International Conference on Planarization/CMP Technology

ICPT 2026

October 19-22, 2026

Science and Technology Convention Center,
Seoul, South Korea

Final Program
(as of September 30, 2026)

Organized by

ICPT
International Conference on Planarization/CMP Technology

KOREA CMPUGM
Korea Chemical Mechanical Planarization Users Group Meeting

KAPAR 한국입자에어로졸학회

October 19 (Mon.), 2026

[Tutorials]

09:15-17:55

International Conference Hall (B1F)

08:30–09:15	Registration	
09:15–09:20	Opening Remarks (Tutorial Chair: Kangchun Lee)	
Session 1: The “M” in CMP: Mechanical Aspects of Planarization (Session Chair: Kangchun Lee)		
09:20–10:20	Fundamentals of CMP Mechanics	Hyunseop Lee (Dong-A Univ., Korea)
10:20–11:20	Introduction to CMP Equipment	Sukbae Joo (Applied Materials, Korea)
11:20–12:20	Fundamentals of Pads	Sanha Kim (KAIST, Korea)
12:20–13:30	Lunch	
Session 2: The “C” in CMP: Chemical Aspects of Planarization (Session Chair: Sanha Kim)		
13:30–14:30	Fundamentals of CMP Abrasives	Kangchun Lee (Kwangwoon Univ., Korea)
14:30–15:30	Fundamentals of CMP Chemistry	Jihoon Seo (Hanyang Univ., Korea)
15:30–15:50	Coffee Break	
Session 3: Beyond the “C” & “M”: Cleaning and Process Control (Session Chair: Jihoon Seo)		
15:50–16:50	Fundamentals of Post-CMP Cleaning	Taegon Kim (Hanyang Univ., Korea)
16:50–17:50	AI-assisted CMP: A Case-based Introduction	Hanchul Cho (KITECH, Korea)
17:50–17:55	Closing Remarks (Tutorial Chair: Kangchun Lee)	

October 20 (Tue.), 2026

[Keynote Speech 1]

09:25-09:55

International Conference Hall (B1F)

● Session Chair: Sanha Kim (KAIST, Korea)

09:25-09:55 **HBM-HBF Memory Architecture and Interconnection Innovations for Next Generation Agentic AI with Token Economics**

Joungho Kim (KAIST, Korea)

[Oral 01] CMP for Advanced Interconnects (I)

09:55-11:20

International Conference Hall (B1F)

● Session Chair: Patrick Ong (imec, Belgium)

09:55-10:20 [Oral 01-1] **[Invited]** CMP Process Innovations, Growing Needs and Challenges Imposed by New Architectures, New Materials and Dimensional Scaling for Logic and Advanced Interconnects

Nancy Heylen (imec, Belgium)

10:20-10:40 [Oral 01-2] Research on CMP Slurry for Removal Rate and Defect Control for Sub-10nm Node Semiconductors

Jong-Young Cho (SK hynix Inc., Korea), Deok-Su Han (YCChem Co., Ltd., Korea), Woojoo Kim, and Hyun-goo Kang (SK hynix Inc., Korea)

10:40-11:00 [Oral 01-3] Advanced Tungsten Slurry with Low Etching Rate, High W / Oxide Selectivity, and E-O-E Free Topography

Sanghwan Kim, Guo Yi (Qnity Electronics, Inc., USA), Joseph Sung, Allison Hsu, and James Hsu (Qnity Electronics, Inc., Taiwan)

11:00-11:20 [Oral 01-4] Innovative Solution for High Throughput Density Tungsten CMP Through In-situ Conditioning Development

Zhengqiu Sun, Wern Jun Mak (Micron SemiAsiaOP Pte Ltd, Singapore), and Arvin Chang (Micron Memory Taiwan Co., Taiwan)

October 20 (Tue.), 2026

[Oral 02] CMP for Advanced Interconnects (II)

11:35-12:55

International Conference Hall (B1F)

● Session Chair: Rob Rhoades (Kothar Technologies, USA)

11:35-11:55 [Oral 02-1]	Advanced Logic Dummy Gate Planarization Challenges	Catarina Regra da Silva, Bart Kenens, and Kevin Vandersmissen (imec, Belgium)
11:55-12:15 [Oral 02-2]	Development of ILD CMP for Enhanced Fence Removal Efficiency	Jihyun An and Kihoon Jang (Samsung Electronics Co., Ltd., Korea)
12:15-12:35 ★[Oral 02-3]	STI CMP with Mesoporous Nano Ceria Particles	Linyi Shen, Boao Ma, Wenlong Tang, Wei Yuan, Fan Zhang, and Xin-Ping Qu (Fudan Univ., China)
12:35-12:55 [Oral 02-4]	Slurry Activation with Megasonics in Barrier CMP	H. Hiyama, A. Manzonie, J.C. Yang, T. Kajikawa, M. Rahman (Ebara Corp., Japan), A. Philipossian, Y. Sampurno (Araca, Inc., USA), C. J. Keating, and J. J. Keleher (Lewis Univ., USA)

October 20 (Tue.), 2026

[Oral 03] CMP for Advanced Packaging/3D Integration (I)

14:20-15:20

International Conference Hall (B1F)

● Session Chair: Bradley Wood (SPS International, USA)

14:20-14:40 [Oral 03-1]	Panel-Level CMP Integration for Cu RDLs in Fine-Pitch Fan-Out Panel-Level Packaging Eungchul Kim, Suhyeon Jeon (Samsung Electronics Co., Ltd., Korea), Yuya Otsuka, Takehiro Yamazaki, Shinya Watanabe (DSRJ, Japan), Yongrae Kim, Dongjoon Oh, Juil Choi, and Minwoo Rhee (Samsung Electronics Co., Ltd., Korea)
14:40-15:00 [Oral 03-2]	Process Optimization of Bulk Si Thinning for Advanced Logic Architecturea Lea Di Donato, Bart Kenens, and Kevin Vandersmissen (imec, Belgium)
15:00-15:20 ★[Oral 03-3]	Sub-10nm Cu/SiO_2 Dishing Control for 3D Heterogeneous Integration Jinhyoung Lee, Junmin Ahn, and Taesung Kim (Sungkyunkwan Univ., Korea)

October 20 (Tue.), 2026

[Oral 04] Metrology & Inspection / Equipment / Process Diagnostics

15:35-16:35

International Conference Hall (B1F)

● Session Chair: Catharina Rudolph Fraunhofer (IZM-ASSID, Germany)

15:35-15:55 [Oral 04-1]	Robust CMP Topography Extraction via Adaptive Polynomial Selection Viorel Balan, Yorrick Exbrayat (Univ. Grenoble Alpes, France), and Sebastien Mermoz (STMicroelectronics, France)
15:55-16:15 [Oral 04-2]	Surface-Enhanced Particle Sizing and Raman Fingerprinting for Nanoscale Abrasive and Residue Detection in Critical CMP Processes Harvey Tang and Ali Altun (UNISERS AG, Switzerland)
16:15-16:35 [Oral 04-3]	Exploratory Data Analysis of Oscillatory Torque-Related Features in CMP Sensor Logs Associated with Slurry Formulation Kohei Noda and Hisashi Shinomura (JSR Corp., Japan)

October 20 (Tue.), 2026

[Oral 05] AI & ML for CMP / Process Control

16:55-17:55

International Conference Hall (B1F)

● Session Chair: Chao-Cheng Arthur Chen (NTUST, Taiwan)

16:55-17:15 [Oral 05-1] AI-Enabled CMP Process Optimization in Advanced Semiconductor Manufacturing

Cheng Zhongyao (Inst. for Infocomm Research (I2R), Singapore), Su Myat Noe, Leong Lup San, Chen Gim Guan (Inst. for Microelectronics (IME), Singapore), Qian Peisheng, Ata Kircali Sezin, Gopinathan Arjunan, Ashish James (Inst. for Infocomm Research (I2R), Singapore), and Jun Hyunsu (Inst. for Microelectronics (IME), Singapore)

17:15-17:35 [Oral 05-2] Digital-Twin-Based Evaluation of Virtual Metrology for APC Performance in CMP

Seungchoun Choi, Yonghwan Yim, and Semyeong Oh (Amously Inc., Korea)

17:35-17:55 [Oral 05-3] Accelerating CMP Model Development Using Machine Learning for Early Manufacturability Risk Detection

Ushasree Katakamsetty (Globalfoundries Singapore Pte. Ltd., Singapore), Henning Turnow, Boris Vasilev (Globalfoundries Dresden, Germany), Stefan Nikolaev Voykov (Globalfoundries, Bulgaria), Ruben Ghulghazaryan, Davit Piliposyan (Siemens Industry Software, Armenia), and Jeff Wilson (Siemens EDA, USA)

October 21 (Wed.), 2026

[Keynote Speech 2]

09:15-09:45

International Conference Hall (B1F)

● Session Chair: Tae-Gon Kim (Hanyang Univ., Korea)

09:15-09:45 **Memory Subsystems for AI: Bridging Performance and Energy from Cloud to Edge**

Dongkyun Kim (SK hynix, Korea)

[Oral 06] CMP for Advanced Packaging / 3D Integration (II)

09:45-11:10

International Conference Hall (B1F)

● Session Chair: Takashi Watanabe (KIOXIA Corp., Japan)

09:45-10:10 [Oral 06-1] **[Invited]** Considerations for Implementing CMP in Panel-Level Packaging

Haedo Jeong, Heondeok Seo, Minjong Yuh, and Eunho Lee (G&P Tech., Korea)

10:10-10:30 [Oral 06-2] Die-to-Wafer CMP: Overcoming Millimetric Planarization Challenges Driven by Die Density

Julian Sturm (Univ. Grenoble Alpes, France), Valentin Callier (EBARA Precision Machinery Europe GmbH – Branch Office France, France), Clément Castan (Univ. Grenoble Alpes, France), Lucie Safourcade (EBARA Precision Machinery Europe GmbH – Branch Office France, France), Cécile Candegabe, Stella-Audrey Yamgouet Njouom, and Catherine Euvrard (Univ. Grenoble Alpes, France)

10:30-10:50 [Oral 06-3] Effect of Slurry pH and Chelating Agent on Surface Roughness and Removal Rate of AlN in SiO_2 Slurry CMP

Bo-Hyeok Cho, Jae-Ik Lee, Seung-Mahn Lee, and Jae-Dong Lee (KCTech, Korea)

10:50-11:10 [Oral 06-4] Polishing Material Impact on Silicon Wafer Processing

Hui Wang (Zhonghuan Advanced Semiconductor Materials Co., Ltd., China)

October 21 (Wed.), 2026

[Oral 07] Post-CMP Cleaning / Defect Engineering

11:25-12:50

International Conference Hall (B1F)

● Session Chair: Jingoo Park (Hanyang Univ., Korea)

11:25-11:50 [Oral 07-1]	**[Invited]** Evolution of Cu PCMP Technology from Mature to Advanced Nodes Ping Hsu, Peter Sun, and Jacky Cheng (Qnity Electronics Inc., Taiwan)
11:50-12:10 ★[Oral 07-2]	Comparative Evaluation of Ammonium- and QAC-Based Alkaline Cleaning Chemistries for Molybdenum Post-CMP Cleaning Gyeongwon Lee, Palwasha Jalalzai (Hanyang Univ., Korea), Junsang Lee, Gayoung Kim, In-Kwon Kim, Sangkyun Kim (Samsung Electronics Co., Ltd., Korea), Tae-Gon Kim, Jihoon Seo, and Jin-Goo Park (Hanyang Univ., Korea)
12:10-12:30 ★[Oral 07-3]	Additive-Free Post-CMP Cleaning for Fine Ceria Particle Removal with Gas-Dissolved Water Hyeonjeong Lee, Donghwan Choi, Jinhyoung Lee, Yechan Kim, and Taesung Kim (Sungkyunkwan Univ., Korea)
12:30-12:50 ★[Oral 07-4]	Effect of pH on Acoustic Bubble Dynamics, Particle Removal Efficiency, and Pattern Damage During Megasonic Cleaning Mir Jalal Khan (Hanyang Univ., Korea), Yunhee Cho, Wonseob Cho (BASF, Korea), Andreas Klipp (BASF SE, Germany), Jihoon Seo, and Jin-Goo Park (Hanyang Univ., Korea)

October 21 (Wed.), 2026

[Oral 08] CMP Consumables (I)

15:10-16:35

International Conference Hall (B1F)

● Session Chair: Xinping Qu (Fudan Univ., China)

15:10-15:35 [Oral 08-1]	**[Invited]** Advanced Ceria Slurries for SiO_2 CMP: Polishing Mechanism of Nanoceria and Emerging Applications Hisataka Minami (Resonac Corp., Japan)
15:35-15:55 ★[Oral 08-2]	W CMP Oxidants for Ultra-low Chemical Dissolution with High Removal Rate Yearin Byun, Thanh Cuong Nguyen, Inkwon Kim, Nohjun Park, Doyoon Kim, Yeonah Jeong, Heechul Moon, and Sangkyun Kim (Samsung Electronics Co., Ltd., Korea)
15:55-16:15 [Oral 08-3]	Advanced Soft Pad Conditioning Solutions for Improved Pad Life and Defectivity in Cu Barrier Applications Uma Rames Krishna Lagudu, Chikai Chiu, Prasoon Gupta, Jiadi Fan (3M, USA), Holden Lee, Chung I Ho, Jason Lin, Yuhsun Wang (3M, Taiwan), Changwan Bea, Yoonghee Na (3M, Korea), Inki Kim (3M, USA), Benson Chen (3M, Taiwan), and Yongsuk Yang (3M, Korea)
16:15-16:35 [Oral 08-4]	CMP Process and Slurries for Memory Device Stacking Yuchun Wang (Anji Microelectronics, China)

October 21 (Wed.), 2026

[Oral 09] Sustainable CMP / Manufacturing Readiness

16:50-17:55

International Conference Hall (B1F)

● Session Chair: Knut Gottfried (Fraunhofer ENAS, Germany)

16:50-17:15 [Oral 09-1]

[Invited] CMP Challenges and Opportunities for 3D Silicon Photonics

Aurore Bonnevialle (STMicroelectronics, France), Catherine Euvrard, Clément Castan, Julian Sturm, Renan Bouis, Arnaud Cornelis (Univ. Grenoble Alpes, France), Elodie Beche, Sebastien Cremer, Sebastien Mermoz (STMicroelectronics, France), Carine Ladner, Stephane Nicolas, Sylvain Guerber, Amelie BelleminComte, Stephanie Garcia, Cédric Perrot (Univ. Grenoble Alpes, France), Frederic Boeuf, and Sébastien Petitdidier (STMicroelectronics, France)

17:15-17:35 [Oral 09-2]

CMP as a Key Enabling Process Step for SiGe BiCMOS, Silicon Photonics, and Quantum Technologies

Marco Lisker, Awwal Adeniyi Adesunkanmi, and Andreas Krüger (IHP GmbH - Leibniz Inst. for High Performance Microelectronics, Germany)

17:35-17:55 ★[Oral 09-3]

Recyclability of Cu/Ta Barrier Slurry via Ultrafiltration

Max Constantin Klotzsche, Conrad Guhl (Fraunhofer IPMS, Germany), and Frank Babick (Technische Univ. Dresden, Germany)

October 22 (Thu.), 2026

[Keynote Speech 3]

09:15-09:45

International Conference Hall (B1F)

● Session Chair: Taesung Kim (Sungkyunkwan Univ., Korea)

09:15-09:45 **CMP at the Inflection Point: Enabling Sub-2nm and Beyond**

Hoyoung Kim (Samsung Electronics Co., Ltd., Korea)

[Oral 10] CMP Fundamentals

09:45-11:10

International Conference Hall (B1F)

● Session Chair: Xinchun Lu (Tsinghua Univ., China)

09:45-10:10 [Oral 10-1] **[Invited]** Research on Atomic-scale Tribochemistry Underlying Wafer-Scale Global Planarization of Advanced Integrated Circuits

Lifei Zhang, Xinchun Lu (Tsinghua Univ., China), Knut Christoph Gottfried, and Jinji Luo-Hofmann (Fraunhofer Inst. for Electronic Nano Systems ENAS, Germany)

10:10-10:30 ★[Oral 10-2] Clarification of Polishing Mechanism Focusing on Abrasive Particle Behavior in CMP - Relationship between Abrasive Particle Behavior and Pad Surface Topography in Micro Replicated CMP Pad -

Haruto Kurokawa, Yoji Oyama, Syuhei Kurokawa, Terutake Hayashi, Keisuke Osawa (Kyushu Univ., Japan), Hirokuni Hiyama, Yutaka Wada, Naoyuki Handa, and Syuntaro Hayashi (Ebara Corp., Japan)

10:30-10:50 ★[Oral 10-3] Micro-Structured Pads for High-MRR and Low-Damage Oxide Chemical Mechanical Polishing

Seounghee Yun, Hyun Jun Ryu, Hyeongmin Je, and Sanha Kim (KAIST, Korea)

10:50-11:10 ★[Oral 10-4] Physics-Informed Friction Coefficient Distribution Modeling for Material Removal Rate Prediction in Chemical Mechanical Polishing

Sho Hirono (Kobe Univ., Japan), Chihiro Mitani (Chuo Univ., Japan), Takumi Sato, Kodai Hirano (Ebara Corp., Japan), and Norikazu Suzuki (Kobe Univ., Japan)

October 22 (Thu.), 2026

[Oral 11] CMP Consumables (II)

11:25-12:45

International Conference Hall (B1F)

● Session Chair: Andy Tuan (Linx Consulting Inc., Taiwan)

11:25-11:45 [Oral 11-1]	The Interconnect Advantage: CMP Powering AI and HBM Ping Tzeng, Jingzhi Chen (Merck, Taiwan), and Hongjun Zhou (The Electronics Business of Merck KGaA, Germany)
11:45-12:05 [Oral 11-2]	Study on the Mechanism of unCMP Caused by Plastic Deformation of the Head Membrane in CMP Equipment and Its Improvement KyongKyu Myong, Jubong Lee, Younggeun Lee, Yoo-Yong Lee, Ki Ho Bae, and Hoyoung Kim (Samsung Electronics Co., Ltd., Korea)
12:05-12:25 ★[Oral 11-3]	Identifying the Origin of Small Particle Defects in Oxide Chemical Mechanical Planarization Seungmoon Choi, Hyeonjeong Lee, Hyunho Kim, Junil Cho, and Taesung Kim (Sungkyunkwan Univ., Korea)
12:25-12:45 [Oral 11-4]	New Particle and Chemistry Technology for Metals IC CMP Slurries Yu Yu Chou, Howl Hsu (Entegris Co., Ltd., Taiwan), Brian Reiss, and Na Zhang (Entegris Inc., USA)

October 21 (Wed.), 2026

Poster Session

13:10-15:10

Gallery (1F)

● Session Chair: Brian J. Brown (AMAT, USA), Baoguo Zhang (Hebei Univ. of Tech., China)

■ 01. Advanced Interconnect CMP (Metal)

★[P-001] Achieving High-Selectivity Tungsten Planarization at Neutral pH via Poly-L-Lysine Inhibition

Hyunho Kim, Chaerin Park, and Taesung Kim (Sungkyunkwan Univ., Korea)

[P-002] Copper CMP Slurry Tailored for Applications with Different Dimensions

Ping Tzeng, Jingzhi Chen (Merck Performance Materials Ltd. - Hsinchu Site, Taiwan), and Hongjun Zhou (Merck KGaA, Germany)

[P-003] New Ceria CMP Slurry Designs for High-Throughput Selective Metal/Dielectric Applications

Wei Hisn (Howl) Hsu, Chien-Liang (Mason) Liu, and Long Dai Lu (Entegris Co., Ltd., Taiwan)

★[P-004] Synergistic Effect of Azole and Polymer on Copper Chemical Mechanical Polishing

Jiaxin Zheng, Yongshun Zhang, Yuting Wei, Liao Zhou, Qiuyu Li, Hui Li (Southwest Jiaotong Univ., China), Liang Jiang (Southwest Jiaotong Univ. & Yanghua Zhizao (Sichuan) Innovation Technologies Co., Ltd., China), and Linmao Qian (Southwest Jiaotong Univ., China)

[P-005] Multiple Synergistic Effects of a Novel PVP-Optimized Slurry System in Mediating Atomic-Scale Synchronous Polishing of Cobalt Interconnection Heterostructures

Zixin Gao (Hwatsing Tech. Co., Ltd., China), Lifei Zhang, Xinchun Lu, and Jialei Zhang (Tsinghua Univ., China)

■ 02. Dielectric & Hard materials CMP

[P-006] Effect of Ceria Residue on STI Polishing

Ying-Chieh Chao (Fujimi Taiwan Limited, Taiwan), Toshio Shinoda, Takahiro Umeda (Fujimi Inc., Japan), and Yasuto Ishida (Fujimi Taiwan Limited, Taiwan)

[P-007] Precise Calculation Method for Oxide CMP APC Pressure Tuning

Qidong Zhang, Hung-Chieh Chao, Chang Hung, Kung, and Kaiqiang Wang (Sien Integrated Circuit Co., Ltd., China)

★[P-008] Selectivity Enhancement Mechanism in STI CMP Using Ceria Abrasives

Chaerin Park, Jeongbin Kim, and Taesung Kim (Sungkyunkwan Univ., Korea)

[P-009] Next Generation HORS Slurry Development

Yang-Yao Lee and Ming-Che Ho (Vibrantz Technology, USA)

[P-010] Acceleration of GaN CMP Rate via Ion Implantation

Akira Sada (Nissin Ion Equipment Co., Ltd., Japan), Sota Ueda (Kyushu Inst. of Tech., Japan), Yuya Uchida, Takeshi Matsumoto (Nissin Ion Equipment Co., Ltd., Japan), and Keisuke Suzuki (Kyushu Inst. of Tech., Japan)

★[P-011] High-Efficiency Chemical Mechanical Polishing of Polycrystalline Diamond Substrates

Yibo Zhou (Ludong Univ., China), Guanghong Luo (Ludong Univ. & Yantai Xianhua Polymer Materials Co., Ltd., China), and Tao Wang (Shenzhen Polytechnic Univ., China)

★[P-012] Selective Adsorption of an Imidazole Polymer for Oxide-Stop Nitride CMP

Donggeun Park, Ilhwa Hong, Ganghyeok Kim, Youngmin Kim, Gimok Lee, and Kangchun Lee (Kwangwoon Univ., Korea)

[P-013] Evaluation and Optimization of CMP Processes for Different GaN Applications

Ahiliya Sen, Patrick Ong, Md Arif Khan, Edoardo Brezza, Ardeshir Esteki, and Karen Geens (imec, Belgium)

[P-014] Surface Processing of Thin Diamond Samples

Robert Rhoades (Kothar Technologies, USA), and John Ciraldo (WD Advanced Materials, USA)

■ 03. Advanced Packaging / 3D Integration CMP (Hybrid Cu Bonding, BSPDN, Wafer Thinning)

★[P-015] Minimizing Selectivity of Cu/SiCN Using Micro-Replicated Pad for Hybrid Bonding CMP

Ziyang Wang, Yinhao An, Janghyun Kim (Sungkyunkwan Univ., Korea), Yongsuk Yang, Changwan Bae (3M Korea, Korea), and Taesung Kim (Sungkyunkwan Univ., Korea)

[P-016] Asymmetrical Surface Characterization of Bulk Si after Extreme Wafer Thinning for Advanced 3D Integration

Zouhair Ameghnas and Jakob Visker (imec, Belgium)

★[P-017] Investigation of High Selectivity between Amorphous Carbon and Silicon Nitride of Application in 3D NAND Flash CMP

Janghyun Kim, Ziyang Wang, and Taesung Kim (Sungkyunkwan Univ., Korea)

[P-018] CMOS-Compatible Tungsten Gate Integration for Graphene THz Plasmonic FET on Silicon

Marco Lisker, Ketan Anand, Dirk Hagen, Awwal Adeniyi Adesunkanmi, Andreas Krüger (IHP GmbH - Leibniz Inst. for High Performance Microelectronics, Germany), and Andreas Mai (IHP GmbH - Leibniz Inst. for High Performance Microelectronics & Technical Univ. of Applied Sciences Wildau, Germany)

[P-019] Selectivity Control in IC Slurry Design for Advanced Packaging

Francis Acquaye, Sudeep Kuttiatoor, Jay Chang, and Alexander W. Hains (Entegris, Inc., USA)

★[P-020] Study on the Effect of Fe-Based Fenton Reaction on Amorphous Carbon Removal in CMP

Yinhao An, Ziyang Wang, and Taesung Kim (Sungkyunkwan Univ., Korea)

★[P-021] Grain Size Effects on Surface Reactions and Removal Behavior of Electroplated Cu during Chemical Mechanical Polishing for Low Temperature Bonding

Donghwan Choi, Hyeonjeong Lee, Hyunkyu Kim (Sungkyunkwan Univ., Korea), Sungho Park, Yunhee Cho (BASF Company Ltd., Korea), Andreas Klipps (BASF SE, Germany), and Taesung Kim (Sungkyunkwan Univ., Korea)

★[P-022] Structural Optimization of Surface-Structured Pads for Reducing Pattern-to-Pattern Variation in Cu Dishing

Jeongseok Oh, Gunhoo Park, Sukkyung Kang, Dong Geun Kim, and Sanha Kim (KAIST, Korea)

[P-023] High-Selectivity, High-Rate Polyimide CMP Assisted by Functionalized Structured Pads for Cu/Polymer Hybrid Bonding

Il Ryu Jang, Seounghee Yun, Jiseung Lee, Joohyun Park, Hyunwoong Baek, Sukkyung Kang, and Sanha Kim (KAIST, Korea)

★[P-024] Diethylenetriamine-Induced Opposite Surface Responses of Cu and Borosilicate Glass for High-Selectivity TGV CMP

Hyunkyu Kim, Jongyeong Jeon, Janghyun Kim (Sungkyunkwan Univ., Korea), Yoojin Son (Samsung Electronics Co., Ltd., Korea), and Taesung Kim (Sungkyunkwan Univ., Korea)

★[P-025] Pressure-Driven Selectivity Inversion in Cu/SiCN CMP for Advanced Hybrid Bonding

Jeongbin Kim, Chaerin Park, and Taesung Kim (Sungkyunkwan Univ., Korea)

[P-026] Die To Wafer CMP Process Exploration and Optimization

Damien Hebras, Renan Bouis, Arnaud Cornelis, Catherine Euvrard, Carine Ladner, and Stéphane Nicolas (Univ. Grenoble Alpes, CEA-Leti, France)

[P-027] Modeling of Cu Dishing based on Asperity-Level Micro-Contact Mechanics for Cu/SiO_2 Hybrid Bonding

Seong Jae Kim, Yoon Sick Eom, Hyeonseo Han, Kyunghyun Kim, Jeongseok Oh, Gunhoo Park, Hyun Jun Ryu, and Sanha Kim (KAIST, Korea)

★[P-028] Chemical Mechanical Polishing of Semi-Cured BCB for Cu/Polymer Hybrid Bonding with High Bonding Strength

Joohyun Park, Sukkyung Kang, Il Ryu Jang, Hyunwoong Baek, Jiseung Lee, Chansu Jeon, Kyung Min Kim, and Sanha Kim (KAIST, Korea)

★[P-029] Graphene-integrated Cu CMP for Cu/SiO_2 Hybrid Bonding

Jumin Ahn, Jinhyoung Lee, Gunhyoung Kim, and Taesung Kim (Sungkyunkwan Univ., Korea)

★[P-030] APTES-Modified SiO_2 Abrasives for Low-Defect AlN CMP

Ganghyeok Kim, Donggeun Park, Ilhwa Hong, Youngmin Kim, Gimok Lee, and Kangchun Lee (Kwangwoon Univ., Korea)

★[P-031] Mechanistic Insights into Cu/Borosilicate Glass CMP and Selectivity Control for through-Glass via (TGV)

Jonyeong Jeon, Chaerin Park, Juyeol Lee, and Taesung Kim (Sungkyunkwan Univ., Korea)

★[P-032] CMP Study of Redistribution Layer (RDL) Using Build-Up Films (BUF) and Photo-Imageable Dielectrics (PID) for Advanced Packaging

Eunok Kim, Boyeong Hwang, Jinmyeong Hwang, Jaehak Lee, Seungmahn Lee, and Jaedong Lee (KCTech, Korea)

★[P-033] pH-Controlled ZrO_2 Slurry for Chemical Mechanical Polishing of Polyimide Film

Yechan Kim, Jongyeong Jeon, and Taesung Kim (Sungkyunkwan Univ., Korea)

■ 04. Post-CMP Cleaning / Defect Engineering

★[P-034] Investigation on Silica Particle Cleaning Mechanism of Surfactants for Amorphous Carbon Post-CMP Cleaning

Minha Kim, Ziyang Wang, and Taesung Kim (Sungkyunkwan Univ., Korea)

★[P-035] Visualization Method of Near Surface Liquid Replacement Induced by Deformation of a PVA Brush

Makoto Miwa (Shizuoka Univ., Japan), Tomoya Nishi (Ebara Corp., Japan), and Toshiyuki Sanada (Shizuoka Univ., Japan)

[P-036] A Comparative Evaluation of THEMAH as a Potential Alternative to TMAH in Cu Post-CMP Cleaning Solutions

Yingshi Jin, Min Wu (Huntsman Chemistry R&D Center (Shanghai) Co., Ltd., China), Minseo Chae, Palwasha Jalalzai, Jihoon Seo, and Jin-Goo Park (Hanyang Univ., Korea)

★[P-037] Chemical and Mechanical Factors Contributing to Brush Nodule Mark Formation During Post-CMP Cleaning

Sumit Kumar, Jae-Hyeong Lee, Yeon-Je Gye, Tae-Gon Kim, Jihoon Seo, and Jin-Goo Park (Hanyang Univ., Korea)

[P-038] A Counter-Intuitive Strategy for Defect Control in Poly-Si CMP: Eliminating Wafer Rinse to Reduce Residue Defects

Yinghao Bai, Mingkang Wang, Yixian Yao, Li Chieh Hsu, Hung-Chieh Chao, and Chang Hung Kung (Sien Integrated Circuit Co., Ltd., China)

[P-039] Green Chemistry in Cu Post-CMP Cleaning : A Highly Efficient TMAH-Free and Azole-Free Formulation

Kunhee Park, Yongho Jeong, Youngtaek Hong, and Jae-Dong Lee (KCTech Material R&D Center, Korea)

★[P-040] Adsorption and Loading Mechanisms of Metal Ions on PVA Brushes during Post-CMP Cleaning: Experimental and DFT Insights

Maheepal Yadav, Sanjay Bisht, Byung-Hyun Kim (Hanyang Univ., Korea), Hirokuni Hiyama (EBARA Corp., Japan), Jihoon Seo, Tae-Gon Kim, and Jin-Goo Park (Hanyang Univ., Korea)

★[P-041] In-Situ Electrochemical Investigation of Cu Tribocorrosion during PVA Brush Scrubbing

Sanjay Bisht, Jiho Seo, Maheepal Yadav, Hyounggeun Kang, Tae-Gon Kim, Jihoon Seo, and Jin-Goo Park (Hanyang Univ., Korea)

★[P-042] Effects of Amino Acid Additives on Tungsten Surface Behavior during Post-CMP Cleaning

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Ji-An Lee, Jun-Hee Han, Arim Woo, Jin-Goo Park, Jihoon Seo, and Tae-Gon Kim (Hanyang Univ., Korea)

★[P-058] Decoupling Cu Protection and Residual Adhesion of Organic Inhibitors in TMAH-Based Cu Post-CMP Cleaning

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Jin Xu, Boao Ma, Bowen Luo, and Xin-Ping Qu (Fudan Univ., China)

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Boao Ma, Xuhao Cao, Bowen Luo, Jin Xu, Linyi Shen (Fudan Univ., China), Lijuan Zhang (CAS, China), and Xin-Ping Qu (Fudan Univ., China)

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Shin Tanihara, Panart Khajornrungruang, Ryunosuke Yamagata (Kyushu Inst. of Tech., Japan), Natsuko Urushihara, Tomoya Nishi, and Hirokuni Hiyama (EBARA Corp., Japan)

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Daniel Chang, Syin Hsu, Sunny Chan, and Tracy Lin (Qnity Electronics Inc., Taiwan)

★[P-063] Study on AI-Assisted CMP Removal Rate Prediction Using Integrated Process Data and Cerium Carbonate-Based Slurry

Eunseo Woo, Sohee Hwang (Hannam Univ., Korea), Jaeyoung Jung (ETRI, Korea), and Woonjoong Kim (Hannam Univ., Korea)

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Jaewook Lee, Incheol Ha, Bobin Kang, Gwanhun Song, Gitae Park, and Hyunseop Lee (Dong-A Univ., Korea)

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Seungchoun Choi, Yonghwan Yim, and Semyeong Oh (Amously Inc., Korea)

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Raymond Maas and Stefan Seuleanu (Rhosonics Analytical B.V., The Netherlands)

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Gary Van Schooneveld, Mark Litchy (CT Associates, Inc., USA), and Gabriel Jae Kwon Park (Levitronix GmbH, Switzerland)

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Rashid Mavliev (Mavlipa LLC, USA), Robert Rhoades (Kothar Tech., USA), and Knut Gottfried (ErzM-Tech., Germany)

★[P-071] Estimation of Pad Uniformity by Diamond Conditioning with Overlapped Areas Method for Advanced CMP Process

Kai-Min Tian, Chao-Chang A. Chen, Wan-Hsiang Tseng (Nat'l Taiwan Univ. of Science and Tech., Taiwan), Hirokuni Hiyama, Naoyuki Handa, Yutaka Wada, and Tadashi Obo (EBARA Corp., Japan)

★[P-072] Study of 3D Pad Microstructure Models with Representative Volume Element and Micro-CT Reconstruction

Pai-Hsiang Chao, Chao-Chang A. Chen, and Le Nam Quoc Huy (Nat'l Taiwan Univ. of Science and Tech., Taiwan)

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Henry (Yu-Heng) Cheng (Entegris, Inc., Taiwan), Yuxin Li (Entegris, Inc., USA), Alan Chao, Enzo Chen, Howard Shih, Aiden Chang (Entegris, Inc., Taiwan), Ying Qi (Entegris, Inc., USA), and Henry Wang (Entegris, Inc., Taiwan)

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Chloe (Ting-Chen) Chen, Alex Chuang, Mott Chien, Hager Yeh, Jason Fu, and YiWei Lu (Entegris. Ltd., Taiwan)

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James Hsu and Joseph Sung (Qnity Electronics, Inc., Taiwan)

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Wookyung Jeon and Taesung Kim (Sungkyunkwan Univ., Korea)

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Ping Chuang (Nippon Alloy Co., Ltd., Taiwan)

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Moeka Ajiki, Sora Shirai (Fujimi Corp., Japan), Sunshine Wei (Fujimi Corp., Taiwan), Ryota Mae, Shogo Onishi, and Tatsuhiko Hirano (Fujimi Corp., Japan)

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Haiying Yu, Yinghao Bai, Yixian Yao, and Chang Hung Kung (Sien Integrated Circuit Co., Ltd., China)

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Jae Eung Koo, Ravichandra Palaparthi, Grant Hou, and Dave Hui (Qnity Electronics Inc., USA)

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Floriane Baudin, Cassandre Beluffi, Sebastien Dominguez, Richard Souil, Candice Thomas, Pablo Renaud, Edouard Deschaseaux, and Catherine Euvrard (Univ. Grenoble Alpes, France)

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Rui (Rachel) Ma, Jessica Lindsay, Weisi Li, Kevin P. Dockery, and Aaron Peterson (Entegris. Ltd., USA)

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Changwan Bae (3M Company, Korea), Uma Rames Krishna Lagudu, Thomas Mooney (3M Company, USA), and Yongsuk Yang (3M Company, Korea)

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Kota Takahashi (Gifu Univ. and Mitsubishi Chemical Engineering Corp., Japan) and Michio Uneda (Gifu Univ., Japan)

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Seongmin Cho (Seoul Nat'l Univ. of Science and Tech., Korea), Daniel R. Troolin, Andrea J. Tiwari (TSI Incorporated, Shoreview, USA), and Dong-Bin Kwak (Seoul Nat'l Univ. of Science and Tech., Korea)

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Tao Lyu, Sohee Hwang (Hannam Univ., Korea), Jaeyeong Jung (ETRI, Korea), and Woonjung Kim (Hannam Univ., Korea)

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Yuya Takashima, Kentaro Fujita (Rokitechno Marketing Co., Ltd., Japan), and Minori Nishioka (Rokitechno Co., Ltd, Japan)

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Majid Entezarian, John Morby, and Sandeep Singh (Thermo Fisher Scientific Inc., USA)

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Haemin Jeong, Hyeonjeong Lee, Seungmoon Choi, and Taesung kim (Sungkyunkwan Univ., Korea)

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Eunseok Lee and Sangwoo Lim (Yonsei Univ., Korea)

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Po-Shen Chen, Pai-Hsiang Chao, Chao-Sung Chang, Wan Hsiang Tseng (Nat'l Taiwan Univ. of Science and Tech., Taiwan), Jason Lin, Yi He, Kazuma Nuno, and Fay Salmon (3M Company, USA)

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Eric S. Moyer (Polysciences, Inc., USA)

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Natsuko Oshima, Kazuki Yagi, Tatsuhiko Hirano, and Kazumi Sugai (Fujimi Inc., Japan)

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Damien Yiyuan Khoo (Bruker (Malaysia) Sdn Bhd, Malaysia)

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Guinea Niku, Ishii Tsubasa, and Masuya Koichi (EBARA Corp., Japan)

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Kazuma Nuno (3M Japan Innovation Ltd., Japan), Jiadi Fan, David Buckley, Jaimie Stomberg, Fay Salmon, Sreekanth Akarapu, Uma Rames Krishna Lagudu, Junqing Xie, Matt Fritz, Thomas Herdtle, Victor Ho, and Yi He (3M Company, USA)

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Ali Jawaid, Jason Seabold, and Kelvin Li (Entegris, Inc., USA)

★[P-121] Study on Iron (Fe)-Complex Catalyst Accompanying Passivation Layer Formation and Hydroxyl Radical Generation in Tungsten(W) Chemical Mechanical Planarization(CMP)

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Keisho Morita and Yohei Hashimoto (Kanazawa Univ., Korea)

★[P-123] Interfacial Kinetics of Molybdenum in Sulfuric Peroxide Mixtures: Oxidation–Inhibition–Dissolution Balance for Mo CMP Chemistry

Junil Cho, Byungsu Kim, and Taesung Kim (Sungkyunkwan Univ., Korea)

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Wonbin Ko, Geumji Back, and Taesung Kim (Sungkyunkwan Univ., Korea)

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Seulki Kim (KCTech Co., Ltd., Korea), Seok Gyu Ryu (Clarkson Univ., USA), Jihoon Seo (Hanyang Univ., Korea), Kyungmin Yoo, Youngjung Kim, Myunggoo Lee, Seungmahn Lee, and Jae-Dong Lee (KCTech Co., Ltd., Korea)

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

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