



<b>Session Title:</b>	<b>[PP2] Poster Session II</b>
<b>Session Date:</b>	<b>November 14 (Thu.), 2024</b>
<b>Session Time:</b>	<b>16:35-17:25</b>
<b>Session Room:</b>	<b>Grand Ballroom 4, 2F, Paradise Hotel Busan</b>

**[PP2-01]**

**A Study on the Etching Characteristics of HFO-1336mzz Gas**

Yeongjin Lim, Sung Wook Kim, Bongsuk Kim (Foosung Co., Ltd., Korea), Kyung-jin Kim, Bong-no Yoon, Dong Eun Yoo, and Jeonghwan Koh (KAIST, Korea)

**[PP2-02]**

**Plasma Etching of SiO<sub>2</sub> Using Low Global Warming Potential Hexafluorobenzene**

Minuk Kim and Chang-Koo Kim (Ajou Univ., Korea)

**[PP2-03]**

**Atomic Layer Etching of MoS<sub>2</sub> Film by Transforming of Top Chalcogen Atoms**

Jin Joo Ahn, Ji Eun Kang, Ji Min Kim, and Geun Young Yeom (Sungkyunkwan Univ., Korea)

**[PP2-04]**

**EUV Patterning Solution to the Reduction of Roughness with Plasma Treatment and Plasma induced Polymer Formation**

Kap Cheol Kim, Seung Rae Kim, and Hyeongtag Jeon (Hanyang Univ., Korea)

**[PP2-05]**

**Study on the Correlation between RF Power and Temperature in Cryogenic Process**

Seungraek Kim and Hyeongtag Jeon (Hanyang Univ., Korea)

**[PP2-06]**

**Optimization of the Selective Wet Etch of Si/SiGe Heteroepitaxial Nanosheets: A Key Process in Channel Release for Gate-All-Around FET**

Eui-Sang Yu, Jin ha Kim, Sang Hoon Kim, Min Kyun Sohn, Subin Heo, Seong Hyun Lee, Jeong Woo Park, Wangjoo Lee, Min-A Park, Sun Kyu Jung, Jaeseoung Park, and Dongwoo Suh (ETRI, Korea)



[PP2-07]

**P-Type Doping of WSe<sub>2</sub> Using BCl<sub>3</sub> Remote Plasma**

Dong Kyu Kim, Ji Eun Kang, Ji Min Kim, Hye Won Han, and Geun Young Yeom (Sungkyunkwan Univ., Korea)

[PP2-08]

**Characterization of Low Global Warming C<sub>3</sub>F<sub>6</sub> for the Plasma Etching of Silicon Oxide and Silicon Nitride**

Hakseung Lee, Daeun Hong, Eunsu Lee, and Heeyeop Chae (Sungkyunkwan Univ., Korea)

[PP2-09]

**Analysis of COF<sub>2</sub>/O<sub>2</sub>/Ar in the Cleaning Process of Silicon Nitride in Plasma-Enhanced Chemical Vapor Deposition Chamber**

Yeon Jin Lee, Bumsuk Jung, and Sang Jeen Hong (Myongji Univ., Korea)

[PP2-10]

**Eco-Friendly Chamber Cleaning Process of Silicon Nitride/Silicon Oxide with COF<sub>2</sub>/N<sub>2</sub>O/Ar in Plasma-Enhanced Chemical Vapor Deposition Chamber**

Hyuck Byun and Sang Jeen Hong (Myongji Univ., Korea)

[PP2-11]

**Study on Characteristics of Capacitively Coupled Plasma Using Argon-Sulfur Hexafluoride Mixed Gas**

Seong Eun Oh (Pusan Nat'l Univ., Korea), Ju-Hong Cha (Gyeongsang Nat'l Univ., Korea), and Ho-Jun Lee (Pusan Nat'l Univ., Korea)

[PP2-12]

**Synchronous Effect of Pulsed Dual-Frequency Capacitively Coupled Plasmas**

Jun Hee Mun, Dong Young Kim, and Hae June Lee (Pusan Nat'l Univ., Korea)



[PP2-13]

Consideration of Plasma Radical Characteristics and Etching Property Changes based on Plasma Surface Reaction and Spatial Distribution according to Device Integration Density

Jiwon Jeong, Jaehwan Kim, Chiyun Bang, Sebin An, Hakrim Lee, and Ju-Hong Cha (Gyeongsang Nat'l Univ., Korea)

[PP2-14]

Low-Damage Etching of Poly-Si and SiO<sub>2</sub> via a Low-Energy Electron Beam in Inductively Coupled CF<sub>4</sub> Plasma

Jiwon Jung, Jae-Hwi Kim, Chang-Min Lim, and Chin-Wook Chung (Hanyang Univ., Korea)

[PP2-15]

Plasma Etching of Silicon Boride Hard Mask using Fluorine-Based Gases

Seunghyeon Hong, Sangbae Lee, Heeju Ha, Hojin Kang, Minsung Jeon, and Heeyeop Chae (Sungkyunkwan Univ., Korea)

[PP2-16]

On High-Efficiency Plasma Generation Using Antenna Impedance Tuning in an Inductively Coupled Plasma

Un-jae Jung (Hanyang Univ., Korea), Myung-soo Huh (Samsung Display Co., Ltd., Korea), and Chin-Wook Chung (Hanyang Univ., Korea)

[PP2-17]

Comparative Analysis of Methods for RF Power Absorption by Plasma in Inductively Coupled Plasma

Yeong jae Jeong and Chin wook Chung (Hanyang Univ., Korea)

[PP2-18]

Wet Etching with Oxidizer and Oxide Removal with Formic Acid Vapor for Ruthenium

Hwan Park, Hojin Kang, Heeju Ha, Taeseok Jung, and Heeyeop Chae (Sungkyunkwan Univ., Korea)



[PP2-19]

**Thermal Atomic Layer Etching of High-k Oxides via Fluorination and Ligand Exchange Mechanisms**

Jung-Tae Kim, Jeongbin Lee, and Woo-Hee Kim (Hanyang Univ., Korea)

[PP2-20]

**Formation and Characterization of Plasma Resistant YOF Layers through Fluorination of  $Y_2O_3$  Surface**

Hwan-yoon Jang and Hyun-Kwuon Lee (Kumoh Nat'l Inst. Of Tech., Korea)

[PP2-21]

**Hybrid Contact Engineering for 2D Ambipolar Transistors**

Seokjin Ko and Jihyun Kim (Seoul Nat'l Univ., Korea)

[PP2-22]

**Layer-by-Layer Etching of 2D  $WS_2$  via Volatile Tungsten Oxychloride Formation**

Hye Won Han, Ji Eun Kang, Ji Min Kim, and Geun Young Yeom (Sungkyunkwan Univ., Korea)

[PP2-23]

**N-Type Doping Method for  $MoS_2$  Using Cyclic Doping**

Ji Min Kim, Ji Eun Kang, Hye Won Han, and Geun Young Yeom (Sungkyunkwan Univ., Korea)

[PP2-24]

**Surface Analysis After ALE Process Using  $C_4H_2F_6$  Isomers**

Jinwoo Choi, Hojune Jang, Jeongwoon Bea, and Kyongnam Kim (Daejeon Univ., Korea)

[PP2-25]

**Characterization of Low-Temperature ICP Etching Using a Low GWP Precursor for Advanced Semiconductor Applications**

Ho June Chang, Jinwoo Choi, Jeongwoon Bea, and Kyongnam Kim (Daejeon Univ., Korea)



[PP2-26]

**Cryogenic Aspect Ratio Etching of SiO<sub>2</sub> at CF<sub>4</sub>/H<sub>2</sub>/Ar Plasma in a Cryogenic Reactive Ion Etch System**

In Young Bang, Seong Hee Cho, Hyeon Jo Kim, Seong Yong Lim, Seo Yeon Kim, Ji Hwan Kim, Jae Hyeon Kim, and Gi-Chung Kwon (Kwangwoon Univ., Korea)

[PP2-27]

**Research on the Etching of Silicon Dioxide Using NF<sub>3</sub> and F<sub>3</sub>NO Plasma**

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

[PP2-28]

**SiO<sub>2</sub> Reactive Ion Etching of NF<sub>3</sub> Plasma by Substrate Temperature**

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

[PP2-29]

**Study of the Chucking Force Characteristics of Electrostatic Chuck with Respect to Electrodes and Voltage**

Ju-Hye Kim, Seong-Bin Kim (Graduate School of Korea Univ. of Tech. & Education, Korea), and Dong-Kyun Min (Korea Univ. of Tech. & Education, Korea)

[PP2-30]

**Sub-50nm Coplanar IGZO/ITO TFTs via Self-Aligned Fabrication Using Tilted Deposition**

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

[PP2-31]

**Soft X-Ray Irradiation Effect of Sol-Gel Films Analyzed by in-Depth XPS**

Seungchul Choi, Youngchan Kim, Hyuk Jin Kim, Eunjip Choi (Univ. of Seoul, Korea), Jiho Kim (POSTECH, Korea), and Young Jun Chang (Univ. of Seoul, Korea)



[PP2-32]

**Investigation of Thermal Transfer Properties of ZTO nanoparticle-based TIMs with Different Alignments**

Seongmin Jeong, Sangmin Kim, Uijin Jung, Hyeonseok Park, Minyong Lee, and Jinsub Park (Hanyang Univ., Korea)

[PP2-33]

**Automatic Pattern Classification-Based Prediction of Warpage in Complex Semiconductor Packages Considering The Anisotropic Viscoelastic Properties**

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

[PP2-34]

**Effect of Packaging Process Sequence on Warpage Behavior in Semiconductor Packages**

Jeong-Hyeon Baek, Woong-Kyoo Yoo (Hanyang Univ., Korea), Gyung-Hwan Oh (Samsung Electronics Co., Ltd., Korea), and Hak-Sung Kim (Hanyang Univ., Korea)

[PP2-35]

**Improving Solder Joint Reliability with Bi, Ni, and Pd-Modified Alloys: A Comparative Analysis of Creep Performance, IMC Suppression, and Mechanical Properties**

You-Gwon Kim, Heon-Su Kim, Tae-Wan Kim (Hanyang Univ., Korea), Jin-Gyu Kim (Duksan Hi-Metal, Korea), and Hak-Sung Kim (Hanyang Univ., Korea)

[PP2-36]

**Utilizing PSPI in Re-Distribution Layer (RDL) Processes for Advanced Semiconductor Packaging**

Sunbum Kim, Gyulee Kim, Dayoung Oh, Dugkyu Han, Kyoungyeon Min, Donghyun Uhm, Jaemyung Lim, and Changwan Choi (Hanyang Univ., Korea)

[PP2-37]

**The Reaction Mechanism Changes of the Carbonyl Fluoride Dissociation and the Eco-Friendly Chamber Dry Cleaning Process**

Seyun Jo (Myongji Univ., Korea), Do Whan Kim, Sung Joong Kim (New Power Plasma Co., Ltd., Korea), Hyeon Ki Park (Sole Materials Co., Ltd., Korea), and Sang Jeon Hong (Myongji Univ., Korea)



[PP2-38]

**Analysis of Channel Stress according to Cell Position in 3D NAND Flash Memory**

Beomsu Kim and Yun-Heub Song (Hanyang Univ., Korea)

[PP2-39]

**Determination of Anti-Ferromagnetically Coupled Skyrmion Pairs Motion for Efficient SOT MRAM Applications**

Jin Pyo Hong (Hanyang Univ., Korea)