Tuesday, April 14

■ HBS Special Session <The speakers will be announced shortly.>

	Room A
13:00	
13:10	
13:40	
14:10	
14:40	

	Room A
15:10	
15:30	
16:00	
16:30	

Wednesday, April 15

	Room A	Room B	Room C	Room D	Room E	Room F
9:00	**15WA1: INEMI** **15WA1-1** Testing and Characterization for Semiconductor Packaging Thermal Management Dongkai Shangguan[1,2], Chun Keang Ooi[2], Sze Pei Lim[1], [1]Indium Corporation, [2]Intel, [3]Thermal Engineering Associates, Inc. **15WA1-2** Benchmarking AOI Capabilities for Fine Pitch Substrate Inspection Feng Xue[1], Charles Reynolds[2], Glenn Pomerantz[2], Jason Frankel[2], Thomas Wassick[2], Charlie Zhu[3], Masahiro Tsuriya[4], [1]IBM, [2]IBM Corp, [3]Nordson T&I, [4]iNEMI **15WA1-3** Thermal Stress Study of Low Temperature Material for 1st Level Interconnect Sze Pei Lim[1], Danyang Zheng[1], Russell Kastberg[2], Shripad Gokhale[3], Yasuharu Yamada[4], Masaki Sanada[5], Takumi Miyazaki[5], Kei Murayama[5], Masahiro Tsuriya[6], [1]Indium Corporation, [2]IBM Infrastructure, [3]Intel Corporation, [4]IBM Research, [5]Shinko Electric Industries, [6]iNEMI **15WA1-4** Warpage Experiments and Simulation for Glass Core Substrate Kang Eu Ong[1], Konishi Junko[2], Satake Noboru[2], Sato Yoichiro[2], Yoshida Tatsuro[3], Murayama Kei[3], Tsukahara Makoto[3], Haley Fu[4], [1]Intel Technology, [2]AGC, [3]Shinko, [4]Inemi	**15WB1: EPTC** **15WB1-1 <Session Invited>** TBD **15WB1-2 <Session Invited>** TBD **15WB1-3 <Session Invited>** TBD **15WB1-4 <Session Invited>** TBD	**15WC1: Fanout Packing-1** **15WC1-1** Advanced Panel Level Fan Out Package - Development of a Damascene Integration Scheme for Cu Redistribution Layers Eungchul Kim, Suhyeon Jeon, Jusuk Kang, Sanghoo Cho, Jeongmin Seo, Dongjoon Oh, Juil Choi, Minwoo Rhee, Samsung Electronics **15WC1-2** From Pilot To HVM A Practical Overlay Yield Prediction Workflow For FOPLP Lithography John Chang, Jian Lu, Timothy Chang, Onto Innovation **15WC1-3** TRC and Fusing current Characterization of Cu RDL Lines for Fan-Out Wafer-Level Packaging Fayong Liu[1], Jinbiao Hu[1], I-Hung Lin[2], Maple Jiang[2], Jinyan Nan[1], Ryan Pang[2], Dongdong Niu[1], Yinhan Zhao[1], Qianyu Jia[1], Kaidi Sun[1], Haiyong Zheng[1], Tom Ni[2], [1]Ocean University of China, [2]Kore Semiconductor Co., Ltd **15WC1-4** Approach of graphic dynamic adjustment integrate to Laser direct imaging solution on 600mm Panel Fan Out PING CHING Shen, Jen-Kuang Fang, Ping-Feng Yang, Sheng-Feng Huang, Advanced Semiconductor Engineering, Inc.	**15WD1: HB Process** **15WD1-1 <Session Invited>** TBD **15WD1-2 <Session Invited>** TBD **15WD1-3** Simplified Gap-Filling Process for Reconstructed Die-to-Wafer Hybrid Bonding Using Spin-Coated Silicone Resin Asuka Fujii[1,2], Yutetsu Kamiya[1], Kenta Hayama[1], Fumihiro Inoue[1], [1]Yokohama National University, [2]ADEKA Corporation **15WD1-4** Prediction of High-Temperature Expansion of Cu in SiO2 Vias for Fine-Pitch Hybrid Bonding 3D-IC Applications Pin-Lin Chen[1], Chih Chen[1,2], [1]Institute of Pioneer Semiconductor Innovation, National Yang Ming Chiao Tung University, [2]Department of Materials Science and Engineering, National Yang Ming Chiao Tung University	**15WE1: Materials-1** **15WE1-1** Electro-Plating of Sn-Cu-Ni Based IMC Material for Connectors and Switches Hiroaki Ikeda, Shigenobu Sekine, Napra, Co. Ltd. **15WE1-2** Cu3Sn as a Passivation Layer for Improving Reliabilities of Nanotwinned Cu Interconnects Jing Chok, Chih Chen, Yi-Quan Lin, National Yang Ming Chiao Tung University **15WE1-3** Strengthening of Pressureless Ag Sintering with (111)-Oriented Nanotwinned Cu Substrate Zhi-Quan Liu[1], Shubo Ai[1], Xingming Huang[2], [1]Southern University of Science and Technology, [2]Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences **15WE1-4** Electric Current Becomes a Thermodynamic Variable - Revisiting Phase Stability in Alloys Shubhayan Mukherjee, Shih-Kang Lin, National Cheng Kung University	**15WF1: Emerging Technologies-1** **15WF1-1 <Session Invited>** Proposal of Development of Megawatt Super-Power Operational Amplifier Using Distar Transistor Kensho Okamoto[1], Ken-ichiro Okamoto[2], Kazunori Morishita[2], Atsushi Okuno[3], [1]Kagawa University, [2]Kyoto University, [3]Green Planets Co. **15WF1-2** Microstructure Evolution and Strength Improvement in Cu-to-Cu Bonding with Micro/Nano Cu Paste ALBERT TZUCHIA WU[1], Li-Chen Wu[1], Shao-Chi Chen[1], Kelvin Li[2], Chang-Meng Wang[2], [1]National Central University, [2]Shenmao Technology INC. **15WF1-3** Via-Last Bumpless TSV for High Bandwidth NAND (HBN) Koji Sakui, Norio Chujo, Masao Taguchi, Takayuki Ohba, Institute of Science Tokyo **15WF1-4** Localized plastic deformation analysis of fordable substrates by using micro-digital image correlation Nakyung JEONG, Jeehoo Na, Eunhye Lee, Sojeong Lee, Tae-Ik Lee, Korea Institute of Industrial Technology
10:40						
	Break					
10:55	**15WA2: MEF** **15WA2-11 <Session Invited>** My 40 years with MEMS, leading to mutual contribution of MEMS/Semiconductors Susumu Kaminaga, Toray Industries, Inc./SK Global Advisers Co., Ltd. **15WA2-2 <Session Invited>** Development of Automotive Chiplet SoC Nobuaki Kawahara, PhD, ASRA, Advanced SoC Research for Automotive **15WA2-3 <Session Invited>** Compact FT-NIR spectrometer made through MOEMS technology Tomofumi Suzuki, HAMAMATSU PHOTONICS K.K.	**15WB2: IMAPS** **15WB2-1 <Session Invited>** TBD **15WB2-2 <Session Invited>** TBD **15WB2-3 <Session Invited>** TBD **15WB2-4 <Session Invited>** TBD	**15WC2: Fanout Packing-2** **15WC2-1** A Novel Fan-Out Wafer Module Stacking Technology Using Transfer Bonding Chih-Cheng Hsiao, Industrial Technology Research Institute **15WC2-2** Warpage Prediction in Multi-Layer Fan-Out Panel-Level Packaging Using Finite Element Method with Artificial Neural Network Chen-Chen Li, Kuo-Shen Chen, National Cheng-Kung University, Department of Mechanical Engineering **15WC2-3** Advanced Packaging Solution by Large Panel Level Fan-out Process for High Performance Computing application Powei Lu, Jeffrey Yang, Yungshun Chang, Yuan Feng Chiang, Jen Kuang Fang, Advanced Semiconductor Engineering **15WC2-4** New Advanced Packaging Architecture - CoWoP (Chip on Wafer on Platform PCB) Terry Hsu, HueiChi Yang, Sam Lin, Vito Lin, Andrew Kang, Don Son Jiang, Siliconware Precision Industries Co., Ltd.	**15WD2: Solder/Intermetallic connect** **15WD2-1 <Session Invited>** Innovative Materials for Advanced Packaging and Heterogeneous Integration Dongkai Shangguan, Sze Pei Lim, Indium Corporation **15WD2-2** Investigating Interfacial Reactions and Shear Strength of SnAg / Fe-HEA Alloy Tzu-Hsiang Liao[1], Jia-Xiang Gao[1], Chuh-Hsiang Liu[1], Chuan Zhang[2], Yu-An Shen[1], [1]Feng Chia University, [2]CompuTherm LLC **15WD2-3** Interfacial Diffusion Control in Silver-Indium Transient Liquid Phase Bonding via Two-Dimensional Interlayers Jiaqi Song[1], Donglin Zhang[1], Xiuchen Zhao[1], Gang Zhang[1,2], Yongjun Huo[1,2,3], [1]School of Materials Science and Engineering, Beijing Institute of Technology, [2]Yangtze River Delta Graduate School of Beijing Institute of Technology, [3]Shenzhen MSU-BIT University, Department of Materials Science **15WD2-4** Development and Characterization of Eco-Friendly Sn-Ag-Cu-Zn Solder for Electrical Performance on PCB Applications Andromeda Dwi Laksono[1,2], Muhammad Ramanda Putra[1], Nurkholis Majid[1], Muhammad Mahessa Ajibasa Syaiban[1], Devit Velanri Putra[1], Lusi Ernawati[2,3], Muhammad Ridho Dewanto[4], Kharis Sugiarto[4], [1]Study Program of Materials and Metallurgical Engineering, Institut Teknologi Kalimantan, [2]Center for Green Materials Innovation, Institut Teknologi Kalimantan, [3]Department of Chemical Engineering, Institut Teknologi Kalimantan, [4]Department of Electrical Engineering, Institut Teknologi Kalimantan	**15WE2: Materials-2** **15WE2-1** Ultra-Thick Photoresist Patterning Enabling Higher Aspect Ratio Cu Posts for Advanced Packaging Tatsuya Fujii, Issei Suzuki, Kazuki Hirano, Eiichi Hayashi, Nobuya Takahashi, Toshiki Furutani, Takashi Kariya, Samsung Device Solutions R&D Japan, Samsung Japan Corporation **15WE2-2** Investigation of SiCN-SiCN bonding with different wet pretreatment solutions followed by O2 plasma for Cu/SiCN hybrid bonding application Chien-Yu Liu[1], Chih Chen[1,2], Pin-Syuan He[1], Yun-Hsuan Chen[1], Rou-Jun Lee[2], Gyanyu Song[3], Cheng Chieh Kao[4], [1]Department of Materials Science and Engineering, National Yang Ming Chiao Tung University, [2] Industry Academia Innovation School, National Yang Ming Chiao Tung University, [3] Lam research Corporation, Tualatin, Oregon, 97062, [4]Lam research Corporation, 1F,No22,R&D RD,II, Hsinchu Science Park **15WE2-3** Reliability Study of NMP-Free PI with Anti-Metal Migration Properties Daniel Chen, Wei-Chun Chen, Renata Hsiao, Fenny Liu, Allen Huang, Liang-Yih Hung, Andrew Kang, Siliconware Precision Industries Co., Ltd. [**15WE2-4**] Fine Trench Fabrication by Excimer Laser Ablation and Plasma Etching Kento Eguchi,Masatsugu Nakano,Eiichiro YamasakiShin-Etsu Engineering Co., Ltd.,	**15WF2: Emerging Technologies-2** **15WF2-1 <Session Invited>** AI-powered analytics for interconnect technologies utilized in electronic packaging Roland Brunner, Materials Center Leoben Forschung GmbH **15WF2-2** High-Resolution 3D Printed Microelectronics Platform for Advanced Packaging Applications Hylke Akkerman, Jeroen Sol, Darragh Walsh, Peter Rensing, Sophie Suijdendorp, Holst Centre / TNO **15WF2-3** Investigation of Laser Parameters for the Creation of Traces and Contact Pads on Aluminum Nitride Ceramics Finn-Merlin Deckert, Cathleen Kleinholz, Christoph Heinze, Indira Kaepplinger, Thomas Ortlepp, CiS Forschungsinstitut fuer Mikrosensorik GmbH **15WF2-4** Cu Pillar Chip Bonding using 3D-Printed Fan-Out Substrate for Adcaned Packaging Haksoon Jung, Jimin Kwon, Ulsan National Institute of Science and Technology (UNIST)
12:35						
	Lunch					
12:55 13:25	**Luncheon Talk:** TBD					
13:35 14:50	**Break / Poster Session**					
	Break					
15:00 15:30	**Award Ceremony**					
	Break					
15:40 16:40	**Keynote Lecture I:** TBD					
16:40 17:40	**Keynote Lecture II:** TBD					
17:40 17:45	**Introduction to ICEP 2027**					
18:15 20:15	**Welcome Reception (Grand Prince Hotel Hiroshima)**					

	Room A	Room B	Room C	Room D	Room E	Room F
8:30 9:15	**Keynote Lecture III:** Advanced Thinning and Cutting Technologies Enabling AI-Oriented Heterogeneous Integration Youngsuk Kim, DISCO Corp.					
	Break					
9:30 11:10	**16TA1: Glass PKG-1** **16TA1-1 <Session Invited>** Opportunities and Challenges of Glass Core Substrate Technologies Andreas Ostmann, Fraunhofer IZM **16TA1-2 <Session Invited>** A Panel-Level Manufacturing Platform for Reliable Glass Core Substrates for Next Generation IC Packages Christian Buchner, SCHMID Group **16TA1-3** Glasses as substrates for packaging: Remarks on Mechanic reliability connected to via-via distance and via density. Martin Letz[1], Fabian Wagner[1], Inge Burger[1], Vanessa Glaesser[1], Volker Seibert[1], Ulrich Peuchert[2], [1]SCHOTT AG, [2]SCHOTT Semicon glass solutions **16TA1-4** From Via to Singulation - Laser Technologies Driving Glass-Based Advanced Packaging Nils Anspach, Daniel Dunker, Jannis Heinz, Simon Hirt, Norbert Ambrosius, Roman Ostholt, LPKF Laser and Electronics SE	**16TB1: ISMP-1** **16TB1-1 <Session Invited>** Bonding Strength Enhancement in Cu/SiO2 Hybrid Bonding Prof. Sungdong Kim, Department of Mechanical System Design Engineering, Seoul National University of Science and Technology **16TB1-2 <Session Invited>** Understanding the interfacial reactions between dielectrics and dielectrics for hybrid bonding applications Prof. Changhwan Choi, Division of Materials Science and Engineering, Hanyang University **16TB1-3 <Session Invited>** Anisotropic Conductive Adhesive for Assembly of Microchips Tae-il Kim, School of Chemical Engineering, Sungkyunkwan University **16TB1-4 <Session Invited>** Signal Integrity Challenges and Opportunities in High-Density Chiplet I/O on Glass Substrates Jimin Kwon, School of Chemical Engineering, Sungkyunkwan University	**16TC1: Ceramic Solution** **16TC1-1** Feasibility study of laterally embedded ceramic inlays into Silicon substrates for sensor applications Michael Fischer, Cathleen Kleinholz, Bjoern Mueller, Alexander Schulz, Jens Mueller, Ilmenau Technical University, Electronics Technology Group **16TC1-2** Silicon on Ceramic an Innovative Technology Platform Cathleen Kleinholz[1,2], Bjoern Mueller[1], Michael Fischer[1], Alexander Schulz[1], Andrea Cyriax[2], Michael Hintz[2], Thomas Ortlepp[2], Jens Mueller[1], [1]Technische Universitaet Ilmenau, [2]CiS Forschungsinstitut fuer Mikrosensorik GmbH **16TC1-3** Fabrication and Evaluation of Fully Embedded Silicon Strain Gauges in Ceramic Material for Wet Wet Applications Cathleen Kleinholz[1], Thomas Frank[1], Andrea Cyriax[1], Stefan Jagomast[1], Christian Maier[1], Michael Hintz[1], Annett Schroeter[2], Uwe Krieger[2], Thomas Ortlepp[1], [1]CiS Forschungsinstitut fuer Mikrosensorik GmbH, [2]VIA electronic GmbH	**16TD1: Cu-Cu Bonding** **16TD1-1** Electrodeposited Oriented Nanotwined Cu for Low Temperature Hybrid Bonding Yunwen Wu[1], Xingya Pan[1], Wenfeng Huang[1], Yuhang Li[1], Shenghong Ju[2], [1]School of Material Science and Engineering, Shanghai Jiao Tong University, [2]Key Laboratory for Thermal Science and Power Engineering of Ministry of Education, Department of Engineering Mechanics, Tsinghua University **16TD1-2** A designed (110)-oriented twin structure for low temperature Cu-Cu bonding Shichen Xie, Zishan Xiong, Yingxia Liu, City University of Hong Kong **16TD1-3** Impact of Surface Treatment Queue Time on Low-Temperature Nanocrystalline Cu Bonding Chen-Ning Li[1], Artur Kolics[2], Mengping Li[2], Shantinath Ghongadi[2], JaeHong Kim[2], Tien-Jen Cheng[2], Chih Chen[1], [1]National Yang Ming Chiao Tung University, [2]Lam Research Corporation **16TD1-4** In-Sn Passivated Low Temperature and Low Pressure fine-pitch Cu-Cu Interconnects Yu-Hsiang Lu[1], Po-Shao Shih[1], Wei Choong Lee[1], Cheng-Yan Yang[1], Yun-Ching Hung[2], Yung-Sheng Lin[2], Chen-Chao Wang[2], Chih-Pin Hung[2], C. Kao[1], [1]Department of Materials Science and Engineering, National Taiwan University, [2]Advanced Semiconductor Engineering, Inc., Taiwan	**16TE1: Materials-3** **16TE1-1** Development of a High-Resolution, High-Reliability Photo-Imageable Dielectric Kohei Abe, Ryo Yukioka, Takeshi Nojiri, Emi Miyazawa, Takashi Kawamori, Resonac Corporation **16TE1-2** Low-temperature Sintering Accelerating of Silver Micro-flake for Improving Interconnect Characteristics by Designing Aliphatic Epoxy-based Binder Takanori Fukushima[1,2], Masahiro Inoue[1], [1]Gunma University, [2]Research Fellow of Japan Society for the Promotion of Science **16TE1-3** Shrinkage Behaviour and Electrical Resistivity of Pyrolyzed Carbon Lattice Yu-Yen Chen[1,2], Hiroaki Tatsumi[2], Hiroshi Nishikawa[2], [1]Graduate School of Engineering, The University of Osaka, [2]Joining and Welding Research Institute, The University of Osaka **16TE1-4** Stretchable PEDOT/PSS Films With Enhanced Electrical And Mechanical Properties For Printed Electronics Masahiro Inoue, Hideyo Shimizu, Gunma University	**16TF1: Thermal Management-1** **16TF1-1 <Session Invited>** High thermal conductive composite for efficient heat spreading through muti-dimnesionals strategy Bin Xu, Junichiro Shiomi, University of Tokyo **16TF1-2** Diamond Thermal Solutions for Emerging High-Heat-Flux and High-Power Semiconductor Packaging Yonhua Tzeng[1,2], [1]National Cheng Kung University, [2]National Tsinghua University **16TF1-3** Ag-coated Ni Metallization for Fluxless Indium-Based TIM Bonding Yuan-Han Ku[1], Cheng-Yan Yang[2], Yu-Hsiang Lu[2], C. Robert Kao[1], [1]National Taiwan University, [2]National Taiwan University **16TF1-4** Thermal properties of Vertically Aligned Carbon Nanotube-based Thermal Interface Materials Yoku Inoue, Tomoki Okumura, Yamato Watanabe, Takayuki Nakano, Shizuoka University
	Break					
11:25 13:05	**16TA2: Glass PKG-2** **16TA2-1 <Session Invited>** TBD Glass PLP HVM solution Frank Su, LAM Research **16TA2-2 <Session Invited>** Reliability Evaluation of 40 μm-Pitch Solder Joint on Glass Interposer Naoko Katoh, IBM **16TA2-3 <Session Invited>** Process Control Innovations for Glass in Advanced Packaging Monita Pau, Onto **16TA2-4 <Session Invited>** Next Generation High Energy Efficiency Packaging Study Utsunomiya, Interconnection Tech	**16TB2: ISMP-2** **16TB2-1 <Session Invited>** Reliability of Fine-Pitch Redistribution Layers (RDLs) for Advanced Packaging Prof. Young-Chang Joo, Department of Materials Science and Engineering, Seoul National University **16TB2-2 <Session Invited>** Novel Electrochemical Processes for Advanced Packaging Prof. Bongyoung Yoo, Department of Materials and Chemical Engineering, Hanyang University, ERICA **16TB2-3** Non-Invasive Visualization of Corrosion in Electronic Packages Using a Conditional Diffusion Model Trained on S-Parameters Tae Yeob Kang, The University of Suwon **16TB2-4** Clustering-Enhanced Deep Surrogate Model for Global Stress and Weak-Point Detection in Semiconductor Packaging Boo Soo Ma[1], Boyeon Kim[2], Myoung Song[2], Tae Yeob Kang[1], Taek-Soo Kim[2], [1]University of Suwon, [2]Korea Advanced Institute of Science and Technology (KAIST)	**16TC2: Direct Bonding** **16TC2-1** A Process-Chemistry Map for Room-Temperature Dielectric Bonding Yun-Hsuan Chen[1], Guanyu Song[2], Cheng-Chieh Kao[2], Chih Chen[1], [1]National Yang Ming Chiao Tung University, [2]Lam Research Corporation **16TC2-2** A Comparison Study on Room Temperature Bonding of Sapphire-Sapphire and Al2O3 Film-Al2O3 Film Kenji Uno, Ryo Takigawa, Graduate School of Information Science and Electrical Engineering, Kyushu University **16TC2-3** Study on Surface Uniformity Improvement of Ag Nanolayer Formed by Galvanic Deposition Quan-Wei Yip, Cheng-Min Yen, Shih-kang Lin, National Cheng Kung University **16TC2-4** Heterogeneous Integration of LiNbO3 And Si Dies Using Room-Temperature Au-Au Bonding in Ambient Air With O2 Plasma Treatment Matsunobu Kosei, Takigawa Ryo, Kyushu University	**16TD2: Others** **16TD2-1** Reliability Assessment of Hybrid Bonding Interconnects under Electromigration Stress Min-Yan Tsai, Shan-Bo Wang, Yung-Sheng Lin, Yu-Ren Chang, Che-Ming Hsu, Chih-Jing Hsu, Zhao-Ze Jiang, Chen-Chao Wang, Chih-Pin Hung, Advanced Semiconductor Engineering **16TD2-2** Enhanced electromigration resistance by nanotwinned Cu-Ag Interconnects for advanced packaging Fan-Yi Ouyang, Peng-Hsiang Hsu, National Tsing Hua University **16TD2-3** Characterization for the Bottom Joint of Stacked Micro-via Integrated in the Substrate by ToF-SIMS and STEM Masahiko Nishijima[1], Ming-Chun Hsieh[1,3], Rieko Okumura[2], Hiroyoshi Yoshida[1], Cuantong Chen[1], Hiroki Seto[2], Kei Hashizume[2], kimihiro yamanaka[1], Hiroshi Nishikawa[4], Katsuaki Suganuma[1], [1]SANKEN, The University of Osaka, [2]Okuno Chemical Industries Co., Ltd, [3]JWRI, The University of Osaka **16TD2-4** Corrosion Behavior of Cu-to-Cu Direct Bonding by Refill Friction Stir Spot Welding for Bus Bar Application HAYOUNG YU[1,2], Myong-Gyu Lee[2], Dongjin Kim[1], [1]Korea Institute of Industrial Technology (KITECH), [2]Seoul National University	**16TE2: Materials-4** **16TE2-1** Low-Temperature Sintering of Cu Microparticle/CuXO Nanoparticle Composite Pastes for High-Strength Bonding Tetsu Yonezawa[1,2], Takashi Aso[1], [1]Hokkaido University, [2]Chulalongkorn University **16TE2-2** Nickel-Enhanced Copper Complex Inks With Improved Weather Resistance Zheng Yi[1], Tsukamoto Hiroki[1], Yonezawa Takaaki[1,2], [1]Division of Materials Science and Engineering, Hokkaido University, [2]Departmtent of Chemical Engineering, Chulalongkorn University **16TE2-3** High-Strength Cu Joint Fabricated Using Bimodal-Sized Cu Nanoparticles Qianhao Zuo, Tetsu Yonezawa, Faculty of Engineering, Hokkaido University **16TE2-4** Surface Modification of Fine Grain Copper for Low Temperature Hybrid Bonding Taiki Miyamoto[1], Kenta Hayama[1], Fabiana Tanaka[1], Yutetsu Kamiya[1], Marie Sano[1], Ryota Naka[2], Ryo Tanaka[2], Fumihiro Inoue[1], [1]Yokohama National University, [2]Okuno Chemical Industries Co., Ltd.	**16TF2: Thermal Management-2** **16TF2-1** Room-Temperature Wafer Direct InP/SiC Bonding Via Surface Activated Bonding Method JUMPEI NAKAMURA, Ryo Takigawa, Kyushu-University **16TF2-2** Development of high heat dissipation insulated metal substrates using thin insulating films YUKIHIRO WATANABE[1], Mitsuru Nishimura[1], Yasuyuki Yanase[1], Kenzo Usami[1], Yutaka Takagi[1], Katsuyuki Sakata[1], Keiji Takagi[1], Akiyoshi Hattori[2], [1]Niterra Co., Ltd., [2]NTK Ceramic Co., Ltd. **16TF2-3** On the Temperature Measurement of on-state GaN-HEMT by Raman Spectrocopy Kensuke Sagawa[1], Kuniharu Kobashi[1,2], Si-Meng Chen[1], Takuya Hoshii[1,2], Anton Myalitsin[2,3], Hiroyuki Ryoson[2], Takashi Yoda[2], Takayuki Ohba[2], Kuniyuki Kakushima[1,2], [1] Institute of Science Tokyo, [2]WOW Alliance, Institute of Science Tokyo, [3]ANVOS Analytics Co., Ltd **16TF2-4** Investigation of Thermal Transient Measurement Methods of Cascode GaN HEMT Devices Wasanthamala Badalawa, Yoshitaka Aoki, Siemens
	Lunch Time					
13:55 15:35	**16TA3: PLP** **16TA3-1 <Session Invited>** TBD TBD, Samsung Electronics **16TA3-2 <Session Invited>** Experience-Driven Advanced Digital Lithography System for Panel Applications Yusuke MATSUHASHI, Nikon **16TA3-3 <Session Invited>** Considerations for Implementing CMP in Panel-Level Packaging Haedo JEONG, Pusan National University **16TA3-4 <Session Invited>** Cutting edge 3D-IC design and analysis environment: Unified solution accelerates advanced package design with AI and Cloud Ksenia ROZE, Cadence	**16TB3: SMTA** **16TB3-1 <Session Invited>** Glass/LTCC Composite Substrates as Completely Inorganic Packaging Interposer Jens Mueller,Technische Universität Ilmenau **16TB3-2 <Session Invited>** Robust Ceramic Components and Packages for EUV Lithography Systems Markus Eberstein, ASML **16TB3-3 <Session Invited>** TBD **16TB3-4 <Session Invited>** LIFT (Laser-Induced Forward Transfer) Application to SMT Manufacturing Markus Bohrer, Dr. Bohrer LaserTec GmbH	**16TC3: Process Development-1** **16TC3-1** Heterogeneous device structure without underfill connected with submicron gold particle bump and seal by chip on wafer process Takashi Imahigashi, Sony Semiconductor Manufacturing Corp. **16TC3-2** Design for Functional Resin Filling Process in Direct Nanoimprint Lithography Ryuhei Yamamura[1], Atsunori Mochida[1], Daisuke Sakurai[1], Masaaki Yasuda[2], Yoshihiko Hirai[2], [1]Panasonic Holdings Corporation, [2]Graduate School of Engineering, Osaka Metropolitan University **16TC3-3** A Direct-Write Solution for Advanced Semiconductor Interconnects Szymon Myrda[1], Toshiyuki Fukuya[2], [1]XTPL S.A, [2]Printed Electronics Corporation **16TC3-4** Fine-pitch Copper Wiring Formation on Build-up Film fabricated by Silver-seed Semi-Additive Process Wataru Fujikawa, Akira Murakawa, Shota Niibayashi, Akinori Furutani, Norimasa Fukazawa, Rei Tamura, DIC Corporation	**16TD3: DMR-E** **16TD3-1** Signal Integrity and Mechanical Design for Mounting HBM4 on an Organic Interposer Taishi Yamaguchi, Yuji Kunimoto, Haruki Horiuchi, Manabu Nakamura, SHINKO ELECTRIC INDUSTRIES CO., LTD. **16TD3-2** Methods for Extracting the Electrical Characteristics of FC-BGA Packages under Thermal Conditions Aki Tanaka, Satoshi Nakamura, KYOCERA Corporation **16TD3-3** Method for Predicting the Impact of Manufacturing Variations Using S-Parameters Satoshi Nakamura, Aki Tanaka, KYOCERA Corporation **16TD3-4** Study on Acceleration of Preconditioning for Solderability Testing Takaaki Sensui, Hideyuki Nagai, TDK Corporation	**16TE3: Materials-5** **16TE3-1** Influence of Indium on the Strength, Ductility, and Soldering of Sn-Bi Alloys CHIH-HSIANG LIU, Tzu-Hsiang Liao, Jia-Xiang Gao, Yu An Shen, Feng Chia Univeristy **16TE3-2** Minor Indium Additions to Sn-Bi Alloys - Properties and Corrosion JIA-XIANG GAO, Chih-Hsiang Liu, Tzu-Hsiang Liao, Yu-An Shen, Feng Chia Univeristy **16TE3-3** Microstructural Refinement and Solidification Behavior in Sn-In Composite Solders with NiO-Coated ZrO2 Nanoparticles Shunya Nitta[1,2], Hiroaki Tatsumi[2], Atsushi Ito[3,4], Arimichi Takayama[3,4], Hiroshi Nishikawa[2], [1]Graduate School of Engineering, The University of Osaka, [2]Joining and Welding Research Institute, The University of Osaka, [3]National Institute for Fusion Science, [4]The Graduate University for Advanced Studies **16TE3-4** In-situ observation of BiIn2(Sn) dissolution in low temperature In-Sn-Bi alloys jiye Zhou, Xin Fu Tan, Stuart McDonald, Kazuhiro Nogita, The University of Queensland	**16TF3: Thermal Management-3** **16TF3-1** A Review of a New Thermal Conductivity Measurement Methodology Tomoaki Hara[1], Qun Yuan[1,2], Haifeng Xu[2], Shuhei Fukunaga[1], Tsuyoshi Funaki[1], [1]THERDEAU Co., LTD., [2]Luology, Co., LTD., [3]The University of Osaka **16TF3-2** Investigating the Thermal Resistance of the SI and Epoxy Interface Wei-Cheng Huang, Lev Tseng, Bo-Yu Huang, Meng-Hsueh Yang, Hui-Chuang Liu, ACE Group Chung-Li Branch **16TF3-3** Cooling Performance Improvement of Heat Sinks by Utilizing Thermal Impedance Distribution Koji Nishi, Ashikaga University **16TF3-4** From Package to Power Integration Enhancing Energy Efficiency through Improved Thermal Dissipation Chesheng Kung, Hao Yu Lu, Micron Memory Taiwan
	Break					
15:50 17:30	**16TA4: HIR** **16TA4-1 <Session Invited>** TBD **16TA4-2 <Session Invited>** TBD **16TA4-3 <Session Invited>** TBD **16TA4-4 <Session Invited>** TBD	**16TB4: Setouchi** **16TB4-1 <Session Invited>** Si-based optical interface devices for photonics-electronics convergence technology (tentative) Hideki Gotoh, Hiroshima University **16TB4-2 <Session Invited>** SiC CMOS Integrated Circuits and Image Sensors for Extreme Environment Applications Shin-Ichiro Kuroki, Hiroshima University **16TB4-3 <Session Invited>** Challenge & Opportunity for Advanced Packaging Takashi Hayakawa, Tokyo Electron **16TB4-4** TBD	**16TC4: Process Development-2** **16TC4-1** Study on the Blind Via Hole Metallization Method for High-Speed Transmission Using Hybrid Desmear and High-Reliability Electroless Copper Plating Tomoya Sawada, Okuno chemical industries **16TC4-2** Interfacial Reactions in the Cu/Sn/Ni Sandwich Couples in 3D IC Packaging Yen-Ling Chen[1], Shih-Jung Chai[2], Yee-Wen Yen[1,2], [1]National Taiwan University of Science and Technology for Materials Science and Engineering, [2]National Taiwan University of Science and Technology for Sustainable Electrochemical Energy Development Center **16TC4-3** Optimization of Encapsulation process for Advanced package using simulation KAZUKI NOGUCHI, Shen Leo, Osaka **16TC4-4** Accurate identification of submicron-sized particle on a copper substrate Michael Lo[1], Naoki Baden[2], [1]Photothermal Spectroscopy Corp., [2]Nihon Thermal Consulting	**16TD4: Mech simulation-1** **16TD4-1** Multiphysics Analysis of Magnetic Thin-Film Inductors Yung Ching Chao[1], Ting-Sheng Chang[2], De-Shin Liu[2], [1]National Chiayi University, [2]National Chung Cheng University **16TD4-2** Advanced Simulation Techniques for Predicting Warpage Behavior in Automotive Electronic Assemblies Weng ChihYang[1,2], Yang ShenYu[1], Chan ChaoChieh[1], Lee ChangChun[2], [1]WNC CORP., [2]National Tsing Hua University **16TD4-3** Systematically Optimized Ensemble Stacking Learning Framework for Process-Induced Warpage Prediction in SiC Power Modules Hsiang-Yu Hsu, Yang-Lun Liu, Hsien-Chie Cheng, Department of Aerospace and Systems Engineering, Feng Chia University **16TD4-4** Warpage Simulation Development for PCB Packaging in AI Drives under Reliability Conditions Shifa Zehruddin Desai[1], Yan-Yu Liou[1], Ming-Chang Wu[2], Chen-Chou Tsai[2], Chieh-Yu Ma[2], Xi-Hong Chen[2], Chih-Cheng Tsai[2], Wen-Chen Wu[2], Chang-Chun Lee[1], [1]Department of Power Mechanical Engineering, National Tsing Hua University, [2] Wistron Corporation	**16TE4: Materials-6** **16TE4-1** Tensile properties of Sn-37Bi-0.5Sb-0.5Cu-0.03Ni low-temperature soldering alloy Xiaozhou Ye[1], Stuart McDonald[1], Xin Fu Tan[1], Takatoshi Nishimura[2], Kazuhiro Nogita[1], [1]The University of Queensland, [2]Nihon Superior Co., Ltd **16TE4-2** In-situ SEM Investigation of Tensile Deformation of Various Sn-xBi Solder Alloys Yi-Hsiang Yen, Yu-Hsin Lin, C. Kao, Department of Materials Science and Engineering, National Taiwan University **16TE4-3** Effect of Sb Addition on the Tensile and Creep Properties of Sn-(58-x)Bi-xSb Low-Temperature Solders Zhi AI, Yu chen Liu, National Cheng Kung University **16TE4-4** Machine Learning-Based Prediction of Electromigration-Induced Resistance Change in Sn-Bi Low-Temperature Solders Chi Chen, Yu-chen Liu, National Cheng Kung University	**16TF4: Thermal Management-4** **16TF4-1** Design and Evaluation of Microchannel Cooling Modules for 2.5D Multi-Hotspot High-Power Packages Yu-hao Lo[1], Jun Mizuno[1], Hsuan-hao Chang[1], Yu-ting Wu[1], Muhammad Friyadi[1], Chi-Hua Yu[1], Takeshi Miyamoto[3], Hung-Hsien Huang[2], Wen-chun Wu[2], Chen-Chao Wang[2], Chih-Pin Hung[2], [1]National Cheng Kung University, [2]Advanced Semiconductor Engineering, [3]Chiba University **16TF4-2** Maximized Manufacturing Flexibility and Convective Heat Transfer Characteristics of Direct Cooling Method for Use in Large-Area Power Electronics Heatsink Byeongchan Kim[1,2], Ha-Young Yu[1], Junha Baik[1], Dongjin Kim[1], [1]korea institute of industrial technology, [2]korea university **16TF4-3** Effect of Thermal Properties of Dielectric Liquids on Breathing Phenomenon Induced by Lotus-Type Porous Copper Toshiya Okafuji[1], Takuya Ide[2], Kohei Yuki[1], Tetsuro Ogushi[2], Masaaki Murakami[2], Kazuhisa Yuki[1], [1]Tokyo University of Science-Yamaguchi, [2]Lotus Thermal Solution Inc. **16TF4-4** Metal 3D Printed Multilayer Channel Liquid Cooling Plate for Large-Scale Heat Dissipation Huiquan Cao[1,2], Jiale Tu[1,2], Zhou Yang[1], Haoyang Sun[2], Feng Ji[2], Jiajie Kang[2], Chi Zhang[3,4], Wei Wang[1,4], [1] Peking University, [2] China University of Geosciences (Beijing), [3]Beijing Institute of Remote Sensing Equipment, [4] National Key Laboratory of Advanced Micro and Nano Manufacture Technology
17:30 18:45	**Poster Session**					
19:00	**Sponsor's Exhibition Party**					

	Room A	Room B	Room C	Room D	Room E	Room F
8:30 9:15	**Keynote IV:** The Future of Computing Norishige Morimoto, IBM Japan, Ltd.					
9:15 10:00	**Keynote V:** TBD					
	Break					
10:15 11:55	**17FA1: IMPACT** **17FA1-1 <Session Invited>** TBD Dr. Chien-Yung Ma, Forcera Materials Inc. **17FA1-2 <Session Invited>** TBD Prof. Yong-Hua Tzeng, NCKU. **17FA1-3 <Session Invited>** TBD Dr. Shin-Puu Jeng, Applied Materials **17FA1-4** Cross-interface grain growth in Cu-Cu Bonding Prof. Chih-Ming Chen, National Chung Hsing University	**17FB1: Printed Electronics** **17FB1-1 <Session Invited>** Printed Organic Thin-Film Transistors for Large-Area Integrated Electronics Prof. Xuying Liu, Zhengzhou University **17FB1-2 <Session Invited>** Low-temperature copper sinter-joining technology for next-generation Prof. Wanli Li, Jiangnan University **17FB1-3 <Session Invited>** Directed self-assembly for high resolution stretchable electronics Dr. Lingying Li, NIMS **17FB1-4** TBD	**17FC1: Hybrid Bonding-1** **17FC1-1 <Session Invited>** TBD **17FC1-2** Low Temperature Hybrid Bonding Process by Surface Modification using Low-Molecular-Weight Organic Material Chihiro Nakagawa[1], Yoshikage Ohmukai[1], Hosoda Kazuki[1], Yuuki Araga[2], Naoya Watanabe[2], Haruo Shimamoto[2], Kenji Takahashi[2], Takashi Namikawa[1], Katsuya Kikuchi[2], [1]Daikin Industries, Ltd., [2]National Institute of Advanced Industrial Science and Technology **17FC1-3** In-situ Analysis of SiO2 Surface Chemistry Evolution During N2 Annealing for Hybrid Bonding Applications Haibo Yang, Fei Ding, Yu Zhang, Yudong Yang, Qiushi Kang, Hongchao Zhang, Lingyun Zhang, Yihao Meng, Renxi Jin, Qidong Wang, Institute of Microelectronics, Chinese Academy of Sciences **17FC1-4** High-Resolution 3D X-Ray Imaging of Hybrid Bonding Till Dreier, Daniel Nilsson, Shiho Tanaka, Excillum AB	**17FD1: Mech simulation-2** **17FD1-1** Physical Estimation of Expoxy Flux Pattern Desing of Milti-Chip Module Packaging Kuan-Wei Chou[1], Chih-Yang Weng[1], You-Yi Zheng[1], Shen-Yu Yang[2], Chao-Chieh Chan[2], Chun-Wei Wang[2], Jui-Chang Chuang[1], Chang-Chun Lee[1], [1]National Tsing Hua University, [2]WNC Corporation **17FD1-2** Simulation of NSMD Type in CUF Parameters and Substrates on Reliability TZU CHIEH CHIEN, Yuan Hung Sun, Yu Chi Sung, Chao Lin Shih, Hui Chung Liu, Lu Ming Lai, Kuang Hsiung Chen, Advanced Semiconductor Engineering, Inc Chung-Li Branch **17FD1-3** Capillary Underfill Simulation across Die-to-Die Gap Using Hybrid EBG Modeling Leo Shen[1], Kazuki Noguchi[2], Yu-En Liang[1], Wei-Yu Lin[1], Zi-Hsuan Wei[1], Ching-Kai Chou[1], Ming-Yu Lin[1], [1]CoreTech System Co., Ltd. (Moldex3D), [2]Sanyu rec co., ltd. **17FD1-4** Numerical Simulation and Machine Learning-Based Optimization of Mass Reflow Temperature Profiles in Batch-Produced System-in-Packages Ian Hu, Xuan-Zhi Kuo, National Kaohsiung University of Science and Technology	**17FE1: High-Speed, Wireless & Components** **17FE1-1** A Compact Dual-Band AiP Integrated Beamforming IC Using Package-on-Package Technology for Mobile Devices Sheng-Chi Hsieh, Advanced Semiconductor Engineering, Inc.(ASE group) **17FE1-2** Design of millimeter-wave antenna array in package featured with bandpass impedance transformation Simin Wang[1], KuoHung Cheng[1], ShengFu Chang[1], ShihCheng Lin[1], ChenChao Wang[2], [1]National Chung Cheng University, [2] Advanced Semiconductor Engineering **17FE1-3** Fabrication tolerance analysis of multi-layers package substrate for 5G mmWave Antenna in Package/Module (AiP/AiM) Cheng Yu HO, Pingtung **17FE1-4** Development of Integrated Q-band 4x4 Phased-Array Module with High Aspect Ratio Cu-Pillar Pins and M7-Level SLP for High-Efficiency mmWave NTN Applications Li-Cheng Shen[1], Wei-Yang Chen[2], Ming-Hung Chang[1], Leo Hsu[2], Su-Wei Chang[2], [1] Universal Global Scientific Industrial Co., Ltd. (USI), [2]TMYTEK Co., Ltd.	**17FF1: Thermal Management-5** **17FF1-1** A Thermal Isolation Method Based on "Parylene-Kirigami" Structure for Silicon-Based 2.5D Heterogeneous Integration Systems Zhou Yang, Han Xu, Lang Chen, Huiquan Cao, Jianyu Du, Chi Zhang, Wei Wang, Peking University **17FF1-2** Co Integrated Cu/Sn Electrical and Fluidic I/Os for Embedded Microchannel Cooling in 3D ICs Using FOWLP Shaofeng Wang[1], Zhou Yang[1], Shangyang Shi[1], Yudong Yang[1], Wei Wang[1,2,3], Chi Zhang[2,3], [1]Peking University, [2]National Key Laboratory of Advanced Micro and Nano Manufacture Technology, [3]Beijing Advanced Innovation Center for Integrated Circuits **17FF1-3** chip-level silicon vapor chamber with MEMS micropillar wick for hotspot cooling and g-robust operation Jianyu Du[1], Jiale Tu[1], Haoyang Sun[2], Shangyang Shi[1], Feng Ji[2], Chi Zhang[1,3,4], Wei Wang[1,3,4], [1]Peking University, [2]Beijing Institute of Remote Sensing Equipment, [3]Beijing Advanced Innovation Center for Integrated Circuits, [4]National Key Laboratory of Advanced Micro and Nano Manufacture Technology **17FF1-4** Numerical Simulation and Analysis of Heat Transfer Characteristics of Through Silicon Vias in Backside Power Delivery Networks Shizun Hu[1], Yutong Fu[1], Huiquan Cao[1,4], Shangyang Shi[1], Chi Zhang[1,2], Wei Wang[1,2,3], [1]Peking University, [2]National Key Laboratory of Advanced Micro and Nano Manufacture Technology, [3]Beijing Advanced Innovation Center for Integrated Circuits, [4]China University of Geosciences (Beijing)
	Lunch Time					
12:45 14:25	**17FA2: Glass-PKG3** **17FA2-1 <Session Invited>** Progress and Remaining Challenges for Glass Core Substrates Jan Vardaman, TechSearch **17FA2-2 <Session Invited>** Enabling Next-Generation Packagingwith Glass and Quartz Core Substrates Jonas Discher, PlanOptik **17FA2-3 <Session Invited>** TBD Glass core evaluation method TBD Prof. Ming-Yi Tsai/ T. Onishi, CGU Chang Gung U EDU TW / GJT **17FA2-4** Development of glass core multilayer build-up substrate with TGV Jun Yoshiike, Masahiro Sunohara, Gai Kadoishi, Yoko Nakabayashi, Noriyoshi Shimizu, Ryuichi Matsuki, Shinko Electric Industries co., LTD	**17FB2: ICEPT** **17FB2-1 <Session Invited>** Advancements in Ultra-High Aspect Ratio Via Interconnection Technology Enabled by Atomic Layer Deposition Daquan Yu, Xiamen Sky Semiconductor Co., Ltd., China **17FB2-2 <Session Invited>** Thermal Management of Chip Wei Wang, Peking University, China **17FB2-3 <Session Invited>** The Simulation and Testing of UCIe Power Noise Based on Chiplet Chenxi Yang, Sanechips Technology Co., Ltd., China **17FB2-4 <Session Invited>** SiC Advanced Packaging and All-Copper Solutions Huaiyu Ye, Southern University of Science and Technology	**17FC2: Hybrid Bonding-2** **17FC2-1** Development of Anti-oxidation Technology for Cu Direct Bonding via Ascorbic Acid Vapor Jeehoo Na[1,4], Eunhye Lee[1], Suin Jang[1], Dongwoo Lee[2], Tae-Ik Lee[1], [1]Korea Institute of Industrial Technology, [2]Sungkyunkwan University **17FC2-2** Electrodeposition of (111)-Oriented Cu Using Accelerator for Cu-Cu Direct Bonding Soojin Kim, Hanyang university **17FC2-3** Effect of Pressure on Grain Growth in Nanocrystalline Cu for Low-Temperature Cu-Cu Bonding Ting-Chi Chen, Chih Chen, National Yang Ming Chiao Tung University	**17FD2: Reliability-1** **17FD2-1** In-situ observation of dislocation movement, accumulation and crack propagation behaviour during tensile loading in Sn and Sn-based solder alloys Kazuhiro Nogita[1], Jiye Zhou[1], Xin Fu Tan[1], Stuart McDonald[1], Keith Sweatman[1,2], Hiroshi Maeno[3], Syo Matsumura[1,4], Kazuhiro Yasuda[1], [1]The University of Queensland, [2]Nihon Superior Co., [3]Kyushu University **17FD2-2** Microcrack-sliding Damping During Crack Propagation In Pure Sn Under Electric Current Stressing Fei Hu[1], Ming Tang[2], Wangyun Li[1,3], [1] Guilin University of Electronic Technology, [2]Chongqing SIIE Product Quality Testing Co., Ltd., [3]Southwest Jiaotong University **17FD2-3** The role of densification on deformation behavior of sintered Ag during nanoindentation creep test Seonghwan Park[1,2], Hiroaki Tatsumi[2], Hiroshi Nishikawa[2], [1]The University of Osaka, [2]The University of Osaka **17FD2-4** Defects in Cu-filled through-silicon vias (TSV) after thermal cycling Zishan Xiong[1], Shichen Xie[2], Zeyuan Li[3], Sheng Liu[3], Yuzheng Guo[3], Yingxia Liu[2], [1] City University of Hong Kong, [2] City University of Hong Kong, [3] Wuhan University	**17FE2: Material Processing** **17FE2-1** Comparison of Cu diffusion barrier properties of electroless-plated CoWB and CoMn alloy films formed on SiO2/Si shoso shingubara, tomohiro shimizu, takeshi ito, Kansai University **17FE2-2** Photon-removable Protective Molecular Nanolayers for Enhancing Cu to Cu Direct Bonding Wei-Ting Chen[1], Ting-Hsiang Hsueh[2], Chih-Ming Chen[1,3], Takafumi Fukushima[4], Jenn-Ming Song[1,2], [1]National Chung Hsing University, [2]National Chung Hsing University, [3]National Chung Hsing University, [4]Tohoku University **17FE2-3** Effect of Binder Chemistry on Dynamic Parcolation of Stretchable Printed Wires During Vacuum Foaming Rina Aida, Masahiro Inoue, Gunma Univercity **17FE2-4** Advanced Hybrid Smear Removal Process with Excimer VUV Treatment for Next-Generation Organic Substrate Packaging Taro Arimoto[1], Yukihisa Baba[1], Yuhei Kitahara[2], Tomoya Sawada[2], Takashi Katou[2], Masasumi Kusunoki[2], Tatsuya Koga[3], [1]USHIO Inc., [2]Okuno chemical industries co. ltd, [3]Shikoku chemicals corporation	**17FF2: Power Electronics-1** **17FF2-1** Development of Low-Temperature Air-Sinterable Copper Paste for Die Attach and Substrate-to-Heatsink Bonding Chuantong Chen[1], Fupeng Huo[1], Sangmin Lee[1], Takeshita Kazutaka[2], Yoshiji Yamaguchi[2], Yashima Momose[2], Katsuaki Suganuma[1], [1]The university of Osaka, [2]Yamato Scientific Co. Ltd. 17FF2-2 Room Temperature Chip Bonding of SiC And Cu Using Activated Cu Atomic Layer Ryohei Yamauchi, Jun Utsumi, Ryo Takigawa, Kyushu University **17FF2-3** X-ray Orientation Microscopy for Non-destructive Observation of Grain Boundaries in Die-attach Solder Yujiro Hayashi[1], J. Kim[1], M. Yabashi[1], H. Tatsumi[2], [1]RIKEN SPring-8 Center, [2]Osaka University
	Break					
14:40 16:20	**17FA3: Glass PKG-4** **17FA3-1** Physical Estimation for Residual Stress of Glass Substrate through Photoelasticity-FEA Hybrid Model Jui-Chang Chuang[1], Chang-Chun Lee[2], Wan Chen Yang[1], Po-Yu Chen[2], Hao-Zhou Lin[1], Wei-Cheng Tsai[1], Chen-Tsai Yang[1], Man-Ning Lu[1], Po-Chi Sung[2], Wei-Chung Wang[2], [1]Industrial Technology Research Institute, [2] National Tsing Hua University **17FA3-2** Micro-crack-free Laser Singulation and meltingTGV for Glass Substrate Eunsuk Jeon, Jinpyo Kim, Duhyun Cho, Laserapps Co. Ltd. **17FA3-3** Analysis of Delamination Mechanism During the Dicing Process of Glass Substrates Chuan Chen, Institute of Microelectronics, Chinese Academy of Sciences	**17FB3: Co-packaged OPT** **17FB3-1 <Session Invited>** Optical Chiplet Using Membrane III-V Photonic Devices Surugu Yamaoka, NTT Device Innovation Center **17FB3-2 <Session Invited>** High-integration thin-film lithium niobate modulator based on heterogeneous integration technology Shuntaro Makino, FITEL Optical Components **17FB3-3 <Session Invited>** Fusion of Electric and Photonic Interconnects: An Advanced Packaging Perspective Vincent Lin, ASE Group **17FB3-4 <Session Invited>** Multi-Die Optical Chiplet Packaging for AI Scale-Up and Scale-Out Surya Bhattacharya, Agency for Science, Technology and Research (A*STAR), Institute of Microelectronics (IME)	**17FC3: Hybrid Bonding-3** **17FC3-1** Establishment of High-Yield and Reliable Cu-Cu Connections with 0.8 Micrometers Pitch Integration Hitomi Shiina, Yukako Ikegami, Ken Arano, Kan Shimizu, Yoshihisa Kagawa, Sony Semiconductor Solutions Corporation **17FC3-2** Copper oxide in TCB Cu-Cu bonding Kun-Yuan Zeng, Shih-Kang Lin, National Cheng Kung University **17FC3-3** Surface Reduction and Self-Passivation in a Single-Step Ar/CH4 Plasma treatment for Hybrid Cu Bonding Hoogwan Lee, Byeongchan Go, Sarah Kim, Seoul National University of Science and Technology **17FC3-4** Optimized Surface Treatment Strategies for Improved Cu-Cu Direct Bonding Kinga Kondracka[1], Cyrille Sebert[2], Patrick Verdonck[3], Kristof Wouters[4], Nadezda Kuznetsova[4], Patrick Merken[4], Michael Kraft[1], [1]KU Leuven, [2]KU Leuven, [3]imec, [4]Xenics	**17FD3: Reliability-2** **17FD3-1** Lifetime Prediction of Die Cracking in Heatsink-Clamped FCQFN Packages under Thermomechanical Loading Weiquan LUO[1], ke Xue[1], Lanqin Huang[2], kai chen[2], yunda wang[1], Dong Lu[1], [1]The Hong Kong University of Science and Technology (Guangzhou), [2]Guangzhou HKUST Fok Ying Tung Research Institute **17FD3-2** Thermal and Drop Reliability Performance of Low Temperature Solder in Fan-Out WLCSP Structure Nien Chun Lin, Sheng Hong Zheng, Yan Bo Lin, Chih Sheng Su, Hsin Chih Shih, Chin Li Kao, Chen Chao Wang, C.P. Hung, Advanced Semiconductor Engineering, Inc. **17FD3-3** Experimental and numerical analysis of a fan-out BGA Chip on PCB reliabilities under drop test loads jian cheng, JCET Group **17FD3-4** Deep Learning Based Reliability Prediction for BL-TCT Lifetime of Molded FCBGA Packages Tang-Yuan Chen, Chen-Chao Wang, Chin-Pin Hung, Advanced Semiconductor Engineering, Inc.	**17FE3: Measurement Method** **17FE3-1** Integrating Mechanical and Chemical Insights Into Bonding Interfaces via DCB-Based Delamination Analysis Shumpei Murakami, Yuki Yoshihara, Daiki Kobayashi, Ryuki Kusakabe, Marie Sano, Fumihiro Inoue, Yokohama National University **17FE3-2** Quantitative Assessment of Bond Strength for Hybrid Bonding Ryuki Kusakabe[1], Daiki Kobayashi[1], Yuki Yoshihara[1], Shumpei Murakami[1], Sano Marie[1], Shunsuke Teranishi[2], Yuya Matsuoka[2], Daichi Saito[2], Naoko Yamamoto[2], Fumihiro Inoue[1], [1]Yokohama National University, [2]DISCO Corporation **17FE3-3** Performance Comparison of Machine Learning Algorithms for Real-Time Temperature Measurement Using Optical-Interference Contactless Thermometry (OICT) Jiawen Yu, Hiroaki Hanafusa, Seiichiro Higashi, Hiroshima University **17FE3-4** Acoustic Emission Signal Filtering for Ultrasonic Vibration-Assisted Grinding Wheel Monitoring Using a Hydrophone Sensor YuKun Lin, Feng Chia University	**17FF3: Power Electronics-2** **17FF3-1** Near-chip 3D functionalization of direct copper bonded substrates in power electronic modules Christoph Hecht[1], Dominik Wiegand[1], Marcel Sippel[2], Joerg Franke[1], Manuela Ockel[1], [1]Friedrich-Alexander-University Erlangen-Nuremberg, [2]Siemens AG **17FF3-2** Heatsink Design and Wire Bonding Failure Analysis of an Automotive 1.2 kV SiC MOSFET Power Module in Power Cycling Tests Po-Kai Chiu, Ji-Yuan Syu, Ting-Yu Wang, Yu-Hua Wu, Kuo-Shu Kao, Tao-Chih Chang, Industrial Technology Research Institute **17FF3-3** Reliability and Thermal Resistance Characterization of Flip-Chip Interconnections in Gallium Nitride Devices Using Silver Sintering Materials Ching Kuan Lee, Ting-Yu Ke, Yan-Cheng Liu, Po-Kai Chiu, Yu-Min Lin, Industrial Technology Research Institute **17FF3-4** Junction Temperature Estimation Error of Chip-Embedded Temperature Sensor During Transient Thermal Measurement Shuhei Fukunaga, Tsuyoshi Funaki, The University of Osaka
	Break					
16:35 18:15			**17FC4: TSV** **17FC4-1** Mixed-Foundry Heterogeneous Integration of Bumpless WOW and COW Processes for System-on-Wafer Norio Chujo[1], Shinji Sugatani[1], Tadashi Fukuda[2], Takayuki Ohba[1], [1]Institute of Science Tokyo, [2]Tech Extension Co., Ltd. **17FC4-2** Efficient Image Feature Extraction Via YOLO Framework for Critical Parameter Extraction from TSV SEM Imagery SHUYAN HE[1,3], Lang Chen[2,3], Yufeng Jin[1], Wei Wang[2,3], [1]Peking University, [2]Peking University, [3]Peking University **17FC4-3** Develop Three-Dimensional Infinite Element Method of Thermal Stress for Through-Silicon Via Analysis DE-SHIN LIU[1,2], WEN-HSUAN CHANG [2], TING-SHENG CHANG[2], ZHEN-WEI ZHUANG[1], YUNG-CHING CHAO[3], PEI-CHEN HUANG[1,2], [1]National Chung Cheng University, [2]National Chung Cheng University, [3]National Chiayi University	**17FD4: Reliability-3** **17FD4-1** Enhancement of Micro-DIC Technique and Deformation Measurement of Fine-Pitch Semiconductor Packages Hyunwoo Nam[1], Seongkyu Choi[1], Minjeong Sohn[1], Tae Yeob Kang[2], Tae-ik Lee[1], [1]Korea Institute of Industrial Technology, [2]University of Suwon **17FD4-2** Static Structural and Thermal Analysis of Heterogeneous 3D IC Integration With Different Interposer Materials Divyankar Jha, Sai Reddy, National Taipei University of Technology **17FD4-3** A Multiscale Simulation Study on Interfacial Crack of Dielectric in Hybrid Bonding Structure Xuanyu Ding[1], Yudong Yang[1,2], Chi Zhang[1,3], Hongchao Zhang[2], Fei Ding[2], Yu Zhang[2], Renxi Jin[2], Haibo Yang[2], Qiushi Kang[2], Lingyun Zhang[2], Qidong Wang[1], Wei Wang[1,3,4], Liqiang Cao[2], [1]School of Integrated Circuits,Peking University, [2]Institute of Microelectronics of the Chinese Academy of Sciences, [3]National Key Laboratory of Advanced Micro and Nano Manufacture Technology, [4]Beijing Advanced Innovation Centerfor Integrated Circuits **17FD4-5** Pre-heating influence on thermo-mechanical response of Ag-Au-Pd alloy fine wire during wire bonding process Pei-Chen Huang[1,2], Zhi-Lin Xie[1], Wei-Lun Kao[1], [1]National Chung Cheng University, [2]National Chung Cheng University	**17FE4: Optoelectronics** **17FE4-1** Reliability Evaluation of Copper Pin Package-on-Package Structures for Co-Packaged Optics Motoyuki Fukuhara, Tatsuaki Denda, Masaki Matsumoto, Futoshi Tsukada, Noritaka Katagiri, Shinko Electric Industries co., Ltd **17FE4-2** In-situ XPS Analysis of Hydroxyl Group Generation in Plasma Activation Technology Cheng Peng[1,2,3], Yihao Meng[1,2,3], Wenxuan Ma[1,2,3], Yetong Zhang[1,2,3], Siwei Sun[1,2], Renxi Jin[1,2,3], Qidong Wang[1,2], Liqiang Cao[1,2], [1]State Key Laboratory of Fabrication Technologies for Integrated Circuits, [2]Institute of Microelectronics of Chinese Academy of Sciences, [3]School of Integrated Circuits, the University of Chinese Academy of Sciences **17FE4-3** Thermal Analysis and Demonstration of Mirror-based Optical Redistribution Layer for Co-packaged Optics Fumi Nakamura, Satoshi Suda, Takayuki Kurosu, Akihiro Noriki, Takeru Amano, National Institute of Advanced Industrial Science and Technology(AIST) **17FE4-4** High-precision Passive Alignment for Multi-channel Optical Connections in Silicon Photonic Microtransceivers Michiyo Kubo, Shigeru Kobayashi, Koichi Takemura, Kazuhiko Kurata, AIO Core Co., Ltd.	**17FF4: Power Electronics-3** **17FF4-1** A Flip Chip Embedded PCB Power Module with Double Sided Cooling and Low Parasitic Inductance for Fine Pad Power Devices KAO CHE, Lin Han, Huang Cheng, Chiu Kai, Lin Ying, Lin Lung, Yeh Chan, Liu Hung, Ko Kuei, Industrial Technology Research Institute / Electronic and Optoelectronic System Research Laboratories **17FF4-2** Dynamic and Thermal Performance Evaluation of Three-Phase Full-Bridge Power Factor Correction Converters for On-Board Charger Applications Wen You Jhu[1], Hsien-Chie Cheng[2], Yan Cheng Liu[3], Tao Chih Chang[3], [1]Feng Chia University, [2]Feng Chia University, [3]Industrial Technology Research Institute **17FF4-3** Atmospheric Pressure Plasma Processes for Metal Oxide Reduction and Adhesion Improvement in Power Electronics Hisanori Miyoshi[1], Dhia Salem[2], Nico Coenen[2], Yaser Hamedi[2], Magnus Buske[2], Daphne Pappas[3], [1]Nihon Plasmatreat Inc., [2]Plasmatreat GmbH, [3]Plasmatreat USA **17FF4-4** A Power Semiconductor Chip Rework Technology Without Thermal and Mechanical Processes Junha Baik[1,2], Byeongchan Kim[1], Ha-Young Yu[1], Myoung-Gyu Lee[2], Dongjin Kim[2], [1]Korea Institute of industrial Technology (KITECH), [2]Seoul National University (SNU)

■ Poster Session

Poster sessions will be held from 13:35-14:50 on April 15 and from 17:30-18:45 on April 16.

P01 Development of Equivalent Material Properties of Substrate/Interposer-type Components for Advanced Packaging
Ya-Chi Chen, Kuo-Ning Chiang, National Tsing Hua University

P02 Utilizing Sobol Sampling and Out-of-Fold Hotspot Analysis With a Small Dataset for ANN-Based WLP Solder Joint Reliability Prediction
Chang-Hsu Lo[1], Kuo-Ning Chiang[1,2], [1]National Tsing Hua University, [2]College of Semiconductor Research, National Tsing Hua University

P03 Towards an intelligent assistance system for prescriptive maintenance applications based on multi-agent systems in SMT-Manufacturing
Felix Mahr, Cathleen Kratzke, Joerg Franke, Manuela Ockel, Friedrich-Alexander-Universitaet Erlangen-Nuremberg (FAU), Institute for Factory Automation and Production Systems (FAPS)

P04 Intelligent Troubleshooting System for SMT Assembly Lines Using GraphRAG and Knowledge Graphs
Felix Mahr, Joerg Franke, Manuela Ockel, Friedrich-Alexander-Universitaet Erlangen-Nuernberg (FAU), Institute for Factory Automation and Production Systems (FAPS), Germany

P05 Experimental Study on the Forced Convection Effectiveness of a Double-Tube Thermal Module for Electronic Packaging
Chi-Ming Lai, C.J. Ho, R.H. Chen, S.H. Huang, National Cheng Kung University

P06 Microstructural and Thermo-mechanical Behavior of CuAl Bilayer Alloy for Low-Temperature Hybrid Bonding
Sarabjot Singh, Kathleen Dunn, University at Albany, State University of New York

P07 Latent Catalysts Development for Energy Saving Semiconductor Packaging Application
Yi Chen, Chih Lin, Kai Chen, Industrial Technology Research Institute

P08 Prediction and Analysis of Bifurcation Warpage in Wafer Packaging based on Machine Learning
Chi-Hsiang Su, Kuo-Shen Chen, Chen-Chen Lee, Ching-Jenq Ho, National Cheng-Kung University

P09 Feasibility and Reliability Considerations of Liquid Metal Alloys in Advanced Packaging.
Wen-Yu Teng, Siliconware Precision Industries Co., Ltd.

P10 Coupling Model Analysis Between E-field Probe and DUT in Non-Contact Near-Field Measurement
YU-CHIEH CHEN, Sung-Mao Wu, National University of Kaohsiung

P11 Synthesis and characterization of thermally conductive carbon nanotube-reinforced polysiloxane composites
Chih-Feng Wang[1], Pei-Rung Hung[2], Pei-Kang Huang[2], Ping-Feng Yang[3], [1]National Sun Yat-sen University, [2]I-Shou University, [3]Advanced Semiconductor Engineering, Inc.

P12 Development of A 650V / 300GaN Half-bridge Power Module
Yuto Kinoshita[1], Kotaro Okano[1], Shota Yamda[1], Tatsumi Yamamoto[1], Takeya Matsumoto[1,3,4], Eigo Fukuda[1,4], Takaharu Takeshita[2,3,4], Toshihiko Noguchi[3,4], Masato Omori[1,3,4], [1]Oita University, [2]Nagoya Institute of Technology, [3]Shizuoka University, [4]Next Semiconductor, Inc.

P13 Surface smoothing based on Au film transfer for room-temperature GaN/diamond bonding in air
Shintaro Goto, Shogo Koseki, Kai Takeuchi, Eiji Higurashi, Tohoku University

P14 Thru Kits realized by Substrate-Integrated Waveguide architecture for Double-side calibration
Wu Ji-Hsuan, Wu Sung-Mao, National University of Kaohsiung

P15 Nanoindentation Investigation of Through Substrate Vias Drilled by Ultrashort Pulse Laser Percussion
RUENN TSAI, Sheng-Wei Tsai, Jhih-Syuan Jhan, National Sun Yat-sen University

P16 Broadband Transition from Microstrip to Inverted Microstrip Gap Waveguide Using Via-Guards Copper Via
RUENN TSAI[1], Po-Kai Hsu[1], Wei-Long Chen[2], [1]National Sun Yat-sen University, [2]ASE Group Taiwan

P17 Construction of Chitosan/Poly(vinyl alcohol)/Poly(ethylene oxide) Scaffolds Via Electrospinning Technology
YOUJIE TSAI, JHENGHEN TU, ZHEYIYI WU, I-SHOU University

P18 Perovskite La0.8Sr0.2Mn1-xNixO3Nanofibers Of Electrospinning
Kai Chen, I-SHOU University

P19 Analysis of Au and Ru Passivation Layers Deposited via Electroless Plating for Low-Temperature Cu-Cu Bonding
Byeongchan Go, hoogwan lee, sarah eunkyung kim, Seoul National University of Science and Technology

P20 Machine Learning-Based Surrogate Model of Thermal Simulation for Heat Sink Design
Seongju Kim[1], Jimin Kwon[2], [1]Hanbat National University, [2]UNIST

P21 New Concept of Intrinsically Switched Tunable Bandpass Filter Using Multi-band Resonators
Akehito Shiotake, Hiroki Matsuura, Junichiro Matsuki, Koji Wada, The University of Electro-Communications

P22 Fan-out RDL technology development for shuttle service
Chen Chun Yu, Industrial Technology Research Institute

P23 Development of AlN Fillers for Composite Resins with High Thermal Conductivity and Low Bond-Line Thickness
Yusaku Imasaka, Atsushi Sanagawa, Isao Masada, Go Hamasaka, Yukihiro Kanechika, Tokuyama Corporation

P24 Investigation of Electrical and Reliability Properties in Nanotwinned Sintered Joints
Shin-Yi Huang[1], Po-Kai Chiu[1], Yung-Min Hsieh[1], Yu-Hua Wu[1], Fan-Yi Ouyang[2], [1]Industrial Technology Research Institute, [2]National Tsing Hua University

P25 Thermal Stress and Interfacial Reliability Analysis of HAR Sub-10um Through-Glass Via (TGV) Structures for High-Frequency Applications
Wei-Ting Chiu[1], Yeong-Jyh Lin[2], Chun-Ming (Albert) Wang[3], [1]Wei-Ting Chiu, [2]Yeong-Jyh Lin, [3]Chun-Ming (Albert) Wang

P26 Warpage of Organic RDL Interposers in 3D Heterogeneous WLP via a Chip-First Hybrid Bonding Process
Ching-Feng Yu[1], Chao-Kai Hsu[2], Chih-Cheng Hsiao[2], [1]National United University, [2]Industrial Technology Research Institute (ITRI)

P27 Performance analysis of Au and Ag metallization for silicon-adapeted LTCC horn antenna structures
Cathleen Kleinholz[1], Bjoern Mueller[1], Alexander Schulz[1], Michael Fischer[1], Nesrine Jaziri[1], Christian Tschoban[2], Karl-Friedrich Becker[2], Martin Schneider-Ramelow[2], Jens Mueller[1], [1]Ilmenau Technical University, [2]Fraunhofer Institute for Reliability and Microintegration

P28 Low-Temperature Curable Photo-Definableitle Polyimide and Its Application as a Sealing Material for RF-MEMS
Susumu Tanaka, Tomoki Sakai, Yumiko Okuda, Hitoshi Araki, Toray Industries, Inc.

P29 VUV-Induced Surface Activation for Cu/SiO2Hybrid Bonding -Effect of H2Concentration in H2/H2O Mixed Atmosphere-
Kengo Nishio, Kejun Wu, Akihiro Shimizu, Shinichi Endo, Akihiro Shimamoto, USHIO INC

P30 Development of Sintering Silver Paste Enabling Short Time Sintering in Non-Pressure Silver Bonding
Daisuke Tomotoshi, Takamichi Mori, OSAKA SODA CO., LTD.

P31 Extraction and Verification of Material Electrical Parameters with Frequency and Temperature Variation
Che-Yu Huang, National Kaohsiung University

P32 FABRICATION of CU NANOCRYSTALLINE by PR ELECTROPLATING METHOD and INFLUENCE of ADDITIVES on GRAIN SIZE
Masato Tsuchiya, Yuma Sato, Katsuji Nakamura, Senju Metal Industry Co., Ltd.

P33 Development of Electromagnetic Shielding Material Testing Technology
Yen Ting Lu, National University of Kaohsiung(Micro Electronic Packaging Laboratory)

P34 Cu Electrodeposition with a Single Additive for Bottom-Up Filling of TSVs
Seolim Yoon, Hui Won Eom, Haejin Kwak, Yun Ha, Myung Jun Kim, Sungkyunkwan University

P35 Defect-Free TGV Filling via Cu Electrodeposition with Ammonium-based Additives
Hui Won Eom, Seonjin Yang, Haejin Kwak, Dong Kun Cha, Myung Jun Kim, Sungkyunkwan University

P36 Innovative Tools and Materials for Advanced Packaging Developed in Taiwan
Chien-Yung Ma, Openness Specialty Materials Corp

P37 Comparative Evaluation of Sputtered Transition-Metal Thin Films on ITO for Hydrogen Evolution Reaction
Tsu Chen[1], Hsu Lin[2], Jun Mizuno[1], [1]National Cheng Kung University, [2]Kun Shan University

P38 Microstructure Modeling, Prediction, and Verification of Cu-Ag Sintered Paste for Die-attach Based on the Quartet Structure Generation Set (QSGS) Algorithm
Xinyue Wang[1], Wenting Liu[1], Letao Bian[1], Zhoudong Yang[1], Guoqi Zhang[2], Jing Zhang[3], Pan Liu[1,4], [1]Fudan University, [2]Delft University of Technology, [3]Heraeus Materials Technology Shanghai Ltd, [4]Research Institute of Fudan University in Ningbo

P39 Interfacial Corrosion Behavior Analysis of Sintered Silver and Sintered Copper Joints for Power Electronics Packaging
Letao Bian[1], Xinyue Wang[1], Guoqi Zhang[2], Jing Zhang[3], Jianhao Wang[3], Pan Liu[1,4], [1]College of Intelligent Robotics and Advanced Manufacturing, Fudan University, [2]Delft University of Technology, [3]Heraeus Materials Technology Shanghai Ltd., [4]Research Institute of Fudan University in Ningbo, Zhejiang Province

P40 Sub-Micro Wiring Method for Embedded Silicon Fan-Out on Reconstructed Wafer Surface
Yifan Ma[1], Jianyu Du[1], Wei Wang[1,2,3], Chi Zhang[1,2,3], Pan Zhang[1,2,3], Lang Chen[1], [1]Peking University, [2]National Key Laboratory of Advanced Micro and Nano Manufacture Technology, [3]Beijing Advanced Innovation Center for Integrated Circuits

P41 GAN-Based Component Placement Generation for Automatic PCB Layout Using Historical Design Data
Hiroki Yonekura, Tomio Echigo, Osaka Electro-Communication University Echigo Laboratory

P42 Mechanical Characterization of Sintered Ag Paste Via Nanoindentation for Advanced Packaging in Power Electronics
Qihang Zong, Huaiyu Ye, Chenshan Gao, Southern University of Science and Technology

P43 Wafer Bonding Void Investigation with SiN Dielectrict Film
Yeong-Jyh Lin, National Sun Yat-sen University

P44 System-Level Fast Optimization Method for High-Speed Circuits Based on Electro-Thermal Equivalent Modeling
Cheng-Hsuan Liu[1,2], Sung-Mao Wu[1,2], [1]Micro Electronic Packaging Laboratory, [2]National University of Kaohsiung

P45 Yield-Limiting Mechanisms Governed by Dicing and Bonding Conditions in Organic Hybrid Bonding
Zhao-Ze Jiang, Alexis Garcia, Chih-Jing Hsu, Chen-Hung Lee, Po-Hsiang Wang, Wang-Chia Ching, Chen-Chung Hung, Advanced Semiconductor Engineering (ASE) Group

P46 High Throughput Silver-based Metal-organic Decomposition with Spray Coating for Package-level EMI Shielding
Ming-Hung Chen, W.-H. Wang, C.-L. Huang, J.-C. Kao, Y.-E. Yeh, Advanced Semiconductor Engineering Inc.

P47 Two Phase Cooling with Microporous Wick and 3D-printed Microchannel Manifold
Shangyang Shi[1], Shangjin Ning[2], Shaofeng Wang[1], Jianyu Du[1], Wei Wang[1,3,4], Chi Zhang[1,3,4], [1]Peking University, [2]Peking University, [3]National Key Laboratory of Advanced Micro and Nano Manufacture Technology, [4]Beijing Advanced Innovation Center for Integrated Circuits

P48 Design Method for On-Chip Thermal Metamaterial Interposer Compatible with MEMS Processes via 3D-to-2D Topology Optimization
Huiquan Cao[1,2], Han Xu[1], Zhou Yang[1], Haoyang Sun[3], Feng Ji[3], Jiajie Kang[2], Chi Zhang[1,4], Wei Wang[1,4], [1]Peking University, [2]China University of Geosciences (Beijing), [3]Beijing Institute of Remote Sensing Equipment, [4]National Key Laboratory of Advanced Micro and Nano Manufacture Technology

P49 A Multi-Modal Temperature-Pressure-Flow Monitoring Device Based on a Venturi Differential Pressure Sensor
Rong Zhang[1], Pan Zhang[1], Hongxu Wu[1], Shengyong Xu[1], Bei Peng[2], Yuxuan Yan[3], Wei Wang[1], [1]Peking University, [2]Wuhan Second Ship Design Institute, [3]Anhui University

P50 Transformer-based TSV Process Performance Yield Prediction Model
Chong Chen, Yihui Cheng, Bo Wen, Yikang Ding, Lang Chen, Pan Zhang, Wei Wang, Peking University

P51 Room Temperature Direct Bonding of Lithium Niobate Wafers With Different Orientations
Yoshiki Katoda, Jumpei Nakamura, Ryo Takigawa, Kyushu University

P52 High-efficiency cleaning for particle removal applied in the CoW hybrid bonding process
Crystal Hsu, ASE Group

P53 Effect of Pre-Annealing Time of Ti/Ag Metallized Cu Substrate on Ag-Ag Direct Bonding for SiC Die Attach
Minseo Kim[1,2], Sangmin Lee[2], Chuantong Chen[2], Seungmin Cho[1,2], Myung Sik Choi[3], Soongkeun Hyun[1], Katsuaki Suganuma[2], [1]Inha University, [2]The University of Osaka, [3]Kyungpook National University

P54 Development of LCP membrane-based Low Dielectric Laminate for High-Frequency High-Speed Communications
Seong-Dae Park, Yejun Ban, Bo-Young Kim, Myong-Jae Yoo, Hyunseung Yang, Korea Electronics Technology Institute

P55 Reliability Analysis of Copper Paste Joints between Ni/Au-Coated SiC Chips and AMB Substrates during High-Temperature Aging
Seungmin Cho[1,2], Chuantong Chen[2], Sangmin Lee[2], Fupeng Huo[2], Minseo Kim[1,2], Katsuaki Suganuma[2], [1]Inha Macufacturing Innovation School, [2]The University of Osaka

P56 Influence of Copper Oxidation on the Characteristics of mmWave Microstrip Antennas
Yu Hsun Chang, Chih-Ling Chang, Ying-Chih Chiang, Cheng-En Ho, Yuan Ze University

P57 ANN Surrogate Model for Signal Integrity Prediction of FCBGA
Soojin Lim, Soyoung Kim, Sungkyunkwan University

P58 GNN-Based Early Power Integrity Estimation for PDN Design
Seonghyun Park, SoYoung Kim, Sungkyunkwan University

P59 Surrogate Model for Junction Temperature Prediction for High-Performance Computing Chips Using Direct-to-Chip Liquid Cooling technology
Jiaxin Weng, Xiong Xiao, Jiapeng Huang, Zhizhen Wang, Shenglin Ma, Xiamen University

P60 Study on the High-Frequency Electrical Performance Degradation mechanism of RF TGV Transmission Structures During Temperature Cycling Tests Under High-Power and High-Temperature Conditions
zhilin wei[1], Luming Chen[1], Chunlei Li[1], Hai Yuan[2], Shuwei He[3], Shenglin Ma[1], [1]Xiamen University, [2]Xi'an Microelectronic Technology, [3]China Electronics Technology Group Corporation 29th Research Institute Chengdu

P61 Interfacial Chemistry-Driven Reliability Enhancement in Air-Cured Bimodal Cu-Filled Conductive Pastes
Ayumi Uchida, Masahiro Inoue, Gunma University

P62 Tailoring Electrical Properties of Printed Stretchable Wires via Binder Molecular Design for Electrically Conductive Pastes
Togo Hatori, Masahiro Inoue, Haruya Okamura, Gunma Univercity

P63 Effect of Structural Factors in Enhancing Dynamic Percolation of Multi-walled Carbon-nanotube-filled Conductive Pastes
Tomoya Hanada, Gunma University

P64 Design Study of Next-Generation Hybrid Bonding Processes
Hideki Kitada, Koharu Yuzawa, Takayuki Ohba, Institute of Science Tokyo

P65 PHYSICS-INFORMED SMALL-SAMPLE NEURAL NETWORK FOR SUBMICRO ETCH PROFILES PREDICTING in SF6/O2/SIF4REACTIVE ION ETCHING
Yikang Ding[1], Bo Wen[2], Lang Chen[2], Yihui Cheng[4], Chong Chen[4], Yufeng Jin[1], Chi Zhang[2], Pan Zhang[2], Wei Wang[2,3], Peking University

*The content of the program may be subject to change without any prior notice.
Please check the ICEP website for an updated version.