Program Overview

ICPT 2024

International Conference on Planarization / CMP Technology

Kurhaus Wiesbaden • October 15 – 18, 2024

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VDE VDI GMM

ICPT 2024 Program Overview

	Wednesday, October 16		Thursday, October 17		Friday, October 18
07:00–08:00	Registration	07:30–08:00	Registration	07:30–08:00	Registration
08:00–08:10	Opening Remarks	08:00–08:10	Presentation ICPT 2025	08:00–08:30	Keynote
08:10–08:40	Keynote	08:10–08:40	Keynote	08:30–09:55	SESSION 9 Defects, defect control and Post CMP cleaning (2)
08:40–10:05	SESSION 1 FEOL CMP	08:40–10:05	SESSION 5 Equipment & CMP consumables	09:55–10:25	*Coffee Break & Exhibiton*
10:05–10:35	*Coffee Break & Exhibiton*	10:05–10:35	*Coffee Break & Exhibiton*	10:25–11:50	SESSION 10 CMP fundamentals, modeling and simulation (2)
10:35–12:00	SESSION 2 BEOL & 3D CMP (1)	10:35–12:00	SESSION 6 BEOL & 3D CMP (2)	11:50–12:10	STUDENT PAPER AWARD
12:00–13:30	*Lunch Break & Exhibiton*	12:00–12:15	Award Ceremony	12:10–12:20	Closing Remarks
13:30–14:55	SESSION 3 CMP fundamentals, modeling and simulation (1)	12:15–13:30	*Lunch Break & Exhibitons*	12:20–13:20	*Lunch Break*
14:55–15:25	*Coffee Break & Exhibiton*	13:30–14:55	SESSION 7 Emerging technologies & Substrate polish	13:20	End of ICPT 2024
15:25–16:50	SESSION 4 Defects, defect control and Post CMP cleaning (1)	14:55–15:25	*Coffee Break & Exhibiton*		
16:50–18:20	POSTER SESSION 1	15:25–16:50	SESSION 8 Extra SESSION		
		16:50–18:20	POSTER SESSION 2		
		19:30–22:30	Conference Dinner		

The given times in the program schedule are according to the German Local Time (CEST)

ICPT 2024 Program

	Wednesday, October 16, 2024
07:00 - 08:00	Registration
08:00 - 08:10	Opening Remarks
08:10 - 08:40	**Keynote** **Development and Implementation of a Data Ecosystem to enable End-to-End Advanced Predictive Manufacturing using AI** *Dr. Saifi Usmani, Merck Electronics KGaA, Darmstadt, Germany*
08:40 - 10:05	**SESSION 1: FEOL CMP**
08:40	**Invited** **CMP Challenges and Opportunities for FDSOI with 28nm-ePCM advanced technologies and beyond** *Aurore Durel, STMicroelectronics, France*
09:05	**Effect of sugar alcohols on removal rate and ceria contamination as a function of carbon number in STI-CMP** *Muskan Muskan, Jenasree Hazarika, Tae Hwan Kim, Tae Gon Kim, Jin Goo Park* *Hanyang University, Korea, Republic of (South Korea)*
09:25	**Smart Design of A Novel Low Selective W CMP Slurry** *Hongjun Zhou[1], Joon-Yeon Cho[2], Gary Lee[2], Jimmy Chang[2]* *[1]Merck; [2]Merck*
09:45	**Development of CMP slurry for carbon hard mask** *Rung-Je Yang[1], Allison Hsu[1], Leo Huang[1], Nita Fan[1], Ping Hsu[1], Kenjiro Ogata[2], Koichiro Hosokawa[2]* *[1]DuPont, Taiwan; [2]NITTA DuPont Incorporated*
10:05 - 10:35	*Coffee Break & Exhibiton*
10:35 - 12:00	**SESSION 2: BEOL & 3D CMP (1)**
10:35	**Invited** **Chemical Mechanical Polishing: A Key Enabling Process for Hybrid Bonding** *Laura Mirkarimi, Adeia, USA*
11:00	**Study on environmentally sustainable corrosion inhibitor of Cu CMP** *Jongyeong Jeon, Seungjun Oh, Juyeol Lee, Taesung Kim* *Sungkyunkwan University, Korea, Republic of (South Korea)*
11:20	**Cu/SiCN CMP for enabling wafer to wafer hybrid bonding down to 400 nm pitch** *Sven Dewilde, Steven Deckers, Nancy Heylen, Katia Devriendt* *imec vzw, Belgium*
11:40	**The impact of temperature on copper slurry chemistry** *Pengzhan Liu, Hyeonjeong Lee, Chaerin Park, Taesung Kim* *Sungkyunkwan University, Korea, Republic of (South Korea)*
12:00 - 13:30	*Lunch Break & Exhibiton*

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13:30 - 14:55	**SESSION 3 – CMP fundamentals, modeling and simulation (1)**
13:30	**Invited** **History and Future of CMP Process Monitoring Technology** *Yoichi Shiokawa, EBARA, Japan*
13:55	**Secrets of the Stribeck Curve** *Leonard Borucki* *Araca Inc., United States of America*
14:15	**Pad-Abrasive-Wafer Interaction at Micro-Scale in Chemical-Mechanical Polishing** *Hyun Jun Ryu[1], Seounghee Yun[1], Ji-hun Jeong[2], Sanha Kim[1]* *[1] KAIST, Korea, Republic of (South Korea); [2] MIT, United States*
14:35	**Accelerating finite element simulations with machine learning to predict interfacial pressures in real-time** *Tom Rothe[1,3], Andre Lauff[2], Alexey Shaporin[1,3], Peter Thieme[2], Mudassir Ali Sayyed[1,3], Knut Gottfried[3], Jörg Schuster[1,3], Jan Langer[3], Martin Stoll[1], Harald Kuhn[1,3]* *[1] University of Technology Chemnitz, Chemnitz, Germany; [2] Infineon Technologies Dresden GmbH & Co. KG, Dresden, Germany; [3] Fraunhofer Institute for Electronic Nano Systems (ENAS), Chemnitz, Germany*
14:55 - 15:25	*Coffee Break & Exhibiton*
15:25 - 16:50	**SESSION 4 – Defects, defect control and Post CMP cleaning (1)**
15:25	**Invited** **“Low Stress” Defect Activated p-CMP Cleaning Processes by Tuning the Molecular Structure of Additives** *Jason J. Keleher, Lewis University, USA*
15:50	**Scale Dependence of Particle Removal Efficiency in PVA Brush Scrubbing** *Somin Shin[1], Ji-hun Jeong[2], Hyun Jun Ryu[1], Sanha Kim[1]* *[1] KAIST, Korea, Republic of (South Korea); [2] MIT, United States*
16:10	**Challenge for Tiny Defect Issues in Advanced Process** *Tetsuya Kamimura, Naoko Oouchi, Toru Tuchihashi, Akihiko Ohtsu, Atushi Mizutani* *FUJIFILM, Japan*
16:30	**Complete removal of positively-charged ceria particles by using alkaline sodium percarbonate aqueous cleaning solution** *Boao Ma, Wenlong Tang, Linyi Shen, Qiancheng Sun, Haijun Cheng, Xin-ping Qu* *School of Microelectronics, Fudan University, China, People‘s Republic of China*
16:50 - 18:20	**POSTER SESSION 1**

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Thursday, October 17, 2024

07:30 - 08:00	Registration
08:00 - 08:10	Presentation ICPT 2025
08:10 - 08:40	**Keynote** **Lithography roadmaps** *Alberto Pirati, ASML, The Netherlands*
08:40 - 10:05	**SESSION 5 – Equipment & CMP consumables**
08:40	**Invited** **Role of CMP in Enabling Heterogeneous Integration** *Brian Brown, Applied Materials, USA*
09:05	**Deep Learning Approaches to Predict Pad Durability in Copper Chemical Mechanical Planarization** *Seunghwan Lee, Jaewon Lee, Pengzhan Liu, Hosin Hwang, Hyunho Kim, Taesung Kim* *Sungkyunkwan University, Korea, Republic of (South Korea)*
09:25	**Effect of increased slurry dwell time on polishing performance** *Conrad Guhl, Felix Köhler, Benjamin Lilienthal-Uhlig, Fraunhofer IPMS CNT, Germany*
09:45	**Dishing Control for Nanotwinned Copper TSV Patterned Wafer CMP with Composite Soft Polishing Pad** *Yueh-Hsun Tsai[1], Kai-Xiang Xiao[1], An-Chieh Cheng[1], Huy Le Nam Quoc[1], Eyob Messele Sefene[1], Chao-Chang A. Chen[1,2]* *[1] Department of Mechanical Engineering, National Taiwan University of Science and Technology, Taiwan; [2] CMP Innovation Center, National Taiwan University of Science and Technology, Taiwan*
10:05 - 10:35	*Coffee Break & Exhibiton*
10:35 - 12:00	**SESSION 6 – BEOL & 3D CMP (2)**
10:35	**Invited** **CMP: a key process for DTW Hybrid bonding integration** *Emilie Bourjot, CEA-Leti, France*
11:00	**Impact of CMP Slurry Additives on Copper Pad Corrosion and Surface Topography of Interest to Cu-Cu Hybrid Bonding** *Seonwoo Go[1], Hazarika Jenasree[1], Arim Woo[1], Jum-Yong Park[2], Tae-Gon Kim[1], Jin-Goo Park[1]* *[1] Hanyang University, Republic of Korea; [2] Samsung Electronics Co., LTD, Republic of Korea*
11:20	**Impact of Dissolved Oxygen on Metal Corrosion in Post-CMP Cleaning for Advanced Logic Structures** *Katrina Mikhaylichenko, Applied Materials, United States of America*
11:40	**Investigation on the removal mechanism of amorphous carbon chemical mechanical polishing** *Ziyang Wang, Pengzhan Liu, Seunghwan Lee, Jinhyoung Lee, Taesung Kim* *Sungkyunkwan University, Korea, Republic of (South Korea)*
12:00 - 12:15	**Award Ceremony**
12:15 - 13:30	*Lunch Break & Exhibiton*

Thursday, October 17, 2024

13:30 - 14:55	**SESSION 7 – Emerging technologies & Substrate polish**
13:30	**Invited** **Extreme wafer thinning process, and subsurface damage study for 3D integration** *Rami Chukka, imec, Belgium*
13:55	**Novel Catalyst-Referred Etching Technology for Preparing Epi-Ready Silicon Carbide Substrates** *Ara Philipossian[1], Yasa Sampurno[1], Tatsutoshi Suzuki[2], Kazuto Yamauchi[3]* *1 Araca, Inc., Tucson AZ, USA; [2] Toho Koki Seisakusho Co., Ltd., Yokkaichi, Japan; [3] Osaka University, Osaka, Japan*
14:15	**High-efficiency GaN polishing by photoelectrochemical etching-assisted catalyst-referred etching** *Daisetsu Toh[1], Kiyoto Kayao[1], Tatsuya Fukagawa[1], Jumpei Yamada[1], Kazuto Yamauchi[2], Yasuhisa Sano[1]* *[1] Department of Precision Science and Technology, Graduate School of Engineering, Osaka University, Osaka, Japan; [2] OSAKA UNIVERSITY-RIKEN Center for Science and Technology, Osaka University, Osaka, Japan*
14:35	**CMP steps to enable NbTiN-based Superconducting Digital Logic** *Bart Kenens[1], Ankit Pokhrel[1], Benjamin Huet[1], Daniel Perez Lozano[1], Jean-Philippe Soulie[1], Diziana Vangoidsenhoven[1], Yann Canvel[1], Vincent Renaud[1], Amey M Walke[1], Jasper Bizindavyi[1], Sara Iraci[1], Blake Hodges[2], Seifallah Ibrahim[2], Trent Josephson[2], Min-Soo Kim[2], Sabine O'Neal[2], Kevin Vandersmissen[1], Katia Devriendt[1], Quentin Herr[1,2], Zsolt Tokei[1], Anna Herr[1,2]* *[1] imec, Belgium; [2] imec Florida, USA*
14:55 - 15:25	*Coffee Break & Exhibiton*
15:25 - 16:50	**SESSION 8 – Extra SESSION**
15:25	**Invited** **Innovative CMP technology for the next generation VNAND devices** *KiHoon Jang, Samsung R&D Center, Korea*
15:50	**Surface polishing of polycrystalline silicon carbide using catalyst-referred etching** *Yusuke Yoshida[1], Kiyoto Kayao[1], Daisetsu Toh[1], Jumpei Yamada[1], Kazuto Yamauchi[2], Yasuhisa Sano[1]* *[1] Department of Precision Science and Technology, Graduate School of Engineering, Osaka University, Japan; [2] OSAKA UNIVERSITY-RIKEN Center for Science and Technology, Osaka University, Osaka, Japan*
16:10	**Nanoscale Dishing and Selectivity Control in STI Pattern Wafer via Mechano-Structural Heterogeneity of CeO2 Nano Particle** *Chulwoo Bae, Jinhyoung Lee, Juyong Lee, Jaedo Nam, Taesung Kim* *Sungkyunkwan Univ., Korea, Republic of (South Korea)*
16:30	**Application of Neural Network Potential Molecular Dynamics Simulation to Atomic-scale understanding of silicon nitride CMP Process by Nano-sized ceria abrasive** *Yoshishige Okuno, Ken Takahashi, AKihiro Orita, Satoyuki Nomura* *Resonac / Japan, Japan*
16:50 - 18:20	**POSTER SESSION 2**
19:30 - 22:30	**Conference Dinner**

Friday, October 18, 2024

07:30 - 08:00	Registration
08:00 - 08:30	**Keynote** **Challenges for hetero integration process technology, test and reliability** *Prof. Harald Kuhn, Fraunhofer ENAS, Germany*
08:30 - 09:55	**SESSION 9 – Defects, defect control and Post CMP cleaning (2)**
08:30	**Invited** **Evolution and progress of post CMP cleaning solution for defect reduction** *Yuchun Wang, Anji Microelectronics Technology Ltd., China*
08:55	**A Study on Evaluating Supercritical CO2 Cleaning with Pressure Pulse using Computational Fluid Dynamics** *Joohwan Ha[1], Geumji Back[1], Jongyeong Jeon[2], Taesung Kim[1,2,3]* *[1] Department of Semiconductor Convergence Engineering, Sungkyunkwan University(SKKU), Suwon 16419, Republic of Korea; [2] School of Mechanical Engineering, Sungkyunkwan University(SKKU), Suwon 16419, Republic of Korea; [3] SKKU Advanced Institude of Nanotechnology(SAINT), Sungkyunkwan University(SKKU), Suwon 16419, Republic of Korea*
09:15	**Separate Distance Measurement of Moving Nano-Particle from Surface in Wet Process using Astigmatism Defocus above Evanescent Field Range** *Norita Kuroe[1], Panart Khajornrungruang[1], Yu Arima[1], Satomi Hamada[2], Yutaka Wada[2], Hirokuni Hiyama[2], Tomoya Nishi[2]* *[1] Kyushu Institute of Technology, Japan; [2] Ebara corporation, Japan*
09:35	**Investigation of the Cross-Contamination Mechanism by PVA Brush Scrubbing Process and Parameters during Post-CMP Cleaning** *Kwang-Min Han[1], Sumit Kumar[2], Mir Jalal Khan[2], Jae-Hyeong Lee[2], Tae-Gon Kim[3], Jin-Goo Park[2]* *[1] Department of Bio-Nano Technology, Hanyang University ERICA, Republic of Korea; [2] Department of Materials Science and Chemical Engineering, Hanyang University ERICA, Republic of Korea; [3] Department of Smart Convergence Engineering, Hanyang University ERICA, Republic of Korea*
09:55 - 10:25	*Coffee Break & Exhibiton*

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10:25 - 11:50	**SESSION 10 – CMP fundamentals, modeling and simulation (2)**
10:25	**Invited** **First ten (of hundreds) ways to kill slurry quality** *Rob Rhoades, X-Trinsic, USA*
10:50	**Exploring the Potential of Machine Learning in Developing CMP Slurry Composition** *Akihiro Orita, Satoyuki Nomura, Resonac Corporation*
11:10	**Wafer Bonding Hotspots Detection by Chip-Scale CMP Simulation** *Ruben Ghulghazaryan[1], Davit Piliposyan[1], Jeff Wilson[2], Ushasree Katakamsetty[3], Yong Chau Ng[3], Yudi Setiawan[3], Anthony Villalon[3], Sam Nakagawa[3], Stefan Nikolaev Voykov[3]* *[1] Siemens Industry Software, Armenia; [2] Siemens EDA, USA; [3] GLOBALFOUNDRIES*
11:30	**Analysis of lower structures of asperities on pad surface** *Yohei Hashimoto[1], Hozumi Yasuda[2], Norikazu Suzuki[3]* *[1] Kanazawa University, Japan; [2] Ebara Company, Japan; [3] Chuo University, Japan*
11:50 - 12:10	**STUDENT PAPER AWARD**
12:10- 12:20	**Closing Remarks**
12:20 - 13:20	*Lunch Break & Exhibiton*
13:20	**End of ICPT 2024**

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Wednesday, October 16, 2024

16:50 - 18:20	**POSTER SESSION 1**
P1	**Cu-CMP Scratch reduction using by Temperature Control Rinse(TCR)** *Taketo Sekine, Applied Materials, United States of America*
P2	**A Novel Data-Driven Modeling based on Pad Surface Recognition for Predicting Material Removal Rate in CMP** *Jongmin Jeong[1], Yeongil Shin[1], Seunghun Jeong[1], Seonho Jeong[1], Masashi Kabasawa[2], Yoichi Shiokawa[2], Keita Yagi[2], Hozumi Yasuda[2], Jichul Yang[2], Katsuhide Watanabe[2], Yutaka Wada[2], Hirokuni Hiyama[2], Haedo Jeong[1]* *[1] Pusan National University, Busan, Republic of Korea;* *[2] EBARA Corporation, Fujisawa, Kanagawa 251-8502, Japan*
P3	**Observation of liquid movement due to PVA brush nodule deformation and prediction of liquid transfer map** *Makoto Miwa[1], Shota Suzuki[1], Satomi Hamada[2], Toshiyuki Sanada[1]* *[1] Shizuoka University; [2] Ebara Corporation*
P4	**Study on the Effect of High Temperature on Defects in Tungsten Chemical Mechanical Planarization** *Jeongyeol Yu[1,2], Taesung Kim[2]* *[1] Samsung Electronics, Korea, Republic of (South Korea); [2] Sungkyunkwan University, Korea, Republic of (South Korea)*
P5	**Preparation of a highly smoothed Si surface via catalyst-referred etching** *Yohei Miyaji[1], Kiyoto Kayao[1], Daisetsu Toh[1], Jumpei Yamada[1], Kazuto Yamauchi[2], Yasuhisa Sano[1]* *[1] Department of Precision Science and Technology, Graduate School of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka, Japan; [2] Osaka University-RIKEN Center for Science and Technology*
P6	**A Novel Approach to Improve Cleaning Performance of High Oxide Rate CMP by Alkaline Ceria Slurry** *Yang-Yao Lee, Ming-Che Ho, Vibrantz Technologies, United States of America*
P7	**Investigation of silica particle and Mo ion contamination on PVA brush during Mo post-CMP cleaning process** *SUMIT KUMAR[1], PALWASHA JALALZAI[1], NAYOUNG KANG[1], TAE-GON KIM[2], JIN-GOO PARK[1]* *[1] Department of Materials Science and Chemical Engineering Hanyang University ERICA, Korea;* *[2] Department of Smart Convergence Engineering, Hanyang University ERICA, Korea*
P8	**Stagnation Time Effects on Through-Silicon Via (TSV) Mechanical Reliability: A Study on Cu Corrosion Standards** *JINSOO YOON[1], Taesung KIM[2]* *[1] Samsung Electronics Semiconductor, Hwaseong, Republic of (South Korea);* *[2] Sungkyunkwan University, Korea, Republic of (South Korea)*
P9	**High-Resolution Size Distribution Characterization of CMP Slurry Particles** *Andrea Tiwari[1], Daniel Troolin[1], Torsten Tritscher[2], Atul Patel[1], Justin Koczak[1], Nathan Birkeland[1], Hee-Siew Han[1]* *[1] TSI Incorporated, Shoreview, MN, United States of America; [2] TSI GmbH, Aachen, Germany*
P10	**Performance of Novel DLC-Coated Conventional Gritted Diamond Discs in ILD CMP** *Yasa Sampurno[1], Len Borucki[1], Akira Okabe[2], Ara Philipossian[1]* *[1] Araca, Inc., Tucson AZ, USA; [2] Epicrew Corporation, Omura-city, Japan*
P11	**Inline Real-Time Process Monitoring of CMP Slurries with Ultrasonic and Conductivity Measurements** *Raymond Maas, Rhosonics, The Netherlands*

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P12	**Study on Property Changes Through Slurry Filtration** *Jongwoo Kwon[1,2], Taesung Kim[3]* *[1] Samsung Electronics, Korea, Republic of (South Korea); [2] Department of Semiconductor and Display Engineering, Sungkyunkwan University, Suwon, Republic of Korea; [3] School of Mechanical Engineering, Sungkyunkwan University, Suwon, Republic of Korea*
P13	**Planarization of substrate with metal wiring using catalyst-referred etching – Etching characteristic of wiring metal –** *Hiroto Yamasaki[1], Kiyoto Kayao1, Daisetsu Toh[1], Jumpei Yamada[1], Kazuto Yamauchi[2], Yasuhisa Sano[1]* *[1] Department of Precision Science and Technology, Graduate School of Engineering, Osaka University, Osaka, Japan; [2] OSAKA UNIVERSITY-RIKEN Center for Science and Technology, Osaka University, Osaka, Japan*
P14	**Investigation of the root cause of the scratch formation during copper post-CMP brush scrubbing** *MAHEEPAL YADAV[1], SANJAY BISHT[1], SE-HOON PARK[1], TAE-GON KIM[2], SATOMI HAMADA[3], JIN-GOO PARK[1]* *[1] Department of Materials Science and Chemical Engineering, Hanyang University, Ansan, 15588, Korea; [2] Department of Smart Convergence Engineering, Hanyang University, Ansan, 15588, Korea; [3] EBARA Corporation, Fujisawa, Kanagawa, 251-8502, Japan*
P15	**Influence of a rolling brush on the fluid flow and concentration distribution of cleaning solutions on a rotating disk** *Yoshinori Jinbo[1], Nao Okuma[2], Eri Okubo[2], Yasushi Hongo[2], Toshimasa Mano[2], Toshiyuki Sanada[1]* *[1] Shizuoka University, Japan; [2] AION Co., Ltd., Japan*
P16	**Reduction of Large Particles and Small Particles in Colloidal Silica Manufacturing Process** *Chiharu Nakano, Shunsuke Tanaka, Haruhiko Eki, Shun Arai, Shuta Ozawa* *FUSO Chemical CO. LTD., Japan*
P17	**Influence of Pad-Wafer-Silica based Slurry Interface on BSI Performances** *Victor Soty[1], Cédric Perrot[1], Aurore Bonnevialle[2], Cassandre Maljournal[2], Elodie Bêche[2], Sébastien Mermoz[2], Catherine Euvrard[1]* *[1] Univ. Grenoble Alpes, CEA, LETI, 38000 Grenoble, France; [2] ST Microelectronics, France*
P18	**Silicon Oxide and Tungsten Compatible Formulation for Ceria and Metal Ion Removal for Post-CMP Clean** *Ping Tzeng[1], Katie M. Gramigna[2], Yuwan Juan[1], Ling Chang[1], Ian Hung[1], Ping Hsu[1]* *[1] DuPont, Hsinchu site 1 (TW); [2] DuPont, Newark (US)*
P19	**Investigating Foreign Materials in Post CMP Cleaning Modules with Total Holographic Characterization** *Laura A Philips[1], Fook Chiong Cheong[1], Tiffany Markus[1], Yongneng Wu[2], Nai-Chieh Huang[2], Max Gauge[2], Jianshe Tang[2]* *[1] Spheryx, Inc., United States of America; [2] Applied Material, United States of America*
P20	**Quantitative measurement of emulsion droplets in silica CMP slurries with Total Holographic Characterization** *Laura Philips, Fook Chiong Cheong, Tiffany Markus, Spheryx, Inc., United States of America*
P21	**Development of model-based robot polishing system - Measurement of robot rigidity distribution and its application -** *Kotaro Totsuka[1], Takamasa Yamamoto[2], Michio Uneda[1], Norikazu Suzuki[3]* *[1] Kanazawa Institute of Technology; [2] Yamamoto Metal Technos Co.,Ltd.; [3] Chuo University*
P22	**Advanced Copper Post-CMP Cleaning Formulation Providing Superior Copper Compatibility and Ruthenium Residue Removal Capability** *Peter Sun, Jacky Cheng, Ping Hsu, DuPont, Taiwan*

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	Wednesday, October 16, 2024
P23	**Functionalized Water Production Methods using Membrane Contactors and its effect on Particle Removal Efficiency post CMP** *Joel Cardona, Sang-Hyeon Park, Charlotte M Starnes, Solventum, United States of America*
P24	**Research on Bio-based CMP Pads to Reduce Carbon Dioxide Emissions** *Mingyeong Ji, Jongwook Yoon, Jangwon Seo, SK enpulse, Korea, Republic of (South Korea)*
P25	**Effect of Surface Oxidation on post-Chemical Mechanical Planarization Cleaning of Silicon Carbide** *Piper M. Smith, Jason J. Keleher, Lewis University, United States of America*
P26	**Oxide CMP Material Removal Rate Performance based on a smart material properties study** *Aurore Bonnevialle Durel[1], Max Bastien[1], Floriane Demeyer[1], Valérie Dupuy[1], Camille Sgrillo[1], Jeanny Maurice[1], Cédric Perrot[2], Victor Soty[2], Catherine Euvrard[2], Daniel Benoit[1], Sébastien Petitdidier[1]* *[1] ST Microelectronics, France; [2] Univ. Grenoble Alpes, CEA, LETI, 38000 Grenoble, France*
P27	**Extending the applicability of a novel cleanliness assessment method for CMP slurries** *Jochen Ruth, Oliver Baatz, Pall GmbH, Germany*
P28	**Post-CMP cleaning of silicon-germanium wafer surfaces** *Andreas Krüger, Awwal Adeniyi Adesunkanmi, Rasuole Lukose, Yuji Yamamoto, Wei-Chen Wen, Marco Lisker, IHP GmbH - Leibniz-Institut für innovative Mikroelektronik, Germany*
P29	**Enhanced Organic Residue Removal during Cu post-Chemical Mechanical Planarization (p-CMP) Cleaning via surface active non-covalent complexes** *Katey M. Sheets, Jason J. Keleher, Lewis University, United States of America*
P30	**Toward an optimized method to remove edge epi defects for GaN on Silicon growths** *IATOSTI Christophe[1], BENSALEM Salma[2], ROY Emmanuel[1], CHABOUREL Alain[2], KODERA Kenji[3], HONG Victor[3], NAKANISHI Masayuki[3]* *[1] STMicroelectronics, 153 rue des Douets 37100 Tours, France;* *[2] Ebara Precision Machinery Europe GmbH, 26 Av Jean Kuntzmann, 38330 Montbonnot St Martin, France;* *[3] Ebara Corporation, 4-2-1, Honfujisawa, Fujisawa-shi, 251-8502, Japan*
P31	**Regulating molybdenum dissolution through controlled oxide phase formation in CMP with catalytic oxidation** *Bobae Lee, Memory CMP Technology Team, Samsung Electronics, Pyeongtaek, South Korea*
P32	**Advanced Filtration Solution for LPC Removal Efficiency Enhancement in CMP Applications** *Alan {Ling-Hsiang} Chao, Enzo Chen, Henry Wang, Entegris, Taiwan*
P33	**Optimizing Wafer Polishing: Innovations in CMP Techniques and Filtration** *Chloe {Ting Chen} Chen, Jason {Yu Chieh} Fu, Nathan Hou, Nate Chang, Elaine Wu, Alex Chuang Entegris, Inc.*
P34	**Exploring the Potential of Precision Engineering in Next-Generation CMP Consumables** *Yi He, 3M, United States of America*

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16:50 - 18:20	**POSTER SESSION 2**
P35	**Application of Neural Network Potential Molecular Dynamics Simulation to Atomic-scale understanding of poly-Si CMP Process by Nano-sized ceria abrasive** *Ken Takahashi, Yshishige Okuno, Akihiro Orita, Satoyuki Nomura, Resonac / Japan, Japan*
P36	**Clarification of Polishing Mechanism Focusing on Polishing Pad in CMP** *Syuhei Kurokawa[1], Hirokuni Hiyama[2], Yutaka Wada[2], Hozumi Yasuda[2], Shuntaro Hayashi[2]* *[1] Kyushu University, Japan; [2] EBARA CORPORATION*
P37	**Maximizing Material Removal Efficiency of Micro-Structured Pads in Chemical Mechanical Polishing** *Seounghee Yun, Hyun Jun Ryu, Sanha Kim, Korea Advanced Institute of Science and Technology, Korea, Republic of (South Korea)*
P38	**Enabling Fast Boron Doped Polysilicon Removal by the Advanced Oxidation and Enhanced Mechanical Approach for DRAM Scaling** *Yang-Yao Lee, Ming-Che Ho, Vibrantz Technologies, United States of America*
P39	**A prediction model of material removal rate distribution considering slurry supply position and relative motion** *Takumi Sato[1,3], Yuki Watanabe[1], Yohei Hashimoto[2], Norikazu Suzuki[3]* *[1] Ebara Corporation, Japan; [2] Kanazawa University, 9201192 ishikawa, Japan; [3] Chuo University, 1128551, Tokyo, Japan*
P40	**Fundamentals in Polishing Scratch Reduction through Advanced CMP Pad Conditioning Processes** *Yongsik Moon[1], Kyoung-Kuk Kwack[1], Joohan Lee[1], Jongkuk Park[1], Eunhwa Song[1], Youngtae Jeon[1], Joohee Lee[1], Sungyu Park[1], Yujeong Jin[1], Jongjae Lee[1], Yongik Whang[2]* *[1] EHWA Diamond, 374 Nambu-daero, Osan-si, Gyeonggi-do, Republic of Korea;* *[2] EHWA Europe GmbH, Rudolf-Diesel-Straße 7, 65760 Eschborn, Germany*
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