



Session Title:	[P2] Poster Session II
Session Date:	November 22 (Wed.), 2023
Session Time:	14:30-15:20
Session Room:	Grand Ballroom 4, 2F

[P2-001]

Effect of Surface Pretreatment to Reduce The Incubation Period of Iridium Thin Film Grown by ALD on The Oxide Surface

Myung-Jin Jung and Se-Hun Kwon (Pusan Nat'l Univ., Korea)

[P2-002]

Dominant Effects of Epitaxial Strain on the Phase Control of $(\text{In}_x\text{Ga}_{1-x})_2\text{O}_3$ Alloys

Han Uk Lee (Ajou Univ., Korea), Hyeon Woo Kim, Giulio Fatti, Hyunseok Ko (KICET, Korea), Min Sung Kang, Dong Won Jeon, Woong Chan Kim, Ji Hoon Hong, and Sung Beom Cho (Ajou Univ., Korea)

[P2-003]

The Effect of Aegis for BCDU & LWR Improvement

Yonghoon Seo and Hyeongtag Jeon (Hanyang Univ., Kor)

[P2-004]

Plasma Enhanced Atomic Layer Deposition of TiO_2 Using TDMAT and O_2 Plasma

Hee Jun Yoon, Jin Young Woo, Dow Wook Lee, and Hyeongtag Jeon (Hanyang Univ., Korea)

[P2-005]

Atomic Layer Deposition of SnS_2 Film on Precursor Pre-Treated Substrate

Jungtae Kim, Dowwook Lee, Jangho Bae, Yoonseo Lee, and Hyeongtag Jeon (Hanyang Univ., Korea)



[P2-006]

Remote Plasma Chemical Vapor Deposition of SiOC Thin Film with Styrene-Contained Precursor and In-Situ O₂ Plasma Treatment

Eungju Kim, Juni Bak, Dowwook Lee, and Hyeongtag Jeon (Hanyang Univ., Korea)

[P2-007]

Characterization of Yttrium Oxide Films Deposited via Thermal and Plasma-Enhanced Atomic Layer Deposition: Investigating Properties for Plasma Resistance

Jun-Hyeok Jeon, Hye-Young Kim, Sung Kyu Jang, Hyun-Mi Kim, Seul-Gi Kim (KETI, Korea), Chang-sub Park, Yong Soo Lee (KoMiCo Ltd., Korea), Hyeongkeun Kim (KETI, Korea), and Jae-Boong Choi (Sungkyunkwan Univ., Korea)

[P2-008]

TiN-ALD Surface Reaction Simulation based on Surface Reaction Data

Jiwon Jang, Ju Eun Kang, and Sang Jeon Hong (Myongji Univ., Korea)

[P2-009]

Investigating the Effectiveness of MgO Thin Film as Oxygen Diffusion Barrier for Preventing Interfacial Layer Formation in ZrO₂-Based Capacitor with TiN Electrode

Seungwoo Lee, Hyeon Ho Seol, Min Kyeong Nam (Kyung Hee Univ., Korea), Daeyeong Kim, Hansol Oh, Hanbyul Kim, Yongjoo Park (SK Trichem Co. Ltd., Korea), and Woojin Jeon (Kyung Hee Univ., Korea)

[P2-010]

Crystallization Control of Molybdenum Disulfide Thin Film by Atomic Layer Deposition with Mo Precursor Surface Adsorption Control

Soo Min Yoo and Woojin Jeon (Kyung Hee Univ., Korea)



[P2-011]

Suppression of Monoclinic Phase in Vanadium Oxides for Enhanced Temperature Coefficient of Resistance by Atomic Layer Deposition Process Using TEMAV and Ozone

Hyeon ho Seol, Seung woo Lee, and Woojin Jeon (Kyung Hee Univ., Korea)

[P2-012]

Introducing a Y_2O_3 Inserting Layer to Enhance the Electrical Characteristics of ZrO_2 -TiSiN Based MIM Capacitor

Jonghwan Jeong, Seungwoo Lee, and Woojin Jeon (Kyung Hee Univ., Korea)

[P2-013]

Local Concentrating Effect on $Mo-Hf_{0.5}Zr_{0.5}O_2$ -Mo Metal-Ferroelectric-Metal Capacitor through N_2+H_2 Gas Pre-treatment

Seung Yeon Kim, Dong Hee Han, and Woojin Jeon (Kyung Hee Univ., Korea)

[P2-014]

Molybdenum Thin Film Formation from Molybdenum Nitride Deposited by Plasma-Enhanced Atomic Layer Deposition with Hydrogen-Permeable Mechanical Capping Layer

Jeong Hyeon Park, YeWon Kim (Kyung Hee Univ., Korea), Myeong Ho Kim, Jin-Sik Kim (UP Chemical Co., Ltd., Korea), and Woojin Jeon (Kyung Hee Univ., Korea)

[P2-015]

Achieving High Dielectric Constant of ZrO_2 Thin Films through High-Temperature Atomic Layer Deposition with Thermal Stability Enhanced Zirconium Precursor

Yoona Choi, Aejin Lee (Kyung Hee Univ., Korea), Hansol Oh, Yongjoo Park (SK Trichem Co. Ltd., Korea), and Woojin Jeon (Kyung Hee Univ., Korea)

[P2-016]

Innovative Transparent Conductive Oxides by Hybrid Superlattices with Ultra-Gas-Proof Properties

Jaeyoung Park and Myung Mo Sung (Hanyang Univ., Korea)



[P2-017]

Layer by Layer Deposition of Two Dimensional Tellurium Nanolayer

Giang Hoang Pham and Myung Mo Sung (Hanyang Univ., Korea)

[P2-018]

High Performance MoS₂ Transistor based on Atomically Thin 2D NbS₂ Metal Gate

Hyun Young Seo and Byungjin Cho (Chungbuk Nat'l Univ., Korea)

[P2-019]

An Organic-Inorganic Superlattice with Phase-Composite Nanolayers for Ultrahigh Thermoelectric Performance

Thi Duyen Nguyen and Myung Mo Sung (Hanyang Univ., Korea)

[P2-020]

The Study on Tuning Tin Contents in Zinc-Tin-Oxide for TFT Application Grown by Atomic Layer Deposition

Dong-Hyun Lim, Ae-Rim Choi, Yi-Ji Jeong (Ajou Univ., Korea), Young-Bae Ahn, Seung-Wook Ryu, Do-Hee Kim (SK Hynix Inc., Korea), and Il-Kwon Oh (Ajou Univ., Korea)

[P2-021]

Area Selective Atomic Layer Deposition of Nb₂O₅ for Improved Interface Quality between ZrO₂ Dielectric and Bottom TiN Electrode

Yong ju Kwon, Woo hyuk Kim, and Woo-Hee Kim (Hanyang Univ., Korea)

[P2-022]

Area-Selective Atomic Layer Deposition of Ru Thin Films Using Aldehyde-Based Inhibitors on Nitride Surfaces

Jinseon Lee and Woo-Hee Kim (Hanyang Univ., Korea)



[P2-023]

Thermal Sensor Design on a Flow Tube for Liquid Mass Flow of ALD Precursor

Jae-Seong Jeong, Young-Gi An (KETI, Korea), and Hee-Sung Kang (MKP Co., Ltd., Korea)

[P2-024]

Uniform Pt Film Deposition on Amorphous Carbon Powder for HighPerformance Pt/C Catalytic Electrodes Using Metal ALD

Jiwon Chung, Hyun-Mi Kim, Sung Kyu Jang, Su-Min Lee, Min-Joo Koo, Seul-Gi Kim, and Hyeongkeun Kim (KETI, Korea)

[P2-025]

Synthesis and Structural Analysis of Novel Molybdenum-N-Alkoxy Carbothioamide Complexes

Sung Kwang Lee (KRICT, Korea), Seung Uk Son (Sungkyunkwan Univ., Korea), and Taek-Mo Chung (KRICT, Korea)

[P2-026]

Enhancing Surface Smoothness in Ultra-Thin Metal Films with the Combined Atomic Layer Deposition and Etching Process

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

[P2-027]

Growth Retardation of Atomic Layer Deposited HfO₂ Thin Films Using a Surface Protector

Donghyeon Im, YongJu Kwon, Jinseon Lee, and Woo-Hee Kim (Hanyang Univ., Korea)

[P2-028]

Low-Temperature SiN_x Plasma-Enhanced Atomic Layer Deposition with Bis(t-butylamino)silane and NH₃ Plasma

Hyeonjin Choi, Jinmyeong Kim, Youngju Ko, Jaehee Kim, and Heeyeop Chae (Sungkyunkwan Univ., Korea)



[P2-029]

Design of Gas Flow Field for a Micro-Gap ALD Processing Chamber

Kyung-Hoon Yoo (KITECH, Korea), Geun-Soo Song (KUMYOUNG ENG Inc., Korea), Chun-Sik Kim (TNG Co., Korea), Jun-Hyung Hwang, Sang-Ho Lee (KITECH, Korea), and Kun-Hyung Lee (Samsung Display Co., Ltd., Korea)

[P2-030]

Heteroleptic Titanium Complexes with Amidoxime Ligands as Precursors for TiN Thin Films ALD

Ga Yeon Lee, Taeyong Eom, and Taek-Mo Chung (KRICT, Korea)

[P2-031]

Development of Ternary Pure Nitride Thin Films Deposited by Plasma Enhanced Chemical Vapor Deposition

Ji Woon Choi (KRICT, Korea), Byungha Shin (KAIST, Korea), and Taek-Mo Chung (KRICT, Korea)

[P2-032]

Synthesis of Novel Ru Precursors for Atomic Layer Deposition

Young Eun Song and Taek-Mo Chung (KRICT, Korea)

[P2-033]

Enhancement of Interface Properties in the Metal-Insulator-Metal Capacitor by Introducing Nb₂O₅ Doping

YoungUk Ryu (Kyung Hee Univ., Korea), Sung Woo Ahn, Jin-Sik Kim, Hyun-Kyu Ryu (UP Chemical Co., Ltd., Korea), and Woojin Jeon (Kyung Hee Univ., Korea)

[P2-034]

Area-Selective Atomic Layer Deposition of Silicon Nitride Using an Aromatic Ring as an Inhibitor

Min-Jeong Rhee, Young-Jin Lim, and Il-Kwon Oh (Ajou Univ., Korea)



[P2-035]

A Heteroleptic Precursor for Atomic Layer Deposition: An Example of $\text{CpZr}(\text{N}(\text{CH}_3)_2)_3$ for ZrO_2 Dielectric

Ae Rim Choi and Il-Kwon Oh (Ajou Univ., Korea)

[P2-036]

Enhanced Deposition Selectivity of High-k Dielectric by Vapor-Dosed Phosphonic Acid Inhibitors Combined with Selective Lift-Off

Jeong-Min Lee and Woo-Hee Kim (Hanyang Univ., Korea)

[P2-037]

Area-Selective Atomic Layer Deposition for Metal/Dielectric Selectivity by Using Small Molecule Inhibitors

Jieun Oh, Jeong-Min Lee, and Woo-Hee Kim (Hanyang Univ., Korea)

[P2-038]

Difference of Growth Behaviors for Plasma Enhanced ALD In_2O_3 Layer Using Novel Indium Precursors based on Alkyl and Amine Ligand

Gyeong Min Jeong, Yoon-Seo Kim, Hae Lin Yang, Su-Hwan Choi (Hanyang Univ., Korea), Myoungwoon Kim, Sangick Lee, Yonghee Kwone, Sangyong Jeon, Youngjae Im (DNF, Korea), and Jin-Seong Park (Hanyang Univ., Korea)

[P2-039]

Optimizing In_2O_3 Thin Film Transistor Performance on Polyimide Substrate via Atmospheric Pressure Spatial ALD

Kwang Su Yoo, Chi-Hoon Lee, Dong-Gyu Kim, Won-Bum Lee, Tae-Woong Cho, and Jin-Seong Park (Hanyang Univ., Korea)

[P2-040]

Multi-Stack Ferroelectric Capacitor based on Fluorite Structure Materials for Neuromorphic Computing

Hyo-Bae Kim and Ji-Hoon Ahn (Hanyang Univ., Korea)



[P2-041]

Two-Dimensional Tin Sulfide Compounds Deposited by Atomic Layer Deposition Using a Novel Precursor

Dong Geun Kim, Ji-Min Lee, Kang Choi, and Ji-Hoon Ahn (Hanyang Univ., Korea)

[P2-042]

A Study on The Defects Caused by Chemical Nozzle Movement in Single Type for Improving Wafer Uniformity

Jinwoo Oh and Taesung Kim (Sungkyunkwan Univ., Korea)

[P2-043]

Characterization of Alkaline Cu/Ti Slurry for TSV Chemical Mechanical Planarization

Yoonji Ra, Seonwoo Go, Muskan, Tae-Gon Kim (Hanyang Univ., Korea), Jum-Yong Park (Samsung Electronics Co., Ltd., Korea), and Jin-Goo Park (Hanyang Univ., Korea)

[P2-044]

A Novel Method to Evaluate the Contact Area of PVA Brushes during Post-CMP Cleaning

Geu-Rim Ha, Mir Jalal Khan, Tae-Gon Kim, and Jin-Goo Park (Hanyang Univ., Korea)

[P2-045]

Surface Removal Polishing of Silicon Carbide Wafer by a Laser Processing

Youngkuk Kim (KITECH, Korea), Jaegi Kim (Univ. of Ulsan, Korea), Shin Kim, and Jihoon Jeong (KITECH, Korea)

[P2-046]

Newly Developed Ceria Nanoparticles Linked with Polishing Accelerator for CMP Process

Minjeong Kim, Yoon Kim (Hannam Univ., Korea), Min-Uk Jeon, Jea-Gun Park (Hanyang Univ., Korea), and Tae Dong Kim (Hannam Univ., Korea)



[P2-047]

The Chemical-Mechanical-Planarization Mechanism of Amorphous Carbon Film : Chemical-Mechanical Property Aspect

Seon-Hwa Kang, Seong-In Kim, Jin-Woong Cho (Hanyang Univ., Korea), Jin-Hyung Park (ENF Tech. Inc., Korea), and Jea-Gun Park (Hanyang Univ., Korea)

[P2-048]

A Study on the Dispersion Stability of One-Componet CMP Slurry

Hyelin Kim, Sooyeon Choi, Sohee Hwang (Hannam Univ., Korea), Seyeong An, Yanghun Ji (Ms materials, Korea), Tae-Dong Kim, and Woonjung Kim (Hannam Univ., Korea)

[P2-049]

Stability Study according to TEA Content of One-Component CMP Ceria Slurry Containing Zwitterionic Dispersant

Jeongwon Yang, Sooyeon Choi, Sohee Hwang (Hannam Univ., Korea), Seyeong An, Yanghun Ji (Ms materials, Korea), Tae-Dong Kim, and Woonjung Kim (Hannam Univ., Korea)

[P2-050]

Characterization and Preparation of Core/Shell Nanoparticle Abrasives for Accerlerating CMP Process

Suho Lee, Yoon Kim, and Tae-Dong Kim (Hannam Univ., Korea)

[P2-051]

Comparison of Etch Characteristics of c-C₄F₈ and Low GWP Etch Gases, i-C₄F₈, 1336mzz, HFIB and 1234ze

Jinkoo Park (Foosung Inc, Korea), Jeonga Ju (UNIST, Korea), Yeongjin Lim, Bongsuk Kim (Foosung Inc, Korea), and Hongsik Jeon (UNIST, Korea)

[P2-053]

Inductively Coupled Plasma Reactive Ion Etching of Cobalt Thin Films Using Halogen Gas

Kyung-Ho Oh, Geum-Bin Baek, Seon-Jae Kim, and Chee-Won Chung (Inha Univ., Korea)



[P2-054]

High Density Plasma Reactive Ion Etching of Cobalt Thin Films Using $\text{CH}_3\text{COCH}_3/\text{Ar}$ Plasma

Geum-Bin Baek, Kyung-Ho Oh, Seung-Hyun Kim, and Chee-Won Chung (Inha Univ., Korea)

[P2-055]

SiO_2 Reactive Ion Etching of NF_3 Plasma by Substrate Temperature

Seo-Yeon Kim, Sun-Hee Lee, Hee-Tae Kwon, Ji-Hwan Kim, In-Young Bang, Jae-Hyun Kim, Hyeon-Jo Kim, Seong-Yong Leem, Seong-Hee Cho, and Gi-Chung Kwon (KwangWoon Univ., Korea)

[P2-056]

Measurement of Temperature of Ceramic Heater Using Heat Transfer Characteristics of Heat Transfer Control Structures

Seonghee Cho, Heetae Kwon, Jihwan Kim, Inyoung Bang, Jaehyeon Kim, HyeonJo Kim, Seongyong Leem, Seoyeon Kim, and Gicheong Kwon (Kwangwoon Univ., Korea)

[P2-057]

The Effect of a Blocking Capacitor on Ion Energy Distribution Function in Multi-Electrode Dual Frequency Capacitively Coupled Ar Plasmas

Geon U Baek, Seo I Choi, Ji Hyun Shin, Sun Jeong Hwang, Hwanho Kim, Cheol Woong Kim, and Hae June Lee (Pusan Nat'l Univ., Korea)

[P2-058]

Effect of Mask Thickness on Redeposition in Etch Profile of Cu Dry Etching

Yoon Jae Cho, Su Myung Ha, and Chee Won Chung (Inha Univ., Korea)

[P2-059]

Characteristics of Inductively Coupled Plasma Using Ar/ H_2 Mixture Gas Including Heat Transfer Model

Sang-Woo Kim (Pusan Nat'l Univ., Korea), Ju-Hong Cha (Gyeongsang Nat'l Univ., Korea), and Ho-Jun Lee (Pusan Nat'l Univ., Korea)



[P2-060]

Analyzing The Plasma Dynamics of An ICP Plasma Device with Applied Bias Voltage in terms of Particle Trajectories Using A 2D PIC Simulation

Heesung Park and Hae June Lee (Pusan Nat'l Univ., Korea)

[P2-061]

Prediction of Atomic Level for MoS₂ based on Machine Learning via RIE

Seunghwan Lee (Sungkyunkwan Univ., Korea), Changmin Kim, Minji Kang, Muyoung Kim (KIMM, Korea), Taesung Kim (Sungkyunkwan Univ., Korea), and Hyeong-U Kim (KIMM, Korea)

[P2-062]

Green Alternatives in SiC Etching to Reduce GWP Impact

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

[P2-063]

Comparison between Ion Beam ALE and ICP ALE for Ruthenium Etching

Yun Jong Jang, Doo San Kim, Hae In Kwon, Gyoung Chan Kim, Hong Seong Gil, Dae Whan Kim, Ju Young Kim, Ji Yeon Lee, Do Seong Pyun, and Geun Young Yeom (Sungkyunkwan Univ., Korea)

[P2-064]

A Study on Etch Characteristics of Magnetic Tunnel Junction (MTJ) Materials Using RF-Biased Reactive Ion Beam Etching

Gyoung Chan Kim, Doo San Kim, Yun Jong Jang, Hong Seong Gil, Hae In Kwon, Ju Young Kim, and Geun Young Yeom (Sungkyunkwan Univ., Korea)

[P2-065]

Effect of Each Plasma Parameter on the High Aspect Ratio Oxide Etching Process at Low-Frequency Bias Power Using an Inductively Coupled Plasma System

Hye Jun Son (Korea Univ., Korea), Alexander Efremov (State Univ. of Chemistry & Tech., Russia), Gilyoung Choi, and Kwang-Ho Kwon (Korea Univ., Korea)



[P2-066]

A Study on the Atomic Layer Etching Process Using Liquid Fluorocarbon Gas

Sejun Son, Junyeob Lee, Suyoung Jang, Eunchong Kang, Jeongwoon Bae, and Kyongnam Kim (Daejeon Univ., Korea)

[P2-067]

Sensor-On-Wafer Sensor for Monitoring The Substrate Temperature

Junyeob Lee, Eunchong Kang, Sejun Son, Jonghyeon Kim, Jeongwoon Bae, and Kyongnam Kim (Daejeon Univ., Korea)

[P2-068]

Mechanism of An Atomic Layer Etching Process Using Alternative Gas Radicals

Eunchong Kang, Sejun Son, Jonghyeon Kim, Junyeob Lee, Jeongwoon Bae, and Kyongnam Kim (Daejeon Univ., Korea)

[P2-069]

The Study on the Methods to Improve Uniformity of Electric Field in Large Area Capacitively Coupled Plasma

Byeong Chun Lee, Jin Ung Son, Min Seok Kim, and Chin Wook Chung (Hanyang Univ., Korea)

[P2-070]

Computational Etching Profile Study on the Influence of SiON Etch Rate in Ar Plasma Etching of Patterned SiON-ACL-SiO₂ Stacked Structures

Byeong-Yeop Choi, Si-Jun Kim, Won-Nyoung Jeong, Young-Seok Lee, In-Ho Seong, Chul-Hee Cho, MinSu Choi, You-Bin Seol, and Shin-Jae You (Chungnam Nat'l Univ., Korea)

[P2-071]

Characteristics of SiO₂ Atomic Layer Etching Adopting A Low Global Warming Potential Fluorocarbon Precursor with Fluorocarbon Plasmas

In-Ho Seong, Young-Seok Lee, Si-Jun Kim, Chul-Hee Cho, Won-Nyoung Jeong, Min-Su Choi, Byeong-Yeop Choi, You-Bin Seol, and Shin-Jae You (Chungnam Nat'l Univ., Korea)