in InGaN/GaN Multi Quantum Wells (MQWs) using by STEM-HAADF and 3-D Atom Probe Tomography**

저자: 구길호[1], 남기범[3], 박찬경[1,2]

소속: [1]Department of Materials Science and Engineering, Pohang University of Science and Technology, [2]National Center for Nanomaterials and Technology, [3]Department of Characterization & Analysis, Seoul Opto Device Co., Ltd.

FE1-3 09:40-10:00 **Improvement of Structural Properties of a-Plane (11$\underline{2}$0) GaN Film Grown on r-Plane (1$\underline{1}$02) Sapphire Substrate**

저자: Yong Seok Lee[1], Tae Su Oh[2], Hyun Jeong[1], Jan Di Kim[1], Tae Hoon Seo[1], Hun Kim[1], Ah Hyun Park[1], Kang Jea Lee[1], Chang-Hee Hong[1], and Eun-Kyung Suh[1,2]

소속: [1]School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University, [2]Department of Nano Semiconductor and Display, Semiconductor Physics Research Center, Chonbuk National University

FE1-4 10:00-10:20 **Self-separated GaN Bulk Growth by HVPE**

저자: 오충석[1], 박기연[1], 이경하[1], 조용훈[2]

소속: [1](주)시스넥스, [2]한국과학기술원

C. Material Growth & Characterization 분과

Room E (B103)

일 시 : 2월 26일(금) 10:40-12:00

세션명 : [FE2] Material Characterization

좌 장 : 전민현(인제대학교), 김성복(한국전자통신연구원)

FE2-1 10:40-11:00 **Initial Growth Behavior of GaSb Thin Films on Si(001) and GaAs(001) Substrates: A Transmission Electron Microscopy Study**

저자: Y. H. Kim[1], Y. K. Noh[2], M. D. Kim[2], and J. E. Oh[3]
소속: [1]Korea Research Institute of Standards and Science, [2]Department of Physics, Chungnam National University, [3]Division of Electrical and Computer Engineering, Hanyang University

FE2-2 11:00-11:20 **2 Inch *a*-plane(11-20) 6H-SiC Crystal Grown by PVT Method from Small Rectangular Substrates**

저자: Im-Gyu Yeo[1], Hee-Beom Ryu[1], Woo-Sung Yang[1], Won-Jae Lee[1], Byoung-Chul Shin[1], and Shigehiro Nishino[2]
소속: [1]Electronic Ceramics Center (ECC), Department of Nano Technology, Dong-Eui University, [2]WideGap Materials Inc., Japan

FE2-3 11:20-11:40 **Characterization of $Si_{1-x}Ge_x$ Quantum Dot Grown by using RPCVD**

저자: T. S. Kim[1], H. D. Yang[2], H. K. Lee[2], Y-H. Kil[2], M. I. Shin[2], J. D. Kim[2], T. S. Jeong[1], S. H. Kim[4], S. Kang[3], C-J. Choi[2], and K-H. Shim[2]
소속: [1]Semiconductor Physics Research Center, Chonbuk National University, [2]School of Semiconductor and Chemical Engineering, Chonbuk National University, [3]Department of Physics, Chonbuk National University, [4]Electronics & Telecommunications Research Institute

FE2-4 11:40-12:00 **Spectroscopic Ellipsometry of InZnO/Ag/InZnO Thin Films Grown on Glass: Plasmon and Antireflection Effect**

저자: Hosuk Lee[1], Jun-Woo Park[1], Hosun Lee[1], Yong Seok Park[2], and Han-Ki Kim[2]
소속: [1]Department of Applied Physics, Kyung Hee University, [2]Department of Display Materials and Engineering, Kyung Hee University

G. Device & Process Modeling, Simulation and Reliability 분과

Room F (B108)

일 시 : 2월 26일(금) 09:00-10:20

세션명 : [FF1] Device Modeling and Simulation

좌 장 : 신민철(KAIST), 이상기(동부하이텍)

FF1-1 09:00-09:20 **Short Channel Effect on Cell-to-Cell Interference of NAND Flash Memory Devices**

저자: 최병용, 이세훈, 김민정, 성석강, 박민철, 이충호, 김건수, 최정달, 김기남

소속: 반도체 연구소 플래시 요소 기술 Lab., 삼성전자

FF1-2 09:20-09:40 **Improved 0.18μm Logic-Based Extended Drain NMOSFET for High-Performance Low-Power Applications**

저자: Yon-Sup Bahng (Pang), Junho Lee, Ilseok Han, Sungmo Gu, Mingyu Lim, Youngseok Kang, Sookjin Kwon, Youngju Kim, Leeyeun Hwang, Jung Lee, and Taejong Lee

소속: Corporate Engineering Device Infra Team and SMS Product Engineering, MagnaChip Semiconductor Ltd.

FF1-3 09:40-10:00 **Drain Bias Effect on Quasi-Ballistic Transport in Ultra-short Channel MOSFETs**

저자: Jaehong Lee, Yongmin Kwon, Junghwan Ji, Jong Ho Lee, Byung-Gook Park, and Hyungcheol Shin

소속: Nano Systems Institute, Inter-University Semiconductor Research Center and School of Electrical Engineering, Seoul National University

FF1-4 10:00-10:20 **Two-Dimensional Electrostatic Potential Model for Twin Silicon Nano Wire MOSFETs (TSNWFETs)**

저자: Yongmin Kwon, Jaehong Lee, Yeonsung Kang, Byung-Gook Park, and Hyungcheol Shin

소속: Inter-University Semiconductor Research Center and School of Electrical Engineering, Seoul National University

G. Device & Process Modeling, Simulation and Reliability 분과

Room F (B108)

일 시 : 2월 26일(금) 10:40-12:00

세션명 : [FF2] Trap Analysis and Reliability Modeling

좌 장 : 최재훈(하이닉스반도체), 황성보(매그나칩반도체)

FF2-1 10:40-11:00 Bias Temperature Instability Characteristics of HfO_2 and HfO_xN_y

저자: Hyung-Suk Jung[1,2], Hyo Kyeom Kim[1], Jeong Hwan Kim[1], Sang Young Lee[1], Joowhi Lee[1], Jung-Min Park[2], Weon-Hong Kim[2], Min-Woo Song[2], Nae-In Lee[2], and Cheol Seong Hwang[1]
소속: [1]Department of Material Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University, [2]System LSI Division, Samsung Electronics Co., Ltd.

FF2-2 11:00-11:20 Modeling of V_{th} Shift of Gate-all-around SONOS Flash Memory

저자: Junghwan Ji, Syed Atif Pervez, Byung-Gook Park, Jong Ho Lee, and Hyungcheol Shin
소속: Inter-University Semiconductor Research Center and School of Electrical Engineering and Computer Science, Seoul National University

FF2-3 11:20-11:40 The Effect of Program Saturation on Reliability in Scaled Interpoly Dielectric NAND Flash Cells

저자: 이세훈, 최병용, 박민철, 김민정, 성석강, 이충호, 김건수, 최정달, 김기남
소속: 삼성전자 반도체 연구소 플래시 요소기술 Laboratory

FF2-4 11:40-12:00 V_T Decay Mechanisms in SONOS Flash Memory Retention Mode Including Trapped Charge Redistribution Effect

저자: Doo-Hyun Kim, Gil Sung Lee, Jung Hoon Lee, Seongjae Cho, Jang-Gn Yun, Dong Hua Li, Yoon Kim, Se Hwan Park, Won Bo Shim, Wandong Kim, and Byung-Gook Park
소속: Inter-University Semiconductor Research Center and School of Electrical Engineering, Seoul National University

G. Device & Process Modeling, Simulation and Reliability 분과

Room F (B108)

일 시 : 2월 26일(금) 13:00-14:20

세션명 : [FF3] Device Characterization

좌 장 : 이성현(한국외국어대학교), 김동명(국민대학교)

FF3-1 13:00-13:20 **Characterization of Oxide Trap from Gate Leakage Current (I_g) RTN in n MOSFETs**

저자: Heung-Jae Cho, Sanghoon Lee, Younghwan Son, and Hyungcheol Shin
소속: Inter-University Semiconductor Research Center and School of Electrical Engineering, Seoul National University

FF3-2 13:20-13:40 **Subgap Density-of-States Extraction of Amorphous Indium-Gallium-Zinc-Oxide Thin Film Transistors by Using Multiple Frequency C-V Characteristics**

저자: Sangwon Lee, Sungwook Park, Sungchul Kim, Yongwoo Jeon, Dongsik Kong, Min-Kyung Bae, Hyun Kwang Jung, Yong Sik Kim, Dong Myong Kim, and Dae Hwan Kim
소속: School of Electrical Engineering, Kookmin University

FF3-3 13:40-14:00 **Characterization of the *C-V* Response of Amorphous Indium Gallium Zinc Oxide TFTs**

저자: Sangwon Lee, Yongwoo Jeon, Sungchul Kim, Min-Kyung Bae, Dongsik Kong, Yong sik Kim, Hyun Kwang Jung, Dong Myong Kim, and Dae Hwan Kim
소속: School of Electrical Engineering, Kookmin University

FF3-4 14:00-14:20 **Accurate Extraction of Gate Capacitances in Leaky MOS Systems Using Modified 3-Element Circuit Model Combining the Multi-Frequency Capacitance-Voltage Method**

저자: S. C. Baek, S. W. Park, H. Y. Bae, J. M. Jang, J. E. Lee, S. Y. Lee, H. R. Jang, H. J. Kim, D. Y. Yun, J. S. Shin, D. H. Kim, and D. M. Kim
소속: School of Electrical Engineering, Kookmin University

EXCO 지하 1F Lobby

일 시 : 2월 26일(금) 09:00-14:20

세션명 : [FP1] Poster Session III

C. Material Growth & Characterization 분과

FP1-1 Electrical Characteristics of TiO_2 Thin Film Deposited by RF Magnetron Sputtering System

저자: 정호용[1,3], 배병주[1], 오상철[2], 홍성훈[1], 김수길[3], 이헌[1,2]
소속: [1]고려대학교 신소재공학과, [2]고려대학교 나노반도체공학과, [3]㈜하이닉스반도체

FP1-2 Growth and Characterization of Hexagonal and Cubic InN Nanowires for Different Growth Temperatures Using MOCVD

저자: Seok-Hyo Yun, Yong-Ho Ra, Ki-Young Song, Young-Min Lee, Seong-Muk Jeong, Dong-Wook Kim, N. J. Suthan Kissinger, In-Hwan Lee, and Cheul-Ro Lee
소속: School of Advanced Materials Engineering, Research Center Advanced Materials Development (RCAMD), Chonbuk National University

FP1-3 Synthesis and Characteristic of Si Nanowires with Sub < 5 nm

저자: Yong-Hee Park, Myoung-Ha Kim, Il-Soo Kim, Ryong Ha, and Heon-Jin Choi
소속: Department of Materials Science and Engineering, Yonsei University

FP1-4 The Study of Characteristics of n-ZnO:In/p-Si (111) Heterojunction Diode with Various In Composition

저자: 장보라[1], 이주영[1], 이종훈[1], 김홍승[1], 장낙원[2], 배기열[3], 이원재[3]
소속: [1]한국해양대학교 나노반도체 공학과, [2]한국해양대학교 전기전자공학과, [3] 동의대학교 나노공학과

FP1-5 Low Temperature Silicon Oxynitridation using the Hyperthermal Neutral Beam (HNB)

저자: J. S. Kim[1,2], D. C. Kim[1], B. J. Lee[1], S. J. Yoo[1], H. J. Son[3], and Y. C. Park[3]
소속: [1] National Fusion Research Institute, [2] Department of Physics, Hanyang University, [3]Department of Information Technology, Handong Global University

FP1-6 Stability and Hopping Conduction of Ga:N Co-Doped ZnO Thin Films by Various Nitrogen Implantation

저자: J. H. Kim[1], S. S. Lee[1], Y. S. Kim[2], J. S. Lee[3], and K. S. An[1]
소속: [1]Device Materials Research Center, Korea Research Institute of Chemical Technology, [2]Advanced Materials Process of Information Technology, Sungkyunkwan University, [3]Proton Engineering Frontier Project, Korea Atomic Research Institute

FP1-7 Physical Properties and Crystallization Process Characterization of Nitrogen

Doped $Ge_1Sb_4Te_7$ Ternary Compounds
저자: Hyung Keun Kim, Nam Hee Kim, and Doo jin Choi
소속: Department of Material Science and Engineering, Yonsei University

FP1-8 **MBE 성장 GaP/InP 단주기 초격자에 의한 측면 조성 변조 구조와 성장 온도 및 5족 원소 분압에 의한 광학적 특성 변화 분석**
저자: 박광욱[1], 박창영[1], 정연길[2], 이용탁[1]
소속: [1]광주과학기술원 정보통신공학과, [2]광주과학기술원 솔라에너지연구소

FP1-9 **KOH 수용액을 이용한 AlN 완충층 두께에 따른 GaN Polarity 변화 관찰**
저자: 한서희[1], 손철구[1], 이상태[1], 박병권[1], 유진아[1], 김기섭[1], 김문덕[1], 김송강[2], 오재응[3], 김영헌[4]
소속: [1]충남대학교 물리학과, [2]중부대학교 정보 통신학과, [3]한양대학교 전기전자제어계측공학과, [4]한국 표준 과학 연구원 나노소재측정

FP1-10 **전자선증착법 형성 MgO micro-facet 의 형성 기구**
저자: 유학기, 이종람
소속: Graduate Institute of Advanced Materials Science and Department of Materials Science and Engineering, Pohang University of Science and Technology

FP1-11 **Antimony Surfactant Effect on Green Emission InGaN/GaN Multi Quantum Wells Grown by MOCVD**
저자: Karthikeyan Giri Sadasivam[1], Kwang Sun Baek[1], Jong-In Shim[2], and June Key Lee[1]
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FP1-12 **4H-SiC Epitaxial Growth on 4° off Axis Substrate Using BTMSM**
저자: Han Seok Seo[1], Wook Bhang[2], Jeong Hyun Moon[1], Jeong Hyuk Yim[1], and Hyeong Joon Kim[1]
소속: [1]School of Materials Science and Engineering, Seoul National University, [2]Center for Energy Efficient Semiconductors, Korea Electrotechnology Research Institute

E. Compound Semiconductors 분과

FP1-13 **Balanced Photoreceiver for QPSK Coherent Detection**
저자: 최중선[1], 김기수[1], 최광성[1], 윤천주[1], 김종회[1], 권용환[1], 남은수[1], S. Chandrasekhar[2], X. Liu[2], R. Tkach[2]
소속: [1]한국전자통신연구원 융합부품·소재 연구부문, [2]Alcatel-Lucent Bell Laboratories

FP1-14 **ESD Protection for GaN-Based LEDs Using a Novel TVS Zener Diode**
저자: S. S. Choi[1], D.H. Cho[1], C.J. Choi[2], J.Y. Kim[2], G.M. Yang[2], J.W. Yang[2], and K. H. Shim[2]
소속: [1]R&D Division, Sigetronics Inc., [2]Semiconductor Physics Research Center, Department of Semiconductor Science and Technology, Chonbuk National University

FP1-15 **나노 크기 물질을 도입한 고효율의 청색 발광 다이오드**
저자: 정세연, 전준우, 박성한, 성태연
소속: 고려대학교 신소재공학과

FP1-16 **Salvation of GaN-based LEDs from Dangerous Electrical and Thermal Shocks using a Novel Bidirectional TVS Zener Diode**
저자: S. S. Choi[1], M.R Jeong[2], R.J. Moon[2], D.H. Cho[1], C.J. Choi[2], J.Y. Kim[2], J.W. Yang[2], and K. H. Shim[2]
소속: [1]R&D Division, Sigetronics Inc., [2]Semiconductor Physics Research Center, Department of Semiconductor Science and Technology, Chonbuk National University

FP1-17 **K/Ka/Q-Band 4-Bit Digital Attenuator Using a T-type Resistive Network**
저자: Jung Gil Yang and Kyounghoon Yang
소속: Department of Electrical Engineering, KAIST

FP1-18 **Suppressing the Ambipolar Behavior of Multi-layer Graphene FET by using High Work Function Source/Drain**
저자: M. H. Jung and M. Suemitsu
소속: Research Institute of Electrical Communication, Tohoku University

FP1-19 **Comparison of InGaN-based LEDs Grown on Conventional Sapphire and Cone Shape Patterned Sapphire Substrate**
저자: 이재훈, 서승범, 김권철, 이동율, 강중서, 정용희, 고덕길, 나채현, 정명구, 김동준, 고종만, 석종욱
소속: Manufacturing Technology Group, Samsung LED Co., Ltd.

FP1-20 **Growth and Characterization of InGaN-Based Blue Light Emitting Diodes Grown on Selectively Wet-Etched Porous GaN with Various Pore Sizes**
저자: Seol Beck, Isnaeni, and Yong-Hoon Cho
소속: Department of Physics and Graduate School of Nanoscience & Technology, KAIST

FP1-21 **High Breakdown Voltage AlGaN/GaN HEMTs Employing Recessed Gate Edge Structure**
저자: 김민기, 최영환, 임지용, 김영실, 석오균, 한민구
소속: 서울대학교 전기 컴퓨터공학부

FP1-22 **Fabrication of Blue LED Chip on Patterned Sapphire Substrate Packaged with Different Reflector Cup Angles**
저자: Seong-Muk Jeong[1], Suthan Kissinger[1], Yong-Ho Ra[1] , Seok-Hyo Yun[1] , Hong-Chul Lim[1], Dong-Wook Kim[1], Seung Jae Lee[2], Jin-Soo Kim[1], In-Hwan Lee[1], and Cheul-Ro Lee [1]
소속: [1]School of Advanced Materials Engineering, Research Center Advanced Materials Development (RCAMD), Chonbuk National University, [2]Korea Photonics Technology Institute

FP1-23 **Development of Self-Aligned RTDs Using a SiN_X Sidewall Process**
저자: Hoyeon Lee, Jongwon Lee, and Kyounghoon Yang
소속: Department of Electrical Engineering, KAIST

FP1-24 **High Performance in Normally-off Operation of GaN MOSFET based on**

AlGaN/GaN Heterostructure with p-GaN Buffer Layer
저자: D. S. Kim[1], J. B. Ha[1], S. N. Kim[1], J. S. Lee[1], K. W. Kim[1], K. S. Im[1], E. H. Kwak[1], S. G. Lee[2], and J. H. Lee[1]
소속: [1]School of Electrical Engineering and Computer Science, Kyungpook National University, [2]Department of Sensor and Display Engineering, Kyungpook National University

FP1-25 Optical Polarization Properties of InGaN/GaN Light-Emitting Diodes with Nonpolar Orientation
저자: H. Song[1,2], J. S. Kim[1], E. K. Kim[1], S.-H. Lee[2], J. B. Kim[2], J.-S. Son[2], and S.-M. Hwang[2]
소속: [1]Quantum-Function Spinics Lab., Department of Physics, Hanyang University, [2]Green Energy Research Center, Korea Electronics Technology Institute

FP1-26 Nanoporous 구조를 갖는 ITO 투명전도막을 이용한 질화물 발광소자의 광 추출 향상 연구
저자: 강지혜, 김형구, 유재형, 김현규, 김희윤, 한남, 이미소, 홍창희
소속: 전북대학교 반도체화학공학부, 반도체물성연구소

G. Device & Process Modeling, Simulation and Reliability 분과

FP1-27 3D Simulation of NBTI in pMOSFET's Including Discrete Interface and Oxide Traps Generation
저자: Seong Wook Choi[1], Chang-Ki Baek[2], Sooyoung Park[1], and Young June Park[1]
소속: [1]School of Electrical Engineering and Computer Science, Seoul National University, [2]School of Computational Sciences, Korea Institute for Advanced Study

FP1-28 Effect of Nitrogen on Random Telegraph Signal Noise of Plasma Nitrided Gate Oxide in Nano-Scale CMOSFET
저자: I. S. Han[1], H. M. Kwon[1], M. K. Na[1], B. S. Park[1], S. W. Park[1], J. D. Bok[1], K. I. Choi[1], D. H. Nam[1], J. G. Park[1], H. H. Ji[2], G. W. Lee[1], and H. D. Lee[1]
소속: [1]Department of Electronics Engineering, Chungnam National University, [2]MagnaChip Semiconductor Ltd.

FP1-29 A Surface Potential Model for Recessed Channel MOSFETs in Strong Inversion
저자: Yeonsung Kang, Younghwan Son, Jaeho Lee, Heesang Kim, Byung-Gook Park, Jong-Ho Lee, and Hyungcheol Shin
소속: Inter-University Semiconductor Research Center and School of Electrical Engineering, Seoul National University

FP1-30 Investigation of Capture and Emission Process Dependency between Individual Traps from Complex RTS Noise
저자: Younghwan Son, Taewook Kang, Sunyoung Park, Byung-Gook Park, Jong-Ho Lee, and Hyungcheol Shin
소속: Inter-university Semiconductor Research Center and School of Electrical Engineering, Seoul National University

FP1-31 DD Based Modeling of Mobility by Discrete Charges in Scaled MOSFETs
저자: 박수영[1], 백창기[2], 최성욱[1], 박영준[1]
소속: [1]서울대학교 전기컴퓨터 공학부, [2]고등과학원 계산과학부

FP1-32 MC-50 싸이클로트론을 이용한 SRAM 의 Single Event Upset 특성 분석
저자: 권순규[1], 최현석[1], 박종강[1], 김종태[1], 채종서[1], 홍승우[2]
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FP1-33 Impact of Deuterium Ion Implantation on Gate Oxide Integrity
저자: J.-S Lee[1], J.-Kon Lee[2], H.-Y. Cha[2], Y.-H Seo[3], S.-W. Do[3], and Y.-H. Lee[3]
소속: [1]Division of Information and Communications Engineering, Uiduk University, [2]Magnachip Semiconductor Inc., [3]School of Electrical Engineering and Computer Science, Kyungpook National University

FP1-34 Simplified Analytic Model for the Scaling Limit of Nano Electro Mechanical Switch Devices
저자: H. J. Hwang[1], S. K. Lim[1], S. Y. Lee[1], C. H. Cho[1], and B. H. Lee[1,2]
소속: [1]Department of Material Science and Engineering, Gwangju Institute of Science and Technology, [2]Department of Nanobio Materials and Electronics, Gwangju Institute of Science and Technology

FP1-35 Temporal and Spectral Variation of Gain and Phase Recovery in Quantum-Dot Semiconductor Optical Amplifiers
저자: Jungho Kim
소속: Department of Information Display, Kyung Hee University

FP1-36 Electrical Stress-Induced Instability of Amorphous InGaZnO Thin-Film Transistors under Bipolar AC Stress
저자: Dongsik Kong, Sangwon Lee, Yong woo Jeon, Sungchul Kim, Yongsik Kim, Hyunkwang Jung, Minkyung Bae, Dong Myong Kim, and Dae Hwan Kim
소속: School of Electrical Engineering, Kookmin University

FP1-37 A Physical Parameter Based on DC I-V Numerical Model of Amorphous InGaZnO Thin Film Transistors
저자: Yong Woo Jeon, Sangwon Lee, Sungchul Kim, Hyunkwang Jung, Dongsik Kong, Yongsik Kim, Minkyung Bae, Dong Myong Kim, and Dae Hwan Kim
소속: School of Electrical Engineering, Kookmin University

FP1-38 Accurate Extraction of High-Temperature Dependent Electron Mobility in MOSFETs Using Improved RF Method
저자: Bonghyuk Ko, Daehyoun Jung, and Seonghearn Lee
소속: Department of Electronic Engineering, Hankuk University of Foreign Studies

H. Display and Imaging Technologies 분과

FP1-39 Hysteresis Suppression Improvement of Polycrystalline Silicon Thin-Film Transistors by Two-Step Hydrogenation

저자: I.-S. Kang,[1], Y.-S. Kim,[2] H.-S. Seo,[1] C. W. Ahn,[1,2] J.-M. Yang,[1,2], and W.-J. Hwang[1,2]
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FP1-40 **Amorphous IGZO Semiconductor Thin Film Transistors Fabricated by DC Magnetron Sputtering at Room Temperature**

저자: Woong-Sun Kim, Yeon-Keon Moon, Sih Lee, Byung-Woo Kang, Kyung-Taek Kim, and Jong-Wan Park
소속: Department of Materials Science and Engineering, Hanyang University

FP1-41 **Emission Color Tuning of Organic Light-Emitting Diodes by Adjusting the Number of Ligand in Heteroleptic Iridium(III) Complex**

저자: Ji Hyun Seo, In June Kim, Young Kwan Kim, and Young Sik Kim
소속: Information Display, Hongik University

FP1-42 **Influence of Surface Properties of Gate Insulator on Pentacene Growth and Organic Field-Effect Transistor Characteristics**

저자: J. Park, J.-H. Bae, W.-H. Kim, M.-H. Kim, C.-M. Keum, and S.-D. Lee
소속: School of Electrical Engineering, Seoul National University

FP1-43 **Mobility Enhancement in Solution-Processed Organic Thin-Film Transistors by Temperature Gradient-Assisted Solvent Evaporation**

저자: Changmin Keum, Jin-Hyuk Bae, Won-Ho Kim, Min-Hoi Kim, Jaehoon Park, and Sin-Doo Lee
소속: School of Electrical Engineering and Computer Science, Seoul National University

FP1-44 **Dynamic Range Enhancement of a Self-adaptive APS with Pulsed Photogate Bias**

저자: Cheongryong Cho, Jiwon Lee, Inkyu Baek, and Kyounghoon Yang
소속: Division of Electrical Engineering, School of Electrical Engineering and Computer Science, KAIST

FP1-45 **Low Noise Scan Driver Circuit Using Transparent Thin Film Transistors**

저자: 정순오[1], 홍석인[1], 황동훈[1], 박상희[2], 권오경[1]
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FP1-46 **잡음감쇄회로에 Charge Pump 원리를 이용한 CMOS Image Sensor의 동작 범위 확장**

저자: 조성현[1], 공재성[1], 이수연[2], 최경화[2], 서상호[1] 신장규[1]
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I. MEMS & Sensors 분과

FP1-47 **Detection of Deoxynivalenol Using MOSFET-based Biosensor**

저자: Byounghyun Lim[1], Young-Sam Choi[1], Hee-Ho Lee[1], Insu Kwon[2], Jang-Kyoo Shin[1], Sang-Ho Seo[1], Sung-Wook Choi[3], and Hyang Sook Chun[3]

소속: [1]School of Electrial Engineering and Computer Science, Kyungpook National University [2]Department of Sensor and Display Engineering, Kyungpook National University, [3]Korea Food Research Institute

FP1-48 A Convection-Based Acceleration and Inclination Sensor

저자: 정대웅, 김삼환, 최주찬, 공성호
소속: 경북대학교 전자전기컴퓨터학부

FP1-49 Touch Mode Capacitive Pressure Sensor for Dynamic Bladder Monitoring System

저자: 김종현, 이승준, 박길수, 최범규
소속: 서강대학교 기계공학과

FP1-50 Smart Capacitive Humidity Sensor and Readout IC with Full Digital Output for USN

저자: J. H. Kim[1], S. M. Hong[2], Y. C. Jo[2], B. M. Moon[1], and K. N. Kim[2]
소속: [1]Department of Electrical Engineering, Korea University, [2]Korea Electronics Technology Institute

FP1-51 Compact Dissolved Oxygen Sensor with Highly Catalytic Nanoporous Platinum Electrode for Bio/Environment Applications

저자: Y. J. Lee, J. D. Kim, and J. Y. Park
소속: Department of Electronic Engineering, Kwangwoon University

FP1-52 Decoupled Vibratory Microgyroscope with Trident Type Springs Fabricated by the Selective Silicon-On-Insulator (SSOI) Process

저자: J. Park, B. Choi, S. M. Lee, and D.-I. Cho
소속: ISRC/ASRI, School of Electrical Engineering and Computer Sciences, Seoul National University

FP1-53 Gas Sensing Behavior of SnO_2 Nanowires and Nanoparticle on the Micro Heater

저자: I. S. Hwang[1], Eui-Bok Lee[3], S. J. Kim[1], J. K. Choi[1], J. H. Cha[4], H. J. Lee[4], Byeong-Kwon Ju[3], and J. H. Lee[1,2]
소속: [1]Department of Materials Science and Engineering, Korea University, [2]Department of Nano Semiconductor Engineering, Korea University, [3]Display & Nanosystem Lab., College of Engineering, Korea University, [4]Seju Engineering Co., Ltd.

FP1-55 다층 그라핀을 이용한 고감도 CO_2 가스 센서

저자: 양진호[1], 윤현중[2], 양상식[1]
소속: [1]아주대학교 전자공학부, [2]Wayne State University 전자공학과

FP1-56 Control of Threshold Voltage Variation on Floating Gate Immerse in Electrolyte

저자: 권혁춘[1], 염세혁[1], Yuan Heng[1], 권대혁[2], 강신원[1]
소속: [1]경북대학교 전자전기컴퓨터학부 광전자 기능성 소자 연구실,
[2]경일대학교 전자정보통신공학과

FP1-57 MWCNT 복합재료를 이용한 촉각센서용 Pressure Variable Resistor 제작

저자: 최병섭[1,2], 이강열[1], 김원효[1], 박광범[1], 박정호[2], 주병권[2], 김건년[1]
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N. VLSI CAD 분과

FP1-58 Synthesis of Nonvolatile Magnetologic Block Using MTJ-based Logic Modules
저자: 박연희, 이승준, 신형순
소속: 이화여자대학교 공과대학 전자공학과

O. System LSI Design 분과

FP1-59 Processor-Based SoC Architecture for Flexible Multimedia Data Processing
저자: Ik-Jae Chun, Chun-Gi Lyuh, Jung-Hee Suk, Se-Wan Heo, Tae Moon Roh, and Jongdae Kim
소속: Electronics and Telecommunications Research Institute

FP1-60 1080p HD급 하이 프로파일 H.264/AVC에 적합한 고속 움직임 탐색기의 실시간 구현
저자: 이석호, 박종원
소속: 한국전자통신연구원 시스템반도체연구부