

[KISM 2024 BUSAN] Program at a Glance (ver. 2024. 10. 28)

Nov. 11 (Mon.)	Time	Room A (Capri Room, 2F, Paradise Hotel Busan)	Room D (Sidney Room, 2F, Paradise Hotel Busan)	Lobby, 2F, Paradise Hotel Busan & Lobby, 5F, Grand Josun Busan
	14:00 - 17:00	Tutorial 1 (in Korean Language) Technology Trend of Advanced package for AI semiconductor Dr. Minsuk Suh (Camtek Korea, Korea)	Tutorial 2 (in Korean Language) Development Trend and Prospect of NAND Memory Device and Process Integration Prof. Changhan Kim (Hanyang Univ., Korea)	
	17:00 - 17:15	Break		
	17:15 - 18:15	Short Course (in Korean Language) The Principle and Device Structure of DRAM VP. In-Ho Nam (PeDiSem Ltd., Korea)		
18:15 - 20:00	Welcome Reception (Sicily Room, 1F, Paradise Hotel Busan)			

Nov. 12 (Tue.)	Time	Room A (Capri Room, 2F, Paradise Hotel Busan)	Room B (Grand Ballroom 1, 2F, Paradise Hotel Busan)	Room C (Grand Ballroom 3, 2F, Paradise Hotel Busan)	Room D (Sidney Room, 2F, Paradise Hotel Busan)	Room E (Sicily Room, 1F, Paradise Hotel Busan)	Room F (Ballroom, 5F)	Room G (Meeting Room, 5F)	Lobby, 2F, Paradise Hotel Busan & Lobby, 5F, Grand Josun Busan	
	10:00 - 10:45	Plenary Session I (Capri Room, 2F, Paradise Hotel Busan) The Evolution of Metrology & Inspection Technologies in Semiconductor; Past, Present, and Future Dr. Yusin Yang (Samsung Electronics Co., Ltd., Korea)								
	10:45 - 11:00	Coffee Break								
	11:00 - 11:30	Opening Ceremony (Grand Ballroom 1, 2, 3, 2F, Paradise Hotel Busan)								
	11:30 - 13:00	Lunch								
	13:00 - 14:40	TuA1 (CMP) Advanced Ceria Abrasive Based CMP Session Chair: Jihoon Seo (Clarkson Univ.)	TuB1 (Power) Power Device I Session Chair: Jang-Kwon Lim (RISE Research)		TuD1 (Litho) Advanced Lithography I Session Chair: Yousef Drissi (imec)	TuE1 (Etching) Plasma Surface Interaction Session Chair: Chin-Wook Chung (Hanyang Univ.)	TuF1 (Thin Film) Nano Thin Film Deposition I Session Chair: Woo Hee Kim (Hanyang Univ.)	TuG1 (MI) Frontier Metrology and Modeling I Session Chair: Hyungtak Seo (Ajou Univ.)		Exhibition
		[13:00-13:25] Invited (25') Satoyuki Nomura (Resonac) 02_1141 Effect of Ceria Surface Orientation on SiO ₂ CMP	[13:00-13:45] Plenary (45') Scott Allen (Onsemi) 07_1159 Silicon Carbide MOSFETs for Efficient EV Drivetrains and Renewable Energy Conversion		[13:00-13:45] Plenary (45') Sandip Halder (imec) 04_1285 Next-Generation Semiconductor Manufacturing: Role of EUV Lithography and Advanced Process Development	[13:00-13:45] Plenary (45') Jean-Paul Booth (CNRS) 03_1061 Atom Recombination on Surfaces in Plasmas - an Experimental Study	[13:00-13:45] Plenary (45') Steven George (Univ. of Colorado) 01_1185 New Mechanisms for Metal Thermal Atomic Layer Etching	[13:00-13:45] Plenary (45') Ye Feng (Intel Corp.) 06_1287 Process Optimization and Control in Dry Etch		
		[13:25-13:50] Invited (25') Keon-Soo Jang (Univ of Suwon) 02_1076 Development of Spherical Wet Ceria Slurry for Improved Chemical and Mechanical Planarization Performances	[13:45-14:15] Invited (30') Sang-Mo Koo (Kwangwoon Univ.) 07_1269 SiC MOSFET: Recent Research Trends on Device Structures and Deep-Level Defects		[13:45-14:15] Invited (30') Woojin Jung (Samsung Electronics Co., Ltd.) 04_1149 The Challenges of EUVL Patterning and Discussion about the Technology to Prepare for Next Generation Devices	[13:45-14:05] Oral (20') Atefeh Fathzadeh (imec) 01_1234 Enhanced Control of Plasma Surface Interaction to Etch Alloys Using Transient Assisted Plasma Etching (TAPE)	[13:45-14:15] Invited (30') Satoshi Hamaguchi (Osaka Univ.) 01_1234 Surface Reaction Mechanisms of SiN ALD Analyzed with Atomic-Scale Simulations	[13:45-14:05] Oral (20') Sanghee Han (Sungkyunkwan Univ.) 06_1205 Etch Rate Uniformity Monitoring for Photoresist Etch Using Multi-Channel Optical Emission Spectroscopy in an Inductively Coupled Plasma Reactor		
		[13:50-14:15] Invited (25') Jaedong Lee (KCTech) 02_1099 Colloidal Ceria Innovation and Its Behaviors in Accordance with Abrasive Size	[14:15-14:40] Invited (25') Youseung Rim (Sejong Univ.) 07_1181 Interface Engineering of Ultra-Wide Bandgap Gallium Oxide-Based Power Devices		[14:15-14:45] Invited (30') Sangsul Lee (POSTECH) 04_1277 Integrating Actinic EUV Metrology with Advanced Analytical Technologies	[14:05-14:25] Oral (20') Chang-Koo Kim (Ajou Univ.) 03_1168 Plasma Etching of Silicon Carbide Using Low-GWP Heptafluoroisopropyl Methyl Ether	[14:15-14:40] Invited (25') Sang Ick Lee (DNF Co. Ltd.) 01_1191 Surface Adsorption/Desorption Reactions and Precursor Design for ALD/ALE	[14:05-14:25] Oral (20') Seob Sim (SK Siltron) 06_1281 Measuring Electrical Resistivity of p-Type Si Wafer with Low Dopant Concentration and Its Dependence on Thermal Donor Formation and Surface Treatments		
		[14:15-14:35] Oral (20') Min-Uk Jeon (Hanyang Univ.) 02_1198 Dependency of Amine Surfactant on Diameter and Morphology of Colloidal Silica Abrasives								
	14:40 - 14:55	TuA2 (CMP) Challenges and Opportunities in CMP Session Chair: Keon-Soo Jang (Univ of Suwon)	TuB2 (Power) Power Device II Session Chair: Ogyun Seok (Pusan Nat'l Univ.)		TuD2 (Litho) Advanced Lithography II Session Chair: Sangsul Lee (POSTECH)	TuE2 (Etching) Advanced Device and Processes Session Chair: Jean-Paul Booth (Inst. Polytechnique de Paris)	TuF2 (Thin Film) Nano Thin Film Deposition II Session Chair: Satoshi Hamaguchi (Osaka Univ.)	TuG2 (MI) Frontier Metrology and Modeling II Session Chair: Tae-Hun Shim (Hanyang Univ.)		
	14:55 - 16:35	[14:55-15:25] Invited (30') Hyo-Chol Koo (SK Hynix) 02_1189 Planarization for Advanced Semiconductor Processing: Challenges and Opportunities	[14:55-15:25] Invited (30') Wonjae Lee (Dong-Eui Univ.) 07_1217 High Quality SiC Single Crystals Obtained with Modification of Crucible Structure and Process Condition in PVT Growth		[15:00-15:30] Invited (30') Kyoungho Jang (TEL) TEL's Challenge for High NA EUV	[15:00-15:30] Invited (30') Ilgyo Koo (imec) 03_1079 The Next Generation of Complementary FET (CFET) Etch Challenge and Progress	[14:55-15:25] Invited (30') Jinhee Park (SK Hynix) 01_1163 The Challenges and the Future of Thin Film Technology in the New Era of Paradigm Shift	[15:00-15:30] Invited (30') Sang-Joon Cho (Park Systems) 06_1072 Bridging the Gap: From Surface Topography to Semiconductor Applications with ISE and AFM		
		[15:25-15:55] Invited (30') Jihoon Seo (Clarkson Univ.) 02_1009 Eco-Innovations in Semiconductor Manufacturing: Sustainable CMP Approaches for the Next Generation	[15:25-15:50] Invited (25') Yusup Jung (PowerCubeSemi Inc.) 07_1225 Investigation of β-Ga ₂ O ₃ Based Hetero-Junction Barrier Schottky Diode		[15:30-16:00] Invited (30') Seo-Min Kim (SK hynix) 04_1262 High NA EUV Lithography: Prospects and Challenges	[15:30-16:00] Invited (30') Huichan Seo (SK hynix) 03_1249 Recent Trend and Challenge of Advanced Dry Etching Technology	[15:25-15:50] Invited (25') Il Kwon Oh (Ajou Univ.) 01_1066 Recent Development of Area-Selective Atomic Layer Deposition for Electronic Devices	[15:30-16:00] Invited (30') Sung Beom Cho (Ajou Univ.) 06_1086 Multiscale Simulation and AI-Driven Approaches for Comprehensive Understanding of Advanced Materials and Semiconductor Processing		
		[15:55-16:15] Invited (20') Eun Su Jung (Chung Ang Univ.) 02_1069 Monitoring of Slurry Components and Concentrations for CMP Process via Raman Spectroscopy	[15:50-16:15] Invited (25') Hyemin Kang (KENTECH) 07_1077 Flat Wire Inductor for Wide Bandgap Power Devices' Characterization		[16:00-16:30] Invited (30') Youssef Drissi (imec) 04_1144 High NA EUV: What does it change for Design, OPC and Mask?	[16:00-16:20] Oral (20') Daeun Hong (Sungkyunkwan Univ.) 03_1212 Selective Isotropic Atomic Layer Etching of Si ₃ N ₄ over SiO ₂ with Surface Fluorination Using CF ₄ /H ₂ O Plasma and Thermal Heating	[15:50-16:10] Oral (20') Sangyeop Jo (Wonik IPS) 01_1172 Development of Warpage Control Technique for High-STACK 3D NAND Flash Memory Device	[16:00-16:30] Invited (30') Taegeun Kim (CUBDXEL) 06_1243 Recent Progress of Display and Semiconductor Inspection Using FSH (Flying-over Scanning Holography)		
[16:15-16:35] Oral (20') Man-Hyup Han (Hanyang Univ.) 02_1195 Sulfate Radical Oxidation for Enhancing Polishing-Rate for WC-Film Chemical Mechanical Planarization		[16:15-16:35] Oral (20') Min Seok Jang (Pusan Nat'l Univ.) 07_1137 Study for the 4H-SiC FIN-Channel MOSFET with Additional Channels with Improved the Electrical Characteristics				[16:10-16:30] Oral (20') Yuhei Otaka (The Univ. of Tokyo) 01_1120 Low Temperature Flow Modulation (FM)-CVD for High Thermal Conductivity AlN Film Formation for Advanced 3DICs	[16:30-17:00] Invited (30') Jae-Hyun Kim (SK hynix) 06_1309 Next Generation Metrologies in Support of Emerging Materials and Devices			
16:35 - 16:50	Break									
16:50 - 17:40	[PP1] Poster Session I (Grand Ballroom 4, 2F, Paradise Hotel Busan) / Topic 2, 7, 9						[PG1] Poster Session I (Board Room, 5F, Grand Josun Busan) / Topic 1			

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09:00 - 10:40	WeA1 (CMP) CMP Innovations Session Chair: Tae-Dong Kim (Hannam Univ.)	WeB1 (Power) Power Device III Session Chair: Ho-Jun Lee (Pusan Nat'l Univ.)	WeC1 (PKG) Advanced Bonding Technology Session Chair: Gu-Sung Kim (Kangnam Univ.)	WeD1 (Litho) Lithography Process I Session Chair: Chawon Koh (Yonsei Univ.)	WeE1 (Etching) Advanced Etching I Session Chair: Peter Ventzek (Tokyo Electron America)	WeF1 (Thin Film) Nano Thin Film Deposition III Session Chair: Jeong Hwan Han (Seoul Nat'l Univ. of Science and Tech.)	WeG1 (MI) Frontier Metrology and Modeling III Session Chair: Sung Beom Cho (Ajou Univ.)	Exhibition
	[09:00-09:30] Invited (30') Sanha Kim (KAIST) 02_1301 Surface-Structured Pads for Scratch-Less Chemical Mechanical Polishing	[09:00-09:30] Invited (30') Jang-Kwon Lim (RISE Research) 07_1067 RISE Wide Bandgap Technology for System Integration: Research Activities and Facilities	[09:00-09:45] Plenary (45') Tadamoto Suga (Univ. of Tokyo) 05_1294 Surface Activated Bonding for 3D and Heterogeneous Integration Current Status and Future Prospects	[09:00-09:45] Invited (45') - Online Anthony Yen (ASML) 04_1302 EUV Lithography – Latest Progress and Outlook	[09:00-09:30] Invited (30') Chanmin Lee (Samsung Electronics) 03_1237 Challenges and Approaches in Advanced Patterning for Microelectronics	[09:00-09:30] Invited (30') Taewook Nam (Sejong Univ.) 01_1128 Growth Inhibition of ZnS ALD by Atomic Layer Etching for Area Selective Deposition	[09:10-09:40] Invited (30') Mohit Kumar (Ajou Univ.) 06_1068 Advancements in Metrology for Materials and Device Characterization: Exploring Innovative In-Materials Processing Techniques for Emerging Applications	
	[09:30-10:00] Invited (30') Wei-Tsu Tweng (IBM) 02_1014 The Mechanical Aspects of Chemical Mechanical Planarization (CMP): Its Known, Unknown, and Challenges in Industry	[09:30-09:55] Invited (25') Si-Young Bae (Pukyong Nat'l Univ.) 07_1214 Current Status of β -Ga ₂ O ₃ Single Crystals by Edge-Defined Film-Fed Growth Method	[09:45-10:15] Invited (30') Thomas Glinsener (EV Group.) 05_1160 The Role of Hybrid Bonding in Modern Semiconductors	[09:45-10:15] Invited (30') Toru Kimura (JSR Corp.) 04_1307 Advanced Lithography Technology Materials towards Next Generation; Challenges and Opportunities	[09:30-10:00] Invited (30') YS Kim (SEMES) 03_1161 Controlling Lateral Modification on Plasma Oxidation Using Optimizing Plasma Conditions during Isotropic Atomic Layer Etching	[09:30-09:55] Invited (25') Woo-Jae Lee (Pukyong Nat'l Univ.) 01_1153 Atomic Layer Deposition Process and Its Application for Semiconductor Field	[09:40-10:10] Invited (30') Younghoon Sohn (Samsung Electronics) 06_1075 Data Intelligence for Semiconductor Autonomous Fab	
	[10:00-10:20] Oral (20') Sohee Hwang (Hannam Univ.) 02_1167 Study on CMP Performance of Ceria Nanoparticles according to Differences in Synthesis Method	[09:55-10:15] Oral (20') Min Kyun Sohn (ETRI) 07_1031 Enhancement of GAA-FET by the Optimization of Channel Shape	[10:15-10:40] Invited (25') Seak-Joon Lee (ITI) 05_1308 FINE Cut for HBM Wafer and FINE Forming for TVG of Glass Substrate		[10:00-10:20] Oral (20') Heeju Ha (Sungkyunkwan Univ.) 03_1216 Plasma-Enhanced Atomic Layer Etching of Titanium Nitride Using Surface Fluorination or Chlorination	[09:55-10:20] Invited (25') Van Quang Nguyen (ISAC Research Inc.) 01_1201 Atomic-Layer-Deposition for the Advanced Technology	[10:10-10:40] Invited (30') Jeong Won Kim (KRISS) 06_1209 Semiconductor Electronic Structure Measurement by Photoelectron Spectroscopy	
	[10:20-10:40] Oral (20') Pil-Su Kim (Hanyang Univ.) 02_1197 Dependencies of Super-Fine Wet-Ceria Abrasive on Solubility Enhancement Surfactant Having Amine Functional Group	[10:15-10:35] Oral (20') Dusan Baek (Pusan Nat'l Univ.) 07_1062 A Low Gate-to-Drain Charge of 1.2 kV SiC DMOSFETs Utilizing a H-Shaped Poly-Si Gate				[10:20-10:40] Oral (20') Jeonghee Jo (EUGENETECH) 01_1012 A New Plasma Source for ALD Process in Large Batch System		
10:40 - 10:55	Coffee Break							
10:55 - 11:40	Plenary Session II (Capri Room, 2F, Paradise Hotel Busan) Area-Selective Deposition for Advanced Semiconductor Devices Prof. Gregory Parsons (North Carolina State Univ., USA)							
11:40 - 13:10	Lunch							
13:10 - 13:55	Plenary Session III (Capri Room, 2F, Paradise Hotel Busan) Wide Bandgap Power Electronics: Challenges and a Path Forward Prof. Robert Nemanich (Arizona State Univ., USA)							
13:55 - 14:10	Coffee Break							
Nov. 13 (Wed.)	WeA2 (CMP) Advanced Cu and Mo CMP Session Chair: Ho Jun Kim (Hanyang Univ.)	WeB2 (ESG) Carbon Neutrality in Semiconductor Industry I Session Chair: Hankwon Lim (UNIST)	WeC2 (PKG) Hybrid Bonding & Evaluations Session Chair: Kwang-Seong Choi (ETRI)	WeD2 (Litho) Lithography Process II Session Chair: Su-Mi Hur (Chonnam Nat'l Univ.)	WeE2 (Etching) Advanced Etching II Session Chair: Steve Shannon (North Carolina Univ.)	WeF2 (Thin Film) Nano Thin Film Deposition IV Session Chair: Mihaela Popovici (imec)	WeG2 (MI) Frontier Metrology and Modeling IV Session Chair: Kumar Mohit (Ajou Univ.)	Exhibition
	[14:10-14:40] Invited (30') Kangchun Lee (Kyonggi Univ.) 02_1029 Predicting Corrosion Inhibition Efficiency based on Charge Transfer Factor	[14:10-14:40] Invited (30') Hyukhwa Kwon (SK hynix) 08_1057 Research on Carbon Neutrality Efforts and Product Life Cycle Assessment (LCA) in the Semiconductor Industry	[14:10-14:40] Invited (30') Jean-charles Souriau (CEA Leti) 05_1084 3D & Heterogeneous Integration at CEA-Leti for the Co-Optimization of the System and the Technology	[14:10-14:40] Invited (30') Youngmin You (Yonsei Univ.) 04_1238 Layer-Ordered Organotin Clusters for Extreme-Ultraviolet Photolithography	[14:10-14:40] Invited (30') Peter Ventzek (Tokyo Electron America) 03_1070 Engineering Semiconducting and Dielectric Materials and Processes Using Integrative Methods	[14:10-14:40] Invited (30') Hanmei Choi (Samsung Electronics) 01_1021 Nano Thin Film Technologies for Charge Trap Flash in VNAND	[14:10-14:40] Invited (30') Dieter Van den Heuvel (imec) 06_1129 Metrology and Inspection Challenges for High NA EUV	
	[14:40-15:05] Invited (25') Jea-Gun Park (Hanyang Univ.) 02_TBA Amorphous Carbon Layer CMP: Material Properties and Solution	[14:40-15:05] Invited (25') Chang-Koo Kim (Ajou Univ.) 08_1169 Fluorinated Ethers as Low-GWP Solutions for Plasma Etching of SiO ₂	[14:40-15:10] Invited (30') Minwoo Rhee (Samsung Electronics) 05_xxxx Recent Advances in Hybrid Bonding Technologies for Advanced Packaging	[14:40-15:10] Invited (30') Jungyoul Lee (Dongjin Semichem) 04_1056 Improvement of EUV Resist Performance through EUV Underlayers	[14:40-15:00] Oral (20') MunPyo Hong (Korea Univ.) 03_1142 Reactive Proton Assisted Etching for Silicon Carbide Dry Etching	[14:40-15:05] Invited (25') Hanwool Yeon (GIST) 01_1233 SMART Nanometallization for Energy-Efficient and Reliable Edges	[14:40-15:10] Invited (30') Nahee Park (KLA Corporation) 06_1074 Optical Metrology Development Trends in Today's Advanced Device Nodes	
	[15:05-15:25] Oral (20') Daehoon Yang (Soulbrain) 02_1007 Study on the Effect of Corrosion Inhibitors during Chemical Mechanical Planarization of Molybdenum	[15:05-15:25] Oral (20') Wangyun Won (Korea Univ.) 08_1251 Application of Life Cycle Assessment (LCA) to Chemical Processes	[15:10-15:30] Oral (20') Jinsub Park (Hanyang Univ.) 05_1288 Nanoparticle-Based Thermal Interface Materials : Alignment Strategy for Improvement of Thermal Conductivity	[15:10-15:40] Invited (30') Su-Mi Hur (Chonnam Nat'l Univ.) 04_1241 Enhancing EUV Lithography with Directed Self-Assembly: Defect Correction and Pattern Quality Improvement	[15:00-15:20] Oral (20') Hojin Kang (Sungkyunkwan Univ.) 03_1220 Plasma-Enhanced Atomic Layer Etching of Tantalum Nitride with Surface Fluorination and Ar Sputtering	[15:05-15:30] Invited (25') Jeong Hwan Han (Seoul Nat'l Univ. of Science and Tech.) 01_1298 Recent Advances in Mo-Based Electrode Materials for High-Performance DRAM Cell Capacitors	[15:10-15:40] Invited (30') Jun Ho Lee (Kongju National University) 06_1146 High NA Objective Lens Optical Design for Metrology & Inspection	
	[15:25-15:45] Oral (20') Junkyuk Kim (Soulbrain) 02_1005 Advanced Additives for Enhanced Removal Rate and Defect Mitigation in Copper CMP Slurries	[15:25-15:45] Oral (20') Tae Hoon Oh (UNIST) 08_1199 Advanced Optimal Control Strategies for Sustainable Green Chemical Vapor Deposition in Semiconductor Industry	[15:30-15:50] Oral (20') Changhwan Choi (Hanyang Univ.) 05_1295 Electrical and Material Characterization of RDL on the PSP1 Packaging Substrate	[15:40-16:10] Invited (30') Young Min Song (GIST) 04_1250 Biologically-Inspired Optic Designs for Advanced Imaging Systems	[15:20-15:40] Oral (20') Chang Min Lim (Hanyang Univ.) 03_1194 Optimization of BOSCH Process Using Real-Time Plasma Measurement	[15:30-15:55] Invited (25') Woojin Jeon (Kyung Hee Univ.) 01_1065 Advanced ALD Process for Meta-Stable Phased Thin Film Deposition		
15:50 - 16:05	Break							
16:05 - 17:45	WeA3 (CMP) Advanced Cleaning Technology Session Chair: Jea-Gun Park (Hanyang Univ.)				WeE3 (Etching) Plasma Source Technology Session Chair: Ho-Jun Lee (Pusan Nat'l Univ.)	WeF3 (Thin Film) Nano Thin Film Deposition V Session Chair: Taewook Nam (Sejong Univ.)	WeG3 (MI) Frontier Metrology and Modeling V Session Chair: Byoung-Ho Lee (Hitachi-hightech)	Exhibition
	[16:05-16:50] Plenary (45') Paul Bernatis (DuPont) 02_1124 Recent Advancements In Cleans Technology to Reduce Particle Defectivity and Corrosion				[16:05-16:35] Invited (30') Steven Shannon (North Carolina State Univ.) 03_1303 Advances in Pulsed RF Power Delivery for Plasma Processes	[16:05-16:35] Invited (30') Mihaela Popovici (imec) 01_1073 Interfacial Engineering for Ferroelectric Memories with Improved Performance	[16:10-16:40] Invited (30') Byoung-Ho Lee (Hitachi High-Tech) 06_1154 MI's New Challenges and Approaches	
	[16:50-17:20] Invited (30') Kuntack Lee (Samsung) 02_1147 Paradigm Shift in Semiconductor Cleaning				[16:35-16:55] Oral (20') Minseok Kim (Hanyang Univ.) 03_1203 Charge-Free Plasma Processing Using Ultra-Low Electron Temperature Plasma for Atomic Scale Semiconductor Devices	[16:35-17:00] Invited (25') Min Hyuk Park (Seoul Nat'l Univ.) 01_1143 Correlation between Device Physics and Material Chemistry in (Hf,Zr)O ₂ -Based Ferroelectric Memories	[16:40-17:00] Oral (20') Min Seok Kim (Samsung Electronics) 06_1008 Multi-Spectrum and In-FAB Data Based Deep Learning Modeling for Early Prediction of Electrical Characteristics	
	[17:20-17:40] Oral (20') Chanmi Kim (Soulbrain) 02_1035 Post CMP Cleaning Solution for Removal of Ceria Nanoparticles				[16:55-17:15] Oral (20') Sung-Hyeon Jung (Pusan Nat'l Univ.) 03_1107 Microwave Heating Techniques in Wafer Processing: Utilizing Toroidal Slot Antennas and Resonant Cavity Modes	[17:00-17:25] Invited (25') Woongkyu Lee (Soongsil Univ.) 01_1121 Synthesis of Perovskite SrTiO ₃ Thin Films by Atomic Layer Deposition for MIM Capacitors	[17:00-17:20] Oral (20') Hyun Bo Shim (Samsung Electronics) 06_1060 AI Image Enhancement for High Speed On-Cell Overlay	
	[17:40-18:00] Oral (20') Sanjay Bisht (Hanyang Univ.) 02_1126 Investigating the Role of Benzotriazole on Silica and Copper Ions Loading to Polyvinyl Acetal (PVA) Brush during Copper Post-CMP Cleaning				[17:15-17:35] Oral (20') Dong-Jin Kang (Pusan Nat'l Univ.) 03_1101 Enhancement of Plasma Characteristics by Using 2.45[GHz] Microwave Source in Inductively Coupled Plasma	[17:25-17:45] Oral (20') Seung Hyun Lee (Soulbrain) 01_1290 Achieving Superior ALD Metal Oxide Films with Organic Molecule Inhibitors	[17:20-17:45] Invited (25') Young Heon Kim (Chungnam National University) 06_1222 In situ and Operando Transmission Electron Microscopy Study of Compound Semiconductor and Packaging Materials	
17:45 - 18:30	Break							
18:30 - 20:30	Banquet (Grand Ballroom, 2F, Paradise Hotel Busan)							

[KISM 2024 BUSAN] Program at a Glance (ver. 2024. 10. 28)

Time	Room A (Capri Room, 2F)	Room B (Grand Ballroom 1, 2F)	Room C (Grand Ballroom 3, 2F)	Room D (Sidney Room, 2F)	Room E (Sicily Room, 1F)	Room F (Ballroom, 5F)	Room G (Meeting Room, 5F)	Lobby, 2F, Paradise Hotel Busan & Lobby, 5F, Grand Josun Busan	
09:00 - 10:40	ThA1 (CMP) Functional Wet Etching Technology Session Chair: Kangchun Lee (Kyonggi Univ.)	ThB1 (ESG) Carbon Neutrality in Semiconductor Industry II Session Chair: Ayeon Kim (UNIST)	ThC1 (PKG) Heterogeneous Integration Session Chair: Jinsub Park (Hanyang Univ.)	ThD1 (Litho) Alternative Lithography I Session Chair: Myung-Ki Kim (Korea Univ.)	ThE1 (Etching) Advanced Etching and Monitoring Session Chair: Won-Jun Lee (Sejong Univ.)	ThF1 (Thin Film) Nano Thin Film Deposition VI Session Chair: Se-Hun Kwon (Pusan Nat'l Univ.)	ThG1 (MI) Frontier Metrology and Modeling VI Session Chair: Tae-Hun Shim (Hanyang Univ.)		
	[09:00-09:25] Invited (25') Sangseun Park (ENF Technology) 02_1080 Breakthrough Additive Technology for Cu Post-CMP Cleaning Solutions in Semiconductor Processes: Achieving Selective CuO Etching	[09:00-09:30] Invited (30') Shih-Nan Hsiao (Nagoya Univ., Japan) 08_1289 Cryogenic Plasma Etching for Semiconductor Processes Towards Carbon Neutrality	[09:00-09:30] Invited (30') Kwang-Seong Choi (ETRI) 05_1104 Chip-on-Wafer (CoW) Technology Utilizing Laser-Assisted Bonding with Compression (LABC) with Laser Non Conductive Film (NCF)	[09:00-09:40] Invited (40') - Online Douglas Resnick (Canon Nanotechnologies) 04_1296 Nanoimprint Lithography: Market Spaces and Opportunities: It's Not Just Semiconductors	[09:00-09:20] Oral (20') Junyong Park (Hanyang Univ.) 03_1213 Ideal Si Etching with Ultra-Low Electron Temperature CF ₄ Plasma	[09:00-09:30] Invited (30') Changbong Yeon (Soulbrain) 01_1011 Enhancing ALD Growth Characteristics through Surface Reaction Control			
	[09:25-09:50] Invited (25') Sangwoo Lim (Yonsei Univ.) 02_1151 Highly Selective Etching for 3D Semiconductor Architecture	[09:30-10:00] Invited (30') Manhee Byun (Carbon Value) 08_1123 Process Intensified Carbon Capture Solution for Semiconductor Industry: Rotating Packed-Bed	[09:30-10:00] Invited (30') Fumihiro Inoue (Yokohama National Univ.) 05_1078 Wafer Bonding for Chiplet and Logic Devices	[09:40-10:10] Invited (30') Sunae So (Korea Univ.) 04_1242 Gradient-Descent Optimized Metasurfaces: Enhancing Data Capacity for Multicolor and 3D Holography	[09:20-09:40] Oral (20') Minho Kim (Myeongji Univ.) 03_1085 In-situ Plasma Monitoring using Multiple Plasma Information (PI) for SiO ₂ Etch Process with CF ₄ /O ₂	[09:30-09:50] Oral (20') Okhyeon Kim (Sejong Univ.) 01_1116 Thermal Atomic Layer Deposition of Aluminum Nitride Films Using Tris(dimethylamido)aluminum and Ammonia	[09:30-09:55] Invited (25') Shinyoung Ryu (Aurostechnology) 06_1006 Recent Progress in Optical Metrology and Data Manipulating Techniques of AI: AI Combined Optical Metrology		
	[09:50-10:10] Oral (20') Chang-Jin Lee (Hanyang Univ.) 02_1226 Mechanism of Polymeric Inhibiting Layer in Wet Etchant for Highly Selective Etching of Si ₃ Ge ₆ to Si-Film	[10:00-10:20] Oral (20') Jong-Moon Park (Myongji Univ.) 08_1229 Recent Efforts for Carbon Neutrality Study in Semiconductor Industry and Academia with Call for a Collaboration	[10:00-10:25] Invited (25') Sangyoon Han (TEL) 05_1291 Wafer Bonding Technology for 3D Integration from In-fab to the Advanced Package	[10:10-10:40] Invited (30') Seungwoo Choi (DGIIST) 04_1259 Co-Integration of Silicon Photonics with MEMS for Ultra-Low Power Programmable Photonic Circuits	[09:40-10:00] Oral (20') Hyeon Ho Nam (Hanyang Univ.) 03_1206 Optical Emission Spectroscopy Analysis (Line Ratio Method) Integrated with Electrical Method for Measuring Accurate Plasma Radical Density	[09:50-10:10] Oral (20') Ji Ye Lee (Korea Univ.) 01_1039 Effect of Tunable Sub-Source and Sub-Drain Device Behavior in Four-Terminal Operation Using Metal-Capping Thin-Film Transistors	[09:55-10:15] Oral (20') Joohee Oh (Sungkyunkwan Univ.) 06_1020 Responses of Various Electrical Trap Measurement Methods to Grain Boundary Traps		
	[10:10-10:30] Oral (20') Palwasha Jalalzai (Hanyang Univ.) 08_1130 Effect of pH and Dissolved Oxygen Levels on the Efficiency of Corrosion Inhibitors for Molybdenum during the CMP Process	[10:20-10:40] Oral (20') Aejin Lee (UNIST) 08_1010 Economic and Environmental Analysis of Optimized Extractive Divided-Wall Distillation Process to Recover Semiconductor Industrial Waste				[10:10-10:30] Oral (20') Na-Gyeong Kang (Hanyang Univ.) 01_1045 Ultrathin Metal Films with Low Resistivity via Atomic Layer Deposition: Process Pressure Effect on Initial Growth Behavior of Ru Films	[10:15-10:35] Oral (20') Changsug Lee (Korea Spectral Product) 06_1286 Spectral and Imaging Sensors for Diagnostics in Next-Generation Semiconductor Processes		
10:40 - 10:50	Coffee Break								
10:50 - 12:30	ThA2 (CMP) Cleaning Challenges for the Next Generation Devices Session Chair: Sangwoo Lim (Yonsei Univ.)	ThB2 (ESG) Carbon Neutrality in Semiconductor Industry III Session Chair: Hankwon Lim (UNIST)	ThC2 (PKG) Process and Integration Session Chair: Changhwan Choi (Hanyang Univ.)	ThD2 (Litho) Alternative Lithography II Session Chair: Myung-Ki Kim (Korea Univ.)	ThE2 (Etching) Modeling Etch Processes Session Chair: Heeyeop Chae (Sungkyunkwan Univ.)	ThF2 (Thin Film) Nano Thin Film Deposition VII Session Chair: Woo-Jae Lee (Pukyong Nat'l Univ.)			
	[10:50-11:15] Invited (25') Kwangwook Lee (SEMES) 02_1164 Study on Bubbles in Wafer Clean System	[10:50-11:20] Invited (30') Ho-Young Jung (Chonnam Nat'l Univ.) 08_1148 Green Aluminum Metal-Organic Frameworks (Al-MOFs) Assisted Commercial Activated Carbon for Enhanced Fluoride Removal from Semi Conductor Industrial Effluents	[10:50-11:20] Invited (30') Heejin Lee (SK hynix) 05_1306 Technology Trends of Memory Packages for High Performance Computing Memory in AI Era	[10:50-11:20] Invited (30') You-Shin No (Konkuk Univ.) 04_1244 III-V/Si Light Source Integration from on-Demand to Three-Dimensions	[10:50-11:20] Invited (30') Won Jun Lee (Sejoing Univ.) 03_1297 Thermal Atomic Layer Etching Mechanism of Aluminum Oxide: A First Principle Study	[10:50-11:15] Invited (25') Jin Sik Kim (UP Chemical Co. Ltd.) 01_1087 Precursor Chemistry in Semiconductor Industry			
	[11:15-11:40] Invited (25') Ho Jun Kim (Hanyang Univ.) 02_1140 Introduction to Two-Phase Flow Analysis Techniques for Fluid Dynamic Analysis of Cleaning Processes: Volume of Fluid, Level Set, and Volume of Fluid - Level Set Coupling Methods	[11:20-11:45] Invited (25') Byeong-Ok Cho (Wonik Materials) 08_1252 Novel Low Global Warming Potential Gases for Etching and Chamber Cleaning Processes Towards Carbon Neutrality	[11:20-11:45] Invited (25') Seung Keun Oh (Dongjin Semichem) 04_1032 Negative Type Bump Photoresist for Advanced Package	[11:20-11:50] Invited (30') Hyeon-Ho Jeong (GIST) 04_1245 Shadow Growth and Electrostatic Coating for Hybrid Nanoparticles	[11:20-11:40] Oral (20') Sangheon Lee (Ewha Womans Univ.) 03_1258 Ab Initio Investigation of Chelation on CoCl ₂ Films for Atomic Layer Etching	[11:15-11:40] Invited (25') Seung-Ho Seo (GO Element) 01_1145 Computational Fluid Dynamics Analysis of Canisters for Mass Delivery of Solid Precursors			
	[11:40-12:05] Invited (25') Tae-Dong Kim (Hannam Univ.) 02_1170 Preparation and Characterization of High Purity Colloidal Silica Abrasives for CMP Slurry	[11:45-12:05] Oral (20') Boon Chye Hoe (BBP) 08_1279 Energy Savings at \$0 Investment	[11:45-12:10] invited (25') Dongchun Lee (Park system) 05_1071 AFM Measurement Techniques in Advanced Packaging and Hybrid Bonding Processes		[11:40-12:00] Oral (20') Byeong-Yeop Choi (Chungnam Nat'l Univ.) 03_1230 Computational Study of Re-Deposition Effects due to Geometric Differences in MASK Patterns in High Aspect Ratio Plasma Etching	[11:40-12:00] Oral (20') Gyuha Lee (POSTECH) 01_1155 Dielectrics with Sub-Surface Dopant Implantation-Mediated Lattice Relaxation and VO Annihilation via Chemo-Physical Plasma Annealing			
	[12:05-12:25] Oral (20') Maheepal Yadav (Hanyang Univ.) 02_1136 Study on Scratch Generation during Copper Post-CMP Brush Cleaning for Sub 10nm Semiconductor Manufacturing Devices	[12:05-12:25] Oral (20') Ayeon Kim (UNIST) 08_1150 Could Overseas-Originated Green Ammonia Be A Green Fuel For Factories?	[12:10-12:40] Invited (30') - Online Wei-Chung Lo (Industrial Tech. research Inst.) 05_1305 An Innovative 2D/3D Chiplets Integration with Fan-out Switching Chip		[12:00-12:20] Oral (20') Inho Seong (Chungnam Nat'l Univ.) 03_1208 A Unified Global Model Accompanied with a Voltage and Current Sensor for Low Pressure Capacitively Coupled RF Discharge	[12:00-12:20] Oral (20') Sunjin Lee (Gachon Univ.) 01_1054 Effect of Oxygen Binding Energy of Hf, Ga and Al on Amorphous Zn-Sn-O Thin Film Transistor			
12:30 - 14:00	Lunch								
14:00 - 14:45	Special Session I (Capri Room, 2F, Paradise Hotel Busan) Basics of Space Radiation Effects on Microelectronics Dr. Insoo Jun (NASA JPL, USA)								
14:45 - 15:30	Special Session II (Capri Room, 2F, Paradise Hotel Busan) Memory Technology 2024 and Outlook: DRAM, NAND, Emerging Memory Dr. Jeongdong Choe (TechInsights, Canada)								
15:30 - 15:40	Break								
15:40 - 16:25	Plenary Session IV (Capri Room, 2F, Paradise Hotel Busan) The Role and the Challenge of the Process Materials at Semiconductor Industry Dr. Deoksin Kil (SK hynix, Korea)								
16:25 - 16:35	Coffee Break								
16:35 - 17:25	[PP2] Poster Session II (Grand Ballroom 4, 2F, Paradise Hotel Busan) / Topic 3, 4, 5, 8				[PG2] Poster Session II (Board Room, 5F, Grand Josun Busan) / Topic 1, 6				
17:25 - 17:40	Break								
17:40 - 18:10	Closing Ceremony & Award Ceremony (Capri Room, 2F in Paradise Hotel Busan)								

Time	Room A (Capri Room, 2F)	Room B (Grand Ballroom 1, 2F)	Room C (Grand Ballroom 3, 2F)	Room D (Sidney Room, 2F)	Room E (Sicily Room, 1F)	Room F (Ballroom, 5F)	Room G (Meeting Room, 5F)	Lobby, 2F, Paradise Hotel Busan & Lobby, 5F, Grand Josun Busan
Nov. 15 (Fri.) (Half) 08:30-12:00 (Full) 08:30-17:30	Optional Tour							

Topics	Sessions
1. Nano Thin Film Deposition	TuF1, TuF2, WeF1, WeF2, WeF3, ThF1, ThF2
2. CMP & Cleaning	TuA1, TuA2, WeA1, WeA2, WeA3, ThA1, ThA2
3. Advanced Etching Technology	TuE1, TuE2, WeE1, WeE2, WeE3, ThE1, ThE2
4. Advanced Lithography + Patterning	TuD1, TuD2, WeD1, WeD2, ThD1, ThD2
5. Post Fabrication Technology and System Packaging	WeC1, WeC2, ThC1, ThC2
6. Frontier Metrology, Diagnosis, and Modeling for Nanoscale IC Integration and Emerging Device Process	TuG1, TuG2, WeG1, WeG2, WeG3, ThG1, ThG2
7. Power Device	TuB1, TuB2, WeB1
8. Carbon Neutrality in Semiconductor Industry	WeB2, ThB1, ThB2

How to See the Oral Session Codes					
Day of Week	Room	Session No.	Presentation No.	Presentation Code	
Tuesday	Tu	A	1	1	TuA1-1
Wednesday	We	B	2	2	WeB2-2
Thursday	Th	C	3	3	ThC3-3

How to See the Poster Session Codes					
Poster Session	Place	Session No.	Presentation No.	Presentation Code	
P	Paradise Hotel Busan	P	1	01	PP1-01
	Grand Josun Busan	G	2	02	PG1-02
	Paradise Hotel Busan	P	1	03	PP2-03