



Session Title:	[PP1] Poster Session I
Session Date:	November 12 (Tue.), 2024
Session Time:	16:50-17:40
Session Room:	Grand Ballroom 4, 2F, Paradise Hotel Busan

[PP1-01]

Aromatic Hydroxyl Additives in H_3PO_4 to Reduce Oxide Regrowth Phenomenon in the Selective Si_3N_4 Etching of 3D NAND Structure

Jongwon Han, Chanwoo Jeon, and Sangwoo Lim (Yonsei Univ., Korea)

[PP1-02]

Optimizing Fluorine Chemistry for Selective SiO_2 Etching Over Si_3N_4

Bumsik Kim, Wonje Lee, and Sangwoo Lim (Yonsei Univ., Korea)

[PP1-03]

Achieving Erosion-Less depending on Pattern Density in W-Film Chemical Mechanical Planarization

Hyun-sung Koh, Il-haeng Heo, and Yun-Heub Song (Hanyang Univ., Korea)

[PP1-04]

Design of Ag-: SiO_2 - Film Polishing-Rate Selectivity Depending on Polymer Species

Myung-Hoe Kim, Min-Ji Kim, Woo-Hyun Jin, and Wan-Jun Park (Hanyang Univ., Korea)

[PP1-05]

Preparation and Characterization of Ceria Nanoparticles according to Calcining Temperature Conditions for CMP Process

Suseong Jang, Sohee Hwang, Lyu Tao, Jaeyoung Jo (Hannam Univ., Korea), Seyoung Ahn (MS Materials Co., Ltd., Korea), and Woonjung Kim (Hannam Univ., Korea)

[PP1-06]

Metal Chelation Using EDTA for Impurities in High-Purity SiO_2 Nanoparticle

Su-Ho Lee, Yoon Kim, Woon-Jung Kim, and Tae-Dong Kim (Hannam Univ., Korea)



[PP1-07]

Synthesis and Characterization of Ceria Nanoparticles for Improved CMP Performances

Tao Lyu, Sohee Hwang, Suseong Jang (Hannam Univ., Korea), Seyoung Ahn (MS Materials Co., Ltd., Korea), and Woonjung Kim (Hannam Univ., Korea)

[PP1-08]

Development of Ceria Nanoparticles Linked with Polishing Accelerator for CMP Process

Hyun-Ji Hwang, Yoon Kim (Hannam Univ., Korea), Min-Uk Jeon, Jea-Gun Park (Hanyang Univ., Korea), Woon-Jung Kim, and Tae-Dong Kim (Hannam Univ., Korea)

[PP1-09]

Synthesis and Characterization of Core/Shell Nanoparticles used by Thermo-responsive Polymers

Do Hyun Lee (Hannam Univ., Korea), Min Uk Jeon (Hanyang Univ., Korea), Woon Jung Kim, and Tae Dong Kim (Hannam Univ., Korea)

[PP1-10]

Analysis for Impact of dv/dt on Electrical Characteristics of 1.2 kV SiC MOSFETS

Hyowon Yoon (Pusan Nat'l Univ., Korea), Sangyeob Kim (Kumoh Nat'l Inst. of Tech., Korea), Dusan Baek (Pusan Nat'l Univ., Korea), Gyuhyeok Kang (Kumoh Nat'l Inst. of Tech., Korea), Sumin Park, and Ogyun Seok (Pusan Nat'l Univ., Korea)

[PP1-11]

Impact of Negatively Charged Bulk Trap on 1.2 kV SiC Super Junction Devices

Sumin Park, Hyowon Yoon, Dusan Baek (Pusan Nat'l Univ., Korea), Sangyeob Kim, Gyuhyeok Kang (Kumoh Nat'l Inst. of Tech., Korea), and Ogyun Seok (Pusan Nat'l Univ., Korea)

[PP1-12]

Impact of Parasitic Inductance on the Current Hump Phenomenon in SiC MOSFETs within a Half-Bridge Configuration

Taehyun Jang and Hyemin Kang (KENTECH, Korea)



[PP1-13]

Simulation of 150mm SiC Epitaxial Growth and Improvement of SiC Epi Quality

Han Seok Seo, Im Gyu Yeo, and Tai Hee Eun (Research Inst. of Industrials and Science & Tech., Korea)

[PP1-14]

Comparison of AlGaIn/GaN HEMTs Device Performance between Au-Based and Au-Free Ohmic Contacts

Sakhone Pharkphoumy (Kunsan Nat'l Univ. and Jeonbuk Nat'l Univ., Korea), Chel-Jong Choi (Jeonbuk Nat'l Univ., Korea), Kyu-Hwan Shim (Jeonbuk Nat'l Univ. and Sigetronics Inc., Korea), and Hyun-Seop Kim (Kunsan Nat'l Univ., Korea)

[PP1-15]

Electrical and Structural Properties of SiO₂ on 4H-SiC with NO Post Annealing Formed by Thermal Oxidation and Atomic Layer Deposition

Hong-ki Kim, Woosung Park, and Jaegil Lee (Powermaster Semiconductor Co., Ltd., Korea)

[PP1-16]

Analysis of the Effect of Charge Balance on the Static and Dynamic Characteristics of the 4H-SiC Super Junction MOSFET

Min Seok Jang, Jung Bok Lee, Min Yong Park, Min-U Jang (Pusan Nat'l Univ., Korea), Ju-Hong Cha (Gyeongsang Nat'l Univ., Korea), Sung Mo Koo (Nat'l Inst. for Nanomaterials Tech., Korea), and Ho Jun Lee (Pusan Nat'l Univ., Korea)

[PP1-17]

Improving Schottky Barrier Diode Performance by Optimizing Cleaning Process for Ga₂O₃

Ho Jung Jeon, Labeled Madani, and You Seung Rim (Sejong Univ., Korea)

[PP1-18]

Transferred Graphene Monolayer as a Diffusion Barrier for β -Ga₂O₃ Based Power Devices

Madani Labeled (Sejong Univ., Korea), Jekyung Kim, Bo-In Park (Massachusetts Inst. of Tech., USA), Jang Hyeok Park (Sejong Univ., Korea), Jeehwan Kim (Massachusetts Inst. of Tech., USA), and You Seung Rim (Sejong Univ., Korea)



[PP1-19]

Preparation of Si_3N_4 Powders via Direct Nitridation for High Thermal Conductivity Substrates in Power Device Applications

Kati Raju, Seunghwan Moon, Minwook Kim, Jaehun Cho, and Hyun-Kwuon Lee (Kumoh Nat'l Inst. of Tech., Korea)

[PP1-20]

Characterization of Structural and Optical Properties on (001) $\beta\text{-Ga}_2\text{O}_3$ Doped with Key Impurities such as Si, Sn, and Fe

Min-Ji Chae, Sun-Yeong Seo, Dae-Uk Kim, Yun-Jin Kim, So-Min Shin, Gwang-Hee Jung, Mi-Seon Park, Jung-Gon Kim, and Won-Jae Lee (Dong-Eui Univ., Korea)

[PP1-21]

SiC/SiO₂ Interface Properties of 4H-SiC MOS Capacitors Fabricated by PEALD and Post Oxidation Annealing Process

Taewon Kim, Jinho Jeon, Hyeonseop Lee, Haeyong Kang, and Beomjin Jeong (Pusan Nat'l Univ., Korea)

[PP1-22]

Comparative FEA Results of Si MOSFETs with and without Al Pads and Modeling Approach Proposals

Na-Yeon Choi and Sung-Uk Zhang (Dong-Eui Univ. and Center for Brain Busan 21 Plus Program, Korea)

[PP1-24]

Enhancement on Thermal Conductivity for Self-Assembled 3D Network Reduced Graphene Oxide Nonwoven

Gyeonghun Lee, In-Sung Lee, Hak Ji Lee, Suheon Kim, Tae Hyeong Kim, Young Joon Yoo, and Young Pyo Jeon (Seoul Nat'l Univ., Korea)



[PP1-25]

Improved Field-Effect Mobility through Metal Capping Layer Oxidation in Top-Gate α -IGZO TFTs with High-k Gate Insulator

Kyubin Hwang, Jiyoung Bang, Hyeonjeong Sun, Seungmin Choi, Youngsoo Noh, Hyowon Kim, Seungjae Lee, Yeoeun Yun, and Seung-Beck Lee (Hanyang Univ., Korea)

[PP1-26]

Resistive Switching Mechanism of All Inorganic CsCu_2I_3 Perovskite-Based Memristor

HyeonSeok Park, UiJin Jung, Yeongho Kim, Uijong Kim, HyeonBin Lee, and JinSub Park (Hanyang Univ., Korea)

[PP1-27]

VI Sensor Design and Equivalent Circuit Analysis for RF Plasma Diagnostics

Jonghoon Oh (Pusan Nat'l Univ., Korea), Joonsik Lee (MKS Instruments Korea, Korea), and Ho-Jun Lee (Pusan Nat'l Univ., Korea)

[PP1-28]

A Single-Ended PAM-4 Receiver Front-End with TAS-TIA Based CTLE and Gain-Mismatch Reduction Techniques

Hyuntae Kim, Yunseong Jo, and Jaeduk Han (Hanyang Univ., Korea)

[PP1-29]

Design Techniques for Enhancing Linearity of High-Order PAM Receivers

Sangwan Lee and Jaeduk Han (Hanyang Univ., Korea)

[PP1-30]

Improving Contact Resistance in α -IGZO TFTs through Corner Structures at the Channel - Electrode Interface

Dongseon Kim and Jae Kyeong Jeong (Hanyang Univ., Korea)

[PP1-31]

A Comparison in Hydrogen Solubility of In-Ga-O TFTs with Crystallographic Changes

Jin Won Bak, Jae Seok Hur, Gwang-Bok Kim, and Jae Kyeong Jeong (Hanyang Univ., Korea)



[PP1-32]

RealGraph^{GPU++}: A GPU-Based Graph Engine with Direct Storage-to-DM IO

Jeong-Min Park, Myung-Hwan Jang (Hanyang Univ., Korea), Duck-Ho Bae (Samsung Electronics Co., Ltd., Korea), and Sang-Wook Kim (Hanyang Univ., Korea)

[PP1-33]

Delta-Sigma ADC for Battery Voltage & Current Sensors

Taehun Kim, Jaedo Kim, and Jeongjin Roh (Hanyang Univ., Korea)

[PP1-34]

Optimization of CRC Generator Polynomials for SDDC in DRAM

Tae-Jeong Kim, Jae-Sang Noh, and Dong-Joon Shin (Hanyang Univ., Korea)

[PP1-35]

High-Voltage Battery Sensor IC for BMS of Electric Vehicles

Yeonhong Kim, Seulmin Ahn, and Jeongjin Roh (Hanyang Univ., Korea)

[PP1-37]

A Stable Method for Measuring Feature Attribution Using Causal Effects in Semiconductor Manufacturing Processes

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

[PP1-38]

An Improved Causal Graph Discovery Method Robust to Noise Variability in Semiconductor Manufacturing Processes

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

[PP1-39]

Comparison of Plasma Density with Langmuir Probe Using Capacitance Measurement Sensor

In Hyeok Kho, Ji Hwan Kim, In Young Bang, Jae Hyeon Kim, Hyeon Jo Kim, Seong Yong Lim, Seo Yeon Kim, Seong Hee Jo, Gwang Ho Lee, Yoon Joo Jeong, Chang Hee Lee, Hyo Jong Shin, Yu Jin Heo, and Gi Chung Kwon (Kwangwoon Univ., Korea)



[PP1-40]

Development of Graphene Oxide-Waterglass Transparent Conducting Electrodes for Enhanced Light Extraction Efficiency in GaN-Based LEDs

Yu-na Lee, Yeo-Jin Choi, Meshesha Mikiyas Mekete, Manal Zafar, Siva Pratap Reddy Mallem (Kumoh Nat'l Inst. of Tech., Korea), Ki-Sik Im (Korea Polytechnics, Korea), and Sung Jin An (Kumoh Nat'l Inst. of Tech., Korea)