



| | |
|-----------------------|---------------------------------|
| Session Title: | [P1] Poster Session I |
| Session Date: | November 20 (Mon.), 2023 |
| Session Time: | 16:50-17:40 |
| Session Room: | Grand Ballroom 4, 2F |

[P1-001]

**Why and How to Increase EUV-Induced Material Alteration Degree in EUV Inorganic Resists? :
The Effect of Electron Beam Irradiation on Dibenzyltin Diacetate Thin Film Using Local
Analysis and Quantum Chemical Calculations**

Hyeok Yun and Hyun-Dam Jeong (Chonnam Nat'l Univ., Korea)

[P1-002]

Microimprinting Lithography for Solar Energy Applications

Beom-Su Kim, Jea-Hyun Kim, and Sun-Kyung Kim (Kyung Hee Univ., Korea)

[P1-003]

High-Sensitivity Observation of Nano Ice with Plasmonic Lithography

Nu-Ri Park, Yedam Lee, Sang Yup Lee, Han-Na Kim, Dong June Ahn, and Myung-Ki Kim (Korea Univ., Korea)

[P1-004]

PMMA Bottlebrush Polymer for Electron Beam Lithography

Kwangjin Kim, Chaeon Kim, Seung Jae Hong, Joona Bang, and Seungwoo Lee (Korea Univ., Korea)

[P1-005]

**Vertically Stacked Heterogeneous Three-Dimensional Integrated Circuits Via Transfer Printed
Semiconductor Sheets**

Seong Woo Hong and Yei Hwan Jung (Hanyang Univ., Korea)



[P1-006]

Metal Alloy Degradation in Fluidic Self-Assembly Transfer Technology under Diverse Conditions for MicroLED Displays

Yunki Min, Jimin Park, Kyeongmin Ryu, Garam Kim, Sang Jeon Hong, and Daewon Lee (Myongji Univ, Korea)

[P1-007]

Analyzing Variations in Fluidic Self-Assembly Efficiency based on Binding Site Size and Spacing

yeongho Park, Bin Yoo, Myeonghwan Hong, Daeun Cho, Tae-min Ha, Garam Kim, Sang Jeon Hong, and Daewon Lee (Myongji Univ., Korea)

[P1-008]

Arranging Heterogeneous Microchips of Different Sizes at Desired Positions Using Fluidic Self-Assembly

Chanyong Park, Insik Nam, Soeun Park, Samuel Ha, Tae-min Ha, Garam Kim, Sang Jeon Hong, and Daewon Lee (Myongji Univ., Korea)

[P1-009]

Microstructure and Characteristic Analysis of High-Integrated Pillar Bump by Reflow Effect

Young-gi An and Jae-seong Jeong (KETI, Korea)

[P1-010]

Heterogeneous Monolithic 3D Integration for Hybrid Vertical Inverter Using n-Type IGTO TFT on p-Type Si FET

Chanseul Lee, Sunbum Kim, Gyuri Kim, and Changhwan Choi (Hanyang Univ., Korea)

[P1-011]

Heterogeneous Inverter Using Si FET and Oxide Semiconductor TFT

Sun Bum Kim, Chan Seul Lee, Gyu Lee Kim, Jae Seok Hur, Ho Young Lee, Jae Kyeong Jeong, and Chang Hwan Choi (Hanyang Univ., Korea)



[P1-012]

Analysis of Numerical Simulation for Optimizing the Effective Thermal Conductivity and Electromagnetic Shielding Properties of Diamond/Copper Composites

Yongbin Bang (Seoul Nat'l Univ., Korea), Tae-Han Kim(Hankuk Univ. of Foreign Studies., Korea), In-Sung Lee, Young Pyo Jeon (Seoul Nat'l Univ., Korea), Bo Wha Lee (Hankuk Univ. of Foreign Studies., Korea), Young Joon Yoo (Seoul Nat'l Univ., Korea), and Sang Yoon Park (Kyonggi Univ., Korea)

[P1-013]

Effect of Nb₂O₅ Interlayer on HZO Ferroelectric Device

Sangmin Lee, Dukhwan Kim, Yerin Jeon, and Hyungtak Seo (Ajou Univ., Korea)

[P1-014]

Al Doped SrTiO₃ Dielectric Layer for MIM Capacitor

Dukhwan Kim, Jisu Kim, JinChan Lee, and Hyungtak Seo (Ajou Univ., Korea)

[P1-015]

Ce Doping Effects on Electrical Characteristics of HfO₂ Thin Films

Jiyeong Park, Yerin Jeon, Beomho Won, and Hyungtak Seo (Ajou Univ., Korea)

[P1-016]

Analysis of the TiO₂ Channel Based Redox-Thin Film Transistor by Controlling the Electrical Pulse

Hayoung Park, Jisu Kim, Suwan Lee, Junmo Kim, Kumar Mohit, and Hyungtak Seo (Ajou Univ., Korea)

[P1-017]

Charge Trap Engineering and Synaptic Behavior of Transition Metal Dichalcogenides Transistor, via Molecular Dynamics

MiJi Kwon, Yeonjin Je, Chang Hwan Oh (Gyeongsang Nat'l Univ., Korea), Sunkook Kim (Sungkyunkwan Univ., Korea), and Jun Hong Park (Gyeongsang Nat'l Univ., Korea)



[P1-018]

Van Der Waals Interface Engineering for Enhancement of Semiconductor Device Performance

Su-yeon Cho, Do-Hyeon Lee, and Jun Hong Park (Gyeongsang Nat'l Univ., Korea)

[P1-019]

Global Mapping Phase Error Compensation of Dynamic Spectroscopic Imaging Ellipsometer

Gukhyeon Hwang, Sukhyun Choi, Saeid Kheiryzadehkhaghah, Inho Choi (Jeonbuk Nat'l Univ., Korea), Sungtae Kim, Sangjun Kim (AUROS Tech., Korea), and Daesuk Kim (Jeonbuk Nat'l Univ., Korea)

[P1-021]

Low-Temperature Growth of Ga₂O₃ Thin Films on Si Substrates by MOCVD and Their Electrical Characteristics

Jung-Bok Lee, Jee-Hun Jeong, Min-Seok Jang, Da-Hui Yoo, and Ho-Jun Lee (Pusan Nat'l Univ., Korea)

[P1-022]

Low-Dropout Regulator with Buffer Impedance Attenuation

Dongsoo Lee and Jeongjin Roh (Hanyang univ., Korea)

[P1-023]

Simulations of Various Edge Termination Structures for 3300 V SiC PiN Diodes Using Epitaxial Layers

Sangyeob Kim, Sumin Park, Hyowon Yoon, Jinhun Kim, Chaeyun Kim, Yeongeun Park, Gyuhyeok Kang, Gukhwa Jeon, Kanghee Shin, Dusan Baek, and Ogyun Seok (Kumoh Nat'l Inst. of Tech., Korea)

[P1-024]

Experiments of TID Effects with Gamma-Ray on SiC MOSFETs

Chaeyun Kim, Gukhwa Jeon, Hyowon Yoon, Yeongeun Park, Sangyeop Kim (Kumoh Nat'l Inst. of Tech., Korea), Dong-Seok Kim (KAERI, Korea), and Ogyun Seok (Kumoh Nat'l Inst. of Tech., Korea)



[P1-025]

The Effects of Power Cycling Test on the 4H-SiC/SiO₂ Interface of 4H-SiC MOSFET

DaHui Yoo and Ho-Jun Lee (Pusan Nat'l Univ., Korea)

[P1-026]

Analysis for Improving Short-Circuit Ruggedness of 4H-SiC Power MOSFET

Min-Seok Jang, Jee-Hun Jeong, DaHui Yoo, Jungbok Lee, and Ho-Jun Lee (Pusan Nat'l Univ., Korea)

[P1-027]

Enhancing Efficiency of Power Converters for Automotive Applications Using Switched Capacitor Voltage Dividers/Multipliers

ByeongIk Kim and JeongJin Roh (Hanyang Univ., Korea)

[P1-028]

A Switched Capacitor Buck-Boost Converter for Automotive LED Driver with Continuous Output Current Delivery

Chaeyoung Kang, Dongsoo Lee, Tian Guo, and Jeongjin Roh (Hanyang Univ., Korea)

[P1-029]

Correlation Analysis of Security Level and RAM Usage in NIST PQC FALCON Digital Signature Algorithm

Dong-Woo Han, Jae-Sang Noh, and Dong-Joon Shin (Hanyang Univ., Korea)

[P1-030]

IO Optimization Strategies for a GPU-Based Graph Engine with High-Performance Storage

Jeong-Min Park, Myung-Hwan Jang, and Sang-Wook Kim (Hanyang Univ., Korea)

[P1-031]

SIMD Optimization for Improving The Performance of a CPU-Based Graph Engine

Ikhyeon Jo, Myung-Hwan Jang, and Sang-Wook Kim (Hanyang Univ., Korea)



[P1-032]

Investigation of Poly-Silicon Channel Induced Vth Distribution Effect and It's Scaling Effect in 3D NAND Flash Memory

Jae-Min Sim, Beomsu Kim, Jiho Song, Hakyong Kim, and Yun-Heub Song (Hanyang Univ., Korea)

[P1-033]

Silicon Nanocrystal Embedded Charge Trap Layer to Improve Program Characteristic in 3D NAND Flash

Hakyong Kim, Beomsu Kim, Jae-Min Sim, Jiho Song, and Yunheub Song (Hanyang Univ., Korea)

[P1-034]

Cs₂AgBiBr₆ - Based Flexible Photodetector with Transferable TiO₂ Nanorods

Seongmin Jeong, Yeongje Choi, Dongkun Ahn, Daekyeong Kang, and Jinsub Park (Hanyang Univ., Korea)

[P1-035]

Performance Enhancement in BaTiO₃ - Fe₃O₄ Core-Shell Based Piezoelectric Nanogenerators through Magnetic-Alignment

Wonjun Heo, Soohoon Lee, Dohee Kim, Myeonghyeon Shim, Yerim Lee, and Jinsub Park (Hanyang Univ., Korea)

[P1-036]

Effects of Gallium Concentration Gradient in IGZO Layer on Performance of Memristor

Sangmin Kim, Juseok Jung, Jaegal Junyeong, Junyong Nam, and Jinsub Park (Hanyang Univ., Korea)

[P1-037]

Towards Better Generalization with Flexible Representation of Multi-Module Graph Neural Networks

Hyungeun Lee and Kijung Yoon (Hanyang Univ., Korea)



[P1-038]

An Analog Low Dropout Regulator Design for Stacked Die Power Management

Jun-Hwan Jang and Byong-Deok Choi (Hanyang Univ., Korea)

[P1-039]

Gate, Emission and Ramp Drivers for Micro-LEDs Using α -IGZO TFT

Jin-Hyeong Kim, Yong-Duck Kim, and Byong-Deok Choi (Hanyang Univ., Korea)

[P1-040]

60Gps PAM-8 Tx for High-Performance Computing Using An Automatic System

Taeseung Kang and Jaeduk Han (Hanyang Univ., Korea)

[P1-041]

Impact of Synaptic Characteristics of IGZO Memristor on Neuromorphic Computing

Kyoungjin Min, Seojin Choi, Yubeen Hwang, and Jonghwan Lee (Sangmyung Univ., Korea)

[P1-042]

An XAI Model for Semiconductor Manufacturing Processes based on Confidence Interval Visualization for the Impact of Process Parameters

Sangmyeong Lee, Sunghyun Hwang, Eunjung Choi, Xueyi Zhou, and Dong-Kyu Chae (Hanyang Univ., Korea)

[P1-043]

An XAI Model for Semiconductor Manufacturing Processes with Exploring Process Parameter Interactions based on Uncertainty

Sunghyun Hwang, Sangmyeong Lee, Eunjung Choi, Jongsoo Lee, and Dong-Kyu Chae (Hanyang Univ., Korea)



[P1-044]

Hydrogenation-Induced Enhancement of Ce^{3+} Concentration in CeO_2 Nanoparticles for Efficient Silicate Adsorption

Myungju Woo, Ganggyu Lee, Sungmin Kim, Donghwan Kim, Yeram Lee, Hongjun Park, Bobae Lee, Taeseup Song, and Ungyu Paik (Hanyang Univ., Korea)

[P1-045]

Prediction and Implementation of I-V Curve of Nanowire GAA FET Using Artificial Neural Networks

Junhyeok Song, Wonbok Lee, and Jonghwan Lee (Sangmyung Univ., Korea)

[P1-046]

Memristor Modeling based on Physics-Informed Neural Network

Younghyun Lee, Kyeongmin Kim, and Jonghwan Lee (Sangmyung Univ., Korea)

[P1-047]

Enhancing Molybdenum CMP Process via Catalytic Oxidation with Iron: A Density Functional Theory Study

Ganggyu Lee, Sungmin Kim, Donghwan Kim, Myungju Woo, Yeram Lee, Hongjun Park, Bobae Lee, Taeseup Song, and Ungyu Paik (Hanyang Univ., Korea)

[P1-048]

Study on The Mechanical Behavior of Epoxy Molding Compound under Various Curing Conditions Using Fiber Bragg Grating Sensor and Dielectric Sensor

Jeong-Hyeon Baek, Jong-Whi Park, Woong-Kyoo Yoo, and Hak-Sung Kim (Hanyang Univ., Korea)

[P1-049]

Stretchable Microwave Transmission Lines based on Quasi-Microstrip Structure

Jaeman Lim and Yei Hwan Jung (Hanyang Univ., Korea)



[P1-050]

Analysis of The Final Multiplexer Stage for High-Speed Transmitter

Youngmin Oh and Jaeduk Han (Hanyang Univ., Korea)

[P1-051]

Enhancing Performance of IGZO/Quantum Dot-Based Phototransistor Using Ga_2O_3 Passivation Layer

Yongjun Jeong and JaeKyeong Jeong (Hanyang Univ., Korea)

[P1-052]

Achieving High Field-Effect Mobility Exceeding $80 \text{ cm}^2/\text{Vs}$ in a Highly Aligned Crystalline IGO TFTs with Outstanding Reliability

Sang Won Chung and Jae Kyeong Jeong (Hanyang Univ., Korea)

[P1-053]

Wavy Thin-Film Transistor Design for Stretchable Displays

Jeong-Eun Oh and Jae-Kyeong Jeong (Hanyang Univ., Korea)

[P1-054]

High Performance of Delta Conductance Characteristics Using Heterojunction Structure for Multi-Values Logic Application

Jun-Ho Lee and Jae-Kyeong Jeong (Hanyang Univ., Korea)

[P1-055]

Silver Nanowire Bottom Gate Electrodes Fabricated by Intense Pulsed Light Welding and Mechanical Roll-Pressing for Thin Film Transistor Fabrication

Young-Min Ju, Jong-Whi Park, and Hak-Sung Kim (Hanyang Univ., Korea)

[P1-056]

Logic Inverter by Junction Field-Effect Transistors with $\text{WSe}_2/n^+\text{-Si}$ and $\text{MoS}_2/p^+\text{-Si}$ Structures

Yoonsok Kim, Taeyoung Kim, Wonchae Jeong, Deogkyu Choi, and Eun Kyu Kim (Hanyang Univ., Korea)



[P1-057]

Optimization for Enhanced Electrical Properties of ZrO_2/HfO_2 Laminated Structure for Metal-Insulator-Metal Capacitors

Yoonchul Shin, Seung Won Lee, and Ji-Hoon Ahn (Hanyang Univ., Korea)

[P1-058]

Quantized PyNET QxQ for On-Sensor Deep Learning Application

Dong-Eon Won and Jungwook Choi (Hanyang Univ., Korea)

[P1-059]

Exploring Advanced Quantization Scheme for Large Language Model

Jiwoong Park and Jungwook Choi (Hanyang Univ., Korea)

[P1-060]

Effect of H_2/N_2 Ratio on Molybdenum Nitride Thin Films Deposited by Atomic Layer Deposition

Min-Ji Ha, Na-Gyeong Kang, and Ji-Hoon Ahn (Hanyang Univ., Korea)

[P1-061]

Optimized Learning Process for Compensation of the Non-Ideal Conductance Characteristics of the Synaptic Devices in Ex-Situ Training

Jun Seop An, Seong Yeon Ryu, and Tae Whan Kim (Hanyang Univ., Korea)

[P1-062]

Fabrication of 3D GaN/2D BN Heterostructures for In-Site Epitaxial Lateral Overgrowths

Heesoo Kim (UNIST, Korea), Beomjun Kim (Sogang Univ., Korea), Hyerin Jo (Soongsil Univ., Korea), Hyobin Yoo (Sogang Univ., Korea), Hongseok Oh (Soongsil Univ., Korea), Aziz Ahmed (Seoul Nat'l Univ., Korea), and Kunook Chung (UNIST, Korea)



[P1-063]

Enhancing Semiconductor Yield through Two-Step Defect Detection and Classification Technique

Tae kyeong Park, Sang Hyuk Moon, and Je Hyeong Hong (Hanyang Univ., Korea)

[P1-064]

A Study on the Heater Design for Back Side Defect Reduction in PE-SiON Process

Daeman Seo, Byungchul Choi, Seungjae Baek (Samsung Electronics, Korea), and Inho Lee (Hankyong Nat'l Univ., Korea)

[P1-065]

Investigation of Surface Chemistry of 4H-SiC during RCA Cleaning Processes

Juyeol Lee, Yoonji Ra, Sumit Kumar, Tae-Gon Kim, and Jin-Goo Park (Hanyang Univ., Korea)

[P1-066]

A Study on the Characteristics of IGZO/ITO and ITO/IGZO TFT Using Thin ITO Channel Layer

Youngsoo Noh, Hyoungeon Ju, Jiyoung Bang, Hyeonjeong Sun, Sangduk Kim, Yeonghun Lee, Seungmin Choi, and Seung-Beck Lee (Hanyang Univ., Korea)

[P1-067]

Enhanced Field Effect Mobility of α -IGZO TFTs by Varying Thickness of Ta Capping Layer

Seungmin Choi, Hyoungeon Ju, Jiyoung Bang, Hyeonjeong Sun, Sangduk Kim, Yeonghun Lee, Youngsoo Noh, and Seung-Beck Lee (Hanyang Univ., Korea)

[P1-068]

The Reaction Mechanism Changes with Oxygen and Argon in the Carbonyl Fluoride Dissociation

Seyun Jo and Sang Jeon Hong (Myongji Univ., Korea)



[P1-069]

Deposition of Porous Europium-Doped Titanium Dioxide ($\text{TiO}_2\text{-Eu}$) Thin Films for Potential UV Screening and Light Conversion

Kamila Zhumanova and Timur Sh. Atabaev (Nazarbayev Univ., Kazakhstan)

[P1-070]

Incorporation of Fluorescent Carbon Dots (CDs) Into Post-Deposited PMMA Layer for Efficiency Enhancement of Perovskite Solar Cells

Darya Goponenko and Timur Sh. Atabaev (Nazarbayev Univ., Kazakhstan)

[P1-071]

Porosity-Dependent Photoelectrochemical Activity of Double-Layered TiO_2 Thin Films Deposited by Spin-Coating Method

Kuralay Rustembekkyzy and Timur Sh. Atabaev (Nazarbayev Univ., Kazakhstan)

[P1-072]

Zero-Reference Low-Light Image Enhancement with Neural ODEs

Donggoo Jung, Daehyun Kim, and Tae Hyun Kim (Hanyang Univ., Korea)

[P1-073]

Hierarchical Joint Graph Learning and Multivariate Time Series Forecasting

Seungwon Yu, Ung Hwang, and Kijung Yoon (Hanyang Univ., Korea)

[P1-074]

Ozone Based ALD SiO_2 Deposition and Post-Annealing Process Compatibility for IGZO Channel Field Effect Transistor

Jae-Hyeok Kwag, Su-Hwan Choi, Dong-Gyu Kim, and Jin-Seong Park (Hanyang Univ., Korea)

[P1-075]

Finding Appropriate Distribution by Normalizing Flow for Anomaly Detection and Localization

Daehyun Kim, Sungyong Baik, and Tae Hyun Kim (Hanyang Univ., Korea)



[P1-076]

Reliable PVDF-TrFE Ferroelectric Polymer-Based InGaZnO Synaptic Transistors with Buried-Gate Structure

Minjeong Kim and Byungjin Cho (Chungbuk Nat'l Univ., Korea)

[P1-077]

Stable Halide Perovskite Thin Films and Solar Cells via 2D/3D Stacking Structure

Won-Gyu Choi and Jae-Seong Jeong (KETI, Korea)

[P1-078]

Enhanced Reliability and Stability in α -COxNy Based Random-Access Memory Device

Woo Jong Kim, Sun Hwa Min, Da Seul Hyeon, Gabiel Jang, Jisoo Choi, and Jin Pyo Hong (Hanyang Univ., Korea)

[P1-079]

In-Situ Spectroscopic Analysis of Surface Doping on 2D MoS₂ for Channel Materials

Jae-Woo Seo, Joon-Seok Lee, and Seon-Jin Choi (Hanyang Univ., Korea)

[P1-080]

Improvement of Degradation in Amorphous In-Ga-Zn-O High Voltage Thin Film Transistors by Adjusting Partial Pressure of Oxygen during Channel Deposition

Hyowon Kim, Hyoungbeen Ju, Jiyoung Bang, Hyeonjeong Sun, Sangduk Kim, Yeonghun Lee, Seungmin Choi, Youngsoo Noh, and Seung-Beck Lee (Hanyang Univ., Korea)

[P1-081]

Radiation-Hardened Analog Amplifier Using Enclosed-Layout Transistors

Taeyeong Kim, Jongho Lee, WeonHyeog Lee, and Ickhyun Song (Hanyang Univ., Korea)



[P1-082]

Low-Temperature Soldering with ZrO₂ Nano-Composite Sn/Bi Plating and Its Application to SAC305 Hybrid Solder Bump and 1608 Capacitor

Ye Jin Jang, Hee Ju Kim, Seong Min Seo, and Jae Pil Jung (Univ. of Seoul, Korea)

[P1-083]

Effect of Thermal Crystallization in the Resistive Switching Behaviors for Memristors based on Molybdenum Oxide (MoO_x) Thin Film Layer

Young Pyo Jeon (Seoul Nat'l Univ., Korea), Min Ji Lee (Kyounggi Univ., Korea), Eun Jeong Lee, Yeon Soo Kim, Young Joon Yoo (Seoul Nat'l Univ., Korea), and Sang Yoon Park (Kyounggi Univ., Korea)