M. RF Design 분과

Room A
창의관 (106)

일시: 2월 16일(목) 09:30-11:00
세션명: [TA1-M] Si-Based mm-Wave and Optoelectronic Circuits
좌장: 왕성호(RadioPulse), 이재성(고려대학교)

TA1-M-1 09:30-10:00 [Invited] A BiCMOS T/R Module for Phased Array Applications
저자: Byung-Wook Min
소속: School of Electrical and Electronic Engineering, Yonsei University

TA1-M-2 10:00-10:30 [Invited] Phased-array Transceiver Chipsets for 60-GHz Communications
저자: Dong Gun Kam
소속: Department of Electronics Engineering, Ajou University

TA1-M-3 10:30-10:45 애벌런치 광 검출기를 사용한 10 Gb/s CMOS 집적 광 수신기
저자: 윤진성, 이명재, 박강엽, 최우영
소속: 연세대학교 전기전자공학과

TA1-M-4 10:45-11:00 60GHz 광섬유-무선 다운링크를 위한 SiGe BiCMOS 집적화된 광-밀리미터파 변환기
저자: 고민수, 이정민, 윤진성, 이명재, 최우영
소속: 연세대학교 전기전자공학과
P. Device for Energy  분과

Room B
창의관 (110)

일 시 : 2월 16일(목) 09:30-11:00
세션명 : [TB1-P] Photovoltaics
좌 장 : 명재민(연세대학교), 인수강(삼성전자)

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TB1-P-1 09:30-10:00  
[Invited] Novel Interdigitated Front Contact Architecture to Overcome the Theoretical Efficiency Limit of Crystalline Si Solar Cells
저자: Yun Gi Kim and Hyuk Chang
소속: Energy Lab, Samsung Advanced Institute of Technology, Samsung Electronics Co., Ltd.

TB1-P-2 10:00-10:15  
Nanoscale Photovoltaics in Small Band Gap Oxides
소속: Department of Materials Science and Engineering, Pohang University of Science and Technology

TB1-P-3 10:15-10:30  
Development of Light Induced Degradation Free Nano Crystal Embedded Amorphous Silicon Thin Film by Neutral Beam Assisted CVD Process at Room Temperature
저자: Jin Nyoung Jang¹, Dong Hyeok Lee¹, Hyun Wook So¹, Suk Jae Yoo², Bonju Lee², and MunPyo Hong¹
소속: ¹Deptment of Display and Semiconductor Physics, Korea University, ²National Fusion Research Institute

TB1-P-4 10:30-10:45  
MgO Coated TiO₂ Binding with (CdSe)ZnS Quantum Dot for High Efficiency Solar Cells
저자: M.-H. Jung¹, M. G. Kang¹, and Moo-Jung Chu²
소속: ¹Thin Film Solar Cell Technology Research Team, Electronics and Telecommunications Research Institute, ²Package Research Team, Advanced Solar Technology Research Department, Convergence Components and Materials Research Laboratory, Electronics and Telecommunications Research Institute
마이크로 블라스터와 RIE 공정을 이용한 태양전지용 재생 웨이퍼 제작
저자: 전성찬1, 오정화1, 정동건1, 공대영1, 조찬섭2, 김봉환3, 이종현1
소속: 1경북대학교 전자전기컴퓨터학부,
2경북대학교 산업전자전기공학부,
3대구카톨릭대학교 전자공학과
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<tr>
<td>TC1-L-1</td>
<td>09:30-10:00</td>
<td>[Invited] 45nm CMOS 공정기술에 최적화된 회로설계기반의 12비트 100MS/s 0.43mm² 저전력 파이프라인 ADC</td>
<td>Hwang Donghyun, Goo Byungwoo, An Tae, Park Junshang, Yi Seungsoon</td>
<td>Sogang University  전자공학과</td>
</tr>
<tr>
<td>TC1-L-2</td>
<td>10:00-10:15</td>
<td>A 6-bit 1.25 GS/s Subranging ADC with Self-calibration</td>
<td>Bong Chan Kim, Yi-Gyeong Kim, Min-Hyung Cho, Tae Moon Roh, and Jong-Kee Kwon</td>
<td>Electronics and Telecommunications Research Institute</td>
</tr>
<tr>
<td>TC1-L-3</td>
<td>10:15-10:30</td>
<td>Two-step Single-slope ADC를 이용한 고속 CMOS 이미지센서의 설계</td>
<td>Kim Jongtae, Kim Daeun, Song Min gui</td>
<td>Dongguk University  반도체학과</td>
</tr>
<tr>
<td>TC1-L-4</td>
<td>10:30-10:45</td>
<td>100MHz-1.6GHz Wide Lock Range를 위한 Fully Self-biased Phase Locked Loop</td>
<td>Shin Jongchul, Kim Youngju, Kim Jiheon, Choi Joonki, Kang Jungho</td>
<td>Hynix Semiconductor Inc., 선행설계팀</td>
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<tr>
<td>TC1-L-5</td>
<td>10:45-11:00</td>
<td>A MPPT Control for Energy Harvesting with Adaptive DC-DC Conversion</td>
<td>Hwang Seohwan, Yang Ilseok, Lee Sang-gun, Kwon Jongki, Kim Jongdae</td>
<td>Korea Electronics and Telecommunications Research Institute</td>
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H. Display and Imaging Technologies

Room D
창의관 (117)

일 시 : 2월 16일(목) 09:30-11:00
세션명 : [TD1-H] Organic TFT
좌 장 : 홍문표(고려대학교)

TD1-H-1 09:30-10:00 [Invited]Low Temperature Fabricated Solution–processed Transistors and Circuits for Flexible Electronics
저자: Sung Kyu Park
소속: School of Electrical and Electronics Engineering, College of Engineering, Chung-Ang University

TD1-H-2 10:00-10:30 [Invited]Polymer–coupled Oxide Dielectrics for Multipurpose Organic Electronic Applications
저자: M. Jang and H. Yang
소속: Department of Advanced Fiber Engineering, Inha University

TD1-H-3 10:30-10:45 Characterization of Density–of–states in Polymer–based Organic Thin Film Transistors and Implementation into TCAD Simulator
저자: Jaehyeong Kim, Jaeman Jang, Minkyung Bae, Woojoon Kim, Inseok Hur, Yongsik Kim, Hyunkwang Jeong, Dongsik Kong, Jaewook Lee, Yun Hyeok Kim, Sungwoo Jun, Choon Hyeong Jo, Dong Myong Kim, and Dae Hwan Kim
소속: School of Electrical Engineering, Kookmin University

TD1-H-4 10:45-11:00 Role of High Vacuum Seasoning in All Solution–processed Organic Thin–film Transistors with Poly 4–vinyl Phenol (PVP) as Organic Gate Dielectric
저자: DongWoo Kim¹, HyoungJin Kim¹, Yong Uk Lee², and MunPyo Hong¹
소속: ¹Department of Display and Semiconductor Physics, Korea University, ²The Printable Electronics Technology Centre, NETPark
E. Compound Semiconductors

Room E

창의관 (B113)

일시: 2월 16일(목) 09:30-11:00

세션명: [TE1-E] Various Compound Semiconductors I

좌장: 심규환(전북대학교)

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TE1-E-1 09:30-10:00 [Invited] Nanostructures for Enhanced Light Extraction Efficiency in Vertical InGaN/GaN Light-emitting Diodes
저자: Jun Ho Son¹, Jeong Min Baik², and Jong-Lam Lee¹
소속: ¹Department of Materials Science and Engineering, Division of Advance Materials Science, Pohang University of Science and Technology, ²School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology

TE1-E-2 10:00-10:30 [Invited] 고출력 초격자 양자계단레이저의 소자특성 및 열적 분석
저자: 유재수
소속: 경희대학교 전자전파공학과

TE1-E-3 10:30-10:45 Fabrication of Near Infrared Planar Geiger-mode Avalanche Photodiodes using a Single Diffusion Process
저자: Kiwon Lee and Kyunghoon Yang
소속: Department of Electrical Engineering, KAIST

TE1-E-4 10:45-11:00 Properties of Nonpolar Si–doped a–plane (11–20)GaN Structures Inserted SiNₓ Interlayer with Different Deposition Conditions
저자: Ji Hoon Kim¹, Jung Ho Park¹, Kwang Hyeon Baik², Yong Gon Seo², and Sung–Min Hwang²
소속: ¹Department of Electronics and Electrical Engineering, Korea University, ²Compound Semiconductor Devices Research Center, Korea Electronics Technology Institute
D. Thin Film Process Technology  

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<tr>
<td>TF1-D-1</td>
<td>09:30-10:00</td>
<td>Development of Organic Field Effect Transistors for Nonvolatile Flexible Memory</td>
<td>Kang-Jun Baeg and Yong-Young Noh</td>
<td>Department of Chemical Engineering, Hanbat National University</td>
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<tr>
<td>TF1-D-2</td>
<td>10:00-10:15</td>
<td>Property Analysis of Zinc Tin Oxide Thin Film Grown by Atomic Layer Deposition Process</td>
<td>Un Ki Kim, Yoon Jang Chung, Byoung Keon Park, Eric Hwang, Min Hyuk Park, Taeyong Eom, Cheol Seong Hwang</td>
<td>WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter-University Semiconductor Research Center, Seoul National University</td>
</tr>
<tr>
<td>TF1-D-3</td>
<td>10:15-10:30</td>
<td>Amorphous Indium Gallium Zinc Oxide Thin Film Transistors on the Polyethersulfone Substrate Employing the Parylene-C</td>
<td>Seongpil Chang, Jung Ho Park, Shin Woo Jeong, Tae-Yeon Oh, Jong Woo Kim, Byeong-Kwon Ju</td>
<td>Department of Electrical Engineering, Korea University</td>
</tr>
<tr>
<td>TF1-D-4</td>
<td>10:30-10:45</td>
<td>Fabrication of Organic Thin Film Transistor using Inkjet-printed Silver Gate Electrode on Substrate with Different Temperature</td>
<td>Jon-Ho Jeun¹, Jung-Min Kim¹, Dong-Hoon Lee¹, Yong-Sang Kim¹²</td>
<td>¹Department of Nano Science &amp; Engineering, Myongji University, ²Department of Electrical Engineering, Myongji University</td>
</tr>
</tbody>
</table>
Degradation Mechanism of Poly-Si TFT under Hot-carrier Stress and Positive Bias Stress

저자: Jun-Suk Chang¹, Tae-Young Jang¹, Dong-Hyoub Kim¹, Jung-woo Kim¹, Musarrat Hasan¹, Cuong Nguyen Manh¹, Hoi-chang Yang¹, Jae-Kyeong Jeong¹, Bio Kim², Jae-young Ahn², Ki-hyun Hwang², and Rino Choi¹

소속: ¹Inha University, ²Process Development P/J2, Semiconductor R&D Center, Samsung Electronics Co., Ltd.
F. Silicon Device and Integration Technology

Room G
hana square (B112)

일시: 2월 16일(목) 09:30-11:00
세션명: [TG1-F] Device Technology for Advanced Materials and Devices
좌장: 양지운(고려대학), 이충호(삼성전자)

TG1-F-1 09:30-09:45 
Investigation of Logic Circuit with Vertical Type Single-electron Transistor
저자: Kyung-Wan Kim, Jung Han Lee, Kwon-Chil Kang, and Byung-Gook Park
소속: Inter-University Semiconductor Research Center (ISRC), and School of Electrical Engineering and Computer Science, Seoul National University

TG1-F-2 09:45-10:00
Study of PMOS Poly Depletion Effect at Metal/Poly-SiGe Gate
저자: 김태윤, 조흥재, 백건훈, 황의성, 김춘환, 홍권, 강효상
소속: Memory R&D Division, Hynix Semiconductor Inc.

TG1-F-3 10:00-10:15
A 600 V Trench Gate MOSFET with Charge Sheet Super Junction (CSSJ)
저자: 백상원1, 조동환2, 최보식2, 이호준1, 이준영1, 박현진2, 이정수1,2
소속: 1Pohang University of Science and Technology 전자전기공학과, 2Pohang University of Science and Technology 정보전자융합공학부

TG1-F-4 10:15-10:30
저자: 오름1, 성만영2
소속: 1삼성전자 DRAM 설계팀, 2고려대학교 전기전자전과공학과

TG1-F-5 10:30-10:45
A Simple and accurate Modeling of Non-rectilinear Gate Shape with Trapezoidal Approximation
저자: M. H. Ryu and Y. M. Kim
소속: School of Electrical and Computer Engineering, UNIST
A. Interconnect & Package  분과

Room H

하나스퀘어 (B115)

일 시 : 2월 16일(목) 09:30-11:00
세션명 : [TH1-A] 구리 배선 기술
좌 장 : 김형준(연세대학교), 박주상(연세대학교)

TH1–A–1 09:30–10:00  [Invited]Development of a Diffusion Barrier Layer for Advanced Technology Node of Silicon Devices
저자: J. Koike
소속: Department of Materials Science, Tohoku University

TH1–A–2 10:00–10:15 Conformal Cu Seed Layer Formation by Electroless Deposition in High Aspect Ratio of Non–bosh Through Silicon Vias
저자: Kyung Ju Park, Myung Jun Kim, Taeho Lim, Hyo–Chol Koo, and Jae Jeong Kim
소속: School of Chemical and Biological Engineering, Seoul National University

저자: Jae Jeong Kim
소속: School of Chemical and Biological Engineering, College of Engineering, Seoul National University
M. RF Design

Room A
창의관 (106)

일 시 : 2월 16일(목) 11:20-12:35
세션명 : [TA2-M] CMOS RF Device and Circuit Solutions
좌 장 : 박준배(GCT 세미컨덕터), 남일구(부산대학교)

TA2-M-1 11:20-11:50  [Invited]Ultra-wideband Design Methodology of CMOS Phase-locked Loops and Voltage-controlled Oscillators
저자: Jae Joon Kim
소속: School of Electrical & Computer Engineering, Ulsan Institute of Science and Technology

TA2-M-2 11:50-12:05  A Capacitive Loaded Low Noise Amplifier for Simultaneous Input Impedance and Minimum Noise Matching
저자: Bum-Kyum Kim1, Donggu Im1, and Kwyro Lee1,2
소속: 1Department of Electrical Engineering, KAIST, 2National NanoFab Center

TA2-M-3 12:05-12:20  DC SOI MOSFET Device Characterization and Optimization Method for Rapid Evaluation of RF Switch Power Handling Capability
저자: Donggu Im1, Ilhyun Choi2, Bum-Kyum Kim1, Hee-Kyung Bae2, Byong-Joo Lee2, and Kwyro Lee1,2
소속: 1Department of Electrical Engineering and Computer Science, KAIST, 2National NanoFab Center

TA2-M-4 12:20-12:35  MOSFET Device Originated Harmonic Distortion Analysis and Optimum Design Methodology for SOI SPDT RF Switch
저자: Donggu Im1, Bum-Kyum Kim1, Jaeyoung Choi1, Youngho Cho2, Bonkee Kim2, and Kwyro Lee1
소속: 1Department of Electrical Engineering and Computer Science, KAIST, 2HiDeep Inc.
P. Device for Energy 분과

일 시 : 2월 16일(목) 11:20-12:35
세션명 : [TB2-P] Device Characteristics
좌 장 : 김윤기(삼성전자), 강달영(연세대학교)

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**TB2-P-1 11:20-11:35**  
Closed-loop Control for Adaptive Wireless Power Transfer and Charging Applications  
저자: Phi-Thuc Duong and Jong-Wook Lee  
소속: Department of Electronics and Radio Engineering, Kyung Hee University

**TB2-P-2 11:35-11:50**  
Increasing Interfacial Fixed Charge at Al₂O₃/Si using High Pressure Oxygen Annealing for Solar Cell Application  
저자: Sakeb Hasan Choudhury¹, Sharif Md. Sadaf², and Hyunsang Hwang¹,²  
소속: ¹Department of Nano–bio Materials and Electronics, Gwangju Institute of Science and Technology, ²School of Materials Science and Engineering, Gwangju Institute of Science and Technology

**TB2-P-3 11:50-12:05**  
Organic–inorganic Hybrid Multilayer Transparent Cathode for P3HT:PCBM Solar Cells  
저자: Gwan Ho Jung, Kihyon Hong, Wan Jae Dong, Juyoung Ham, and Jong Lam-Lee  
소속: Division of Advanced Materials Science and Department of Materials Science and Engineering, Pohang University of Science and Technology

**TB2-P-4 12:05-12:20**  
Measurement of Seebeck Coefficients in Silicon Nanowire Thermoelectric Device with CMOS Top–down Process  
저자: Jaehyeon Kim¹,², Younghoon Hyun¹, Youngsam Park¹, Wonchul Choi¹,³, Taehyoung Zyung¹, and Moongyu Jang¹,²  
소속: ¹NT Research division, Electronics and Telecommunications Research Institute, ²Department of Advanced Device Technology, UST, ³Department of Electrical Engineering, KAIST
P3HT 나노 섬유 구조를 이용한 이층 박막 유기 태양전지
저자: 송지연, 이동구, 김준영, 송형준, 고영준, 이창희
소속: 서울대학교 전기정보공학부, 반도체공동연구소
L. Analog Design 분과

Room C
창의관 (116)

일시 : 2월 16일(목) 11:20-12:35
세션명 : [TC2-L] Advanced Analog Techniques
좌장 : 인해정(한양대학교), 안길초(서강대학교)

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TC2-L-1 11:20-11:35  LED 구동을 위해 전류감지회로를 이용하여 출력전류가 정의되는 전류-모드 전하펌프 회로
저자: 안영국, 남현석, 이희영, 노정진
소속: 한양대학교 전자통신공학과

TC2-L-2 11:35-11:50  An Integration-based, Spread-spectrum-clocking Tracking Aid for Digital Clock and Data Recovery Loops
저자: Sigang Ryu and Jaeha Kim
소속: School of Electrical Engineering, Inter-university Semiconductor Research Center, Seoul National University

TC2-L-3 11:50-12:05  A 0.009% THD+N, 100 dB SNR Class-G Capacitor-Less Headphone Amplifier for an Audio Subsystem
저자: Sanghyub Kang, Taeho Hwang, Sunwoo Kwon, Sangheon Lee, Shinyoung Yi, Byoungkwon Moon, Hosung Sung, and Jinseok Koh
소속: Advanced Product Development Center, Dongbu HiTeck Co., Ltd.

TC2-L-4 12:05-12:20  New High-sensitivity Logarithmic Response CMOS Active Pixel Sensor using a GIDL Mechanism
저자: Inkyu Baek, Jiwon Lee, and Kyounghoon Yang
소속: Department of Electrical Engineering, KAIST

TC2-L-5 12:20-12:35  A Photovoltaic Power Management System using a Luminance-controlled Oscillator and Charge Pump for MPPT
저자: Jun-Han Bae¹, Ji-Eun Jeong¹, Kwang-Su Kim², Caroline Sunyong Lee², Jung-Hoon Chun¹, and Kee-Won Kwon¹
소속: ¹College of Information & Communication, Sungkyunkwan University, ²Division
H. Display and Imaging Technologies

Room D
창의관 (117)

일시: 2월 16일(목) 11:20-12:35
세션명: [TD2-H] OLED
좌장: 진병두(단국대학교)

저자: Jang Hyuk Kwon
소속: Department of Information Display, Kyung Hee University

TD2-H-2 11:50-12:05 기판에 따른 유기 다이오드의 전력 전달 능력 연구
저자: 강찬모, 정승준, 홍용택, 이창희
소속: 서울대학교 전기정보공학부, 서울대학교 반도체공동연구소

TD2-H-3 12:05-12:20 Optical Properties of Metal/dielectric Multilayer for Wavelength Tunable Transparent Cathode in Top-emission Organic Light Emitting Diodes
저자: Bonhyeong Koo², Kihyon Hong¹, Sungjun Kim¹, Kisoo Kim¹, Illhwan Lee¹, Juyoung Ham¹, and Jong-Lam Lee¹,²
소속: ¹Department of Advanced Materials Science, Pohang University of Science and Technology, ²Division of Materials Science and Engineering, Pohang University of Science and Technology

TD2-H-4 12:20-12:35 유기발광다이오드에서의 일칼리 급속 도핑 메커니즘 연구
저자: 김기수, 홍기현, 이종람
소속: 포항공과대학교 신소재공학과

TD2-H-5 12:35-12:50 Highly Efficient Flexible Organic Light-emitting Devices using Modified Graphene Anodes
저자: T.-H. Han¹, Y. Lee²,³, M.-R. Choi¹, S.-H. Woo¹, S.-H. Bae²,³, B. H. Hong², J.-H. Ahn²,³, and T.-W. Lee¹
소속: ¹Department of Materials Science and Engineering, Pohang University of Science and Technology, ²SKKU Advanced Institute of Nanotechnology and Center for Human Interface Nano Technology, ³School of Advanced Materials Science and
Engineering, Sungkyunkwan University, 4Department of Chemistry, Seoul National University
E. Compound Semiconductors 분과

일 시 : 2월 16일(목) 11:20-12:35
세션명 : [TE2-E] Various Compound Semiconductors II
좌 장 : 이종람(포항공과대학교), 김제원(삼성LED)

TE2-E-1 11:20-11:50 [Invited] Two-step Germanium Epitaxial Growth on (100) Silicon Substrate using Rapid Thermal Chemical Vapor Deposition (RTCVD)
저자: Chel-Jong Choi1,2, Yeon-Ho Gil1, and Kyu-Hwan Sim1
소속: 1School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University, 2Department of BIN Fusion Technology, Chonbuk National University

TE2-E-2 11:50-12:05 Effects of Double-side Patterned Sapphire Substrate on Light Extraction Efficiency in GaN-based LEDs
저자: Hwan Keon Lee, Jun Ho Son, Yang Hee Song, Buem Joon Kim, and Jong-Lam Lee
소속: Division of Advanced Materials Science and Department of Materials Science and Engineering, Pohang University of Science and Technology

TE2-E-3 12:05-12:20 유도결합 플라즈마를 이용한 SiC 비아홀의 식각 특성 연구
저자: 최일환1,2, 장경욱1, 민병규2, 윤형섭2, 안호균2, 임종원2
소속: 1한서대학교 신소재공학과, 2한국전자통신연구원 RF융합부품연구팀

TE2-E-4 12:20-12:35 Nanopatterning through Anodic Aluminum Oxide Template on GaN Substrate
저자: Chul Jong Yoo, Jun Ho Son, and Jong Lam Lee
소속: Division of Advanced Materials Science and Department of Materials Science and Engineering, Pohang University of Science and Technology
D. Thin Film Process Technology

Room F
창의관 (B114)

일시: 2월 16일(목) 11:20-12:35
세션명: [TF2-D] Resistive Memory
좌장: 황기현(삼성전자), 박태주(한양대학교)

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저자: Doo Seok Jeong
소속: Electronic Materials Research Centre, Korea Institute of Science and Technology

TF2-D-2 11:50-12:05 Memristive Tri-stable Resistive Switching at Ruptured Conducting Filaments of a Pt/TiO₂/Pt Cell
저자: Kyung Jean Yoon, Min Hwan Lee, Gun Hwan Kim, Seul Ji Song, Jun Yeong Seok, Jung Ho Yoon, and Cheol Seong Hwang
소속: WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

TF2-D-3 12:05-12:20 Plasma-enhanced Atomic Layer Deposition of NiO Thin Films for Resistive Switching Memory Applications
저자: Seul Ji Song¹, Gun Hwan Kim¹, Jun Yeong Seok¹, Kyung Jean Yoon¹, Julien Gatineau², and Cheol Seong Hwang¹
소속: ¹WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University, ²Air Liquide

TF2-D-4 12:20-12:35 Effect of TaOx Composition and HfO₂ Physical Property on Bipolar Resistive Switching Behavior of Pt/HfO₂/TaOx/Pt Device
저자: 김종기¹, 이성훈¹,², 김영재¹, 나희도¹, 이규민¹, 박성훈¹, 손현철¹
소속: ¹연세대학교 신소재공학과, ²㈜하이닉스반도체
F. Silicon Device and Integration Technology  
분과

Room G  
하나스퀘어 (B112)

일 식 : 2월 16일(목) 11:20-12:35  
세션명 : [TG2-F] Integration Technology for Advance Materials and Devices  
좌 장 : 이석희(KAIST), 이병훈(광주과학기술원)

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**TG2-F-1  11:20–11:35**  
Effect of SC1 Cleaning on the Performance of Graphene FET  
저자: 박은지\(^1\), 강창구\(^2\), 이상경\(^2\), 조천흠\(^1\), 이영곤\(^2\), 정현종\(^3\),  
서순애\(^4\), 이병훈\(^1,2\)  
소속: \(^1\)광주과학기술원 나노바이오 전자재료공학과, \(^2\)광주과학기술원 신소재공학부, \(^3\)삼성종합기술원, \(^4\)세종대학교 물리학과

**TG2-F-2  11:35–11:50**  
Wafer-scale Graphene Nanoribbons for Tunnel FET Applications  
저자: W. S. Hwang\(^1\), K. Tahy\(^1\), P. Zhao\(^1\), R. L. Myers–Ward\(^2\), P. M. Campbell\(^2\),  
C. R Eddy\(^2\), Jr., D. K. Gaskill\(^2\), H. Xing\(^1\), A. C. Seabaugh\(^1\), and D. Jena\(^1\)  
소속: \(^1\)Department of Electrical Engineering, University of Notre Dame,  
\(^2\)U. S. Naval Research Laboratory

**TG2-F-3  11:50–12:05**  
The Improvement of Device Characteristic in HK/MG Logic Device by Newly Developed CESL  
저자: Hyunkwan Yu, Yong–kuk Jeong, Pankwi Park, Ki–Eun Kim,  
Sang–Uk Park, Dong Suk Shin, Moon Han Park, Ja–Hm Ku, and Nae–In Lee  
소속: Advanced Process Development / TD, System LSI Division,  
Samsung Electronics Co., Ltd.

**TG2-F-4  12:05–12:20**  
The Effect of Thermal Budget on the Insulating Properties of HfO\(_2\) on Ge Substrate  
저자: Hyung–Suk Jung\(^1\), Il–Hyuk Yu\(^1\), Hyo Kyeom Kim\(^1\), Sang Young Lee\(^1\), Tae Joo Park\(^2\), Nae–In Lee\(^3\), and Cheol Seong Hwang\(^1\)  
소속: \(^1\)WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter–university Semiconductor Research Center, Seoul National University, \(^2\)Hanyang University, \(^3\)SYS LSI division, Samsung Electronics Co., Ltd.
Ground-plane Doping for $V_t$-modulation of Planar Tunnel Field-effect Transistors on Ultra-thin-body and BOX (UTBB) SOI Substrate


소속: 1Inter-university Semiconductor Research Center and School of Electrical Engineering and Computer Science, Seoul National University, 2TD (S. LSI), Semiconductor Business Group, Samsung Electronics Co., Ltd.
A. Interconnect & Package 분과

Room H  하나스퀘어 (B115)

일 시 : 2월 16일(목) 11:20-12:35
세션명 : [TH2-A] 탄소 배선 및 TSV
좌 장 : 이원준(세종대학교), 이태윤(연세대학교)

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**TH2-A-1 11:20-11:50** [Invited] Graphene Interconnects as Next Candidate for Replacing Cu Interconnects
저자: Taeyoon Lee
소속: Nanobio Device Laboratory, School of Electrical and Electronic Engineering, Yonsei University

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**TH2-A-2 11:50-12:05** Growth of Multilayer Graphene by Chemical Vapor Deposition using Tetrabromomathane for Nanoscale Device Metallization
저자: 최태진, 강혜민, 정한열, 이현익, 홍주리, 이상근, 이태윤, 김형준
소속: 연세대학교 전기전자공학부

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**TH2-A-3 12:05-12:20** Influence of Hydrogen Gases and Metal Induced Catalytic Effect for Graphene Etching
저자: Hyonik Lee1, Juree Hong1, Jungmok Seo1, Sang Geun Lee1, Jae-Hong Lee1, Taejin Choi2, Hyemin Kang2, Jaehong Yoon2, Hanearl Jung2, Hyungjin Kim2, and Taeyoon Lee1
소속: 1Nanobio Device Laboratory, School of Electrical and Electronic Engineering, Yonsei University, 2Nanodevice Laboratory, School of Electrical and Electronic Engineering, Yonsei University

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**TH2-A-4 12:20-12:35** Cu Contamination under Thermal and Electric Field Stress and its Effect on the Pn+ Diode Performances of the nMOSFET of a 3-D Integrated Circuit with through Silicon Vias
저자: 연한울1, 정성엽1, 임정열1, 편정우2, 김형욱2, 백도현2, 주영창1
소속: 1서울대학교 재료공학부, 2삼성전자 메모리사업부, 개발 QA팀
A. Interconnect & Package 分과

TP1–01 09:30–12:35  Silicidation of Plasma Enhanced Atomic Layer Deposition of Ni for Nanoscale Contact Application
저자: 윤재홍, 송정규, 최원식, 김형준
소속: 연세대학교 전기전자공학부

TP1–02 09:30–12:35  The Effects of Surface Modification on the Electrical Properties of Silicon Nanowire Field Effect Transistor Grown by an Aqueous Electroless Etching Method
저자: Hyukho Kwon, Seulah Lee, and Taeyoon Lee
소속: Nanobio Device Laboratory, School of Eletrical and Electronic Engineering, Yonsei University

TP1–03 09:30–12:35  Cu/SAMs bilayer 구조의 확산방지 및 낮은 접촉저항 특성을 이용한 a–Si:H TFT–LCDs에서의 소스/드레인 적용
저자: 한정석, 이치영, 이재갑
소속: School of Advanced Materials Engineering, Kookmin University

TP1–04 09:30–12:35  단일 유기첨가제를 이용한 70 nm 구리 배선 전기도금
저자: 허미나1, 최세진1, 홍기민1, 김창수2
소속: 1충남대학교 물리학과, 2한국표준과학연구원 나노소재평가센터

TP1–05 09:30–12:35  On the RF Characteristics of CVD–grown Single– and Multi–layer Graphene for High–frequency Interconnect
저자: Hee–Jo Lee1, Eunho Kim2, and Jongwan Jung1,2
소속: 1Graphene Research Institute, Sejong University, 2Institute of Nano and Advanced Materials, Sejong University

TP1–06 09:30–12:35  Electrical Properties of TIPS–pentacene–organic Field Effect
Transistors with Graphene/metal Electrode Directly Grown by CVD at Low Temperature
저자: 최진우, 안효섭, 정종완
소속: Graphene Research Institute and Institute of Nano and Advanced Materials, Sejong University

TP1-07 09:30–12:35 Effect of Post N₂ & O₂ Thermal Treatment of Flowable Oxide Thin Film Grown by ALD–CVD Combination
저자: 박성훈, 이규민, 손현철
소속: 연세대학교 신소재공학과

TP1-08 09:30–12:35 Diffusion Barrier against Copper Ion Drift under Biased Thermal Stress: A Comparison between Through–silicon via and Planar Structures
저자: 서승호¹, 황주선², 정종완³, 황율중⁴, 이원준²
소속: ¹세종대학교 기계공학과, ²세종대학교 나노신소재공학부, ³나노종합랩센터, ⁴한국기계연구원

TP1-09 09:30–12:35 Ultrasound-assisted Pd Activation Process for Electroless Copper Gap-filling in Cu Nano-interconnect
저자: Chang-Myeon Lee, Min Hyung Lee, Jin-Young Hur, Ho-Nyun Lee, and Hong-Kee Lee
소속: Korea Institute of Industrial Technology

TP1-10 09:30–12:35 Optimization of Catalyzing Process on Ta Substrate for Copper Electroless Deposition using Electrochemical Method
저자: Taeho Lim¹, Hyo-Chol Koo¹, Kyung Ju Park¹, Myung Jun Kim¹, Soo-Kil Kim², and Jae Jeong Kim¹
소속: ¹School of Chemical and Biological Engineering, College of Engineering, Seoul National University, ²Department of Integrative Engineering, Chung-Ang University

H. Display and Imaging Technologies

TP1-11 09:30–12:35 Investigation of AC Model of Amorphous Silicon Thin Film Transistor Device
저자: Shinhyoung Kim, Younghwan Son, and Hyungcheol Shin
소속: Inter–university Semiconductor Research Center and School of
**TP1-12  09:30–12:35**

*Finite Element Method (FEM) Study on Space Charge Effects in Organic Light Emitting Diodes (OLED)*

저자: K. S. Kim and T. Y. Won
소속: School of Electrical Engineering, Inha University

**TP1-13  09:30–12:35**

*Effects of the Annealing Temperature and High-k Gate Dielectrics of Amorphous GaInZnO Metal–point–contact Field Effect Transistors*

저자: 이세원, 조원주
소속: 광운대학교 전자재료공학과

**TP1-14  09:30–12:35**

*TFT 제원적용 IGZO 박막특성분석 및 고성능소자제작*

저자: 신주홍, 문병무
소속: 고려대학교 미세소자공학협동과정

**TP1-15  09:30–12:35**

*GPU–CPU Based Parallel Architecture for Multi–view Video Decoder*

저자: Xiang Jun Zhao, Nguyen Van Thao, and Yong Beom Cho
소속: Electronic Engineering, Konkuk University

**TP1-16  09:30–12:35**

*TSP(Touch Screen Panel)용 전하재분배에 의한 전하검출 최로설계*

저자: 조호신, 김석만, 조경록
소속: 충북대학교 정보통신공학 통신회로 및 시스템

**TP1-17  09:30–12:35**

*QDs/PVK 발광층을 이용한 고효율 하이브리드 전계발광소자의 제작*

저자: 김정우¹, 강대호¹, 장은식¹, 최수호¹, 유현지¹, 이현지¹, 윤태양², 강신원¹
소속: ¹경북대학교 IT대학 전자공학부, ²경북대학교 전자전기컴퓨터학부

**TP1-18  09:30–12:35**

*Enhanced Light Outcoupling of Silver–based Dielectric/metal/dielectric Transparent Electrode using Nano Structured MgO Layer*

Fabrication of Air-gap Assisted OLED using Self-assembled Nanosphere Lithography
저자: Jong Uk Kim, Sungjun Kim, and Jong-Lam Lee
소속: Division of Advanced Materials Science and Department of Materials Science and Engineering, Pohang University of Science and Technology

New Approaches for Overcoming Current Issues of Flexible AM–OLEDs: Development of Nanolaminated Single Gas Barrier Layer by Neutral Beam Assisted Sputtering Process
저자: YunSung Jang, YouJong Lee, and MunPyo Hong
소속: Department of Display Semiconductor Physics, Korea University

Effective Process of Dislocation for Embedded Flash Memory
저자: 선종원, 박지환, 양택승, 한재원
소속: 동부하이텍 MF사업부 특화공정개발팀

Wafer Bonding을 이용한 FLI IGBT 제조 공정에 관한 연구
저자: 조유습, 오주현, 김종민, 성만영
소속: 고려대학교 전기전자전파공학과

Reversed Meta-stable Dip (MSD) Effect in Fully Depleted (FD) Silicon-on-insulator (SOI) Triple-Gate MOSFETs
저자: K.-I. Na¹, S. Cristoloveanu², M. Bawedin², Y. Bae³, K. -H. Park², P. Patruno⁴, W. Xiong⁵, and J. -H. Lee⁶
소속: ¹Convergence Components and Materials Research Laboratory, Electronics and Telecommunication Research Institute, ²Grenoble-INP, IMEP–LAHC Minatec, ³Department of Electronics Engineering, Uiduk University, ⁴SOITEC, ⁵Texas Instruments, ⁶School of EECS Kyungpook National University
다층 산화막을 이용한 고 신뢰성 트렌치 게이트 TDMOSFET 응용
저자: 김상기, 이진호, 나경일, 원종일, 구진근, 양일석
소속: 한국전자통신연구원 IT 융합부품기술팀

Investigation of Channel Strain Distribution in FinFET with Si$_1-x$Ge$_x$ S/D and Comparison with MOSFETs
저자: 목인수, 오진호, 손현철
소속: 연세대학교 신소재공학과

Edge–width Calibrated Serializer for 7.5Gb/s Transmitter
저자: 이연호, 송준영, 정인화, 황세욱, 김철우
소속: 고려대학교 전자전기공학과 집적시스템연구실

UHF–band Near–field RFID Tag IC with 4–K OTP Memory for High Security Applications
저자: Ngoc Dang Phan, Thuyen Chau Tran, and Jong–Wook Lee
소속: Department of Electronics and Radio Engineering, Kyung Hee University

Design of an ALS Sensor with Dark Current Compensation Circuit
저자: 김정석$^1$, 조순익$^1$, 백광현$^2$, 김석기$^1$
소속: $^1$고려대학교 전기전자공학과, $^2$중앙대학교 전자전기공학부

An Interstage–error–correction Technique for High–resolution Pipelined ADCs
저자: 남제원, 윤석주, 전영득, 오지민, 김민기, 양일석, 노태문, 권종기
소속: 한국전자통신연구원 융합부품소재연구부문

Body-floating 기술을 이용한 낮은 트리거 전압을 갖는 ggNMOS 가반의 개선된 ESD 보호회로에 관한 연구
저자: 김동수$^1$, 이병석$^1$, 박원석$^1$, 송보배$^2$, 정준모$^2$, 구용서$^1$
소속: $^1$단국대학교 전자전기공학과, $^2$서경대학교 전자공학과
M. RF Design 분과

TP1–31 09:30–12:35  Comparison of CE and CB Configurations of SiGe HBTs for Power Gain and Stability
저자: Yongho Oh, Hyunchul Kim, and Jae–Sung Rieh
소속: School of Electrical Engineering, Korea University

TP1–32 09:30–12:35  A 140 GHz Colpitts Push–push VCO in a SiGe BiCMOS Technology
저자: Kyungmin Kim, Namhyung Kim, and Jae–Sung Rieh
소속: School of Electrical Engineering, Korea University

TP1–33 09:30–12:35  A Study on Fast Locking and Wideband PLL
저자: Jun Cheng and Yong Moon
소속: Department of Electronic Engineering, Soongsil University

P. Device for Energy 분과

TP1–36 09:30–12:35  ONO 후면 패시베이션 및 레이저 가공을 통한 태양전자의 후면 전극 형성
저자: 최평호, 김효중, 이경수, 최병덕
소속: 성균관대학교 태양광시스템공학협동과정

TP1–37 09:30–12:35  GZO 투명전극을 이용한 염료 감응형 태양전자의 전기화학적 임피던스 및 효율 특성 분석
저자: 박재호, 이경주, 송상우, 신주홍, 조슬기, 문병무
소속: 고려대학교 미세소자협동과정
저자: U. Shaislamov and B. Yang
소속: Department of Information Nano Materials Engineering, Kumoh National Institute of Technology

TP1–39 09:30–12:35 RIE를 이용한 피라미드와 반원 구조의 단 결정 태양 전지 제작
저자: 조준환¹, 공대영¹, 오정화¹, 조찬섭², 김봉환³, 이종현¹
소속: ¹경북대학교 전자전기컴퓨터학부,
     ²경북대학교 산업전자전기공학부,
     ³대구가톨릭대학교 전자공학과

TP1–40 09:30–12:35 Flexible Organic Light Emitting Diodes using Cold–welded Silver Nanowires as a Transparent Conducting Electrode
저자: Bola Lee, Kihyon Hong, Kisoo Kim, Sungjun Kim, Ill–Hwan Lee, Bonhyeong Koo, and Jong–Lam Lee
소속: Graduate Institute of Advanced Materials Science, Pohang University of Science and Technology and Department of Materials Science and Engineering, Pohang University of Science and Technology

TP1–41 09:30–12:35 분리된 LBSF 층 수 및 LBSF와 emitter의 갭 너비에 따른 후면 전극 실리콘 태양전지 효율 변환
저자: 장왕근¹, 임창진², 박정호¹,²
소속: ¹고려대학교 전기전자전파공학과,
     ²고려대학교 마이크로/나노시스템 협동과정

저자: Wan Jae Dong, Gwan Ho Jung, Kihyon Hong, Juyoung Ham, and Jong–Lam Lee
소속: Department of Materials Science and Engineering and Division of Advanced Materials Science, Pohang University of Science and Technology

TP1–43 09:30–12:35 Transparent Conducting Dielectric/Metal/Dielectric Multilayer Electrode
for High Efficiency Organic Photovoltaic
저자: Juyoung Ham, Gwan Ho Jung, Kihyon Hong, Wan Jae Dong, and Jong-Lam Lee
소속: Graduate Institute of Advanced Materials Science, Pohang University of Science and Technology

TP1-44 09:30–12:35 Al Doped-ZnO TCO(Transparent Conductive Oxide) Thin Films Prepared by Large Scaled Cylindrical Sputtering System
저자: 김동석¹, 백주열¹, 명재민², 안경준¹
소속: ¹(주)에스엔텍, ²연세대학교
Room J
hana square (B116)

일 시 : 2월 16일(목) 09:30-17:10
세션명 : [CDC] Chip Design Contest

ASIC Demo

CDC1
An Implementation of H.264 Decoder with Low Memory Bandwidth
저자: T. H Kim, H. C Lee, G. H Heo, J. W Yoo, S. W Ye, and Y. P Hong
소속: Division of Electronics and Electrical Engineering, Dongguk University

CDC2
생체모방 청각센서를 위한 아날로그 증폭단 설계
저자: 김진호, 박정환, 송윤규, 김성준
소속: 서울대학교 공과대학 전기공학부, 서울대학교 융합과학기술대학원 나노융합학과

CDC3
High Performance Pipelined Architecture for 32–bit Single Core AES
저자: 신경섭, Deng Lin, 김규관, 김승열, 유영갑
소속: 충북대학교 정보통신공학과

CDC4
A reference switching non–binary asynchronous SAR ADC for time–interleaving application
저자: 백승엽1, 조상현2, 조동신1, 김완1, 류승탁1
소속: 1KAIST 전기 및 전자공학과, 2삼성전자 System LSI

Panel

CDC5
A Hybrid Dual Threshold 2T Gain Cell for Embedded Memory Applications
저자: Weijie Cheng, Jeong–Wook Cho, Yong–Woon Kim, and Yeonbae Chung
소속: School of Electronics Engineering, Kyungpook National University

CDC6
스위칭-중복기를 사용한 저-손실 밀리미터파 대역 CMOS 위상변화기
저자: 최승호, 이国주, 김문일
소속: 고려대학교 전기전자전파공학부

CDC7
10bit Rail–to–Rail Time–Domain Successive Approximation ADC
저자: 김훈기, 박영재, 권찬근, 김수원
서울대학교 집적시스템설계연구실

소속: 고려대학교 전자전기공학과

CDC8  
A Low Power Digital PLL with Power Optimized Digitally Controlled Oscillator  
저자: 정찬희, 김훈기, 김수원  
소속: 고려대학교 전자전기공학과

CDC9  
전력량 측정용 프로그램 가능한 이득 증폭기 및 아날로그-디지털 변환기  
저자: 권찬근, 민영재, 이관주, 정영목, 김수원  
소속: 고려대학교 전자전기공학과

CDC10  
A High Performance CMOS Circulator  
저자: S. M Kim, S. S Choi, W. G Kim, and Y. H Kim  
소속: School of Mechatronics, GIST

CDC11  
A Design of Low–Power and Low–Noise Analog Front–End Design for EEG Signal Acquisition  
저자: Chung–Jae Lee, Arim Ha, and Jong–In Song  
소속: Department of Nanobio Materials and Electronics, GIST

CDC12  
A 6.4–Gb/s/channel Asymmetric 4–PAM Transceiver for Memory Interface  
저자: 이광훈, 장영찬  
소속: 금오공과대학교

CDC13  
A Wide Dynamic Range CMOS Image Sensor Using Configurable Digital Logarithmic Counter  
저자: 김다솜, Kim, and Chang  
소속: 동국대학교 반도체과학과

CDC14  
A PVT variation tolerant current–regulated LED driver IC  
저자: 임재하, 박준은, 정덕균  
소속: 서울대학교 집적시스템설계연구실

CDC15  
Design of 1.2V 10bit 200MHz ADC in 0.13μm CMOS  
저자: 김태호, 이상윤, 김성우, 정덕균  
소속: 서울대학교 집적시스템설계 연구실

CDC16  
Measurement of On–Chip Power Grid Noise using Sensing Circuits  
저자: 곽상균, 조정민, 최성식, 김나현, 김소영  
소속: 성균관 대학 반도체 시스템 공학과
An All-digital Process Variation Compensated Multi-phase Generator
저자: 류경호, 정동훈, 정성욱
소속: 연세대학교

온칩 솔라셀을 이용한 마이크로 에너지 하브스팅 시스템
저자: 윤은정1, 박준호1, 전지호2, 박종태1, 유희근1
소속: 1인천대학교 전자공학과, 2C&S Technology

WLAN 응용을 위한 DAC를 이용한 고해상도 DCO 설계
저자: 황인호1, 윤성욱1, 서희택2, 박종태1, 유희근1
소속: 1인천대학교 전자공학과, 2C&S Technology

Interpolation Circuit Implementation Using FFT for XRF Systems
저자: 송원석, 김은혜, 정진균
소속: 전북대학교 전자공학부

주파수 특성을 이용한 디지털 영역 왜젠류 검사 알고리즘 구현
저자: 김정훈, 이정은, 정진균
소속: 전북대학교 전자공학부

PWM 방식을 이용한 CMOS DC-DC Boost Converter 설계
저자: 이민웅, 정의훈, 조성익
소속: 전북대학교 전자공학과

2bit Flash ADC for Pipelined ADC
저자: 김민수, 임철근, 조성익
소속: 전북대학교 전자공학부

Programmable Low Noise Capacitive Readout Circuit for Tri-axial Microaccelerometer
저자: H. H. Ko
소속: Department of Electronics, Chungnam National University

이미지 패턴 매칭을 위한 멤리스터 기반의 범프회로 A Memristor Based Bump Circuit for Image Pattern Matching
저자: 오광석, 한가람, 이상진, 조경록
소속: 충북대학교 정보통신공학과

A 10b 40MS/s 2.3mm$^2$ 92.4mW 0.18um CMOS Pipeline A/D Converter
저자: 정준희, 김영식
소속: 한동대학교 정보통신공학과
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기타 Demo/Panel 참여팀

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소속: 숭실대학교

CDC_43
설계명: CMOS IR–UWB Transmitter
지도교수: 김태욱
대표설계자: 한홍걸
소속: 연세대학교

CDC_44
설계명: DisplayPort 1.1용 Transceiver IP 개발
지도교수: 최우영
대표설계자: 김왕수
소속: 연세대학교

CDC_45
설계명: Display port full transceiver 를 위한 핵심 IP
지도교수: 최우영
대표설계자: 박영석
소속: 연세대학교

CDC_46
설계명: 60GHz anti–podal diode pair optoelectronic mixer with integrated VCO/PLL
지도교수: 최우영
대표설계자: 김재영
소속: 연세대학교

CDC_47
설계명: 부스트 컨버터를 이용한 열전소자의 최대전력점 추적회로
지도교수: 김시호
대표설계자: 박정용
소속: 충북대학교

CDC_48
설계명: dB–linear VGA
지도교수: 김범만
대표설계자: 최인영
소속: 포항공대대학교

CDC_49
설계명: LED 구동을 위해 전류감지회로를 이용하여 출력전류가 정의되는 전류–모드 전하펌프 회로
지도교수: 노정진
대표설계자: 안영국
소속: 한양대학교

CDC_50
설계명: 200MHz On–chip Synchronous DC–DC buck converter with stacked wideband LNA
지도교수: 김정호
대표설계자: 구경철
Design: 6bit 1GS/s flash SAR ADC for UWB application

Supervisor: Young-Tak Ryu

Main designer: Bora Seo

Affiliation: KAIST
H. Display and Imaging Technologies

Room A
창의관 (106)

일시: 2월 17일(금) 09:30-11:00
세션명: [FA1-H] Display & TFT
좌장: 모연곤(삼성 SMD), 배병성(호서대학교)

FA1–H–1 09:30–10:00 [Invited] Recent Progress on Low-fatigue Autostereoscopic Three-dimensional Displays
저자: 박재형
소속: 충북대학교 정보통신공학부

FA1–H–2 10:00–10:30 [Invited] Origin of High Carrier Mobility in Amorphous Metal Oxide Semiconductor InGaZnO₄: First-principles Study
저자: Iljoon Kang¹,² and C. H. Park¹,³
소속: ¹Research Center for Dielectric and Advanced Matter Physics, Pusan National University, ²Department of Physics, Pusan National University, ³Department of Physics Education, Pusan National University

FA1–H–3 10:30–10:45 Backchannel 표면 전위를 고려한 Field Effect Method 기반의 TFT 결함 분석
저자: 송현수¹, 임화럼¹, 정재욱², 홍용택¹
소속: ¹서울대학교 전기컴퓨터공학부, ²대구경북과학기술원

FA1–H–4 10:45–11:00 The Improved Storage Capacitor Structure of LTPS CMOS Thin–film Transistors for AMLCD Application
저자: 오금미¹,², 이석우¹, 이상진¹, 박성기¹, 신우섭¹, 전영철¹, 황용기¹, 이현용², 성만영²
소속: ¹LG Display, ²고려대학교
K. Memory (Design & Process Technology) 분과

Room B
창의관 (110)

일 시: 2월 17일(금) 09:30-11:00
세션명: [FB1-K] Memory Design Technologies
좌 장: 강희복(하이닉스반도체), 최우영(삼성전자)

FB1-K-1 09:30-10:00  [Invited] Mobile Storage Overview
저자: 강용훈
소속: 삼성전자 Memory 상품기획팀

FB1-K-2 10:00-10:15  SRAM disturb 특성 향상을 위한 β ratio 개선
저자: 김승훈, 양태규, 김용훈, 김윤용, 홍명희, 박용복, 김성한, 한정욱
소속: 삼성전자 System LSI사업부 Foundry사업팀 PIE팀 PIE2그룹

FB1-K-3 10:15-10:30  On-Chip Regulator with Very High PSRR for Low Noise Applications
저자: 강신덕, 김용주
소속: 하이닉스반도체 설계기반기술팀

FB1-K-4 10:30-10:45  On-Chip Decoupling Capacitor 최적 설계를 통한 DDR3 메모리의 Power Noise 감소
저자: 정부호, 이준호, 김현석, 조선기, 김양희
소속: 하이닉스 반도체 선행설계팀
O. System LSI Design

Room C
창의관 (116)

일시 : 2월 17일(금) 09:30-11:00
세션명 : [FC1-O] Multimedia SoCs
좌장 : 공준진(삼성전자), 박종선(고려대학교)

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FC1-O-1 09:30-09:45
저전력 H.264 프로세서를 위한 가변적인 비트 폭 임베디드 메모리 설계
저자 : 박장원1, 권진모1, 김동완1, 박종선1,2
소속 : 1고려대학교 전기전자전파공학과, 2고려대학교 나노반도체공학과

FC1-O-2 09:45-10:15
[Invited] A Novel Coded Modulation Scheme for Reliability Improvement of NAND Flash Memory System
저자 : 설창규, 유영건, 손홍락, 공준진
소속 : 삼성전자 DS사업총괄, 메모리사업부

FC1-O-3 10:15-10:30
1080p H.264/AVC 프로그래머블 움직임 보상 엔진의 설계
저자 : 차길형, 홍도선, 채수익
소속 : 서울대학교 전기컴퓨터대학원 시스템설계연구실

FC1-O-4 10:30-10:45
A Study of Wide Dynamic Range Image without Memory in Digital Circuit
저자 : 윤영환, 김명선, 김응재, 신민수
소속 : 하이닉스 M8사업부 CIS 응용제품팀

FC1-O-5 10:45-11:00
The Real-time Face-Detection for Digital Images under Dynamic Visual Deformation Conditions
저자 : Kyounghoon Jang, Hosang Jo, Hyunjung Kang, and Bongsoon Kang
소속 : Department of Electronics Engineering, Dong-A University
B. Patterning 분과

Room D 창의관 (117)

일시 : 2월 17일(금) 09:30-11:00
세션명 : [FD1-B] Patterning (Litho & Etch)
좌장 : 유원종(성균관대학교)

FD1–B–1 09:30–09:45 Modeling and Simulation of Line Edge and Width Roughness for EUV Resists
저자: Sang–Kun Kim
소속: Department of Applied Physics, Hanyang University

FD1–B–2 09:45–10:00 Analysis of Etched Biases of a Continuous Lines and Spaces for Patterning for Deep Trench Isolation
저자: Hee–Young Koh, YongKuk Bae, Siyoung Choi, and Yun–Suk Nam

FD1–B–3 10:00–10:15 Analysis of Overlay Error by Different Aperture Mixing at 2Xnm Node
저자: 김신영, 박찬하, 양현조, 임동규
소속: Hynix반도체 노광OPC팀

FD1–B–4 10:15–10:45 [Invited] 플라즈마 처리에 의한 그래핀의 전기적 특성 제어
저자: 유원종
소속: 성균관대학교 나노과학기술원
E. Compound Semiconductors

Room E
창의관 (B113)

일시: 2월 17일(금) 09:30-11:00
세션명: [FE1-E] Electronics Devices and Processes I
좌장: 윤형섭(ERTI), 곽준섭(순천대학교)

FE1-E-1 09:30-10:00 [Invited] Next Generation Power Semiconductor Devices
저자: 차호영
소속: 홍익대학교 전자전기공학부

FE1-E-2 10:00-10:15 다중 Al2O3/Ga2O3 스택을 이용한 고전압 AlGaN/GaN HEMTs
저자: 안우진, 석오균, 김영실, 한민구
소속: 서울대학교 전기공학부

FE1-E-3 10:15-10:30 The Effects of Interface Plasma Passivation on Pt/Al2O3/6H–SiC MOS Devices
저자: Seung-Chan Heo1, Dongjun Yoo1, Tae Yong Park1, Hyeongtag Jeon1, Tae Young Jang2, Rino Choi2, and Changhwan Choi1
소속: 1Division of Materials Science and Engineering, Hanyang University, 2School of Materials Science and Engineering, Inha University

FE1-E-4 10:30-10:45 Effect of Al2O3 Gate Insulator Thickness on Characteristics of Normally–off GaN MOSFETs
저자: Sung-Dal Jung1, Ki-Won Kim1, Mi-Kyung Kwon1, Dong-Seok Kim1, Hee-Sung Kang1, Ki-Sik Im1 Chul-Ho Won1, Chan-Ho Bu1, Ryun-Hwi Kim2, Kyu-Il Jang1, Chung-Mo Yang1, and Jung-Hee Lee1
소속: 1School of Electrical Engineering & Computer Science, Kyungpook National University, 2Department of Sensor & Display Engineering, Kyungpook National University

FE1-E-5 10:45-11:00 Packaged GaN HEMT Power Bar with 17 W Output Power at 3 GHz
저자: 장우진, 임종원, 주철원, 강동민, 이상호, 김성일, 안호균, 운형섭, 민병규, 김해천, 문재경, 남은수
소속: 한국전자통신연구원 RF융합부품연구팀
**D. Thin Film Process Technology**

**Room F**
창의관 (B114)

**일 시 :** 2월 17일(금) 09:30-11:00
세션명 : [FF1-D] Device and Characterization Technology
좌 장 : 최리노(인하대학교), 전상훈(삼성중합기술원)

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**FF1-D-1 09:30-10:00**  
**[Invited]** Gate–Last Process Integration Issues with High–k Gate Dielectric and Metal Gate (HKMG) Technology  
저자: Changhwan Choi  
소속: Division of Materials Science and Engineering, Hanyang University

**FF1-D-2 10:00-10:15**  
Scaling of Equivalent Oxide Thickness and Modulation of Effective Work Function using Transition Metal (La,Ti) – Inserted TiN Metal Gate on HfO2  
저자: Hyo Kyeom Kim1, Hyung-Suk Jung1, Sang Young Lee1, II-Hyuk Yu1, Tae Joo Park2, and Cheol Seong Hwang1  
소속: 1WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter–university Semiconductor Research Center, Seoul National University, 2Department of Materials Engineering, Hanyang University

**FF1-D-3 10:15-10:30**  
Application of Charge Pumping Method into Extracting Trap Distribution in Polysilicon Thin Film Transistors  
저자: Cuong Nguyen Manh1, Tae–Young Jang1, Dong–Hyoub Kim1, Jungwoo Kim1, Jun Suk Chang1, Musarrat Hasan1, Hoichang Yang1, Jae Kyeong Jeong1, Bio Kim2, Jae–young Ahn2, Kihyun Hwang2, and Rino Choi1  
소속: 1Inha University, 2Process Development P/J2, Semiconductor R&D Center, Samsung Electronics Co., Ltd.

**FF1-D-4 10:30-10:45**  
Capacitance–voltage Measurement of Leaky Al2O3 MIM Capacitor using Time Domain Reflectometry (TDR)  
저자: 김용훈1, 이영곤1, 김진주2, 정욱진1, 송승철3, 이병훈1,2  
소속: 1광주과학기술원 신소재공학부, 2광주과학기술원 나노바이오재료전자공학과, 3Texas Instruments Inc.
Effects of W Diffusion Barrier on Inhibition of AlN Formation in Ti/Al based Ohmic Contacts on N–polar N–GaN

저자: Yang Hee Song, Jun Ho Son, Buem Joon, and Jong-Lam Lee

소속: 포항공과대학교 신소재공학과 첨단재료과학부
저자: Woo Young Choi  
소속: Department of Electronic Engineering, Sogang University

FG1–G-2 10:00–10:15  Optimization of Gateless MOSFET (Biristor)  
저자: Seung–Won Ko, Dong–Il Moon, Sungho Kim, Ji–Min Choi, and Yang–Kyu Choi  
소속: Department of Electrical Engineering, KAIST

FG1–G-3 10:45–11:00  Characterization of Floating–base Bipolar Junction Transistor as a 2–terminal Select Device for Cross–Point Memory Devices  
저자: Jong–Ho Bae, Chang–Hee Kim, and Jong–Ho Lee  
소속: Inter–University Semiconductor Research Center (ISRC) and School of Electrical Engineering, Seoul National University

FG1–G-4 10:15–10:30  Transfer Characteristics Simulation for Hydrogenated Amorphous Silicon Thin Film Transistors using High Field Mobility Degradation Model  
저자: Seunghyun Jang, Jaehong Lee, Jaeho Lee, and Hyungcheol Shin  
소속: Inter–University Semiconductor Research Center (ISRC) and School of Electrical Engineering, Seoul National University

FG1–G-5 10:30–10:45  Temperature Dependent Mobility Characteristics for the InGaZnO₅ Thin Film Transistor  
저자: Sang–Ho Rha¹,², Jisim Jung¹, Un Ki Kim¹, Yoon Jang Chung¹, Eun Suk Hwang¹, and Cheol Seong Hwang¹  
소속: ¹Department of Materials Science and Engineering and Inter–
university Semiconductor Research Center, Seoul National University, ²Process Development Team, Semiconductor R&D Center, Samsung Electronics Co., Ltd.
A. Interconnect & Package 분과

ROOM H

한나스퀘어 (B115)

일 시 : 2월 17일(금) 09:30-11:00
세션명 : [FH1-A] 패키징 세션 I
좌 장 : 안은철(삼성전자), 이후정(성균관대학교)

FH1-A-1 09:30-10:00 [Invited] 3D Packaging Trends
저자: 황태주
소속: 삼성전자 반도체연구소

FH1-A-2 10:00-10:30 [Invited] RF Characteristic Study of MCP with Modified Package Substrate
저자: Woong-Sun Lee¹, Sang-Joon Lim¹, Heung-Jae Shin¹, Jong-Tae Lee², Jung-Kwon Park², Qwan-Ho Chung¹, and Kwang-Yoo Byun¹
소속: ¹PKG R&D, Hynix Semiconductor Inc., ²R&D Department Simmtech Co., Ltd.

FH1-A-3 10:30-11:00 [Invited] Mechanical and Electrical Reliabilities of Metallic Bonds for 3D Integration
저자: 박영배, 곽병현, 김재명, 박종명, 김성혁, 김정규
소속: 안동대학교 신소재공학부 청정에너지 소재기술연구센터
Q. Metrology, Inspection, and Yield Enhancement

Room A
창의관 (106)

일시: 2월 17일(금) 11:20-12:35
세션명: [FA2-Q] Q I
좌장: 김진승(전북대학교), 오승철(SNUprecision)

저자: Lubek Jastrzebski and Andrew Findlay
소속: Semilab Co., Ltd.

FA2-Q-2 11:50-12:20 [Invited] 2D Spectroscopic Ellipsometer
저자: Anlun Tang and J. L. Choi
소속: AUROS Technology, Inc.

FA2-Q-3 12:20-12:35 3D Profile Measurement of TSVs based on the Optical Comb of a Femtosecond Pulse Laser
저자: 진종한1,2, 이상헌1, 김재환1,2, 강주식1,2, 김종안1
소속: 1한국표준과학연구원 기반표준본부 길이센터, 2과학기술연합대학원대학교

FA2-Q-4 12:35-12:50 Defect Signal Intensity Simulation by Change of Apertures on a Bright Field Inspection Tool
저자: Seong-Min Ma, Kyu Young Kim, Dae Jong Kim, Young Jae Cho, Sung Su Kim, Hyung Won Yoo, and Il Keoun Han
소속: Manufacturing Division, Hynix Semiconductor Inc.
K. Memory (Design & Process Technology) 분과

Room B
창의관 (110)

일 시 : 2월 17일(금) 11:20-12:35
세션명 : [FB2-K] Phase Change Memories
좌 장 : 조성익(전북대학교)

저자: 박해찬, 박남균, 김석기, 김명섭, 이세호, 최강식, 이정훈, 홍성주
소속: 하이닉스반도체 선행소자A팀

FB2–K–2 11:50–12:05  PCRAM Flip–flop Circuit with Sequential Sleep–in Control Scheme
저자: Jun–Myung Choi, Chul–Moon Jung, and Kyeong–Sik Min
소속: School of Electrical Engineering, Kookmin University

FB2–K–3 12:05–12:20  The Effect of Carbon Incorporated into In$_3$Sb$_1$Te$_2$ on Phase Change Characteristics in Phase Change Memory
저자: 김현수$^{1,4}$, 김용태$^2$, 김용인$^3$, 성만영$^4$
소속: $^1$삼성전자 Memory 사업부, $^2$한국과학기술연구원, $^3$KAIST, $^4$고려대학교

FB2–K–4 12:20–12:35  Improved Switching Uniformity in Ge$_2$Sb$_2$Te$_5$ based Resistive Switching Memory Device by using Internal Resistor
저자: Jiyong Woo$^1$, Seungjae Jung$^1$, Jubong Park$^1$, Seonghyun Kim$^1$, Wootae Lee$^1$, Dasesoek Lee$^1$, Euijun Cha$^2$, and Hyunsang Hwang$^{1,2}$
소속: $^1$School of Materials Science and Engineering, Gwangju Institute of Science and Technology, $^2$Department of Nanobio Materials and Electronics, Gwangju Institute of Science and Technology, Gwangju Institute of Science and Technology
O. System LSI Design  분과

Room C
장의관 (116)

일 시 : 2월 17일(금) 11:20-12:35
세션명 : [FC2-O] Digital VLSI Circuits and Systems
좌 장 : 조준호(서울 벨연구소), 이한호(인하대학교)

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FC2–O–1  11:20–11:35  An Efficient Overlapped LDPC Decoder with a Dual-diagonal Structure
저자: Yong Ki Byun, Jong Kang Park, Soongyu Kwon, and Jong Tae Kim
소속: School of Information and Communication Engineering, Sungkyunkwan University

저자: 조준호
소속: 서울 벨 연구소

FC2–O–3  12:05–12:20  Low Power CORDIC Architecture using Trigonometric Characteristics
저자: 이민우, 박종선
소속: 고려대학교 전기전자전파공학과

FC2–O–4  12:20–12:35  Low Power Multiplexer at Date Rate of 8 Gb/s with PMOS Latch
저자: Yifei Li, Suki Kim, and Sang-Hyuk Yang
소속: Department of Electrical Engineering, Korea University
저자: Jong-Hyun Ahn
소속: School of Advanced Materials Science and Engineering, SKKU
Advanced Institute of Nanotechnology, Sungkyunkwan University

저자: Hoseok Heo2, Kibum Kang1, Donghun Lee1 Li–Hua Jin3 Hyeon–Jun Back4, Yong–Jin Kim1,4, Miseong Kim1, Hyun–Seung Lee1, Inchan Hwang1, Byung–Joo Lee1, Gyu–Chul Yi4, Yong–Hoon Cho3, and Moon–Ho Jo1,2
소속: 1Department of Materials Science and Engineering, Pohang University of Science and Technology, 2Division of Advanced Materials Science Science, Pohang University of Science and Technology, 3Graduate School of Nanoscience & Technology (WCU), and KI for the NanoCentury, KAIST, 4National Creative Research Initiative Center for Semiconductor Nanorods and Department of Physics and Astronomy, Seoul National University

저자: Seoung–Ki Lee1, Beom Joon Kim2, Hous Jang1, Jeong Ho Cho2, and Jong–Hyun Ahn1
소속: 1School of Advanced Materials Science and Engineering, SKKU Advanced Institute of Nanotechnology (SAINT) and Center for Human Interface Nano Technology (HINT), Sungkyunkwan University, 2Department of Organic Materials and Fiber Engineering, Soongsil University
[Invited] Hysteresis–Free Carbon Nanotube Network Transistors with a Ferroelectric Polymer Gate Insulator

저자: Y. S. Choi and C. Park
소속: Department of Materials Science and Engineering, Yonsei University
세션명: [FE2-E] Electronics Devices and Processes II
좌장: 이정희(경북대학교), 차호영(홍익대학교)

FE2-E-1 11:20-11:50 [Invited] 차세대 국방레이더 트랜시버용 GaN 전자소자 제조공정 기술 개발
저자: 문재경
소속: 한국전자통신연구원 융합부품소재연구부문 광무선융합부품연구부 RF융합부품연구팀

FE2-E-2 11:50-12:05 Crack-free AlGaN/GaN HFET Grown on 6-inch Si substrate
소속: IGBT part, LG Electronics Inc.

FE2-E-3 12:05-12:20 Characteristics of AlGaN/GaN-based FinFET using High Quality ALD Al₂O₃ as Gate Dielectric
저자: Ki-Sik Im, Ki-Won Kim, Dong-Seok Kim, Hee-Sung Kang, Sung-Dal Jung, Chan-Ho Bu, Chul-Ho Won, Ryun-Hwi Kim, Kyu-II Jang, Mi-Kyung Kwon, and Jung-Hee Lee
소속: School of Electrical Engineering and Computer Science, Kyungpook National University

FE2-E-4 12:20-12:35 X-band용 6W AlGaN/GaN HEMT 소자의 특성
저자: 김성일, 윤형섭, 강동민, 민병규, 안호균, 주철원, 이종민, 이상홍, 임종원, 김해천, 문재경, 남은수
소속: ETRI 융합부품소재연구부문 광무선융합부품연구팀 RF융합부품연구팀
D. Thin Film Process Technology

Room F
창의관 (B114)

일시: 2월 17일(금) 11:20-12:35
세션명: [FF2-D] Thin Film Deposition
좌장: 윤성민(경희대학교), 김형섭(성균관대학교)

 FF2-D-1 11:20-11:50  [Invited] Nonvolatile Memory Technology with Engineered Tunnel Barriers Based on High-k Materials
저자: Won-Ju Cho
소속: Department of Electronic Materials Engineering, Kwangwoon University

 FF2-D-2 11:50-12:05  Atomic Layer Deposition of (GeTe2)1-x(Sb2Te3)x Film for Phase Change Memory
저자: Taeyong Eom1, Seol Choi1, Byung Joon Choi1, Min Hwan Lee1, Taehong Gwon1, Sang Ho Rha1, Woongkyu Lee3, Moo-Sung Kim2, Manchao Xiao3, and Cheol Seong Hwang1
소속: 1WCU Hybrid Material Program, Department of Materials Science and Engineering, Seoul National University, and Inter-university Semiconductor Research Center, Seoul National University, 2Air Products Korea, 3Air Products and Chemicals, Inc.

 FF2-D-3 12:05-12:20  Atomic Layer Deposition of SrTiO3 Films with Cp-based Precursors
저자: Woongkyu Lee, Jeong Hwan Han, Woojin Jeon, and Cheol Seong Hwang
소속: WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

 FF2-D-4 12:20-12:35  Investigation on Suppression of Nickel–Silicide Formation by Fluorocarbon Reactive Ion Etch (RIE) and Plasma–Enhanced Deposition
저자: Hyun Woo Kim1, Jung Han Lee1, Min-Chul Sun1,2, and Byung-Gook Park1
소속: 1 Inter–University Semiconductor Research Center (ISRC) and
Comparative Study of Ultralow-k pSiCOH (k=2.5) Films by using Different C-bridged Si-precursors

저자: Gyeonghee Kim¹, Sang Hoon Ahn¹, Insun Jung², Kyu-Hee Han¹, Janghee Lee¹, Jongho Yun¹, Gil Heyun Choi¹, Ho Kyu Kang¹, and Chillhee Chung¹

소속: ¹Process Development Team, Semiconductor R&D Center, Samsung Electronics Co., Ltd., ²Analytical Engineering Group, AE Center, Samsung Advanced Institute of Technology
G. Device & Process Modeling, Simulation and Reliability 분과

Room G
하나스퀘어 (B112)

일시 : 2월 17일(금) 11:20-12:35
세션명 : [FG2-G] Modeling and Simulation II
좌장 : 황성보(매그나칩반도체), 이정수(포항공과대학교)

저자: Mincheol Shin, Kihoon Park, and Jung Hyun Oh
소속: Department of Electrical Engineering, KAIST

FG2-G-2 11:50-12:05 Estimation of Initial Surface Potential and Modeling of Inversion Charge for Double–Gate MOSFET
저자: 황병운1, 이창용2, 이석희1, 양지운2
소속: 1Department of Electrical Engineering, KAIST, 2Department of Electronics and Information Engineering, Korea University

FG2-G-3 12:05-12:20 Non–equilibrium Green’s Function Approach to Surface–roughness–limited Mobility in Silicon Nanowire Field Effect Transistors
저자: Hyo–Eun Jung and Mincheol Shin
소속: Department of Electrical Engineering, KAIST

저자: Hoon Ryu1, Ju–Young Jung2, and Mincheol Shin2
소속: 1Supercomputing Center, Korea Institute of Science and Technology Information, 2Department of Electrical Engineering, KAIST
A. Interconnect & Package 분과

Room G

hana스퀘어 (B112)

일 시 : 2월 17일(금) 11:20-12:35
세션명 : [FH2-A] 패키징 세션 II
좌 장 : 황태주(삼성전자), 박영배(안동대학교)

저자 : 조순진
소속 : 삼성전기 ACI 사업부

FH2-A-2 11:50-12:05 A Self-Convection 3D IC Cooling System using a Micro Flat Heat Pipe for Portable Devices
저자 : 김남재, 김시호
소속 : School of Integrated Technology and Yonsei Institute of convergence technology

FH2-A-3 12:05-12:20 The Effects of a Ni(P)/Cu Diffusion Barrier on Reliabilities of Cu/Sn/Cu Bonding
저자 : 이병훈, 이후정
소속 : 성균관대학교 신소재공학과

FH2-A-4 12:20-12:50 [Invited] LED Package 기술 동향
저자 : 황성덕
소속 : 삼성LED 연구소 연구1팀
FA3–Q–1 13:40–14:10  [Invited]High Speed Full Wafer Monitoring of Surface, Edge and Bonding Interface for 3D–stacking
저자: Pierre–Yves Guittet, Lars Markwort, Greg Savage, and Christoph Kappel
소속: Nanometrics Gmbh

FA3–Q–2 14:10–14:25 탐침현미경–전자현미경 결합과 반도체 기술
저자: 박병천¹, 이주엽², 송윤¹, 김달현¹, 홍재원²
소속: ¹한국표준과학연구원, ²㈜나노포커스

FA3–Q–3 14:25–14:40 FE–(S)TEM을 이용한 GaN계 LED의 미세구조 분석
저자: 양준모¹, 박중식¹③, 박경진¹, 박윤창¹, 유정호¹, 정철성¹, 이상길², 신기삼³
소속: ¹나노융합센터, ²한국기초과학지원연구원, ³창원대학교 나노신소재공학과

소속: Technology Development–1 / TD, System LSI Division, Samsung Electronics Co., Ltd.
세션명: [FB3-K] Resitive Switching Memories
좌장: 홍권(하이닉스반도체), 최우영(서강대학교)

FB3-K-1 13:40-14:10  [Invited] Review and Prospects of New Memory Development
저자: G. H. Koh, B. C. Kim, S. O. Park, S. W. Nam, S. Choi, G. T. Jeong, H. K. Kang, and C. Chung
소속: Semiconductor R&D Center, Semiconductor, Samsung Electronics Co., Ltd.

FB3-K-2 14:10-14:25  1D 1R Type Cross–bar Resistive Memory using TiO$_2$ Thin Films
저자: Gun Hwan Kim$^1$, Jong Ho Lee$^1$, Jeong Hwan Han$^1$, Seul Ji Song$^1$, Jun Yeong Seok$^1$, Jung Ho Yoon$^1$, Kyung Jean Yoon$^1$, Min Hwan Lee$^1$, Tae Joo Park$^2$, and Cheol Seong Hwang$^1$
소속: $^1$WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter–university Semiconductor Research Center, Seoul National University, $^2$Department of Materials Engineering, Hanyang University

FB3-K-3 14:25-14:40  Ferroelectricity Induced Resistance Switching in PZT/PCMO/Nb:STO Epitaxial Heterostructure
저자: Sharif Md. Sadaf$^1$, El Mostafa Bourim$^3$, Xinjun Liu$^1$, Sakeb H. Choudhury$^2$, and Hyunsang Hwang$^{1,2}$
소속: $^1$School of Materials Science and Engineering, Gwangju Institute of Science and Technology, $^2$Department of Nanobio Materials and Electronics, Gwangju Institute of Science and Technology, $^3$Department of Physics, Gwangju Institute of Science and Technology

저자: Godeuni Choi$^1$, Jungho Shim$^1$, Euijun Cha$^2$, Jubong Park$^1$, and Hyungsang Hwang$^{1,2}$
소속: $^1$School of Materials Science and Engineering, Gwangju Institute of Science and Technology
Electrode–dependent Resistive Switching Characteristics of Maghemite Nanoparticle Assembly on Flexible Substrate

저자: Jae Woo Yoo¹, Quanli Hu¹, Yoon-Jae Baek², Chi Jung Kang¹,³, Hyun Ho Lee⁴, Do-Joong Lee⁵, Hyun-Mi Kim⁵, Ki-Bum Kim⁵, and Tae-Sik Yoon¹,²

소속: ¹Department of Nano Science and Engineering, Myongji University, ²Department of Materials Science and Engineering, Myongji University, ³Department of Physics, Myongji University, ⁴Department of Chemical Engineering, Myongji University, ⁵Department of Materials Science and Engineering, Seoul National University
N. VLSI CAD 분과

일 시 : 2월 17일(금) 13:40-15:10
세션명 : [FC3-N] Innovative Ideas in System-Level Designs
좌 장 : 김지훈(충남대학교), 신영수(KAIST)

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FC3-N-1 13:40-14:10 [Invited]대용량 NAND SSD 컨트롤러 설계 검증을 위한 FPGA 기반 플랫폼
저자: 이세일, 이명현, 서범준, 최성훈, 윤성로
소속: 고려대학교 전기전자전파공학과

FC3-N-2 14:10-14:40 [Invited]A Hierarchical 3D Floor-planning for Optimizing Wire and TSVs
저자: 이병현, 김태환
소속: 서울대학교 전기컴퓨터공학부

FC3-N-3 14:40-14:55 DRAM/PRAM Memory Subsystem Modeling
저자: 김영식, 유승주, 이승구
소속: 포항공과대학교 전자전기공학과

FC3-N-4 14:55-15:10 Hierarchical Temporal Memory 방식을 이용한 뇌 인지 기능 모사 하드웨어의 구현
저자: 김덕환, 송지훈, 신영수
소속: KAIST 전기 전자공학과
저자: Kisuk Kang
소속: Department of Material Science and Engineering, Seoul National University

저자: 조경상1, 김태호1, 이은경1, 김정우2, 최병룡1, 이상윤2, 김종민1
소속: 1삼성 종합기술원 Frontier Research Lab, 2삼성 종합기술원 Display Lab

저자: Ho–Hyun Nahm1, Yong–Sung Kim1, and Dae Hwan Kim2
소속: 1Korea Research Institute of Standards and Science, 2School of Electrical Engineering, Kookmin University
# I. MEMS & Sensors 분과

**Room E**
창의관 (B113)

일 시 : 2월 17일(금) 13:40-15:10
세션명 : [FE3-I] Bio Sensors & Optical MEMS
좌 장 : 정 석(고려대학교), 문성욱(KIST)

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<td>나노와이어바이오센서의 단백질전하 직접검출에 미치는 이온농도 효과</td>
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<td>CMOS–Compatible Inverter–Type Si Nanoribbon Biosensor with High Sensitivity</td>
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<td>14:25-14:40</td>
<td>Atmospheric Micro Plasma Induced Inactivation of Bacteria</td>
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FE3-I-5  14:40~14:55  Design and Evaluation of Patterned Nanoarray Chips for Sub-diffraction Limited Far-field Microscopy
저자: 이원주, 김규정, 김동현
소속: 연세대학교 공과대학 전기전자공학부

FE3-I-6  14:55~15:10  Development of Fine-Pitch Microbolometer Fabricated by CMOS Compatible Process
저자: 임성규, 김영수, 경기명, 송영호, 박재홍, 이태중, 김태현, 김희연, 황욱중, 이귀로
소속: 나노종합랩센터 MEMS 사업본부
C. Materials Growth & Characterization 분과

일 시 : 2월 17일(금) 13:40-15:10
세션명 : [FF3-C] Wide Bandgap Materials
좌 장 : 권순용(울산과학기술대학교), 송진동(KIST)

FF3–C–1 13:40–14:10  [Invited] Revisit on Dislocations and Related Defects in Heteroepitaxy: Polar and Nonpolar GaN and ZnO Cases
저자: Soon–Ku Hong
소속: Department of Materials Science & Engineering and Graduate School of Green Energy Technology, Chungnam National University

FF3–C–2 14:10–14:25  Fabrication of InGaN/GaN Green LED
저자: 김성복¹, 배성범¹, 백주희¹, 윤두협¹, 임재목², 손정환², 문영부³, 김현성⁴, 김종배⁵
소속: ¹한국전자통신연구원 광무선융합부품연구부, ²(주)제니컴, ³(주)더리즈, ⁴한양대학교

FF3–C–3 14:25–14:40  Improved Mobility of AlGaN/GaN HEMT Structure on 6-inch Silicon(111) by Bowing Parameter
저자: 신종훈, 김준호, 김재무, 김광중, 장태훈
소속: LG 전자 Emerging 연구소 IGBT Part

FF3–C–4 14:40–14:55  The Effect of Si Precursor on the Properties of Atomic Layer Deposited HfSiO Film
저자: 이승미, 김범용, 지연혁, 은용석, 김준환, 홍권, 강효상
소속: Memory R&D Division, Hynix Semiconductor Inc.
G. Device & Process Modeling, Simulation and Reliability

Room G

하나스퀘어 (B112)

일 시 : 2월 17일(금) 13:40-15:10

세션명 : [FG3_G] Device Performance & Reliability Issues in Non-Volatile Memories and Advanced Devices

좌 장 : 최재훈(하이닉스반도체), 이재규(삼성전자)

FG3_G-1 13:40-14:10 [Invited] Development of Stress Memorization Technique Applicable for 20nm Low Power SoC Process
저자: Choongryul Ryou¹, Sang-Su Kim², Yaoqi Dong¹,
ByoungGi Kim¹, Weon-wi Jang¹, Seunghyun Song³, Hongseon Yang², Uihui Kwon³, Youngdal Lim¹,
Soohun Hong¹, Yoonmoon Park¹, Sada-aki Masuoka¹,
Jae Gon Lee², Dong-Won Kim¹, Sang-Pil Sim¹,
Dong Kyun Sohn¹, Jong Shik Yoon¹ and Chilhee Chung¹
소속: ¹Logic TD Team, Semiconductor R&D division, Samsung Electronics Co., Ltd., ²Process Development P/J3,
Semiconductor R&D division, Samsung Electronics Co., Ltd., ³CAE Team, Semiconductor R&D division, Samsung Electronics Co., Ltd.

FG3_G-2 14:10-14:25 Improvement of Electrical Overstress Robustness of GGNMOS I/O Cells for Timing Controller Application
저자: Yon-Sup Pang, Youngju Kim, Jinseop Shim, Young-Chul Kim,
Taehoon Kim, Kyongjin Hwang, Hyun-Ho Jang, Sookjin Kwon,
Leeyeun Hwang, Sung-Bum Park, and Taejong Lee
소속: NVM/Device/ESD, DSD KDC and LDDI PE Teams, MagnaChip Semiconductor

FG3_G-3 14:25-14:40 Write Margin Variability and $V_{CCmin}$ projection of 6T SRAM with Double-Gate MOSFETs down to Lmin=8nm
저자: Boun Jun Lee and Ji-Woon Yang
소속: Department of Electronics and Information Engineering, Korea University

FG3_G-4 14:40-14:55 Analysis of Single Poly EEPROM Characteristics on the Multiple Doped
Floating Gate Structure
저자: JN Eum, YJ Kwon, SK Park, SH Lee, KS Ko, DH Kim, KS Lee, IW Cho, and KD Yoo
소속: TD Team, M8 Division, Hynix Semicondutor Inc.

FG3_G–5  14:55–15:10
Amorphous Silicon 박막트랜지스터의 Negative Bias Illumination Stress 하에서의 물리적 Parameter 기반 신뢰성 특성분석
저자: 정현광, 공동식, 김용식, 배민경, 김재형, 김우준, 허인석, 이제욱, 김윤혁, 전성우, 조춘형, 김동명, 김대환
소속: School of Electrical Engineering, Kookmin University
A. Interconnect & Package  분과

일 시 : 2월 17일(금) 13:40-15:10
세션명 : [FH3-A] 디스플레이용 배선 및 TCO
좌 장 : 손현철(연세대학교)

FH3-A-1  13:40-14:10  [Invited]TFT Fabrication by using Soluble Oxide Semiconductor and Gate Insulator
저자: 김정한, 김치완, 김철홍, 채기성, 전명철
소속: LG 디스플레이 R&D 센터

저자: 이영주1, 임정열1, 정성엽1, 연한울1, 권창연1, 이제훈2, 주영창1
소속: 1Department of Materials Science & Engineering, Seoul National University, 2Samsung Electronics Co., Ltd.

FH3-A-3  14:25-14:40  Ga doped ZnO (GZO) by Atomic Layer Deposition for Transparent Conducting Oxides
저자: Taewook Nam, Won-Seon Lee, and Hyungjun Kim
소속: Yonsei University

FH3-A-4  14:40-15:10  [Invited]Transparent Conducting Oxide Thin Films Deposited by Atomic Layer Deposition
저자: Jin-Seong Park
소속: Department of Materials Science and Engineering, Dankook University
Q. Metrology, Inspection, and Yield Enhancement 분과

Room A
창의관 (106)

일 시 : 2월 17일(금) 15:30-16:45
세션명 : [FA4-Q] Q Ⅲ
좌 장 : 박병천(한국표준과학연구원), 양준모(나노종합팩센터)

FA4–Q–1 15:30–16:00 [Invited]Non–Visual Defect Inspection (Residues and Charge) for Advanced Process Control and Yield Engineering
저자: Sungjin Cho
소속: Qcept Technologies Inc.

FA4–Q–2 16:00–16:15 Transmission Electron Microscopy Study on the Microstructural Properties of CoFeB/MgO/CoFeB Magnetic Tunnel Junctions
저자: 전승준1, 손성규1, 오장원1, 유종희1, 이주희1, 김국천2, 김원1, 김호정1, 김창열1
소속: 1하이닉스 반도체 분석개발팀, 2하이닉스 반도체 NM공정S팀

FA4–Q–3 16:15–16:30 고속 검사를 위한 초소형전자칼럼 광학구조 연구
저자: 이영복1, 오태석1, 김대욱1, 안승준1, 최상국2, 진상원2, 김영철3, 김호섭1
소속: 1선문대학교 정보디스플레이학과, 2씨이비티(주), 3울지대학교

FA4–Q–4 16:30–16:45 FIB 기법을 이용한 LED–TEM 시편의 정밀제작
저자: 박경진, 유정호, 콩상희, 박중식, 양준모
소속: 나노종합팩센터 특성평가팀
K. Memory (Design & Process Technology) 분과

일 시 : 2월 17일(금) 15:30-16:45
세션명 : [FB4-K] FLASH Memories and New Memory Technologies
좌 장 : 곽동화(삼성전자), 김영희(창원대학교)

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<td>FB4-K-1</td>
<td>15:30-15:45</td>
<td>Layer Selection by Multi Level Operation (LSM) of String Select Line in 3D Stacked NAND Flash Memory</td>
<td>W. Kim, S.-H. Kim, Y. Kim, S.-H. Park, J. Yun Seo, D.-B. Kim, B.-G. Park</td>
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<td>FB4-K-2</td>
<td>15:45-16:00</td>
<td>Erase Speed Enhancement by using SiGe Drain in 3D Stacked NAND Flash Memory</td>
<td>W. Kim, Y. Kim, S.-H. Park, J. Yun Seo, D.-B. Kim, S.-H. Kim, B.-G. Park</td>
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<tr>
<td>FB4-K-3</td>
<td>16:00-16:15</td>
<td>Dramatic Increase of Dielectric Constant of Al₂O₃ by Very Light Doping of La and Thermal Treatment and Its Application to Flash Memory Device</td>
<td>J. Park¹, S.-H. Lee¹, K.-H. Lee², S. H. Pyi², B. Jin Cho¹</td>
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<td>FB4-K-4</td>
<td>16:15-16:30</td>
<td>Tri-states Memory using Ferroelectric-insulator-semiconductor Hetero-junctions for Fifty Percent Increased Data Storage</td>
<td>M. Park, H. Ju Lee, G. Hwan Kim, Y. Jin Kim, J. Hwan Kim, J. Ho Lee, C. S. Hwang</td>
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FB4–K–5  16:30–16:45  Analysis of Fringe Field Effects in Nano–Electromechanical (NEM) Nonvolatile Memory Cells
저자: Boram Han and Woo Young Choi
소속: Department of Electronic Engineering, Sogang University
일시: 2월 17일(금) 15:30-16:45
세션명: [FC4-N] State-of-the-art Low Power SoC Design Methods
좌장: 이종은(울산과학기술대학교), 윤성로(고려대학교)

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**FC4-N-1 15:30-16:00** [Invited] How to Implement Low Power SOC under 32nm Process
저자: Jung Yun Choi
소속: Design Technology Team, Samsung Electronics Co., Ltd.

**FC4-N-2 16:00-16:30** [Invited] Clock Gating: Design or Synthesis?
저자: Inhak Han and Youngsoo Shin
소속: Department of Electrical Engineering, KAIST

**FC4-N-3 16:30-16:45** Power / Area Optimization by Design Window Reduction in Standard–Cell Based Circuits
저자: Hyung-Ock Kim, Jun Seomun, Jea Han Jeon, Jung Yon Choi, Hyo-Sig Won, and Kee Sup Kim
소속: Samsung Electronics Co., Ltd.
J. Nano-Science & Technology 분과

Room D
창의관 (117)

일 시 : 2월 17일(금) 15:30-16:45
세션명 : [FD4-J] Soft Electronics: Materials, Processes and Devices
좌 장 : 이탁희(서울대학교), 김상욱(KAIST)

FD4-J-1 15:30-16:00  [Invited] Organic Nanowire Printing, Lithography, and Electronics
저자: S.-Y. Min¹, T. S. Kim¹, J. H. Cho², and T.-W. Lee¹
소속: ¹Department of Materials Science and Engineering, Pohang University of Science and Technology, ²Department of Organic Materials and Fiber Engineering, Soongsil University

FD4-J-2 16:00-16:15  Enhanced Performance of Pentacene Field Effect Transistors with Patterned Graphene Electrodes using Surface Treatments
저자: 이상철¹, 강석주¹, 조건호¹, 최민혁¹, 박우진¹, 윤종원¹, 권태현¹, 강영호¹, 김동수¹, 이병훈¹, 이탁희²
소속: ¹광주과학기술원 신소재공학부 나노바이오전자재료공학과, ²서울대학교 물리천문학부

FD4-J-3 16:15-16:45  [Invited] Nanolithography based on Highly Tunable Self–assembly
저자: Jae Won Jeong, Woon Ik Park, and Yeon Sik Jung
소속: Department of Materials Science and Engineering, KAIST
E. Compound Semiconductors

일시: 2월 17일(금) 15:30-16:45
세션명: [FE4-E] Electronics Devices and Processes III
좌장: 민병규(ETRI), 장태훈(LG전자)

FE4-E-1 15:30-15:45 Demonstration of GaN MOSFET using Selectively Re-grown AlGaN Layer on Source and Drain Regions
저자: Dong-Seok Kim¹, Chul-Ho Won¹, Kyu-II Jang¹, Sung-Dal Jung¹, Mi-Kyung Kwon¹, Hee-Sung Kang¹, Ki-Sik Im¹, Ki-Won Kim¹, Chung-Mo Yang¹, Jae-Joon Oh², Jong-Bong Ha², Jai-Kwang Shin², and Jung-Hee Lee¹
소속: ¹School of Electrical Engineering and Computer Science, Kyungpook National University, ²Samsung Advanced Institute of Technology

FE4-E-2 15:45-16:00 Improvement of Interfacial quality of Al₂O₃/GaN–MOSFETs by TMAH Treatment
저자: Ki-Won Kim, Sung-Dal Jung, Mi-Kyung Kwon, Ki-Sik Im, Dong-Seok Kim, Hee-Sung Kang, and Jung-Hee Lee
소속: School of Electrical Engineering & Computer Science, Kyungpook National University

FE4-E-3 16:00-16:15 이중 전계판 구조를 가지는 고내압 AlGaN/GaN-on-Si HFET에 대한 연구
저자: 이호중, 이재길, 차호영
소속: 홍익대학교 전자전기공학부

FE4-E-4 16:15-16:30 Effects of Microstructural Changes on Electrical Properties of Ti/Al based Ohmic Contacts on N-face n–GaN
저자: Buem Joon Kim, Yang Hee Song, Jun Ho Son, Hak Ki Yu, and Jong-Lam Lee
소속: Division of Advanced Materials Science and Department of Materials Science and Engineering, Pohang University of Science and Technology
Reduction in Schottky Barrier Height of AlGaN-based SBD with In-situ Deposited Silicon Carbon Nitride (SiCN) Cap Layer

저자: Jae-Hoon Lee¹, Young-Sun Kwak¹, Jae-Hyun Jeong¹, Heon-Bok Lee¹, Jong-Kyu Ryu¹, Ki-Se Kim¹, and Jung-Hee Lee²

소속: ¹Power Research Group, Samsung LED Co., Ltd., ²School of Electronic Engineering & Computer Science, Kyungpook National University
C. Materials Growth & Characterization

FF4–C–1  15:30–16:00  [Invited] Characterization of RTN (Random Telegraph Noise) in Semiconductor Devices
저자: Nam-Hoon Kim, Sung-Min Joe, Ju-Wan Lee, and Jong-Ho Lee
소속: Electrical Engineering and Computer Science and Inter-University Semiconductor Research Center (ISRC), Seoul National University

FF4–C–2  16:00–16:15  Diamond Shape eSiGe Source/Drain for High Performance Sub-28nm PMOSFET
저자: Hoi Sung Chung, Myung Sun Kim, Dong Hyuk Kim, Geo Myung Shin, Yong Ju Lee, Yu Bin Kim, Dong Suk Shin, Moon Han Park, Ja Hum Ku, and Nae-In Lee
소속: System LSI Division, Samsung Electronics Co., Ltd.

FF4–C–3  16:15–16:30  3차원 원자탐침 전자현미경을 이용한 Si 기판에 패턴된 Fin구조 내 도핑 원소분석
저자: 김보화1, 박성민1, 구길호1, 박윤백3, 박찬경1,2
소속: 1포항공과대학교 신소재공학과, 2나노기술직접센터(NCNT), 3하이닉스 연구소 R&D기반기술그룹 분석개발팀

FF4–C–4  16:30–16:45  Morphology Controlled Growth of 1D Si Nanostructures by Exploiting Nanoscale Surface Diffusion for Anti-reflector
저자: J. Yi and W. I. Park
소속: Department of Material Science & Engineering, Hanyang University
G. Device & Process Modeling, Simulation and Reliability 분과

Room G
하나스퀘어 (B112)

일 시 : 2월 17일(금) 15:30-16:45
세션명 : [FG4-G] Device Characterization
좌 장 : 이상기(동부하이텍), 조인욱(하이닉스반도체)

FG4–G–1 15:30–16:00 [Invited]Low-frequency Noise in Precision Analog Components
저자: Badih El-Kareh
소속: Dongbu HiTek

저자: Hagyoul Bae, Dongsik Kong, Ja Sun Shin, Dayeon Yun, Euiyeon Hong, Hyojoon Seo, Hyunjun Choi, Jieun Lee, Hyun-Kwang Jung, Minkyung Bae, Yongsik Kim, Woojoon Kim, Dae Hwan Kim, and Dong Myong Kim
소속: School of Electrical Engineering, Kookmin University

FG4–G–3 16:00–16:15 Differential Ideality Factor Technique and Extraction of Subgap Density–of–states in Amorphous InGaZnO Thin–Film Transistors
저자: Minkyung Bae, Daeyoun Yun, Yongsik Kim, Dongsik Kong, Hyunkwang Jeong, Jaeman Jang, Woojoon Kim, Inseok Hur, Jaehyeong Kim, Yun Hyeok Kim, Jaewook Lee, Sungwoo Jun, Choon Hyeong Jo, Dae Hwan Kim, and Dong Myong Kim
소속: School of Electrical Engineering, Kookmin University

FG4–G–4 16:15–16:30 Characterization of Intrinsic Field Effect Mobility in a–IGZO Thin–film Transistors through the De–embedding the Parasitic Source and Drain Resistance Effects
저자: Inseok Hur, Hagyoul Bae, Minkyung Bae, Yongsik Kim, Dongsik Kong, Hyunkwang Jeong, Jaeman Jang, Jaehyeong Kim, Woojoon Kim, Yun Hyeok Kim, Jaewook Lee, Sungwoo Jun, Choon Hyeong Jo, Dae Hwan Kim, and Dong Myong Kim
소속: School of Electrical Engineering, Kookmin University
A. Interconnect & Package  분과

일 시 : 2월 17일(금) 15:30-16:45
세션명 : [FH4-A] 배선용 원자층 증착공정
좌 장 : 김수현(영남대학교), 박진성(단국대학교)

FH4-A-1  15:30-16:00 [Invited]Atomic Layer Deposition of Ru Thin Films with Enhanced Nucleations using Various Ru(0) Metallorganic Precursors and Molecular O2
저자: Soo-Hyun Kim
소속: School of Materials Science and Engineering, Yeungnam University

FH4-A-2  16:00-16:15 Cu 배선 확산방지막용 ALD Ru박막의 계면접착력 평가
저자: 김정규1, 천태훈2, 김수현2, 박영배1
소속: 1안동대학교 신소재공학부 청정에너지 소재기술연구센터, 2영남대학교 신소재공학부

FH4-A-3  16:15-16:30 Atomic Layer Deposition of Ru and Ru–N Thin Films using N₂/H₂ Plasma as a Reactnat
저자: Ki-Yeung Mun1, Tae Eun Hong2, Taehoon Cheon1, Soo-Hyun Kim1, Byoung-Yong Lim3, and Sunjung Kim3
소속: 1School of Materials Science and Engineering, Yeungnam University, 2Busan Center, Korea Basic Science Institute, 3School of Materials Science and Engineering, University of Ulsan

FH4-A-4  16:30-16:45 Atomic Layer Deposition of Ru Thin Films using a Novel Ru(0) Metallorganic precursor as a Seed Layer for Copper Metallizations
저자: Seungmin Yeo1, Sang-Hyeok Choi1, Taehoon Cheon1, Soo-Hyun Kim1, Byoung-Yong Lim2, and Sunjung Kim2
소속: 1School of Materials Science and Engineering, Yeungnam University, 2School of Materials Science and Engineering, University of Ulsan
I. MEMS & Sensors 분과

FP1-1  09:30~12:35  Novel Biosensor based on MOSFET–BJT Hybrid Mode of Gated Lateral BJT for C–reactive Protein Detection
소속: School of Electrical Engineering and Computer Science, Kyungpook National University

저자: Jinyong Oh¹, M. Saif Islam¹, Hyun–June Jang², Tae–On Bae², and Won–Ju Cho²
소속: ¹University of California Davis, ²Kwangwoon University

FP1-3  09:30~12:35  Single Photon Detection for Quantum Cryptography Applications
저자: A. Bouzid, J. B. Park, and S. Moon
소속: Nanophotonics Research Center, Korea Institute of Science and Technology

FP1-4  09:30~12:35  MEMS 공정을 이용한 이중빔 PZT 외괄보 에너지수확소자의 제작 및 특성
저자: 김문근¹,², 황범석¹, 정재화¹, 민남기¹, 이상균², 양일석², 권광호¹
소속: ¹고려대학교, ²한국전자통신연구원

FP1-5  09:30~12:35  A RF MEMS Tunable Capacitor with Large Tuning Range using Aluminum Nitride Film and Two Air Gap Structure
저자: W. J. Jang, S. J. Cheon, and J. Y. Park
소속: Micro/Nano Devices and Packaging Lab. Department of Electronic Engineering, Kwangwoon University
D. Thin Film Process Technology

FP1-6 09:30–12:35  Growth of Conductive SrRuO<sub>x</sub> Films by Combined CVD/ALD Process
저자: Jeong Hwan Han, Woongkyu Lee, Woojin Jeon, and Cheol Seong Hwang
소속: WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter-university Semiconductor Research Center, Seoul National University

FP1-7 09:30–12:35  Resistive Switching Characteristics in HfO<sub>2</sub> Thin Films Depending on the Crystalline Structure
저자: 윤정호, 정형석, 이민환, 김건환, 송슬지, 석준영, 윤경진, 황철성
소속: 서울대학교 재료공학부 유전박막연구실

FP1-8 09:30–12:35  The Advanced Characteristics of Thermal CVD Silicon Oxide in a Single-wafer Chamber
저자: 이웅, 김용석, 신현진, 이우성, 임헌형, 황기현, 신유균
소속: Semiconductor R&D Center, Samsung Electronics Co., Ltd.

FP1-9 09:30–12:35  Development of High Performance and High Stability Transistors without Junctions
저자: 정승민<sup>1</sup>, 오진용<sup>2</sup>, M. Saif Islam<sup>2</sup>, 조원주<sup>1</sup>
소속: <sup>1</sup>광운대학교, 전자재료공학과, <sup>2</sup>Department of Electrical and Computer Engineering, University of California Davis

FP1-10 09:30–12:35  저온 스프레더증착법을 이용한 플렉서블 적층 저장변화 메모리의 제작 및 특성 연구
저자: 한용<sup>1</sup>, 조경아<sup>2</sup>, 박석형<sup>2</sup>, 김상식<sup>1,2</sup>
소속: <sup>1</sup>고려대학교 나노반도체공학과, <sup>2</sup>고려대학교 전기전자전파공학과

FP1-11 09:30–12:35  Mn doped ZnO<sub>x</sub>S<sub>1–x</sub> 저항변화 메모리소자 특성에 미치는 전극물질의 영향
저자: 한용<sup>1</sup>, 조경아<sup>2</sup>, 윤정권<sup>2</sup>, 김상식<sup>1,2</sup>
소속: <sup>1</sup>고려대학교 나노반도체공학과, <sup>2</sup>고려대학교 전기전자전파공학과
저자: Dong–Hyoub Kim, Musarrat Hasan, Tae–Young Jang, Jungwoo Kim, Jun Suk Chang, Manh Cuong Nguyen, and Rino Choi
소속: Inha University

Dipole–induced Conduction Process Change in La–incorporated Hafnium–based Dielectric
저자: Tae–Young Jang, Dong–Hyoub Kim, Jungwoo Kim, Jun Suk Chang, Cuong Nguyen Manh, Musarrat Hasan, and Rino Choi
소속: Department of Materials Science and Engineering, Inha University

Impacts of Ar/N$_2$ Flow rates of Sputtered TiN Metal Gate on Electrical Properties in Gate–first Processed MOS Devices
저자: Dongjun Yoo, Seung–Chan Heo, and Changhwan Choi
소속: Division of Materials Science and Engineering, Hanyang University

Low–temperature Atomic Layer Deposition of Cobalt Oxide Thin Films using Cyclopendadienylcobalt Dicarbonyl and Ozone
저자: 최규하, 한별, 박정우, 이원준
소속: 1세종대학교 나노신소재공학과, 2한솔케미칼 박막재료팀

Growth of Zn–Sn–O Films using by Plasma Enhanced Atomic Layer Deposition for TFTs Applications
소속: 1Thin Film Materials Research Team, Korea Research Institute of Chemical Technology, 2Department of Material Science and Engineering, Hongik University

ZnO Nano–wire Deposited by Metal Organic Chemical Vapor Deposition (MOCVD) for Anti Reflection Coating (ARC) of Si Solar Cell
저자: 최은석, 장삼석, 임소영, 박성주, 김동환, 변동진
소속: 1Department of Materials Science and Engineering, Korea
Influence of Argon Neutral Particle Beam of High Energy in the Neutral Particle Beam Sputtering System Assisted the Change of Structural Properties on the Amorphous Carbon Film

저자: DongHyeok Lee\(^1\), JinNyoung Jang\(^1\), KwangHo Kwon\(^2\), SukJae You\(^3\), BonJu Lee\(^3\), and MunPyo Hong\(^1\)
소속: \(^1\)Department of Display and Semiconductor Physics, Korea University, \(^2\)Department of Control and Instrumentation Engineering, Korea University, \(^3\)National Fusion Research Institute

Fabrication of Silicon Nanowire Based Thermoelectric Device and Temperature Sensor Calibration

저자: Wonchul Choi\(^1,2\), Youngsam Park\(^1\), Younghoon Hyun\(^1\), Taehyoung Zyung\(^1\), Jaehyun. Kim\(^1,3\), Mincheol Shin\(^2\), and Moongyu Jang\(^1,3\)
소속: \(^1\)Convergence Components & Material Research Lab., Electronics and Telecommunications Research Institute, \(^2\)Department of Electrical Engineering, KAIST, \(^3\)Department of Advanced Device Technology, UST

Fabrication of Sub-30nm Pillar Array by Oxygen Plasma Treatment

저자: Bongho Kim\(^1\), Daehong Kim\(^1\), Jihun Kwon\(^1\), Sungwoo Chun\(^1\), Seonjun Choi\(^1\), and Seung-Beck Lee\(^1,2,3\)
소속: \(^1\)Department of Electronic Engineering, Hanyang University, \(^2\)Department of Nanoscale Semiconductor Engineering, Hanyang University, \(^3\)Institute of Nano Science and Technology, Hanyang University

Thin Film Fabrication and Simultaneous Reduction of Deposited Graphene Oxide Platelets by Electrophoretic Deposition

저자: Sung Jin An
소속: School of Advanced Materials and Systems Engineering, Kumoh National Institute of Technology
FP1–22  09:30–12:35  Ion–gel Gate Dielectrics for Arrayed Si Nanowires Field Effect Transistors
저자: 최진용, 조경아, 김상식
소속: 고려대학교 전기전자전파공학과

FP1–23  09:30–12:35  Fabrication of Beta–phase Poly(9,9–dioctylfluorene) Nanowire Array using Direct Printing Method
저자: Jangmi Back and Myung M. Sung
소속: Department of Chemistry, Hanyang University

FP1–24  09:30–12:35  Graphene Sheets as P–type Transparent Conducting Electrodes in GaN Light Emitting Diodes
저자: Jung Min Lee, Hae Yong Jeong, and Won Il Park
소속: Division of Materials Science and Engineering, Hanyang University

FP1–25  09:30–12:35  Fabrication of Vapor Phase Polymerized PEDOT Nanowire Arrays using Liquid–bridge–mediated Nanotransfer Molding
저자: Boram Cho, Hyun S. Oh, and Myung M. Sung
소속: Department of Chemistry, Hanyang University

FP1–26  09:30–12:35  N–type Carbon Nanotube Network Device Based on Tunneling through SnO₂
저자: Young Jun Heo, Jun Ho Cheon, Seok Ha Lee, Jaeheung Lim, and Young June Park
소속: School of Electrical Engineering, Seoul National University

FP1–27  09:30–12:35  The Predicted Crystal Structure of Li₄C₆O₆, an Organic Cathode Material for Li–ion Batteries: First–principles Multi–scale Computational Study
저자: Dong–Hwa Seo¹, Hyungjun Kim², Haegyeom Kim¹, William A. Goddard III²,³, and Kisuk Kang¹
소속: ¹Department of Materials Science and Engineering, Seoul National University, ²Graduate School of EEWS, KAIST, ³Materials and Process Simulation Center, California Institute of Technology
FP1–28 09:30–12:35  Fabricated Various Metallic Nano–sized Pattern using Ag Ink Printing Technique

저자: 오상철1, 신주현2, 김징승2, 김양두3, 이현1,2,3
소속: 1고려대학교 나노반도체공학과, 2고려대학교 신소재공학과, 3고려대학교 바이오–마이크로시스템 협동과정


저자: I.-S. Kang and C. W. Ahn
소속: National Nanofab Center, Korea Advanced Institute of Science and Technology

FP1–30 09:30–12:35  Color Tunable OLEDs using Localized Surface Plasmons

저자: Illhwan Lee, Kihyon Hong, Sungjun Kim, and Jong–Lam Lee
소속: Department of Materials Science and Engineering and Division of Advanced Materials Science, Pohang University of Science and Technology

FP1–31 09:30–12:35  Analytic Model of Spin–Torque Oscillators(STO) for Circuit–level Simulation

저자: 안소라1, 임혜인1, 서수만2, 이경진2, 신형순1, 이승준1
소속: 1이화여자대학교 전자공학과, 2고려대학교 신소재공학과

FP1–32 09:30–12:35  Porosity Modulated Silicon Nanowires

저자: Jungkil Kim1,2, and Woo Lee1,2
소속: 1Korea Research Institute of Standards and Science, 2Department of Nano Science, University of Science and Technology

FP1–33 09:30–12:35  Thermal Modeling of 3D Stacked MLC NAND Flash Memory

저자: 김동기, 유승주, 이승구
소속: 포항공과대학교 전자전기공학과

FP1–34 09:30–12:35  System Model for CPU/GPU Architecture
서문

저자: 이성광1, 유승주1, 정재웅2, 우동혁2, 김대현2
소속: 1포항공과대학교 전자전기공학과, 2Intel Corporation

FP1-35 09:30–12:35  High-throughput Double-binary MAP Decoder with Reduced Memory Requirement
저자: 김지훈
소속: 충남대학교 전자공학과

FP1-36 09:30–12:35  Promoting Data Reuse on Shared Memory of Hybrid System
저자: Toan X. Mai, Yeonghun Jeong, and Jongeun Lee
소속: School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology

FP1-37 09:30–12:35  쓰기 데이터의 특성 파악을 통한 Wear-leveling
저자: 유태희, 박상훈, 서혁준, 정의영
소속: 연세대학교 전기전자공학과

FP1-38 09:30–12:35  Interleaved Garbage Collection Scheme using Dynamic Channel/Way Allocation for Solid-state Drive
저자: 김동건, 박상훈, 서혁준, 정의영
소속: 연세대학교 전기전자공학과

Q. Metrology, Inspection, and Yield Enhancement 분과

FP1-39 09:30–12:35  초음속 나노입자빔을 이용한 실리콘 웨이퍼 표면오염입자(10nm) 제거 실험
저자: 김인호, 이진원
소속: 포항공과대학교 기계공학과

FP1-40 09:30–12:35  Characterization of Overlay Error Induced by Film Stress using Local Stress Monitoring Tool
저자: C. H. Lee1, J. T. Kim1, J. H. Kim1, H. Y. Yoo1, I. K. Han1, and W. S. Yoo2
소속: 1Hynix Semiconductor Inc., 2WaferMasters, Inc.

FP1-41 09:30–12:35  The Pattern Wiggling CD Metrology using Flexible Scan & Dense Function
FP1–42  09:30–12:35  Electron Beam Inspection of Cell Mat Edge using Image Averaging and Comparison Method
저자: G. Kwon¹, J. H. Oh¹, D. Y. Mun¹, J. C. Jo², J. S. Koo², M. Nozoe², T. Ninomiya², T. Hiroi², H. Okuda², and H. W. Yoo¹
소속: ¹Hynix Semiconductor Inc.,
²Central Research Laboratory, Hitachi High-Technologies Corporation

FP1–43  09:30–12:35  The Measurement of OCD (Optical critical dimension) for Yield Enhancement at Edge Die
저자: Seok Park, Won Sik Yun, Chang Hwan Lee, Sung Su Kim, Hyung Won Yoo, and Il Keoun Han
소속: Hynix Semiconductor Inc.

FP1–44  09:30–12:35  The MASK CD Control (CDC) using OCD applications
저자: Hyun Chul Shin, Seok Park, Won Sik Yun, Chang Hwan Lee, Hyung Won Yoo, and Il Keoun Han
소속: Hynix Semiconductor Inc.

FP1–45  09:30–12:35  The In–Line Monitoring Method of ZAZ Thickness Using WD–XRF
저자: Jun Soo Kim, Sang Hoon Son, Shin Wang Ju, Hyung Won Yoo, and Il Keoun Han
소속: Hynix Semiconductor Inc.

저자: Y. J. Park¹ and D. R. Lee²
소속: ¹Pohang Accelerator Laboratory, Pohang University of Science and Technology, ²Department of Physics, Soongsil University

FP1–47  09:30–12:35  Improvement of Measurement Resolution for Determining Geometrical Thickness of a Silicon Wafer using a Femtosecond Pulse Laser
저자: 맹새롬¹³, 박정재¹, 진종완², 김재현¹², 강주식¹², 김중안¹, 오병성¹³
소속: 1한국표준과학연구원 길이센터, 2과학기술연합대학원대학교, 3충남대학교 물리학과

FP1-48  09:30-12:35  다결정성 tungsten 나노팁의 저전압 전계방출 안정성 평가
저자: 정재은, 안상정, 박창준, 김주황, 송운, 김달현, 배문섭, 이확주, 조양구
소속: 한국표준과학연구원 나노미징기술센터
Room I
하나스퀘어 (아뜨리움)

일시: 2월 17일(금) 13:40-16:45
세션명: [FP2] Poster II

B. Patterning 분과

FP2-1 13:40-16:45  
Hydrogen Plasma Characteristics by Cylindrical Inductively Coupled Plasma for Photoresist Strip Process  
저자: 양승국, 강정현, 조주형, 이성욱, 조정희, 채희선  
소속: 피에스케이㈜ 연구소

FP2-2 13:40-16:45  
AlGaInP 기반 LED에서 공기 층 Hybrid DBR 구조 삽입을 통한 발광 효율 향상에 관한 연구  
저자: 류호성1,2, 박준모1,3, 백종협1, 곽준섭, 오화섭1  
소속: 1한국광기술원 LED소자센터, 2순천대학교 WCU 인쇄전자공학과, 3전남대학교 물리학과

FP2-3 13:40-16:45  
Investigation on Etch Characteristics of Magnetic Tunnel Junction Stacks in a CH₄/O₂/ArPlasma  
저자: Tea Young Lee, Eun Ho Kim, and CheeWon Chung  
소속: Department of Chemical Engineering, Inha University

FP2-4 13:40-16:45  
Inductively Coupled Plasma Reactive Ion Etching of MgO Thin Films in CH₄/Ar Plasma  
저자: Tea Young Lee, Eun Ho Kim, Il Hoon Lee, and Chee Won Chung  
소속: Department of Chemical Engineering, Inha University

FP2-5 13:40-16:45  
용매 증발 제어를 통한 고분자 복합 소재의 non-lithography 패터닝 기술  
저자: 정희준, 박철민  
소속: 연세대학교 신소재과학과

FP2-6 13:40-16:45  
Inductively Coupled Plasma Effect on Graphene Field Effect Transistor  
저자: Y. D. Lim, D. Y. Lee, and W. J. Yoo  
소속: Department of Nano Science and Technology, Sungkyunkwan University
E. Compound Semiconductors

저자: M. Siva Pratap Reddy¹, V. Rajagopal Reddy², and Jung-Hee Lee¹
소속: ¹School of Electrical Engineering & Computer Science, Kyungpook National University, ²Department of Physics, Sri Venkateswara University

FP2-8 13:40–16:45  Drain Field Plate를 통한 AlGaN/GaN HEMT의 Off–state Breakdown Voltage 특성 개선에 관한 연구
저자: 안호정¹, 최우진¹, 박봉렬², 차호영², 서광석¹
소속: ¹서울대학교 전기컴퓨터공학과, ²홍익대학교 전자전기공학과

FP2-9 13:40–16:45  Sapphire Substrate밑면에 성장시킨 ZnO Nanorods의 LED성능에 미치는 영향
저자: 진주, 류버들, 한민, 김현규, 김희윤, 박재영, 홍창희
소속: 전북대학교 반도체화학공학부

FP2-10 13:40–16:45  BCl³ ICP 건식 식각 공정으로 게이트 리세스한 0.25μm T–gate AlGaN/GaN/SiC HEMT 소자제작 및 특성
저자: 송인협¹,², 장경욱¹, 안호진¹, 민병규², 임종원², 김성일², 장우진², 이종민², 윤형섭², 문재경²
소속: ¹한서대학교 신소재공학과, ²한국전자통신연구원 RF융합부품연구팀

FP2-11 13:40–16:45  Deep Level Defects in InGaN/GaN Blue Light Emitting Diode
저자: P. Koteswara Rao¹, Byungguon Park¹, Sang-Tae Lee¹, Moon-Deock, Kim¹, Jae-Eung Oh², and Song-Gang Kim³
소속: ¹Department of Physics, Chungnam National University, ²School of Electrical and Computer Engineering, Hanyang University, ³Department of Information and Communications, Joongbu University

FP2-12 13:40–16:45  Effect of Gate Leakage Current on AlGaN/GaN HEMTs with Electron Beam Irradiation
저자: Seung Kyu Oh, S. M. Wie, and Joon Seop Kwak
FP2–13 13:40–16:45  LED Light Extraction Efficiency Study of GaN Based Light Emitting Diodes using by Various Ion Implanted Current Blocking Layer
저자: Y. D. Kim, M. J. Park, and J. S. Kwak
소속: Department of Printed Electronics Engineering, Sunchon National University

C. Materials Growth & Characterization 분과

FP2–14 13:40–16:45  Photoluminescence and Dielectric Function of Cuprous Oxide Thin Films
저자: Jun–Woo Park¹, Hyungkeun Jang¹, Sung Kim¹, Suk–Ho Choi¹, Joongoo Kang², Su–Huai Wei², and Hosun Lee¹
소속: ¹Department of Applied Physics, Kyung Hee University, ²National Renewable Energy Laboratory

저자: Hun Hee Lee, Han Seok Seo, Jeong Hyuk Yim, Do Hyun Lee, Changhyun Kim, and Hyeong Joon Kim
소속: Department of Materials Science and Engineering, Seoul National University

FP2–16 13:40–16:45  Structural Properties of Nonpolar A–plane MgZn1–xO Films on R–plane Sapphire Substrates by Plasma–assisted Molecular Beam Epitaxy
저자: S. K. Han¹, H. S. Lee¹, D. S. Lim², S. K. Hong¹,², M. H. Jung³, J. Y. Lee³, and T. Yao⁴
소속: ¹Department of Advanced Materials Engineering, Chungnam National University, ²Graduate School of Green Energy Technology, Chungnam National University, ³Department of Materials Science and Engineering, KAIST, ⁴Center for Interdisciplinary Research, Tohoku

저자: 빈민욱¹, 이원재¹, 최은호², 유영조²
소속: ¹동의대학교 융합부품공학과,
213:40–16:45 Ni-assisted, Large-area Graphene Growth using Rapid Thermal Annealing
저자: Jae Hwan Chu¹, Jinsung Kwak¹, Tae-Yang Kwon¹, Soon-Dong Park¹, Heungseok Go², Sung Youb Kim¹, Kibog Park², and Soon-Yong Kwon¹,²  
소속: ¹School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology, ²School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology.

213:40–16:45 2-step ELOG of GaN on C-plane Sapphire using Carbonized PR Mask
저자: Sungwook Moon¹, Sang-il Kim², Samseok Jang², Jungyeop Hong¹, Junhyuck Kwon², and Dongjin Byun¹,²  
소속: ¹Department of Nano-photonics, Korea University, ²Department of Material Science and engineering, Korea University.

213:40–16:45 Improved Crystalline Quality of Si-doped a-plane GaN using Higher Initial Growth Pressure
저자: Keun Man Song¹, Jong Min Kim¹, Chan Soo Shin¹, Chul Gi Ko¹, Hyun Koun Cho², Dae Ho Yoon², Sung Min Hwang³, and Hogyoung Kim⁴  
소속: ¹Korea Advanced Nano Fab Center, ²School of Advanced Materials Science and Engineering, Sungkyunkwan University, ³Korea Electronics Technology Institute, ⁴College of Humanities and Sciences.

213:40–16:45 Nucleation and Growth of GaN Compound on Various Powders
저자: Hongseong¹, Yeongtack¹, Bokjin², Cho Youngmin², and Takafumi Yao³  
소속: ¹Materials Science and Engineering, Dong-A University, ²Department of Electronic Engineering, Hanyang University, ³Institute for Materials Research, Tohoku University.

213:40–16:45 Growth of GaN using Patterned Metal Mask by Metal–organic Chemical Vapor Deposition
저자: J. Park¹, D. Moon², S. Park², S. H. Park², and E. Yoon²
FP2–23 13:40–16:45  Growth of Monolayer Graphene from Solid Carbon Source using Rapid Thermal Annealing
저자: J. Kwak\textsuperscript{1}, J. H. Chu\textsuperscript{1}, T.-Y. Kwon\textsuperscript{1}, S.-D. Park\textsuperscript{1}, S. Y. Kim\textsuperscript{1}, K. Park\textsuperscript{2}, and S.-Y. Kwon\textsuperscript{1,2}
소속: 1School of Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology, 2School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology

FP2–24 13:40–16:45  Investigation of Crystallization Procedures and Crystal Structures of Nitrogen Doped GeSb Phase Change Film
저자: Hyung Keun Kim and Doo jin Choi
소속: Department of Material Science and Engineering, Yonsei University

FP2–25 13:40–16:45  Fabrication of Vertically Aligned GaN/air–gap Microstructures using Doping Selective Electrochemical Etching
저자: Ah Hyun Park, Yong Seok Lee, Hyun Jeong, Tae Hoon Seo, Kang Jea Lee, and Eun Kyung Suh
소속: School of Semiconductor and Chemical Engineering, Semiconductor Physics Research Center, Chonbuk National University

FP2–26 13:40–16:45  Structural and Electrical Properties of Nano-crystalline Graphite Layer on 6H–SiC Formed by Direct Electron Beam Irradiation
저자: Heung Seok Go\textsuperscript{1}, Jinsung Kwak\textsuperscript{2}, Youngeun Jeon\textsuperscript{1}, Bum-Kyu Kim\textsuperscript{3}, Nam Kim\textsuperscript{4}, Jae-Hyun Ko\textsuperscript{5}, Sung Youb Kim\textsuperscript{2}, Byung Cheol Lee\textsuperscript{6}, Hyun Suk Kang\textsuperscript{6}, Soon-Yong Kwon\textsuperscript{2}, and Kibog Park\textsuperscript{1}
소속: 1Electrical and Computer Engineering, Ulsan National Institute of Science and Technology (UNIST), 2Mechanical and Advanced Materials Engineering, Ulsan National Institute of Science and Technology (UNIST), 3Physics, Chonbuk National University, 4Division of Convergence Technology, Korea Research Institute of Standards and Science, 5Physics, Hallym University, 6Quantum Optics Lab, Korea Atomic Energy Research Institute
FP2–27 13:40–16:45  Growth of InP/InGaP Quantum Structure for the 808–nm Wavelength Emission
저자: S. Y. Kim1,2, E. H. Lee1, J. D. Song1, I. K. Han1, J. I. Lee1, and T. W. Kim2
소속: 1Nano Photonics Research Center, Korea institute of Science and Technology, 2Division of Electronics and Computer Engineering, Hanyang University

FP2–28 13:40–16:45  Molecular Beam Epitaxy를 이용한 Large Droplet Island 성장
저자: 이은혜1, 송진동1, 김수연1, 배민환1, 한일기1, 장수경2, 이정일1
소속: 1한국과학기술연구원 나노포토닉스센터, 2연세대학교 물리학과

FP2–29 13:40–16:45  Enhancement of Emission from InGaN/GaN Multiple Quantum Wells via Surface Plasmon Resonance
저자: Kyoung Su Lee, Seon Pil Kim, and Eun Kyu Kim
소속: Quantum–Function Research Lab. and Department of Physics, Hanyang University

K. Memory (Design & Process Technology) 분과

FP2–30 13:40–16:45  A Novel Cross–bar Array Scheme to Supress Sneak Path Current in Memory Operation
저자: Jun Yeong Seok, Gun Hwan Kim, Seul Ji Song, Jung Ho Yoon, Kyung Jin Yoon, Min Hwan Lee, and Cheol Seong Hwang
소속: WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter–university Semiconductor Research Center, Seoul National University

FP2–31 13:40–16:45  ZN 기반의 저항 변화 메모리의 스위칭 메커니즘 및 기억유지 특성 연구
저자: 김희동, 안호영, 서유정, 김경현, 송민영, 이동명, 김태근
소속: 고려대학교 전기전자전파공학과

FP2–32 13:40–16:45  Bipolar Switching Behavior of ZnO Thin Films Deposited by Metal Organic Chemical Vapor Deposition using Different Growth Temperature
저자: Yim So Young1, Lee Jong–Han2, Samseok Jang2, Lee Do Han2, Tae–Geun Seong1, Sahm Nahm1,2, and Dongjin Byun2
Ion Beam Etching of Sub-30nm Scale Perpendicular-MTJ for Reducing by-product and Damage of Sidewall.
저자: Daehong Kim¹, Bongho Kim¹, Sungwoo Chun¹, Jihun Kwon¹, Seonjun Choi¹, and Seung-Beck Lee¹,²
소속: ¹Department of Electronic Engineering, Hanyang University, ²Institute of Nano Science and Technology, Hanyang University

Resistive Switching Properties of TaOx with a Variety of Reactive Metal
저자: 송성호, 양민규, 김재혁, 성동준, 주현수, 김은미, 박찬전, 박성건, 백인규, 박순오, 최시영
소속: 삼성전자 반도체 연구소 공정개발팀

Si/SiGe Vertical Gate DHBT (VerDHBT)–based 1T DRAM Cell For Improved Retention Characteristics With a Large Hysteresis Window
저자: Ja Sun Shin, Hyunjun Choi, Hagyoul Bae, Jaeman Jang, Daeyoun Yun, Euiyoun Hong, Hyojoon Seo, Dae Hwan Kim, and Dong Myong Kim
소속: School of Electrical Engineering, Kookmin University

Deposition Temperature Dependence of the Memory Characteristics for AYO(Al₂O₃/Y₂O₃/SiO₂) Multi–stacked Film
저자: Hye Young Jung¹,² and Doo Jin Choi¹
소속: ¹Department of Materials Science & Engineering, Yonsei University, ²Samsung Electronics Co., Ltd.

Optical Modeling of NBIS Instability and Hole Current in a–IGZO Systems
저자: Yoon Jang Chung¹, Un Ki Kim¹, Jeong Hwan Kim¹, Eric Hwang¹, Sang ho Rha², and Cheol Seong Hwang¹
소속: ¹WCU Hybrid Materials Program, Department of Materials Science and Engineering and Inter–university Semiconductor Research Center, Seoul National University, ²Department of Nano Science and Technology,
FP2–38 13:40–16:45  A Smart Scribe SRAM Test Structure for Bitcell Variation Characterization in Macro Level
저자: 김현수, 김형태, 황재철, 김영현, 배윤미, 윤효준, 이호철, 홍규식
소속: 삼성전자 System LSI, Product & Test Engineering Team

저자: 김형태, 김현수, 김영현, 황재철, 배윤미, 윤효준, 이호철, 홍규식
소속: 삼성전자 System LSI 제품기술팀

FP2–40 13:40–16:45  Simulation Study of Resurf Stepped Oxide (RSO) Type Semi Super-junction (semi-SJ) Trench Double Diffusion MOSFET (TDMOS) with Various Geometrical Parameters
저자: 나경일¹, 구진근¹, 김상기¹, 김종대¹, 양일석², 이전호¹
소속: ¹한국전자통신연구원 융합부품소재연구부, IT융합부품기술팀, ²한국전자통신연구원 융합부품소재연구부 전력제어소자연구팀

FP2–41 13:40–16:45  Dynamic Pixel Test Pattern for CMOS Image Sensor
저자: KS Lee, HJ Lee, MJ Jang, JC Kim, ST Kim, JW Moon, W Cho, and KD Yoo
소속: Hynix Semiconductor Inc.

저자: Ja Sun Shin, Hagyoul Bae, Euiyoun Hong, Jaeman Jang, Daeyoun Yun, Hyojoon Seo, Hyunjun Choi, Dae Hwan Kim, and Dong Myong Kim
소속: School of Electrical Engineering, Kookmin University

FP2–43 13:40–16:45  Migration of Oxygen Ions and Vacancies in Tunneling based Resistance Switching Element
저자: Seung Jae Baik
소속: Department of Electrical Engineering, KAIST
Design Optimization of Vertical Double Gate SiGe/Si Heterostructure Tunneling Field-Effect Transistors
저자: 윤영준, 이재성, 박윤수, 서재화, 우성윤, 강인만
소속: 경북대학교 전자공학부, 경북대학교 전자전기컴퓨터학부

Measurement of Band Bending Voltage in SiO₂/Poly-silicon Stack during FN Tunneling by Constant Current Stress Test.
저자: 나희도, 오진호, 목인수, 김종기, 이규민, 손현철
소속: 연세대학교 신소재공학과

Accuracy Verification of Asymmetric Substrate Resistance Model for Multi-finger RF MOSFETs
저자: Min-Kwon Choi, Ju-Young Kim, and Seonghearn Lee
소속: Department of Electronic Engineering, Hankuk University of Foreign Studies

Analytical Model-based SPICE Simulation for the Design of Amorphous InGaZnO Thin-Film Transistors-based Circuits
저자: 김우준, 배민경, 김용석, 김재형, 허인석, 장재만, 정현광, 공동식, 김윤혁, 이재욱, 조춘형, 전성우, 김동명, 김대환
소속: School of Electrical Engineering, Kookmin University