

[KISM 2025 BUSAN] Program at a Glance (ver. 2025. 11. 04)

Nov. 10 (Mon.)	Time		Room A (Capri Room, 2F)					Room B (Grand Ballroom 1, 2F)					Room C (Grand Ballroom 3, 2F)					Room D (Sydney Room, 2F)					Room E (Sicily Room, 1F)					Room F (Panorama Room, 16F)					Lobby, 2F																			
	13:00	- 16:00	Tutorial I Current and Future Challenges and Solutions in AI & HPC System Thermal Management Dr. Gamal Refai-Ahmed (AMD, USA)																														Short Course (in Korean Language) Technical Trends and Challenges in 3D NAND Flash Memory Evolution Prof. Sungnam Chang (Hanyang Univ. / PeDiSem Ltd., Korea)															Registration				
	16:00	- 17:30	Tutorial II (in Korean Language) Non-Volatile Memory-Based AI Semiconductors for Low-Power Neural Networks Prof. Jong-Ho Lee (Seoul Nat'l Univ., Korea)																																																	
	18:15	- 20:00	Welcome Reception (Sicily Room, 1F)																																																	
Nov. 11 (Tue.)	Time		Room A (Capri Room, 2F)					Room B (Grand Ballroom 1, 2F)					Room C (Grand Ballroom 3, 2F)					Room D (Sydney Room, 2F)					Room E (Sicily Room, 1F)					Room F (Panorama Room, 16F)					Lobby, 2F																			
	10:00	- 10:45	Plenary Session I (Capri Room, 2F) Semiconductor Technology Trends to Overcome the Integration Limitations for Future AI Memory Devices Dr. Jiho Kang (SK hynix Inc., Korea)																																																	
	10:45	- 11:00	Coffee Break (Lobby, 2F)																																																	
	11:00	- 11:30	Opening Ceremony (Grand Ballroom 1~3, 2F)																																																	
	11:30	- 13:00	Lunch																																																	
	13:00	- 14:40	TuA1 (Thin Film)					TuB1 (Etching)					TuC1 (MI)					TuD1 (Power)					TuE1 (CMP)																													
			Nanoscale Thin Film Deposition I					Advanced Etch I					Advanced Metrology & Inspection, Process Diagnostics & Control, and Yield Management I					Power Devices I					Innovative Abrasives and Carbon Layer CMP																													
			Session Chair: Prof. Woo Hee Kim (Hanyang Univ., Korea) [13:00-13:30] Invited (30') Rong Chen (Huazhong Univ. of Science and Tech.) 01_1152 Selective Atomic Layer Deposition in Advancing Semiconductor Manufacturing					Session Chair: Prof. Heeyeop Chae (Sungkyunkwan Univ., Korea) [13:00-13:45] Plenary (45') Thorsten Lill (Lam Research) 03_1136 Etch Innovation for 3D Electronic Devices					Session Chair: Dr. Byoung-Ho Lee (Hitachi High-Tech Corp., Japan) [13:00-13:45] Plenary (45') Daniel Schmidt (IBM Research) 06_1068 Characterizing Complexity: Metrology Innovations for Next-Gen Logic Nodes					Session Chair: Prof. Hyemin Kang (KENTECH, Korea) [13:00-13:25] Invited (25') Dong-Seok Kim (KAERI) 07_1053 Cosmic-Ray Radiation Effects on Power Devices					Session Chair: Dr. Yongsik Moon (EHWA Diamond, Korea) [13:00-13:30] Invited (30') Ungyu Paik (Hanyang Univ.) 02_1022 Molybdenum CMP: Aspects of Thermodynamics and Kinetics																													
			[13:30-14:00] Invited (30') Jongho Lee (SK hynix Inc.) 01_1159 Development of a Selective-Area ALD Process for Buried Word Line in DRAM					[13:45-14:15] Invited (30') Thi-Thyu-Nga Nguyen (Nagoya Univ.) 03_1223 Nonhalogen Etching for Hard-to-Etch Materials: A Concept Developed from Wet-like Plasma Technology for Semiconductor Device Fabrication					[13:45-14:15] Invited (30') Kazuhiko Omote (Rigaku Corporation) 06_1101 Progress of X-ray Metrology for Analyzing Devise Nanostructure in Advanced Semiconductors					[13:25-13:50] Invited (25') Ho-Young Cha (Hongik Univ. and ChipsK Corp.) 07_1121 III-N Heterojunction Devices for Power Electronics and Extreme Environment Applications					[13:30-13:50] Oral (20') Ganggyu Lee (Hanyang Univ.) 02_1061 Mitigating Galvanic Corrosion in Cu/Ru Interfaces through Selective Surface Interactions for Ru Barrier Metal CMP																													
			[14:00-14:20] Invited (20') Seung hyun Lee (Soulbrain Co., Ltd.) 01_1092 Novel Organic Molecular Inhibitors for Improved Step Coverage in High-Temperature ALD Dielectrics					[14:15-14:40] Invited (25') Hae June Lee (Pusan Nat'l Univ.) 03_1265 K-PIC: A Particle-in-Cell Plasma Simulation for RF Capacitively Coupled Plasmas					[14:15-14:45] Invited (30') Trevor A. Norman (NeXray, Inc.) 06_1197 Spatially Coherent Xray Imaging Over a Large FOV, High-resolution, Within Seconds					[13:50-14:15] Invited (25') Jeong-Gil Kim (Dong-A Univ.) 07_1143 Possibility of AlN/GaN/AlN Heterostructure for Power Device Applications					[13:50-14:20] Invited (30') Jea-Gun Park (Hanyang Univ.) 02_1080 Surface Modification Mechanism of Carbon-Metal-Carbon Structures for Enhanced Mechanical Polishing Performance in Hard Amorphous Carbon Layer Chemical-Mechanical-Planarization																													
			[14:20-14:40] Oral (20') Jieun Oh (Hanyang Univ.) 01_1047 Enhancing Oxide/Nitride Selectivity in Area-Selective ALD via Pyridine-Catalyzed Inhibition															[14:15-14:40] Invited (25') Dongkwang Lee (Semipower Inc.) 07_1149 Power Semiconductor Packaging Using Ceramic Clip					[14:20-14:40] Oral (20') Ikjoon Kim (ENF Technology Co., Ltd.) 02_1106 Zirconia as a Novel Abrasive for CMP of Amorphous Carbon Layer (ACL)																													
	14:40	- 14:50	Coffee Break (Lobby, 2F)																																																	
	14:50	- 16:30	TuA2 (Thin Film)					TuB2 (Etching)					TuC2 (MI)					TuD2 (Power)					TuE2 (CMP)					TuF2 (PKG)																								
			Nanoscale Thin Film Deposition II					Sustainable Etch					Advanced Metrology & Inspection, Process Diagnostics & Control, and Yield Management II					Power Devices II					CMP Consumables: Conditioning, Monitoring, and Abrasives					Processing for 3D Integration																								
			Session Chair: Prof. Rong Chen (HUST, China) [14:50-15:20] Invited (30') Min Hyuk Park (Seoul Nat'l Univ.) 01_1271 Ferroelectric Materials for Low Power Electronic Devices and Computing					Session Chair: Dr. Thorsten Lill (Lam Research, USA) [14:50-15:20] Invited (30') Chang-Koo Kim (Ajou Univ.) 03_1124 Low-GWP Cyclic Etching of SiO2 Contact Holes Using Heptafluoropropyl Methyl Ether					Session Chair: Dr. WooSeok Kang (KIMM, Korea) [14:50-15:20] Invited (30') Taeyong Jo (Samsung Electronics Co., Ltd.) 06_1024 The Future Is Here: Next-Gen Semiconductor Metrology & Inspection					Session Chair: Prof. Ho-Jun Lee (Pusan Nat'l Univ., Korea) [14:50-15:15] Invited (25') Ogyun Seok (Pusan Nat'l Univ.) 07_1276 Radiation-Hardened Edge Termination Design for SiC Power Devices under Proton					Session Chair: Dr. Hyunkyu Moon (KIMM, Korea) [14:50-15:20] Invited (30') Yongsik Moon (EHWA Diamond) 02_1175 CMP Pad Conditioning of the Future: Fundamentals, Emerging Technologies, and Development Pathways					Session Chair: Dr. Kwang-Seong Choi (ETRI, Korea) [14:50-15:35] Plenary (45') Takafumi (Tak) Fukushima (Tohoku Univ.) 05_1230 Advanced Packaging Technology with Cu-Cu Hybrid Bonding																								
			[15:20-15:40] Invited (20') Ho Jun Kim (Hanyang Univ.) 01_1282 Parametric Dependence of O(+D) Flux and Density in O2/Ar Inductively Coupled Plasmas: Effect of Gas Ratio and Pressure					[15:20-15:35] Oral (15') Daeun Hong (Sungkyunkwan Univ.) 03_1216 Low Global Warming CSF100/H2O Plasma for Low Temperature Etching of SiO2 and Si3N4					[15:20-15:50] Invited (30') Byoung-Ho Lee (Hitachi High-Tech Corp.) 06_1299 The Importance and Role of MI in Semiconductor Devices' 3D Era					[15:15-15:40] Invited (25') Hongki Kim (Power Master Semiconductor) 07_1127 Development Status of SiC MOSFET in Powermaster Semiconductor					[15:20-15:50] Invited (30') Min Ku Kim (Hanyang Univ.) 02_1126 Slurry sensing for CMP processes					[15:35-16:05] Invited (30') Ji Yong Park (SK hynix Inc.) 05_1096 Vertical Fan-Out (VFO) Technology for Memory and Storage Applications																								
			[15:40-16:00] Oral (20') Yoonseok Lee (Hanyang Univ.) 01_1224 Gate Metal Engineering for Tailoring Ferroelectric Properties of HfxZr1-xO2 Thin Films					[15:35-15:50] Oral (15') Inkyoung Cho (Ajou Univ.) 03_1133 Comparative Study of C3F6 and CF4 for Sustainable Plasma Etching of SiO2					[15:50-16:20] Invited (30') Nahee Park (KLA Corp.) 06_1139 Overlay Metrology for Layer Alignment Accuracy in Device Processing					[15:40-16:05] Invited (25') Sung Mo Koo (EYEQ Lab Inc.) 07_1006 Fabrication of SiC SBD for 6.5kV EdgeTermination Designs					[15:50-16:10] Invited (20') Sanghyun Ryu (Dongjin Semichem Co., Ltd.) 02_1076 A Novel CMP Slurry Systems for Next-Generation Semiconductor Fabrication					[16:05-16:25] Invited (20') Thomas Kasbauer (EV Group) 05_1151 Enabling 3D Integration: Advances in Hybrid Wafer Bonding Technology																								
			[16:00-16:20] Oral (20') Hyojun Choi (Seoul Nat'l Univ.) 01_1107 Role of Oxygen Incorporation in Ru Electrodes on Phase Stability and Reliability of Hf0.5Zr0.5O2 Ferroelectrics					[15:50-16:05] Oral (15') Seyoung Choi (Sungkyunkwan Univ.) 03_1211 Comparison of Etching Characteristics and Environmental Impact of Fluorocarbon Isomers in High Aspect Ratio (HAR) Etching Processes										[16:05-16:30] Invited (25') Geumchan Hwang (TES) 07_1296 Performance of TES Tunable SiC Epitaxial System "TRION"					[16:10-16:30] Invited (20') Arunkumar G V (IBM Research) 02_1294 Post CMP Cleaning Strategies for Amorphous Silicon in Wafer Bonding Processes (Pre-recorded video presentation)																													
			[16:20-16:40] Invited (20') Seong-Min Jeong (KICET) 01_1285 Reactor-Scale Modeling and AI-Surrogate Approaches for Thin Film and Bulk Crystal Growth: Oxide ALD, Diamond MPCVD and SiC PVT																																																	
			16:30	- 16:40	Break																																															
16:40			- 17:25	Special Session I (Capri Room, 2F) Semiconductor Engineering in AI Era I																																																
	Chairman of the Board Chul Joo Hwang (Jusung Engineering Co., Ltd., Korea)																																																			
	Poster Session I (Grand Ballroom 4, 2F)																																																			

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09:00	10:40	WeA1 (Thin Film)		WeB1 (Etching)		WeC1 (MI)		WeD1(Litho)		WeE1 (CMP)		WeF1 (PKG)					
		Nanoscale Thin Film Deposition III		HARC Etch and Plasma Source		Advanced Metrology & Inspection, Process Diagnostics & Control, and Yield Management III		Lithography Process		Nanostructured Materials and Surface Chemistry		Processing for AI Semiconductor Modules					
		Session Chair: Prof. Min Hyuk Park (Seoul Nat'l Univ., Korea)		Session Chair: Dr. Jie Li (imec, Belgium)		Session Chair: Dr. Hyuksang Kwon (KRISS, Korea)		Session Chair: Dr. Jeong-Ho Yeo (Applied Materials, Korea)		Session Chair: Prof. Jihoon Seo (Clarkson Univ., USA)		Session Chair: Prof. Hongyun So (Hanyang Univ., Korea)					
		[09:00-09:30] Invited (30') Jungho Lee (Lam Research Korea) 01_1242 Non-Fluorinated Molybdenum Metallization in 3D NAND		[09:00-09:30] Invited (30') Jaeho Min (Samsung Electronics Co., Ltd.) 03_1074 Next Generation HARC Etch Technologies Requiring Ultra-High Aspect Ratio, High Selectivity, and Very High Etch Rate for VNAND Device		[09:00-09:30] Invited (30') Joonho You (Nexensor Inc.) 06_1287 Next-Generation Optical Metrology for Advanced Semiconductor Packaging		[09:00-09:30] Invited (30') Jong-Hwa Baek (Samsung Electronics Co., Ltd.) 04_1297 Journey to the Future: Low & High NA EUV Lithography for Next Generation Logic Devices		[09:00-09:30] Invited (30') Panart Khajornrungruang (Kyushu Inst. of Tech.) 02_1043 3D Observation Method of Transporting Nano-Particle near a Surface		[09:00-09:45] Plenary (45') Seungbae Park (State Univ. of New York at Binghamton) 05_1238 Status of AI Packages and its Manufacturing Issues					
		[09:30-10:00] Invited (30') Chang Bong Yeon (Soulbrain Co., Ltd.) 01_1049 Atomic Layer Deposition of Molybdenum Thin Films: Enhancing Deposition Characteristics and Film Quality with Advanced Deposition Materials		[09:30-09:55] Invited (25') Dongsoo Lee (Lam Research Korea) 03_1025 3D NAND Dielectric Etch Technology Challenges and Breakthroughs		[09:30-09:50] Invited (20') Hyun-Jung Kim (Nexus1 Co., Ltd.) 06_1219 Wafer Fracture Stress Due to Edge Cracks and Crack Inspection Method		[09:30-10:00] Invited (30') Chan-Uk Jeon (Tekscend Photomask Corp.) 04_1248 EUV Mask Technology: Evolution and Future Outlook		[09:30-10:00] Invited (30') Seho Sun (Yeungnam Univ.) 02_1104 Oxidation Behavior of Co Metal for CMP Slurry Design		[09:45-10:15] Invited (30') Jaehwa Park (Samsung Electronics Co., Ltd.) 05_1015 Challenges of hybrid Cu bonding for high bandwidth memory					
		[10:00-10:20] Oral (20') Taewon Hwang (Hanyang Univ.) 01_1240 Interlayer Engineering for Reliable Hybrid Channel NAND Flash		[09:55-10:10] Oral (15') Sung-Hyeon Jung (Pusan Nat'l Univ.) 03_1229 Investigation of Toroidal Slot Antennas for Microwave Heating and Plasma Generation		[09:50-10:10] Invited (20') Janghwan Kim (SEMES) 06_1172 Development of designing motion profile with advanced jerk for vibration suppression and high wafer throughput		[10:00-10:20] Invited (20') Youngje Um (Applied Materials Korea) 04_1134 SEM Overlay Target Optimization for NZO Improvement by Measuring Device Like Target Using E-Beam Simulation		[10:00-10:30] Invited (30') Tae-Dong Kim (Hannam Univ.) 02_1190 Surface Modified Nanoparticle Abrasives for Efficient CMP Process		[10:15-10:35] Invited (20') Kwang-Seong Choi (ETRI) 05_1146 Cu Post Bonding Technology, Based on Laser-Assisted Bonding with Compression (LABC) and Fume-Free Laser Solder Paste for Advanced 3D Interconnections					
[10:20-10:40] Oral (20') Yeong-Seo Cho (Pusan Nat'l Univ.) 01_1206 Atomic Layer Deposition of Binary Alloy Thin Films for Advanced Interconnects		[10:10-10:25] Oral (15') Seong Eun Oh (Pusan Nat'l Univ.) 03_1227 Investigation of Plasma Density Distribution and Electron Heating Mechanisms in Capacitively Coupled Plasma		[10:10-10:30] Invited (20') Jihye Seo (KETI) 06_1298 AI-Based Multi-Sensor Integrated Process Intelligence for Atomic Layer Deposition		[10:20-10:40] Invited (20') Prashant Purwar (S&S TECH) 04_1163 Development of EUV Pellicles supporting High EUV Power		[10:30-10:50] Oral (20') Pil-Su Kim (Hanyang Univ.) 02_1081 Si-Wafer Polishing Rate Enhancing Mechanism Through Accelerating Hydrolysis Reaction at Si-Wafer Surface									
10:40	10:55	Coffee Break (Lobby, 2F)															
10:55	11:40	Plenary Session II (Capri Room, 2F)															
		Atomic Layer Processing: Status and Perspectives in Advancing Semiconductor Manufacturing Prof. Fred Roozeboom (Univ. of Twente, The Netherlands)															
11:40	13:10	Lunch															
13:10	13:55	Plenary Session III (Capri Room, 2F)															
13:55	14:10	Pushing the Limits: A Decade of Thermo-Mechanical Breakthroughs in Semiconductor Packaging Dr. Gamal Refai-Ahmed (AMD, USA)															
		Coffee Break (Lobby, 2F)															
Nov. 12 (Wed.)	14:10	WeA2 (Thin Film)		WeB2 (Etching)		WeC2 (MI)		WeD2 (Litho)		WeE2 (CMP)		WeF2 (PKG)					
		Nanoscale Thin Film Deposition IV		Advanced Etch II		Advanced Metrology & Inspection, Process Diagnostics & Control, and Yield Management IV		Material & Process		AI-Driven CMP and Emerging Process Strategies		Materials and Processing for Advanced Packaging					
		Session Chair: Prof. Jin-Seong Park (Hanyang Univ., Korea)		Session Chair: Dr. Dongsoo Lee (Lam Research Korea, Korea)		Session Chair: Dr. Ansoo Kim (KRISS, Korea)		Session Chair: Prof. Su-Mi Hur (Chonnam Nat'l Univ., Korea)		Session Chair: Prof. Seho Sun (Yeungnam Univ., Korea)		Session Chair: Prof. Ah-Young Park (Univ. of Seoul, Korea)					
		[14:10-14:40] Invited (30') Kibum Kang (KAIST and TDS Innovation Co., Ltd.) 01_1217 2D Semiconductor Crystal Layer Deposition Toward Fab-Line Compatibility		[14:10-14:40] Invited (30') Jie Li (imec) 03_1029 Advanced Patterning of Metal Oxide Semiconductors for Memory Applications: IBE, RIE, and ALE Approaches		[14:10-14:40] Invited (30') Hagyoung Kihm (KRISS and Univ. of Science and Tech.) 06_1100 Development of DUV & EUV Optics for Semiconductor Inspection		[14:10-14:40] Invited (30') Ben Eynon (Lam Research) 04_1137 Advanced Patterning: Tackling the Big Problems in Printing Small Features		[14:10-14:40] Invited (30') Jihoon Seo (Clarkson Univ.) 02_1002 Machine Learning-Based Strategic Corrosion Management for Targeted Inhibitor Implementation in CMP Applications		[14:10-14:30] Invited (20') Bo Yeon Lee (ENF Technology Co., Ltd.) 05_1147 Development of an Eco-Friendly Photoresist Stripper for Advanced Semiconductor Packaging Processes					
		[14:40-15:10] Invited (30') Kwangmin Park (Samsung Electronics Co., Ltd.) 01_1120 Innovations in Deposition Technologies at the Onset of 3D Devices		[14:40-15:05] Invited (25') Taeho Shin (ICD Ltd.) 03_1293 r-Wave Resonance-Enhanced ICP Etcher for High-Precision Dry Etching		[14:40-15:10] Invited (30') In-Yong Park (KRISS) 06_1072 Development of a high-brightness LaB6 electron source and REELS (Reflection Electron Energy Loss Spectroscopy)		[14:40-15:10] Invited (30') Byeri Yoon (Samsung SDI) 04_1300 Overview of Innovative Lithography Patterning Process Materials Contributing to Next Wave of Challenge on Semiconductor Architecture		[14:40-15:00] Oral (20') Chang-Jin Lee (Hanyang Univ.) 02_1156 Mechanism on Formation of Selective Hindrance Layer on Si-Film Enhancing Etch-Rate Selectivity of Si1-xGex- to Si-Film		[14:30-14:50] Invited (20') Seok-Joon Lee (ITI) 05_1284 FINE Cut and FINE Forming (TGV) of HBM4, Glass Core and Interposer					
		[15:10-15:30] Invited (20') Van Quang Nguyen (ISAC Research Inc.) 01_1292 ALD/ALE for the Advanced Technology		[15:05-15:20] Oral (15') Somyeong Shin (Wonik IPS) 03_1019 Crystalline Ultra-Thin High-K Films Enabled by Fluorine-Radical-Based Atomic Layer Etching		[15:10-15:40] Invited (30') A.D. Giddings (Infinitesima Ltd.) 06_1180 Applications of High-Speed AFM for Advanced Packaging, EUV Lithography and CMP		[15:10-15:30] Invited (20') Hyungkun Lee (Dongjin Semichem Co., Ltd.) 04_1010 EUV vs. E-Beam Photoresists : Cross-Platform Analysis and Optimization Strategies		[15:00-15:20] Oral (20') Hyun Jun Ryu (KAIST) 02_1195 Design Rules for Micro-Structured Chemical Mechanical Polishing Pads to Enhance MRR		[14:50-15:10] Invited (20') Jimin Kwon (UNIST) 05_1164 Glass Package Substrates for High-Performance Chiplet Systems					
		[15:30-15:50] Oral (20') Myung-Jin Jung (Pusan Nat'l Univ.) 01_1205 Development of ALD-Based Initial Surface Control Technology for Sub-10 nm Continuous Ir Films in Advanced Interconnect Metallization		[15:20-15:35] Oral (15') Chang-Min Lim (Hanyang Univ.) 03_1264 Study on SiO2 Atomic Scale Etching Using Selective Control of Ar Metastable Atom Generation				[15:30-15:50] Invited (20') Byeonggeun Kim (SEMES) 04_1204 EUV mask local CD correction system development via laser irradiation		[15:20-15:40] Nandan Baradanahalli Kenchappa (Applied Materials) 02_1295 CMP: Enabling Advanced Packaging for the AI Era (Pre-recorded video presentation)		[15:10-15:30] Invited (20') Ah-Young Park (Univ. of Seoul) 05_1167 Bonding Strength and Fracture Behavior in Patterned Cu-SiO2 Hybrid Interfaces					
												[15:30-15:50] Invited (20') Hongyun So (Hanyang Univ.) 05_1200 Development of Optical Interconnection Core Technologies for Implementation and Reliability Enhancement of Co-Packaged Optics					
		15:50	16:05	Break													
		16:05	17:45	WeA3 (Thin Film)						WeD3 (Litho)		WeE3 (CMP)		WeF3 (PKG)			
Nanoscale Thin Film Deposition V								Computational Lithography & Mask		Reliability and Integration Challenges in Advanced Packaging		Advanced Designs, Processing, and Reliability					
Session Chair: Prof. Woo-Jae Lee (Pukyong National Univ., Korea)								Session Chair: Prof. Chawon Koh (Yonsei Univ., Korea)		Session Chair: Prof. Tae-Dong Kim (Hannam Univ., Korea)		Session Chair: Dr. Tae-Ik Lee (KITECH, Korea)					
[16:05-16:35] Invited (30') Jin-Seong Park (Hanyang Univ.) 01_1220 Atomically Ordered ALD Oxide Semiconductors for High-Mobility, Low-Temperature Logic and BEOL Integration								[16:05-16:35] Invited (30') Jeonghoon Lee (imec) 04_1067 EUV and High-NA EUV Patterning for DRAM Scaling: Challenges and Opportunities		[16:05-16:25] Invited (20') Jae-Dong Lee (KCTech) 02_1079 Emerging CMP Solutions For Next Generation Advanced Packaging Process		[16:05-16:25] Invited (20') Hak-Sung Kim (Hanyang Univ.) 05_1178 Advanced Flip-chip Bonding Process via Intense Pulsed Light Irradiation: From Single-Chip to Multi-Chip Stacking Applications					
[16:35-17:05] Invited (30') Young-Rae Cho (Pusan Nat'l Univ.) 01_1113 High-Performance Transparent Conducting Oxides via Nano-Textured Substrates and Ag Interlayer								[16:35-16:55] Invited (20') Su-Mi Hur (Chonnam Nat'l Univ.) 04_1201 From Molecular Simulations to Artificial Intelligence for Advanced Patterning Materials Designs		[16:25-16:55] Invited (30') Young-Hoo Kim (Samsung Electronics Co., Ltd.) 02_1203 Wet Cleaning Process Issues with Memory Device Scaling		[16:25-16:45] Invited (20') Junyong Park (Kyung Hee Univ.) 05_1150 Statistical Signal Integrity Analysis with Nonideal Buffer of DFE for Chiplet					
[17:05-17:25] Oral (20') Minji Kim (Ewha Womans Univ.) 01_1090 Theoretical Study of Radical Decomposition of Low GWP Alternative Gases and Fluorocarbon Film Formation on SiO2								[16:55-17:10] Oral (15') Seong-Ji Ha (UNIST) 04_1279 Pioneering Carboxylated Zirconium Oxo Cluster Resist for Precision Nanoscale Patterning		[16:55-17:15] Oral (20') Man-Hyup Han (Hanyang Univ.) 02_1086 Fenton Reaction Enhancing Significant Chemical Oxidation for Ag Chemical Mechanical Planarization		[16:45-17:05] Invited (20') Tae-Ik Lee (KITECH) 05_1213 Visualized Thermo-Mechanical Failure Mechanisms in Advanced Semiconductor Package Interconnects via Microscale Deformation Analysis					
[17:25-17:45] Oral (20') Gyeong Min Jeong (Hanyang Univ.) 01_1241 Work Function Modulation of Chlorine-Free TiAlN Films through Controlled Al Incorporation by Thermal ALD								[17:10-17:30] Invited (20') Rieko Nishimura (NuFlare Technology, Inc.) 04_1155 MBM-4000; electron multi-beam mask writer for advanced mask making		[17:15-17:35] Oral (20') Min Uk Jeon (Hanyang Univ.) 02_1082 Si-Wafer Polishing Rate Enhancement by Amine Functional Group as Hydrolysis Reaction Accelerator		[17:05-17:25] Oral (20') Haksoon Jung (UNIST) 05_1148 3D-Printed Organic Interposer with Embedded Fan-Out Interconnects Enabled by Additive Manufacturing					
								[17:30-17:45] Oral (15') Asheesh Nautiyal (Gudeng Precision Industry Co., Ltd.) 04_1007 Contamination Control Strategies in Next-Generation EUV Pods				[17:25-17:45] Oral (20') Jonghee Park (Myongji Univ.) 05_1091 Predictive Analysis of Signal Transmission in Pogo Pin-Load Board					
17:45	18:30			Break													
18:30	20:30			Banquet (Grand Ballroom, 2F)													

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			ThA1 (Thin Film)	ThB1 (Etching)	ThC1 (MI)	ThD1 (Litho)	ThE1 (CMP)	ThF1 (ESG)				
09:00	- 10:40		Nanoscale Thin Film Deposition VI	Atomic Scale Etching	Advanced Metrology & Inspection, Process Diagnostics & Control, and Yield Management V	Process & Mask	CMP for Heterogeneous Integration and New Materials	Carbon Neutrality in Semiconductor Industry I				
			Session Chair: Prof. Young-Rae Cho (Pusan National Univ., Korea)	Session Chair: Prof. Thi-Thuy-Nga Nguyen (Nagoya Univ., Japan)	Session Chair: Dr. Dae-Woong Kim (KIMM, Korea)	Session Chair: Mr. Jeonghoon Lee (imec, Belgium)	Session Chair: Prof. Kangchun Lee (Kwangwoon Univ., Korea)	Session Chair: Prof. Hongsik Jeong (UNIST, Korea)				
			[09:00-09:30] Invited (30') Changhwan Choi (Hanyang Univ.) 01_1278 Multi-Threshold Voltage (Vth) Engineering using ALD TaN-based HKMG Gate Stack for Advanced Logic and DRAM Devices	[09:00-09:30] Invited (30') Yeonghun Han (SK hynix Inc.) 03_1026 Challenges and Approaches of HARC Patterning for AI Memory Devices	[09:00-09:20] Invited (20') Won Jun Jang (Sungkyunkwan Univ.) 06_1234 High-/Low-Pressure Swing Annealing for Uniform Curing of High-Aspect-Ratio TiN Electrodes in DRAM Capacitors	[09:00-09:45] Plenary (45') Kurt Ronse (imec) 04_1221 Advances in Lithography and Patterning for Logic and DRAM	[09:00-09:45] Plenary (45') K. Mikhaylichenko (Applied Materials) 02_1280 Role of CMP in Enabling New Materials for Heterogeneous Integration	[09:00-09:45] Plenary (45') Shih-Nan Hsiao (Nagoya Univ.) 08_1040 Advances in Etching Technologies for Next Generation Semiconductor Manufacturing Towards Sustainable Development Goals				
			[09:30-09:50] Invited (20') Seul-Gi Kim (KETI) 01_1253 Ultrathin Freestanding Ceramic Membranes for Yield Enhancement in Extreme Ultraviolet Lithography	[09:30-10:00] Invited (30') Taewook Nam (Sejong Univ.) 03_1041 Conversion-Free Atomic Layer Etching (ALE) of ZnO: Effect of Precursor on the ALE Process	[09:20-09:50] Invited (30') Ali Ozhan Altun (UNISERS AG) 06_1122 A New Approach to High-Throughput Defect Review of Unpatterned Wafers for Leading Edge Nodes	[09:45-10:15] Invited (30') Heeyoul Lim (SK hynix Inc.) 04_1062 EUV ECO Equal Maximizing Productivity	[09:45-10:15] Invited (30') Taeseup Song (Hanyang Univ.) 02_1060 Oxide Layer Engineering for Cobalt CMP	[09:45-10:10] Invited (25') Jeongsoon Lee (KRISS) 08_1035 Estimating GWP Based on a Comprehensive Analysis of R134a: A Method for Accurate Monitoring of Greenhouse Gas Emissions				
			[09:50-10:10] Invited (20') Jinwoo Kim (HEX A.I. Labs Inc.) 01_1236 Transforming Semiconductor Manufacturing with AI: Changing the Paradigm of Next-Generation Semiconductor Processes	[10:00-10:25] Invited (25') Sangheon Lee (Ewha Womans Univ.) 03_1184 Ab Initio Analysis of Atomistic Diffusion of Halogen Species at the Etching Front	[09:50-10:20] Invited (30') Hagyoul Bae (Jeonbuk Nat'l Univ.) 06_1291 Advanced Technique for Analysis of Defect States in Future 3D Semiconductor Devices	[10:15-10:35] Invited (20') Hyun-Dam Jeong (Chonnam Nat'l Univ.) 04_1177 Recent Progress in Tin-Based Inorganic Molecular Resists for EUV Lithography and Proposal of Cyclic Siloxane Resist for Blue-X Lithography	[10:15-10:45] Invited (30') Haeri Kim (SK hynix Inc.) 02_1202 Hybrid Bonding Challenges and Advanced CMP Strategies for Yield Enhancement	[10:10-10:35] Invited (25') Wontae Noh (Wonik IPS) 08_1065 Development of NF3 Alternative Gas for Global Warming Potential Reduction				
					[10:25-10:40] Oral (15') Sanghyun Jo (Hanyang Univ.) 03_1283 Investigation of Wafer Edge Tilting in Capacitively Coupled Plasmas via IEADF-Driven Monte Carlo Feature-Scale Simulation		[10:35-10:50] Invited (15') Dong Hyup Kim (Chonnam Nat'l Univ.) 04_1210 Cartridge-Based Van Der Waals Printing for Versatile Device Integration					
10:40	- 10:50	Coffee Break (Lobby, 2F)										
Nov. 13 (Thu.)	10:50 - 12:30		ThA2 (Thin Film)	ThB2 (Etching)	ThC2 (MI)	ThD2 (Litho)	ThE2 (CMP)	ThF2 (ESG)	Registration & Exhibition			
			Nanoscale Thin Film Deposition VII	Etch Process Monitoring	Advanced Metrology & Inspection, Process Diagnostics & Control, and Yield Management VI	Alternative Lithography	Next-Generation Slurries and Pad Technologies	Carbon Neutrality in Semiconductor Industry II				
			Session Chair: Prof. Changhwan Choi (Hanyang Univ., Korea)	Session Chair: Prof. Taewook Nam (Sejong Univ., Korea)	Session Chair: Dr. Jeong Won Kim (KRISS, Korea)	Session Chair: Dr. Jisung Kwon (Korea Univ., Korea)	Session Chair: Prof. Seho Sun (Yeungnam Univ., Korea)	Session Chair: Prof. Hu Young Jeong (UNIST, Korea)				
			[10:50-11:20] Invited (30') Woojin Jeon (Kyung Hee Univ.) 01_1244 Atomic Layer Deposition Process Development of Molybdenum Dioxide for the DRAM Capacitor Electrode Applications	[10:50-11:05] Oral (15') Zimeng Wang (Eindhoven Univ. of Tech.) 03_1013 Endpoint Detection of Plasma Etching in Small Open Area based on Feature Extraction and Trend Identification	[10:50-11:20] Invited (30') Seolhye Park (Samsung Display Co., Ltd.) 06_1114 Data-Driven Plasma Science-based Plasma Etching Process Design in OLED and Semiconductor Mass Productions Referring to PI-VM	[10:50-11:10] Invited (20') Minah Seo (Sogang Univ.) 04_1140 Large Scaled Metasurface Design and Fabrication for Terahertz Electromagnetic Wave Modulation and Their Applications	[10:50-11:10] Oral (20') Jae Uk Hur (Soulbrain Co., Ltd.) 02_1020 Synthesis Strategies of Ceria Abrasives for Optimizing Dielectric Chemical Mechanical Planarization Performance	[10:50-11:15] Invited (25') Chulhwan Choi (Samsung Electronics Co., Ltd.) 08_1054 Toward Sustainability: Green CVD Approaches for Decarbonizing Semiconductor Fabs				
			[11:20-11:40] Invited (20') Woo-Jae Lee (Pukyong Nat'l Univ.) 01_1214 Optimization of Atomic Layer Deposition Chemistry Toward Advanced Semiconductor Applications	[11:05-11:20] Oral (15') Seonghyeon Seo (Chungnam Nat'l Univ.) 03_1023 Quantitative Analysis of Radical Species in a Plasma Chamber Using RGA-Based Global Modeling	[11:20-11:50] Invited (30') Dae-Woong Kim (KIMM) 06_1116 Advances in plasma diagnostics for process chamber monitoring and characterization: Microwave diagnostics	[11:10-11:30] Invited (20') Min Seok Jang (KAIST) 04_1123 Dynamic IR Beam Steering and Switching with Active Metasurfaces	[11:10-11:40] Invited (30') Ja-Eung Koo (Dupont) 02_1016 New Pad for high rate and longer life in W bulk CMP	[11:15-11:40] Invited (25') Yongjin Kim (ECO ENERGEN Co., Ltd.) 08_1162 Improvement of PFC Gas Treatment Technology for Etching Using Catalysts and Its Additional Effects				
			[11:40-12:00] Oral (20') Jisu Park (Hanyang Univ.) 01_1218 Improved thermal Stability and Retention in Carbon-Doped Ge2Sb2Te5-Based Phase-Change Random Access Memory	[11:20-11:35] Oral (15') Kwan Jae Lee (Myongji Univ.) 03_1228 On-Wafer Type Wireless Temperature Sensor for Cryogenic Etch Temperature Monitoring	[11:50-12:10] Oral (20') Jun-Hyung Park (Korea Aerospace Univ.) 06_1261 Photon Momentum Induced Particle Extraction in the Low-Pressure Plasma	[11:30-11:50] Invited (20') Soo Jin Kim (Korea Univ.) 04_1128 Nanopatterned Surfaces for Advanced Manipulation of Light	[11:40-12:00] Oral (20') Junhyuk Kim (Soulbrain Co., Ltd.) 02_1005 Development of ITO stop Ag slurry based on structural differences in carboxylic acids	[11:40-12:05] Invited (25') Seung Han Kwon (NURI PLAN Co., Ltd.) 08_1174 Case Study on the Demonstration of a White Plume Reduction Device(K-Industry)				
				[11:35-11:50] Oral (15') Jaehyeon Kim (Sungkyunkwan Univ.) 03_1272 Fault Detection in Plasma Processes Using Optical Emission Spectroscopy with Recurrent Neural Networks-Based Autoencoder	[12:10-12:30] Oral (20') Gwang-Seok Chae (Korea Aerospace Univ. and KRISS) 06_1262 Development of Microwave Patch Antenna Sensor for Plasma Process Monitoring	[11:50-12:10] Invited (20') Inki Kim (Sungkyunkwan Univ.) 04_1073 Scalable Nanomanufacturing for Optical Metasurfaces		[12:05-12:25] Oral (20') Sumin Park (Sungkyunkwan Univ.) 08_1215 Low Temperature Etching of SiO2 and Si3N4 Using Low Global Warming C3F6, C3HF5, and C3H2F4				
						[12:10-12:30] Invited (20') Myung-Ki Kim (Korea Univ.) 04_1125 Unlocking the Optical Potential of MXenes: Discoveries in Plasmonics and Nonlinear Absorption						
		12:30	- 14:00	Lunch								
		14:00	- 14:45	Special Session II (Capri Room, 2F) Memory Technology Trends and Outlook Dr. Jeongdong Choe (TechInsights, Canada)								
Coffee Break (Lobby, 2F)												
14:45	- 15:00	Plenary Session IV (Capri Room, 2F) The Planarization Technology Innovations in the Era of 3D ICs Dr. Bo Un Yoon (Samsung Electronics Co., Ltd., Korea)										
15:00	- 15:45	Coffee Break (Lobby, 2F)										
15:45	- 15:55	Poster Session II (Grand Ballroom 4, 2F)										
15:55	- 16:45	Break										
16:45	- 17:00	Closing Ceremony & Award Ceremony (Capri Room, 2F)										
17:00	- 17:30											
Nov. 14 (Fri.)	Time	Room A (Capri Room, 2F)	Room B (Grand Ballroom 1, 2F)	Room C (Grand Ballroom 3, 2F)	Room D (Sydney Room, 2F)	Room E (Sicily Room, 1F)	Room F (Panorama Room, 16F)	Lobby, 2F				
	08:30-12:00 08:30-17:30	Optional Tour										

Topic	Session
1. Nanoscale Thin Film Deposition	TuA1, TuA2, WeA1, WeA2, WeA3, ThA1, ThA2
2. Advanced CMP & Cleaning	TuE1, TuE2, WeE1, WeE2, WeE3, ThE1, ThE2
3. Advanced Etching Technology	TuB1, TuB2, WeB1, WeB2, ThB1, ThB2
4. Advanced Lithography + Patterning	WeD1, WeD2, WeD3, ThD1, ThD2
5. Advanced Packaging Technology	TuF2, WeF1, WeF2, WeF3
6. Advanced Metrology & Inspection, Process Diagnostics & Control, and Yield Management	TuC1, TuC2, WeC1, WeC2, ThC1, ThC2
7. Power Semiconductor Devices and Manufacturing Process	TuD1, TuD2
8. Carbon Neutrality in Semiconductor Industry	ThF1, ThF2

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