

	Room A	Room B	Room C	Room D	Room E
9:30	<p>WA1: Chiplet-1 Chairs: K. Hasegawa, JSR, K. Okamoto, Nippon Institute of Technology</p> <p>WA1-1 <Session Invited> Advanced System Integration and Packaging (ASIP) at Purdue University and the US CHIPS Act Ganesh Subbarayan, Atalla Institute for Advanced System Integration and Packaging (ASIP) / USA.</p> <p>WA1-2 <Session Invited> Development of Next-Generation Distortion Correction Technologies for High-Precision Wafer-to-Wafer Bonding Hajime Mitsuishi, Hiroshi Mori, Hidehiro Maeda, Mikio Ushijima, Atsushi Kamashita, Masashi Okada, Masanori Aramata, Takashi Shiomi, Shinya Sakamoto, Kishou Takahata, Tomohiro Chiba, Minoru Fukuda, Masahiro Kanbayashi, Toshimasa Shimoda, Isao Sugaya, NIKON / Japan</p> <p>WA1-3 In-Depth Analysis of Bonding Interface at Die Level Hybrid Bonding Yuki Yoshihara¹, Junya Fuse², Tomoya Iwata¹, Shunsuke Teranishi³, Naoko Yamamoto⁴, Akihito Kawai⁵, Shimpei Aoki⁶, Takashi Hara⁷, Marie Sano⁸, Fumihito Inoue⁹, YOKOHAMA National University, ¹Disco, ²Toray Engineering, ³Kanagawa Institute of Industrial Science and Technology / Japan</p> <p>WA1-4 Approach to Process Design and Prediction of CMP Process for Dielectric Organic Material and Cu Layer Assisted by Deep Learning T. Tanaka^{1,6}, K. Okada^{1,6}, H. Nishizawa^{2,6}, K. Tsukamoto^{2,6}, T. Doi^{3,6}, M. Ozono^{3,6}, H. Kimuro^{3,6}, H. Hirai^{3,6}, S. Yamamoto^{2,4,6}, K. Suzuki^{1,6}, S. Takahashi^{1,6}, Y. Minami^{1,6}, M. Yasuda^{1,6}, M. Sasago^{1,6}, T. Saito^{1,6}, Y. Hirai^{1,6}, ¹Osaka Metropolitan Univ., ²Doi Laboratory, ³AIST Kyushu, ⁴Kyushu Institute of Technology, ⁵Lithotech Japan, ⁶RCS consortium / Japan</p>	<p>WB1: DPS Session Chair: Y. Morikawa, ULVAC</p> <p>WB1-1 <Session Invited> Challenges of Dry Etching for Logic Devices Masaru Izawa, Hitachi High-Tech / Japan</p> <p>WB1-2 <Session Invited> Development of the Wafile Wafer for Bumpless Via-Last Chip-On-Wafer(COW) Integration Shogo Okita^{1,2}, Hajime Kato^{1,2}, Tadashi Fukuda¹, Tatsuya Funaki^{1,3}, Takayuki Ohba¹, ¹Tokyo Institute of Technology, ²Panasonic, ³Murata Manufacturing / Japan</p> <p>WB1-3 <Session Invited> Possible Solutions to Challenges of Wafer Bonding Technologies for Future Electronic Devices Bumki Moon, SeungHo Hahn, Wooyoung Kim, Sujie Kang, Minsoo Han, Wonyoung Choi, Donggap Shin, Nungpyo Hong, Yongin Lee, Siwoong Woo, Jungshin Lee, Kyeongbin Lim, Minwoo Rhee, Samsung Electronics / Korea</p> <p>WB1-4 <Session Invited> High Aspect Ratio Plasma Etching -Nano to Micron Tomihito Ohba, Lam Research / Japan</p>	<p>WC1: Processing Chairs: A. Shigetou, NIMS, J. Wang, Meisei University</p> <p>WC1-1 The Plating Technology for Press-Fit Pins Using Heat-Resistant IMC Joint Material Hiroaki Ikeda, Shigenobu Sekine, Napra / Japan</p> <p>WC1-2 Quantitative Elemental Characterization for Electroless Cu Plating Interface of Micro-via by ToF-SIMS Masahiko Nishijima¹, Ming-Chun Hsieh¹, Zhang Zheng¹, Rieko Okumura¹, Aiji Suetake¹, Hiroyoshi Yoshida¹, Chuantong Chen¹, Hiroaki Seto², Yuhei Kitahara¹, Kei Hashizume¹, Katsuki Suganuma¹, ¹Osaka University, ²Okuno Chemical Industries / Japan</p> <p>WC1-3 Microstructure and Intermetallic Growth Characteristics of Sn-Bi-In-xGa Quaternary Low Melting Point Solders Jingyu Qiao, Xingchao Mao, King-Ning Tu, Yingxia Liu, City University of Hong Kong / Hong Kong</p> <p>WC1-4 Extremely Narrow Pitch Gravure Offset Printing Technology Using Fine Solder Paste Shunichi Haraguchi¹, Chisato Oyama¹, Kotarou Usuda², Yoshihiro Ohyama¹, Hideki Ikeda¹, KOMORI, ²SERIA ENGINEERING / Japan</p>	<p>WD1: Emerging Technology Chairs: Y.Y. Lim, AIST, K. Takeuchi, Tohoku University</p> <p>WD1-1 Manufacturing of PEEK-PDMS Composite Materials for Intervertebral Disc Implants Heng-ching Mie, Yu-chen Liu, Jun Mizuno, National Cheng Kung University / Taiwan</p> <p>WD1-2 HAZ-free Direct Laser Machining on Silicone-Based Flexible Hybrid Electronics M. H. Chen, C. I. Cheng, Y. C. Lin, J. C. Kao, Advanced Semiconductor Engineering / Taiwan</p> <p>WD1-3 Proposal of Indoor Spatial Coordinate Definition Method and Compact Detection Module Using Fifth-Generation Mobile Communication System and Sensors Maho Terashima, Nobuaki Hashimoto, Suwa University of Science / Japan</p> <p>WD1-4 Application of Battery Less Ear Tag Sensor for Goat Breeding Management Riku Yasumura¹, Osamu Takiguchi², Wakako Takagi¹, Syo Taira¹, Kyota Fusho¹, Haruichi Kanaya¹, Okinawa Prefectural Livestock and Grassland Research Center, ²ALSENS, ³Kyushu University / Japan</p>	<p>WE1: Power Electronics-1 Chairs: Y. Ikeda, Fuji Electric, H. Sakamoto, Huawei Technologies Japan</p> <p>WE1-1 Solder Joint Lifetime Characterization of a SiC Power MOSFET Module Under Power Cycling He-Hong Wang¹, Hsien-Chie Cheng¹, Yan-Cheng Liu², Ji-Yuan Syu³, Kuo-Shu Kao⁴, Tao-Chih Chang⁵, ¹Feng Chia University, ²Industrial Technology Research Institute / Taiwan</p> <p>WE1-2 Joint Strength of Transient Liquid Phase Bonding Using Cu-SAC Molded Sheet Ichizo Sakamoto¹, Doojin Jeong^{1,2}, Hiroaki Tatsumi¹, Hiroshi Nishikawa¹, ¹Osaka University / Japan, ²Inha University / Korea</p> <p>WE1-3 Large Area Powermodule Sintering Using Porous Copper Thomas Blank¹, Felix Steiner¹, Dai Ishikawa², Hideo Nakako³, Karlsruhe Institute of Technology / Germany, ²Resonac / Japan</p> <p>WE1-4 Advancing Reliability in SiC Modules via Copper Sintering J-Y Syu, Y-M Hsieh, Y-C Liu, S-F Hsu, C-W Chang, K-S Kao, T-C Chang, Industrial Technology Research Institute / Taiwan</p>
11:10 11:20	Break				
11:20	<p>WA2: Chiplet-2 Chairs: K. Hasegawa, JSR, T. Nonaka, Rapidus</p> <p>WA2-1 <Session Invited> High Current Density Power Supply With Substrate Embedding Technology for Chiplet Application Wang Qidong, Institute of Microelectronics of the Chinese Academy of Sciences / China</p> <p>WA2-2 <Session Invited> A Game-Changer for AI and HPC Substrates: A Novel Interconnect Technology Rozalia Beica, Avertak / USA</p> <p>WA2-3 Photosensitive Polyimides Compositions with Good Flexibility and Low Dielectric Property for Heterogeneous Chiplet Integration Technologies Takashi Tasaki, Takashi Yamaguchi, Taiyou Nakamura, Madoka Yamashita, ARAKAWA CHEMICAL INDUSTRIES / Japan</p>	<p>WB2: ISMP Session Chair: T.S. Kim, KAIST</p> <p>WB2-1 <Session Invited> Multiscale Thermal Challenges in Semiconductors: From Device to Packaging Eunju Jeong, Woosung Park, Sogang University / Korea</p> <p>WB2-2 <Session Invited> Wafer and Die Warpage Measurement for the Advanced Package Processing Joonho You, Nexensor / Korea</p> <p>WB2-3 <Session Invited> Implementation of High Purity Cu to Cu Direct Bonding With Refill Friction Stir Spot Welding for Busbar Applications Sangmin Lee¹, Seungyeop Baek¹, Chuantong Chen¹, Seung-Joon Lee¹, Hiroshi Utsunomiya¹, Katsuki Suganuma¹, Dongjin Kim¹, ¹Osaka University / Japan, ²Korea Automotive Technology Institute, ³Tech University of Korea, ⁴Korea Institute of Industrial Technology / Korea</p> <p>WB2-4 <Session Invited> Pulse Current Electrodeposition of Fe-Ni Alloy for Ultra Thin Fine Metal Mask Fabrication Na Young Kang, Jae-Ho Lee, Hongik University / Korea</p>	<p>WC2: Soldering Chairs: H. Nishikawa, Osaka University, S. Uegaki, Crane Research</p> <p>WC2-1 Reliability Evaluations of Bonding Characteristics of Combined Pb-free Solder Joints With Sn-Bi-Ag and Sn-Ag-Cu Jahyeon Kim¹, Youngran Choi¹, Taeyoon Im¹, Won Bin Im², Min-Su Kim¹, Yong-Ho Ko^{1,3}, ¹Korea Institute of Industrial Technology, ²Hanyang University, ³University of Science and Technology / Korea</p> <p>WC2-2 Dissolution Behavior of Cu-0.1wt.% Fe C19210 in Molten Sn & SAC305 Solders A. D. Laksono, J. T. Chou, Y. W. Yen, National Taiwan University of Science and Technology / Taiwan</p> <p>WC2-3 Solid/Solid Interfacial Reactions in the Sn/C7025 and Sn-3.0 wt%Ag-0.5wt%Cu/C7025 Couples J. T. Chou, A. D. Laksono, Y. W. Yen, National Taiwan University of Science and Technology / Taiwan</p>	<p>WD2: DMR-E Chairs: M. Aoyagi, Kumamoto University, N. Fukazawa, DIC</p> <p>WD2-1 Dendrite Formation in Power Electronics Packages During HV-H3TRB Testing Due to Flux Residue Felix Steiner¹, Thomas Blank¹, Dai Ishikawa², Hideo Nakako³, Karlsruhe Institute of Technology / Germany, ²Resonac / Japan</p> <p>WD2-2 Delamination of Metallized AlN Substrate under Thermal Cycling Test Monitored by Acoustic Emission and Digital Image Correlation Methods Minh Chu Ngo, Hiroyuki Miyazaki, Kiyoshi Hirao, Tatsuki Ohji, Manabu Fukushima, National Institute of Advanced Industrial Science and Technology / Japan</p> <p>WD2-3 A Novel High Electric Field EMS Probe for Automotive and Consumer System Levels Hsing-Chuan Peng¹, Sung-Mao Wu¹, Ming-Cheng Chang¹, Jen-Chieh Liu², National University of Kaohsiung, ²Himax Technologies / Taiwan</p> <p>WD2-4 AI Based Layer Assignment for Probe Card Design Hirohiko Matsuzawa¹, Katsuyoshi Ikuta¹, Yutaka Inaga¹, Katsuyuki Takayama², ZUKEN, ³OKI Circuit Technology / Japan</p>	<p>WE2: Power Electronics-2 Chairs: H. Sakamoto, Huawei Technologies Japan, K. Takeuchi, Tohoku University</p> <p>WE2-1 Development of Thermal Characteristics Evaluation System for Multi-Chip SiC Power Modules Fupeng Huo¹, Chuantong Chen¹, Zheng Zhang¹, Aiji Suetake¹, Kazutaka Takeshita², Yoshiji Yamaguchi³, Yashima Momose³, Katsuki Suganuma¹, ¹Osaka University, ²Yamato Scientific / Japan</p> <p>WE2-2 Super-High Thermal Conductive Resin Sheet and Insulated Metal Baseplate Achieved by Card-house Structured BN Filler Ayano Imai, Katsuhiko Hidaka, Toshiyuki Sawamura, Yuya Koga, Mitsubishi Chemical / Japan</p> <p>WE2-3 Low Thermal Resistance Joint Using Lotus-Type Cu/Solder Composite Hiroaki Tatsumi¹, Hiroshi Isono², Kana Hirase¹, Takuya Ide³, Hiroshi Nishikawa¹, ¹Osaka University, ²Shima Electronics, ³Lotus Thermal Solution / Japan</p> <p>WE2-4 Effects of the Nanoporous Cu Interlayer on the Bonding Area and Strength for Applications in Packaging of High Power Devices Wan-Hsin Lu, Chih Chen, National Yang Ming Chiao Tung University / Taiwan</p>
13:00	Lunch				
13:50	Award Ceremony				
13:50 14:40	Break				
14:40 14:50	Break				
14:50	Keynote Lecture I: RUMS – A New Business Scheme to Accelerate Innovation Through Integration of Front-End and Back-End of Semiconductor Technologies Atsuyoshi Koike, Rapidus Chairs: Y. Morikawa, ULVAC, K. Takeuchi, Tohoku University				
15:50	Break / Poster Session				
15:50 16:50	Keynote Lecture II: The Chiplet Challenge Beth Keser, Zero ASIC Chairs: F. Inoue, YOKOHAMA National University, Y. Orii, Rapidus				
16:50	Welcome Reception				
17:50	Welcome Reception				
18:20 20:20	Welcome Reception				

	Room A	Room B	Room C	Room D	Room E
8:30	Keynote Lecture III: Glass packaging for Emerging Applications in Advanced Communications and AI				
9:30	Madhavan Swaminathan, The Pennsylvania State University				
9:30	Chairs: T. Sakai, FICT, O. Suzuki, Rapidus				
9:40	Break				
9:40	<p>TA1: iNEMI Session Chairs: Y. Tomita, Intel, S. Uegaki, Crane Research</p> <p>TA1-1 Comparing Electromigration in Tin-Bismuth Alloys Using Planar Geometry Solder Joints Prabjit Singh¹, L. Palmer², T. Wassick³, M. Hamid⁴, Eric Campbell⁵, R. F. Aspandiar⁶, B. Franco⁷, H. Fu⁸, Richard Coyle⁹, V. Vasudevan¹⁰, A. Allen¹¹, K. Howell¹², K. Murayama¹³, H. Zhang¹⁴, A. Lifton¹⁵, T. Munson¹⁶, S. Middleton¹⁷, M. Sarangapani¹⁸, IBM, Intel / USA, iNEMI / China, Dell Technologies, HP / USA, Nihon Superior, Shinko Electric Industries / Japan, Indium, MacDermid Alpha Electronics Solutions, Foresite / USA, Heraeus Materials Singapore / Singapore</p> <p>TA1-2 <Session Invited> Adhesion Characterization of Redistribution Layer Kor Oon Lee¹, Steven R. Martell², Tzu-Hsuan Wang³, Yangchun Deng⁴, Masahiro Tsuriya⁵, Intel / Malaysia, Nordson T&I / USA, Unimicron Technology / Taiwan, AT&S (Chongqing) / China, iNEMI / Japan</p> <p>TA1-3 <Session Invited> High Temperature Hygroscopic Swelling of Polymers in Electronic Packaging Ian Chin¹, Wei Keat Loh², Seow Chien Kee³, Yi He⁴, Mohd Zulkifly Abdullah⁵, Masahiro Tsuriya⁶, Intel Microelectronics / Malaysia, Intel / USA, Universiti Sains Malaysia / Malaysia, iNEMI / Japan</p> <p>TA1-4 Low Temperature Material Discovery and Readiness for 1st Level Interconnect in Semiconductor Packaging Sze Pei Lim¹, Masahiro Tsuriya², Shripad Gokhale³, Russell Kastberg⁴, Indium / Malaysia, iNEMI / Japan, Intel, IBM / USA</p>	<p>TB1: Advanced Packaging-1 Chairs: T. Nonaka, Rapidus, K. Yasuda, Osaka University</p> <p>TB1-1 Large-Scale Cu Interconnection of Organic Substrate Materials through Electroless Plating Technology M. L. Shih¹, P. S. Shih², J. H. Huang³, I. A. Chen⁴, J. S. Wang⁵, C. T. Ko⁶, B. R. Lin⁷, K. M. Yang⁸, C. H. Lin⁹, A. S. Lee¹⁰, C. R. Kao¹¹, National Taiwan University, Unimicron Technology / Taiwan</p> <p>TB1-2 Large Panel Fan-Out Process for High Performance Computing Device Application With Micro Ball Mount Process Powei Lu, Jia Sang Weng, F. S. Yang, Jeffrey Yang, Jen-Kuang Fang, Advanced Semiconductor Engineering / Taiwan</p> <p>TB1-3 TGV Drilling by Ultrafast Laser With Hollow Beam Optics Hsiang-Chen Hsu¹, Shih-Jeh Wu², Wei-Yu Lu³, Schiang-Jing Hon⁴, I-Shou University, E&R Engineering / Taiwan</p> <p>TB1-4 Addressing Advanced IC Substrate Deformation and Pattern Distortion Using an Extremely Large Exposure Field Fine-Resolution Lithography System John Chang, Corey Shay, James Webb, Timothy Chang, Onto Innovation / USA</p>	<p>TC1: Sintering & Diffusion Chairs: M. Inoue, Gunma University, J. Wang, Meisei University</p> <p>TC1-1 Ag Sintered Joints on ENIG Cu Substrates by an Ag-based Complex Chungheng Wang, Hiroaki Tatsumi, Hiroshi Nishikawa, Osaka University / Japan</p> <p>TC1-2 Interface Analysis of Direct Bonded Oxide Layers by Neutron Reflectometry Masahisa Fujino¹, Kenji Takahashi², Katsuya Kikuchi³, Noboru Miyata⁴, National Institute of Advanced Industrial Science and Technology, Comprehensive Research Organization for Science and Society / Japan</p> <p>TC1-3 Lead-Free Diffusion Bonding for High Temperature Using ZnAl Eutectic Alloy Toru Ikeda¹, Tomoki Kurakazu², Masaaki Koganezumi³, Tetsuro Nishimura⁴, Kagoshima University, Nihon Superior / Japan</p> <p>TC1-4 Direct Observation of Void Nucleation and Growth in a 2-µm-Wide Cu Redistribution Line During In Situ Electromigration Chien-Lung Liang¹, Yung-Sheng Lin², Min-Yan Tsai³, Meng-Chun Chi⁴, Shan-Bo Wang⁵, Chih-Pin Hung⁶, Kwang-Lung Lin⁷, National Taiwan University of Science and Technology, Advanced Semiconductor Engineering Group, National Cheng Kung University / Taiwan</p>	<p>TD1: Process-1 Chairs: T. Aoki, IBM Japan, F. Inoue, YOKOHAMA National University</p> <p>TD1-1 Formation of SiO₂ Bonding Interface using Perhydropolysilazane at Room Temperature Kai Takeuchi¹, Daiki Nemoto², Tadamoto Suga³, Eiji Higurashi⁴, Tohoku University, Meisei University / Japan</p> <p>TD1-2 Surface Modification by Wet Treatment for Low-Temperature Cu/SiO₂ Hybrid Bonding Yu-An Chen¹, Jia-Juen Ong², Wei-Lan Chiu³, Hsiang-Hung Chang⁴, Chih Chen⁵, National Yang Ming Chiao Tung University, Industrial Technology Research Institute / Taiwan</p> <p>TD1-3 Optimization of Ag Thin Film Thickness With a Capping Layer for Ag-Ag Surface Activated Bonding Yuanhao Cai, Kai Takeuchi, Miyuki Uomoto, Takehito Shimatsu, Eiji Higurashi, Tohoku University / Japan</p> <p>TD1-4 Direct Bonding of Germanium and Diamond Substrates by Reduction Process Yuki Minowa^{1,2}, Takashi Matsumae³, Masanori Hayase⁴, Yuichi Kurashima⁵, Hideki Takagi⁶, Tokyo University of Science, National Institute of Advanced Industrial Science and Technology / Japan</p>	<p>TE1: Power Electronics-3 Chairs: C. Chen, Osaka University, Y. Ikeda, Fuji Electric</p> <p>TE1-1 Bonding Parameter-Dependent Microstructural and Mechanical Capabilities of Ag Porous Sheet Bonding Yeh-Ri Kim^{1,2}, Eunjin Jo³, Byeong Kwon Ju⁴, Yooung Lee⁵, Jaep Kim⁶, Kijoon Ahn⁷, Dongjin Kim⁸, Korea Institute of Industrial Technology, Korea University, Andong National University, SP Semiconductor / Korea</p> <p>TE1-2 Solid-State Bonding With SAC305 Sheets for Direct Cooling Eunjin Jo^{1,2}, Yeh-Ri Kim³, Young-Bae Park⁴, Dongjin Kim⁵, Korea Institute of Industrial Technology, Andong National University, Korea University / Korea</p> <p>TE1-3 Thermo-Mechanical Reliability of Ag Porous Sheet Bonding Structures Dongjin Kim¹, Yeh-Ri Kim², Eunjin Jo³, Seoh Kim⁴, Jiyong Park⁵, Yong-Ho Ko⁶, Korea Institute of Industrial Technology, Korea University, Andong National University, Kyonggi University / Korea</p>
11:20	Break				
11:20	Break				
11:30	<p>TA2: IMPACT Session Chairs: Y. Liu, National Cheng Kung University, J. Mizuno, National Cheng Kung University</p> <p>TA2-1 <Session Invited> Advanced IC Substrates in the Next Decade Yu-Hua Chen, Unimicron / Taiwan</p> <p>TA2-2 <Session Invited> Improvement of Microelectronic Joint Reliability Through the Optimization of IMC Nanomechanical Properties Jenn-Ming Song, National Chung Hsing University / Taiwan</p> <p>TA2-3 <Session Invited> From Big Data to Smart, Robust and Reliable Simulation Technology K.N. Chiang, National Tsing Hua University / Taiwan</p> <p>TA2-4 <Session Invited> High Performance 3D Heterogeneous Integration Package Yu-Po Wang, Siliconware Precision Industries / Taiwan</p>	<p>TB2: Advanced Packaging-2 Chairs: O. Suzuki, Rapidus, S. Uegaki, Crane Research</p> <p>TB2-1 Polymer Hybrid Bonding using Copper-Copper Bonding Materials and Thermosetting Resins for Copper-Copper Bonding at 200-250°C Hirotatsu Sakamoto, Tadashi Teranishi, Rumi Nagai, Ryo Itaya, Akihiko Happona, Daicel / Japan</p> <p>TB2-2 Carbon/Nitrogen Dual-Doped in <100> P-type Silicon Hard Mask for Wafer Thinning and Dishing Less for Hybrid Bonding Yen-Shuo Chen¹, Tzu Wei Chiu², Hua-Tai Fan³, Yu-Chien Ko⁴, Chu Chi Chen⁵, Fu-Hsiang Ko⁶, National Yang Ming Chiao Tung University, Seriphy Technology, Taiwan Semiconductor Research Institute / Taiwan</p> <p>TB2-3 Characterization of Surface Activation on Nanowinned Copper and SiCN by using Ar and N₂ Plasma Rou-Jun Lee¹, Pin-Syuan He², Wei-Lan Chiu³, Hsiang-Hung Chang⁴, Wei-Yu Hsu⁵, Chih Chen⁶, National Yang Ming Chiao Tung University, Industrial Technology Research Institute / Taiwan</p>	<p>TC2: Cu-related Chairs: M. Fujino, AIST, H. Nishikawa, Osaka University</p> <p>TC2-1 The Enhancement in the Reliability of Nanowinned Cu Redistribution Lines Passivated With Immersion Sn and Ag Yu-Wen Hung, Yi-Quan Lin, Chih Chen, National Yang Ming Chiao Tung University / Taiwan</p> <p>TC2-2 Wafer Backside Fine 0.4 µm Pitch Copper Interconnects For Multi Stacked Device Integration Takahiro Miyawaki, Masaki Haneda, Yukari Fukumizu, Akihisa Sakamoto, Kan Shimizu, Yoshihisa Kagawa, Hayato Iwamoto, Sony Semiconductor Solutions / Japan</p> <p>TC2-3 Cu Nanoparticle Sintering by Electrical Current Albert T. Wu¹, Tzu-Hao Sheng², Jui-Lin Chao³, Chang-Meng Wang⁴, Watson Tseng⁵, National Central University, Shenmao Technology / Taiwan</p> <p>TC2-4 Low-Temperature Cu-Cu Bonding Using Nanocrystalline Grains Chen-Ning Li¹, Wei-Lan Chiu², Hsiang-Hung Chang³, Chih Chen⁴, National Yang Ming Chiao Tung University, Industrial Technology Research Institute / Taiwan</p>	<p>TD2: Process-2 Chairs: Y.Y. Lim, AIST, M. Nakazawa, Sony Semiconductor Solutions</p> <p>TD2-1 Verification of Resolution Considering Process Margins for the 10µm Pitch Patterning of Organic Substrates Naoya Sohara, Yu Abe, Ryotaro Takahashi, Hirotsuke Takamatsu, Ushio / Japan</p> <p>TD2-2 Control of the Surface Modification of Epoxy Resin by VUV-Reduction and VUV-Redox Method using Vacuum Ultraviolet Light S. Endo^{1,2}, A. Shimizu³, K. Fukada⁴, Ushio, Osaka Prefecture University, Shibaura Machine / Japan</p> <p>TD2-3 Adhesion Characteristics of Sputtered Cu Seed Layer on Cycloolefin Polymer A. Shimizu¹, K. Fukada², S. Endo³, Ushio, Gifu University, Shibaura Machine, Osaka Prefecture University / Japan</p> <p>TD2-4 Investigating Laser Direct Structuring and Aerosol-Jet for Additively Manufactured Helix Antennas Markus Ankenbrand, David Panusch, Niklas Pechulek, Gerald Gold, Klaus Helmreich, Jörg Franke, Friedrich-Alexander-Universität Erlangen-Nürnberg / Germany</p>	<p>TE2: DMR-M-1 Chairs: N. Tanaka, Resonac, H. Sakamoto, Huawei Technologies Japan</p> <p>TE2-1 Investigation of Wafer Warpage Evolution Based on Fan-out Chip-first Process Heng-Chun Yang, Wei-Hong Lai, Chin-Li Kao, Chen-Chao Wang, Chih-Pin Hung, Advanced Semiconductor Engineering / Taiwan</p> <p>TE2-2 Solder Joint Reliability Comparison Under JEDEC Drop and System-like Drop Test Conditions Meng-Kai Shih¹, Zih-Jun Ke², Chun-Yu Yen³, Wei-Hong Lai⁴, Chin-Li Kao⁵, National Formosa University, Advanced Semiconductor Engineering / Taiwan</p> <p>TE2-3 The Effect of Electromigration and Stress Migration on Ni-Cu RDLs Passivated With Titanium Dioxide Yi-Quan Lin, Ching-Yu Tang, Yu-Wen Hung, Yu-Yi Lin, Chih Chen, National Yang Ming Chiao Tung University / Taiwan</p>
13:10	Lunch Time				
13:10	Lunch Time				
14:00	<p>TA3: ADMETA/BEOL Session Chair: F. Inoue, YOKOHAMA National University</p> <p>TA3-1 <Session Invited> The Growing Importance of Wet Processing in 3D Semiconductor Fabrication Tomohisa Sato, SCREEN Semiconductor Solutions / Japan</p> <p>TA3-2 <Session Invited> Superconducting Nb Interconnects for Cryo-CMOS Application Hideaki Numata¹, Noriyuki Iguchi², Masamitsu Tanaka³, Koichiro Okamoto⁴, Sadahiko Miura⁵, Ken Uchida⁶, Hiroki Ishikuro⁷, Toshitsugu Sakamoto⁸, Munehiro Tada⁹, NanoBridge Semiconductor, Nagoya University, The University of Tokyo, Keio University / Japan</p> <p>TA3-3 <Session Invited> Development of Large-Scale Connections of Wafer-Level Face-to-Back Structure with Cu-Cu Hybrid Bonding Yukako Ikegami, Masaki Haneda, Kengo Kotoo, Kan Shimizu, Yoshihisa Kagawa, Hayato Iwamoto, Sony Semiconductor Solutions / Japan</p>	<p>TB3: Advanced Packaging-3 Chairs: N. Fujimori, Olympus, Y. Tomita, Intel</p> <p>TB3-1 Bare Cu Bonding by Cu-Ag Composite Paste in Low Temperature Low Pressure Air Sintering Chuantong Chen¹, Takuya Sekiguchi², Katsusaki Suganuma³, Osaka University, TOPPAN Holdings / Japan</p> <p>TB3-2 Thermal Stability of Bi in Sn-Cu Based High Strength Pb-Free Solder Alloys Jiye Zhou¹, Xin F. Tan², Stuart D. McDonald³, Keith Sweatman⁴, Tetsuya Akaiwa⁵, Kazuhiko Nogita⁶, The University of Queensland / Australia, Kyushu University, Nihon Superior / Japan</p> <p>TB3-3 Selective Cu Surface Activation for Cu-Sn Thermocompression Microbump Bonding Without Flux Deposition Ryo Negishi, Satoshi Saito, Itsuro Tomatsu, MEC / Japan</p> <p>TB3-4 Cu/SnAg Pillar Bump Joints on Ni-less Surface Finish in Laser Assisted Bonding (LAB) Sang Eun Han^{1,2}, Seonghui Han³, Tae-Young Lee⁴, Hoo-Jeong Lee⁵, Sehoon Yoo⁶, Korea Institute of Industrial Technology, Sungkyunkwan University, Andong National University, Tech University of Korea / Korea</p>	<p>TC3: Pan Pacific Session Chairs: K. Hasegawa, JSR, O. Suzuki, Rapidus</p> <p>TC3-1 <Session Invited> Technical Implementation of DNA Data-Storage Kirsten Weide-Zaage, Leibniz Universität Hannover / Germany</p> <p>TC3-2 <Session Invited> Chiplets Turn 65! Charles E. Bauer, TechLead / USA</p> <p>TC3-3 <Session Invited> IC Package Board Level Vibration Test for Electronic Industry Jeffrey Lee, iST-Integrated Service Technology / Taiwan</p>	<p>TD3: Process-3 Chairs: M. Inoue, Gunma University, M. Nakazawa, Sony Semiconductor Solutions</p> <p>TD3-1 Template Stripping Process Combined With Polyimide and SiO₂/Si Templates for Obtaining Smooth Au Surfaces Shogo Koseki¹, Mika Ogino², Kai Takeuchi³, Le Hac Huong Thu⁴, Takashi Matsumae⁵, Hideki Takagi⁶, Yuichi Kurashima⁷, Takahiro Tsuda⁸, Tomoaki Tokuhisa⁹, Toshikazu Shimizu¹⁰, Eiji Higurashi¹¹, Tohoku University, National Institute of Advanced Industrial Science and Technology, Kanto Chemical / Japan</p> <p>TD3-2 Photonic Curing and Soldering to Printed Silver for Enhanced Attachment and Joint Quality John Ukwuoma¹, Harry Chou², Ara Parsekian³, Ian Rawson⁴, Dave Pope⁵, Valid Akhavan⁶, PulseForge, NovaCentrix / USA</p> <p>TD3-3 Improvement of the Bonding Reliability of Electroless Thin-Film Ni/Au Plating Using Co Activation Kana Kawasaki, Ryuji Saito, Toshimitsu Nagao, Kenji Hara, Okuno Chemical Industries / Japan</p> <p>TD3-4 An Investigation of Cu/Ni/Ga Interfacial Reaction With Different Ni/Ga Ratio Tzu-hsuan Huang, Jian-wei Huang, Zhi-feng Lin, Shih-kang Lin, National Cheng Kung University / Taiwan</p>	<p>TE3: DMR-M-2 Chairs: N. Tanaka, Resonac, H. Sakamoto, Huawei Technologies Japan</p> <p>TE3-1 Temperature Dependence Mechanical Characteristics of Ag Alloy Wire and Corresponding Influence in Wire Bonding Procedure D.-S. Liu¹, P.-C. Wen², Z.-W. Zhuang³, Y. C. Chao⁴, P.-C. Huang⁵, National Chung Cheng University, National Chiayi University / Taiwan</p> <p>TE3-2 Simulation Study of Pore Structure Evolution and its Influences on the Properties of Sintered Silver Han Jiang¹, Shuibao Liang², Changqing Liu³, Anhui University, Hefei University of Technology / China, Loughborough University / UK</p> <p>TE3-3 Effect of Phase Evolution on Inhomogeneous Deformation and Fracture Behavior in Sn-Bi Solder Alloys Shuibao Liang¹, Wangyun Li², Han Jiang³, Zhihao Guo⁴, Zhihong Zhong⁵, Hefei University of Technology, Guilin University of Electronic Technology / China, Osaka University / Japan, Anhui University / China, Loughborough University / UK</p>
15:40	Break				
15:40	Break				
16:00	Break				

	Room A	Room B	Room C	Room D	Room E
16:00	<p>TA4: Advances in Chiplet Packaging hosted by IMAPS Chairs: B. Kaser, Zero ASIC, Y. Oriti, Rapidus</p> <p>TA4-1 <Session Invited> Advancements in Die-to-Wafer Hybrid Bonding for 3D Chiplets Chris Scanlan, Best / Switzerland</p> <p>TA4-2 <Session Invited> Opportunities and Challenges in Building the Chiplet Ecosystem E. Jan Vardaman, TechSearch International / USA</p> <p>TA4-3 <Session Invited> A Holistic Approach for Chiplet Assembly Tanja Braun, Fraunhofer IZM / Germany</p> <p>TA4-4 <Session Invited> Packaging Advancements for Heterogeneous and 3D Integration Vikas Gupta, ASE Group / USA</p>	<p>TB4: Advanced Packaging-4 Chairs: S. Uegaki, Crane Research, K. Yasuda, Osaka University</p> <p>TB4-1 Reliability Investigation of Cobalt and Copper Damascene Interconnects with Capped Graphene Y. T. Hung¹, J. Z. Huang², H. H. Chang¹, K. P. Huang³, O. H. Lee⁴, H. C. Chien⁵, C. H. Wang⁶, W. C. Lo⁷, C. I. Wu⁸, K. N. Chen^{1,2}, Industrial Technology Research Institute, ²National Taiwan University, ³National Yang Ming Chiao Tung University / Taiwan</p> <p>TB4-2 Laser Applications in Power Management IC Packaging Wei-Yu Lu¹, Shih-Jeh Wu¹, Hsiang-Chen Hsu¹, Wen-Fei Lin², I-Shou University, ²E&R Engineering / Taiwan</p> <p>TB4-3 Warpage Control Technology Using 300 mm Wafer Evaluated by High-Precision FEM Analysis Wataru Doi^{1,2}, Tatsuya Funaki^{1,2}, Kyosuke Kobinata^{3,4}, Koji Miyamoto⁴, Hajime Kato^{2,5}, Shogo Okita^{2,5}, Takayuki Ohba¹, Murata Manufacturing, ²Tokyo Institute of Technology, ³DISCO, ⁴NAGASE, ⁵Panasonic Connect / Japan</p> <p>TB4-4 Formation of 10 μm Pitch Sharp Micro-bump by Fusion Process of Imprint and Photolithography Kiyokazu Itoi, Yusuke Takeuchi, Daisuke Sakurai, Panasonic Holdings / Japan</p>	<p>TC4: Debonding Chair: A. Shigetou, NIMS</p> <p>TC4-1 <Session Invited> Feasibility of Solid-State Debonding of Cu-Cu Interface by Cooling Akitsu Shigetou, National Institute for Materials Science / Japan</p> <p>TC4-2 <Session Invited> Temporary Bonding Method: Use an Inorganic Film as an Intermediate Layer for Ultrasonic Vibration Debonding Yoshie Matsumoto, Lantech Service / Japan</p> <p>TC4-3 <Session Invited> Biomimetic Bonding and Debonding Technology Naoe Hosoda, National Institute for Materials Science / Japan</p>	<p>TD4: Process-4 Chairs: M. Nakazawa, Sony Semiconductor Solutions, K. Okamoto, Nippon Institute of Technology</p> <p>TD4-1 Cathodoluminescence Characterization of Diamond Polished by Gas Cluster Ion Beam Junsha Wang, Tadatomo Suga, Meisei University / Japan</p> <p>TD4-2 Development Status of Laser-Induced Peel-off Transfer Technology for Advanced Semiconductors Satoshi Enzaki, Koichi Kazama, Yuichiro Tsuda, Tatsuya Okada, Yoshiyuki Arai, Toray Engineering / Japan</p> <p>TD4-3 Investigation of Blind MicroVias bonding force: A Field Study Hung-Kun Chen, Shun-Jen Chan, Yu-Cheng Pai, Carl Chen, Yu-Po Wang, Siliconware Precision Industries / Taiwan</p> <p>TD4-4 Study of Galvanic Effect Factor and Mechanism for Ni/Au Plated Substrate MJ He, Rick Ye, Yu Cheng Pai, Yu-Po Wang, Siliconware Precision Industries / Taiwan</p>	<p>TE4: DMR-M-3 Chairs: K. Takeuchi, Tohoku University, H. Sakamoto, Huawei Technologies Japan</p> <p>TE4-1 Prediction of High-Speed Oscillator Frequency Drift Under Package Level Reliability Tests Ming-Han Wang¹, Christine Xiao², Chien Liu¹, Hassan Hashemi², Synaptics / Taiwan, ²Synaptics / USA</p> <p>TE4-2 Correction Factors to Biaxial Bending Strength of Thin Silicon Die in the Ball-on-Ring Test Due to Contact Nonlinearity Effect P. J. Hsieh, T. C. Kuo, M. Y. Tsai, Chang Gung University / Taiwan</p> <p>TE4-3 Mold Flow Strategy Improvement for Power Module Bing-Yuan Huang, Ying-Xu Lu, Hung-Hsien Huang, Chen-Chao Wang, Chih-Pin Hung, Advanced Semiconductor Engineering / Taiwan</p> <p>TE4-4 Power Device Structure Optimization by Sequential Approximation Optimization Method Tomoki Takao, Yoshiharu Iwata, Hidefumi Wakamatsu, Osaka University / Japan</p>
17:40	Poster & Sponsors Exhibition Party				
17:40					
19:10					

	Room A	Room B	Room C	Room D	Room E
8:30	Keynote IV: Inflection Point on Next Package Solution Sa-Yoon Kang, President of KMEPS Chairs: T. Aoki, IBM Japan, T. Hatakeyama, Toyama Prefectural University				
9:30	Break				
9:40	<p>FA1: Glass PKG-1 Chairs: J. Mizuno, National Cheng Kung University, T. Onishi, Grand Joint Technology</p> <p>FA1-1 <Session Invited> Markets, Opportunities, and Challenges with Glass Package Applications: Today +10 E. Jan Vardaman, TechSearch International, / USA</p> <p>FA1-2 <Session Invited> Glass Material and TGV Formation Technologies Yoichiro Sato, AGC / Japan</p> <p>FA1-3 <Session Invited> The Role of Structured Glass Substrates for Heterogeneous Integration of Electronics Martin Letz, Schott / Germany</p> <p>FA1-4 <Session Invited> High Volume Glass Microhole Formation by LIDE Hiroyuki Kamidate, LPKF Laser & Electronics / Japan, Richard Noack, LPKF Laser & Electronics / Germany</p>	<p>FB1: Advanced Packaging-5 Chairs: M. Fujino, AIST, O. Suzuki, Rapidus</p> <p>FB1-1 Approach With Large Panel Fan-Out Technology Ping-Ching Shen¹, Sheng-Feng Huang¹, Ping-Feng Yang¹, Jen-Kuang Fang¹, Advanced Semiconductor Engineering / Taiwan</p> <p>FB1-2 Approach for Advanced Packaging for 2.5D/3D Chiplets T. Kubota, H. Oshida, S. Hayashiguchi, Y. Kajikawa, TOWA / Japan</p> <p>FB1-3 Semiconductor Fan-Out Polymer Adhesion on Physical Vapor Deposited Copper Coupling Temperature & Humidity Effects Nien-Chun Lin, Hsin-Chih Shih, Ching-I Tsai, Chin-Li Kao, Chen-Chao Wang, C.P. Hung, Advanced Semiconductor Engineering / Taiwan</p> <p>FB1-4 Advanced Fan-Out Embedded Chip Process Integration for 3D Application Chih-Cheng Hsiao, Chao-Kai Hsu, Ching-Iang Li, Yung-Sheng Chang, Ming-Ji Dai, Feng-Hsiang Lo, Chin-Hung Wang, Wei-Chung Lo, Industrial Technology Research Institute / Taiwan</p>	<p>FC1: Intermetallic Compounds-1 Chairs: M. Inoue, Gunma University, K. Shibayama, Sekisui Chemical</p> <p>FC1-1 Study of Wetting and Interfacial Reactivity in Au/Liquid in System for Photonic Packaging O. Belhaddad^{1,2}, O. Maillart¹, F. Hodaj², CEA, LETI, ³Univ. Grenoble Alpes / France</p> <p>FC1-2 Investigation of Additional Elements in Sn-Bi Based Low-Temperature Solder F. L. Chang, Y. C. Chen, Y. H. Lin, P. K. Wu, M. C. Chuang, C. R. Kao, National Taiwan University / Taiwan</p> <p>FC1-3 A Thermodynamic Modeling Approach for the Design and Development of Low-Temperature Solder Alloys Y. C. Chen, F. L. Chang, M. C. Chuang, Y. C. Su, C. R. Kao, National Taiwan University / Taiwan</p> <p>FC1-4 Temperature-Dependent Electrical Resistivity in Sn-Bi Alloys Xin F. Tan^{1,2}, Qichao Hao¹, Jiye Zhou¹, Stuart D. McDonald¹, Keith Sweatman^{1,3}, Kazuhiro Nogita¹, The University of Queensland / Australia, ²Kyushu University, ³Nihon Superior / Japan</p>	<p>FD1: Thermal Management-1 Chairs: R. Miyazawa, IBM Japan, H. Sakamoto, Huawei Technologies Japan</p> <p>FD1-1 Issues of Using Unsaturated Heating Time for Transient Thermal Measurement Part 2 Tomoaki Hara¹, Shuhei Fukunaga², Tsuyoshi Funaki², Siemens, ³Osaka University / Japan</p> <p>FD1-2 Influence of Heat Losses on Measurement of Thermal Contact Resistance in Sn-Bi Based Low-Temperature Solder U. Akram, T. Hatakeyama, R. Kibushi, Toyama Prefectural University / Japan</p> <p>FD1-3 Non-destructive Orientation Mapping with X-ray Diffraction for Electronic Packaging Applications Y. Hayashi, J. Kim, M. Yabashi, RIKEN Spring-8 Center / Japan</p>	<p>FE1: Optoelectronics-1 Chairs: E. Higurashi, Tohoku University, Y.Y. Lim, AIST</p> <p>FE1-1 Alignment and Transfer of Silver Nanowire Arrays onto Unconventional Substrates for Optoelectronic Devices via Dielectrophoresis Force Yen-Shuo Chen¹, Shun-Yu Liu¹, Ching-Chang Lin², Hua-Tai Fan¹, Yu-Chien Ko¹, Chun-Chi Chen¹, Fu-Hsiang Ko¹, National Yang Ming Chiao Tung University / Taiwan, ²The University of Tokyo / Japan, ³Taiwan Semiconductor Research Institute / Taiwan</p> <p>FE1-2 Development of Optical Pin Formation Process for Low-Profile Optical Modules Shuhei Sudo, Osamu Hirata, Kazuhiro Shiba, Michiyo Kubo, Shigeru Kobayashi, Keizo Kinoshita, Takahiro Nakamura, Koichi Takemura, Kazuhiko Kurata, AIO Core / Japan</p> <p>FE1-3 Stability Study of Quantum Dot Color Converted Mini/Micro-LED Displays Yuanjie Cheng, Jeffery C. C. Lo, Xing Qiu, Hua Xu, Mian Tao, S. W. Ricky Lee, Hong Kong University of Science & Technology / Hong Kong & China</p> <p>FE1-4 Design and Evaluation of On-Chip Terahertz Wave Power Combiner for Beyond 5G/6G Y. Kamiura, H. Sali, H. Agemori, R. Doi, M. Che, Y. Mikami, K. Kato, Kyushu University / Japan</p>
11:20	Break				
11:20	Break				
11:30	<p>FA2: Glass PKG-2 Chairs: Y. Sato, AGC, J. Vardaman, TechSearch International</p> <p>FA2-1 <Session Invited> Challenge of Metallization on Glass Core and Through-Glass Vias Tomoki Shinohara, Toshiyo Honda, Toshiya Fujiwara, Atotech Japan / Japan</p> <p>FA2-2 Development of the Integrated Passive Device for Sub6 Band Using 100 μm Thickness Glass Substrate Tomoyuki Ishii, Masashi Sawadaishi, Noriko Kano, Masao Ishibashi, Takashi Kizu, TOPPAN Holdings / Japan</p> <p>FA2-3 Physical and Thermal Characteristics of the Advanced Package with Glass Core Substrate S. Mitarai, K. Adachi, T. Igarashi, K. Seki, N. Kakoyama, Y. Tanaka, S. Oka, M. Nakazawa, H. Iwamoto, Sony Semiconductor Solutions / Japan</p> <p>FA2-4 <Session Invited> Glass Package Trends & Core Technologies Tetsuya Onishi, Grand Joint Technology / Hong Kong</p>	<p>FB2: Advanced Packaging-6 Chairs: M. Fujino, AIST, Y. Morikawa, ULVAC</p> <p>FB2-1 <Session Invited> Design Considerations for 2.5D Interposer Technologies Gu-Sung Kim, Kangnam University / Korea</p> <p>FB2-2 The Strategy on Artificial Neural Networks for Prediction Advanced Packaging Reliability Under Small Dataset Qinghua Su¹, Cadmus Yuan¹, K.N. Chiang¹, National Tsing Hua University, Feng Chia University / Taiwan</p> <p>FB2-3 Hybrid Numerical Simulation for Capillary Underfill Flow Over a Fine Pitch HBM Packaging Chien-Ting Wu, Leo Shen, CoreTech System (Moldex3D) / Taiwan</p> <p>FB2-4 RDL Embedded Coreless Substrate for Heterogeneous Integration Fusao Takagi, Takashi Fujita, Masahiro Kosugi, Hiroyuki Ishida, Akane Kobayashi, Shuji Kiuchi, TOPPAN Holdings / Japan</p>	<p>FC2: Intermetallic Compounds-2 Chairs: T. Aoki, IBM Japan, F. Inoue, YOKOHAMA National University</p> <p>FC2-1 Surface Manipulation of Ag Metallization to Improve the Adhesion Strength for Soldering Applications on LTCC C. Kleinhözl, B. Müller, M. Fischer, C. Tschoban, J.-M. Koszegi, J. Potter, I. Nölp, M. Schneider-Ramelew, J. Müller, Technische Universität Ilmenau, Fraunhofer Institute for Reliability and Microintegration / Germany</p> <p>FC2-2 Fabrication of InP-on-Insulator Wafers Through Room Temperature Wafer Bonding Using Activated Si Atomic Layer Gufei Zhang, Seigo Murakami, Ryo Takigawa, Kyushu University / Japan</p> <p>FC2-3 Interfacial Reactions in the Sn-3.0 wt.%Ag-0.5 wt.% Cu (SAC)/Cu-Ni-Si-Mg Alloy (C7025) Couples M. Ramadhani, A. D. Laksono, Y.C. Liou, Y. W. Yen, National Taiwan University of Science and Technology / Taiwan</p> <p>FC2-4 In-Situ Observations of Cu₆Sn₅ Morphological Changes at the Liquid SAC305/Solid OSP-Cu Interface Kazuhiro Nogita¹, Xin F. Tan^{1,2}, Flora Somidin¹, Stuart D. McDonald¹, Hiroshi Maeno³, Syo Matsumura^{1,2}, The University of Queensland / Australia, ²Kyushu University / Japan, ³Universiti Malaysia Perlis / Malaysia</p>	<p>FD2: Thermal Management-2 Chairs: H. Sakamoto, Huawei Technologies Japan, J. Wang, Meisei University</p> <p>FD2-1 Thermal Transient Evaluation of MOSFETs Heating Current Applied from Source to Drain Wasanthamala Badalawa, Tomoaki Hara, Siemens / Japan</p> <p>FD2-2 Examination of Evaluation Method for In-plane Effective Thermal Conductivity of Printed Circuit Board R. Hasegawa, T. Hatakeyama, R. Kibushi, Toyama Prefectural University / Japan</p> <p>FD2-3 Metal Sinter Material Technology for Power Module Packaging Chen-Chun Chao, Yi-Chi Yang, Jyh-Long Jeng, Industrial Technology Research Institute / Taiwan</p> <p>FD2-4 Cooling Performance Evaluation of Microprocessor Package and Heat Sink K. Nishi, C. Shubata, Ashikaga University / Japan</p>	<p>FE2: Optoelectronics-2 Chairs: T. Amano, AIST, K. Takemura, AIO Core</p> <p>FE2-1 <Session Invited> Dinuclear Eu (III)-Diketatonates With Tetraphosphine Tetraoxide Ligand and Their LED Applications Hiroyuki Iwanaga¹, Chingchun Huang², Takeshi Hongo³, Atsushi Okuno³, Toshiba, Green Planets / Japan</p> <p>FE2-2 <Session Invited> Light-Reflection-Type High-Power Distar Engine Capable Easy Heat Dissipation Kencho Okamoto, Kyoto University / Japan</p> <p>FE2-3 <Session Invited> Superior Characteristics of 405nm-Based High-CRI White LEDs Atsushi Okuno¹, Jung Uk An², Green Planets / Japan, ALLIX / Korea</p>
13:10	Break				
13:10	Break				
14:00	<p>FA3: Nano-imprint Chairs: N. Fujimori, Olympus, J. Mizuno, National Cheng Kung University</p> <p>FA3-1 <Session Invited> Synchronization of Process and Material to Achieve Best Results in Nano-Imprinting Lithography Patrick Schuster, EV Group / Austria</p> <p>FA3-2 <Session Invited> Advanced Manufacturing Techniques for Freeform Micro-Optics Elements Anna Dudas, EV Group / Austria</p> <p>FA3-3 <Session Invited> Advanced Technologies for Large FOV Waveguide Satoshi Shiraga, Cellid / Japan</p> <p>FA3-4 <Session Invited> Wearable Devices Using Microfabrication and Nanoimprinting of Conductive Polymers Seiichi Takamatsu, The University of Tokyo / Japan</p>	<p>FB3: High-Speed, Wireless & Components-1 Chairs: N. Fukazawa, DIC, Y.Y. Lim, AIST</p> <p>FB3-1 A Compact AIP with a Dual-Polarized 1x4 Antenna Array for 5G Smartphone Applications Sheng-Chi Hsieh¹, Hong-Sheng Huang¹, Wen-Chun Hsiao¹, Cheng-Yu Ho¹, Tai-Jung Lee¹, Chen-Chao Wang¹, Hsu-Yang Lee¹, Advanced Semiconductor Engineering, ²National Chi Nan University / Taiwan</p> <p>FB3-2 High Performance Antenna-In-Package With Test Socket for Millimeter-Wave System Cheng-Yu Ho, Wen-Chun Hsiao, Sheng-Chi Hsieh, Chen-Chao Wang, Hsu-Yang Lee, Advanced Semiconductor Engineering / Taiwan</p> <p>FB3-3 Microwave Patch Antenna Placement on 6U CubeSat Daisuke Nakayama, Kei Sano, Tohlu Matsushima, Yuki Fukumoto, Kyushu Institute of Technology / Japan</p> <p>FB3-4 Matching Circuit to Improve Transmission Characteristic of Antenna for Undersea Communication Soma Miki, Kensei Kuwahara, Kazuhiro Eguchi, Daisuke Nakayama, Tohlu Matsushima, Yuki Fukumoto, Kyushu Institute of Technology / Japan</p>	<p>FC3: Organic and Polymer Material Chairs: G. Hamasaka, Tokuyama, K. Shibayama, Sekisui Chemical</p> <p>FC3-1 Sintering Behavior of Silver-Filled Anhydride-cured Electrically Conductive Adhesives for Enhancing Interfacial Conductivity Takanori Fukushima, Masahiro Inoue, Gunma University / Japan</p> <p>FC3-2 Development of Novel Low Dielectric Epoxy Resin Kentaro Tanaka, Masanari Nishimura, Noriyuki Kida, Takaaki Watanabe, Mitsubishi Chemical / Japan</p> <p>FC3-3 Kinetics on Dynamic Percolation of Carbon-Nanotube-Filled Electrically Conductive Pastes Depending on Binder Chemistry Masahiro Inoue, Subaru Tajimura, Jinseok Won, Gunma University / Japan</p> <p>FC3-4 Ultra-sensitive Visualization and Identification of Defects in Microelectronics Packaging Michael K. F. Lo, Eoghan P. Dillon, Jay Anderson, Photothermal Spectroscopy / USA</p>	<p>FD3: Thermal Management-3 Chairs: H. Sakamoto, Huawei Technologies Japan, K. Takeuchi, Tohoku University</p> <p>FD3-1 Effectiveness of Thermal Bottleneck in Topology Optimization for Thermal Conduction Design Haruki Takei, Siemens / Japan</p> <p>FD3-2 Investigation into the Impact of Layout Design on Thermal Performance in Embedded-Die Packages Tang-Yuan Chen, Dao-Long Chen, Frank Chiu, Chen-Chao Wang, Chin-Pin Hung, Advanced Semiconductor Engineering / Taiwan</p> <p>FD3-3 Assessment of Thermal Dissipation Ability of Assembled Modules Bonded by Metallic Pastes, Pb-free Solder, and Thermally Conductive Sheet Ming-chun Hsieh¹, Aiji Suetake¹, Zheng Zhang¹, Rieko Okumura¹, Kei Anai², Takashi Hattori², Katsuki Suganuma¹, Osaka University, ²Mitsui Mining & Smelting / Japan</p> <p>FD3-4 Heat Transfer Performance of Aluminum-Ammonia Heat Pipe at Low Temperature under Various Heating/Cooling Conditions Chien-Cheng Wang, Chieh Lung, Mu-Ting Hsieh, Chien-Yuh Yang, National Central University / Taiwan</p>	<p>FE3: Optoelectronics-3 Chairs: E. Higurashi, Tohoku University, K. Takemura, AIO Core</p> <p>FE3-1 <Session Invited> New Development of EU-Doped Ga Red LEDs for Small Micro-LED Displays With Ultrahigh Definition Yasufumi Fujiwara^{1,2}, Ritsumeikan University, Osaka University / Japan</p> <p>FE3-2 <Session Invited> How can Micro-LEDs for Next Generation Displays Leverage The Learnings of Electronics Assembly / Packaging Industry? Makarem Hussein, LuxNour Technology / USA</p>
15:40	Break				
15:40	Break				
16:00	Break				

	Room A	Room B	Room C	Room D	Room E
16:00	<p>FA4: Professor S. Denda Memorial Session Chairs: F. Miyashiro, Y.J.C., K. Hashimoto, C-NET</p> <p>FA4-1 <Session Invited> (10min.) Reminiscence of Dr. Seiichi Denda- "Japanese Session" in ISHM/IMAPS Conference Fumio Miyashiro, Yokohama Jisso Consortium / Japan</p> <p>FA4-2 <Session Invited> (30min.) TSV and Bosch Process / The Bosch Process, Enabling the Practical Application and Mass Production of TSV Hiroshi Tanaka, Sumitomo Precision Products / Japan</p> <p>FA4-3 <Session Invited> (30min.) Toward Glass Core Substrate From Si Interposer for the Future Advanced Packaging Satoru Kuramochi, Dai Nippon Printing / Japan</p> <p>FA4-4 <Session Invited> (30min.) Multilayer Glass Core Substrate Technology with Using Conductive Paste Taiji Sakai, FICT / Japan</p>	<p>FB4: High-Speed, Wireless & Components-2 Chairs: N. Fukazawa, DIC, Y.Y. Lim, AIST</p> <p>FB4-1 Development of Cast Iron Manhole Steel Covers With Improved Radio Wave Permeability Eiichi Tateishi^{1,2}, Yuantong Yi¹, Nobuhiro Kai², Takaya Kumagai², Tatsuya Yamaguchi³, Haruichi Kanaya⁴, Kyushu University, ¹HINODE Holdings, ²HINODE / Japan</p> <p>FB4-2 High-Speed Signal Transmission Rigid Substrate Fabricated by Silver-Seed Copper Plating Technique Wataru Fujikawa, Rei Tamura, Tadashi Matsumoto, Norimasa Fukazawa, DIC / Japan</p>	<p>FC4: Advanced Packaging Materials and Related Technologies Chairs: G. Hamasaka, Tokuyama, H. Yamada, Toshiba</p> <p>FC4-1 Surface Topography Control for Polymer/Cu Hybrid Bonding Yuzo Nakamura^{1,2}, Yusuke Kondo¹, Kenta Hayama¹, Fabiana Lie Tanaka¹, Fumihito Inoue¹, ¹Yokohama National University, ²Mitsui Chemicals / Japan</p> <p>FC4-2 Development of Fast Filling Acid Copper Plating for Through Silicon Via Nobuaki Nagano, Shota Suzuki, Reito Kobayashi, JCU / Japan</p> <p>FC4-3 Advanced TIM Material Analysis for High Performance Package Applications Jyun-De Jhan, Wen-Yu Teng, Liang-Yih Hung, Carl Chen, Yu-Po Wang, Siliconware Precision Industries / Taiwan</p> <p>FC4-4 A Special Holding System for Large Package in 3D X-ray Inspection Chia-Ju Huang¹, Yu-Hsiang Hsiao¹, Yi-Sheng Lin¹, Cheng-Hsin Liu¹, ¹Advanced Semiconductor Engineering / Taiwan</p>		
17:40					

■ Poster Session

Poster sessions will be held from 15:50-16:50 on April 17 and from 17:40-18:40 on April 18.

P01	Plasma Cleaning and Thermal Compression Bonding of Indium Bumps as Superconducting Interconnects for Cryogenic and Quantum Computing Applications Kumin Kang ¹ , Jaber Derakhshandeh ² , Christian Wendeln ³ , Ralf Schmidt ⁴ , Hao-Yu ⁵ , Ehsan Shafahian ² , Zaid El-Mekki ⁶ , Tom Cochet ⁷ , Masataka Maehara ⁸ , Eric Beyne ⁹ , ¹ Hanyang University / Korea, ² imec / Belgium, ³ Atotech Deutschland / Germany	P10	Fracture Properties Characterization of Multi-Layer Ceramic Capacitors for Device Longevity Assessment Po-Yi Lee, Kuo-Shen Chen, Tz-Cheng Chiu, Tian-Shiang Yang, Ching-Jeng Ho, Lien-Wen Chen, National Cheng-Kung University / Taiwan	P20	Evaluation of PVD SiCN for Cu/SiCN Hybrid Bonding Junyoung Choi, Sangmin Lee, Sangwoo Park, Sarah Funkyung Kim, Seoul National University of Science and Technology / Korea	P30	Long-Term Reliability of Sintering Paste Using Ag Coated Cu Particles Dajung Kim ¹ , Mi So Won ¹ , Hyunseung Yang ¹ , Junghwan Bang ² , Chulmin Oh ¹ , ¹ Electronics Technology Institute, ² Korea Institute of Industrial Technology / Korea
P02	High Speed D2D Interface Applied on Advanced Package Chen Chao Wang, Chih Yi Huang, Hung Chun Kuo, Ming Fong Zhong, Fu Chen Chu, Hsu Yang Lee, Advanced Semiconductor Engineering / Taiwan	P11	Thermal Cycle Reliability of BGA Package With Board-Level Underfill Materials Jiyoon Park ¹ , Dajung Kim ¹ , Hyunseung Yang ¹ , Myeonghyeon Jeon ¹ , Chulmin Oh ¹ , ¹ Korea Electronics Technology Institute / Korea	P21	Fly Cutting for Polymer Planarization in Hybrid Cu Bonding Suin Jang, Sangmin Lee, Sangwoo Park, Sarah Funkyung Kim, Seoul National University of Science and Technology / Korea	P31	Development of a Sintering Paste Using Cu@Ag Powder for Power Package Mi So Won, Dajung Kim, Hyunseung Yang, Chulmin Oh, Korea Electronics Technology Institute / Korea
P03	Research of Impedance Optimization with Mesh Reference Ground Shu-Yu Lin, Shin-Shian Wu, Yu-Ming Su, Tsai-Feng Wu, Sung-Mao Wu, National University of Kaohsiung / Taiwan	P12	Investigation of Plasma Gases for Polysilazane Conversion into SiO ₂ for Water Bonding Daiki Nemoto, Kai Takeuchi, Eiji Higurashi, Tohoku University / Japan	P22	Microstructure and Mechanical Properties of Type 8 Solder Paste for Mini-Led Assembly Using Laser-Assisted Bonding Jun Ho Ku, Sri Harini Rajendran, Jae Pil Jung, University of Seoul / Korea	P32	Silver Paste Transferability in the Imprinting Process H. Komatsu, D. Sakai, N. Shimoishizaka, CONNECTEC JAPAN / Japan
P04	Design of Panel Level Package and Power and Signal Integrity Analysis Yu-zhi Ma, Qian Lee, Sung-Mao Wu, National University of Kaohsiung / Taiwan	P13	Observation of Liquid Crystal Fiber Structure in Nematic and Smectic A phases D. Sato ^{1,2} , Y. Sumino ^{1,2} , T. Yamamoto ² , I. Muševič ³ , Y. Takenaka ⁴ , ¹ Tokyo University of Science, ² National Institute of Advanced Industrial Science and Technology / Japan, ³ Jožef Stefan Institute / Slovenia	P23	Low-Temperature and Low-Pressure Fine-Pitch Micro Cu Bump Bonding Using Stress Migration of a Sputtering Ag Layer Zheng Zhang, Aiji Suetake, Ran Liu, Hiroshi Yoshida, Rieko Okumura, Chuantong Chen, Katsuki Suganuma, Osaka University / Japan	P33	Influence of Various Plasma and UV/O ₂ Treatments on Au Surfaces for Au-Au Surface Activated Bonding Mika Ogino, Kai Takeuchi, Eiji Higurashi, Tohoku University / Japan
P05	High Speed Signal Design on Fan-Out RDL Interposer for Artificial Intelligence (AI) and Deep Neural Network (DNN) Chiplet Accelerators Application Ming-Han Zhuang, Chih-Yuan Shih, Ho-Chuan Lin, Andrew Kang, Yu-Po Wang, Siliconware Precision Industries / Taiwan	P14	Development of Laminate Materials With Low D _i Using Novel Functionalized PPE H. Yamamoto ¹ , K. Iwase ¹ , H. Fukuoka ¹ , S. Otani ¹ , M. Harada ² , ¹ Asahi Kasei, ² Kansai University / Japan	P24	Comparison of Mechanical Property and Thermal Cycling Lifetime of Sintered Cu and Sintered Ag Dai Ishikawa ¹ , Hideo Nakako ¹ , Thomas Blank ² , Felix Steiner ² , ¹ Resonac / Japan, ² Karlsruhe Institute of Technology / Germany	P34	Preparation and Characterization of Expanded Graphite/Polymer Composites With Enhanced Thermal Conductivity Chih-Feng Wang ¹ , Pei-Rung Hung ² , Ping-Feng Yang ³ , ¹ National Sun Yat-sen University, ² I-Shou University, ³ Advanced Semiconductor Engineering / Taiwan
P06	Eutectic Bonding in Sequential Bi and Sn Layers for Low-Temperature Interconnections Sri Harini Rajendran, Jae Pil Jung, Chul Hwa Jung, Seong Min Seo, University of Seoul / Korea	P15	Optimal Impedance Design for Meshed Ground Application at High-speed Circuit Shin-Yi Hung, Sung-Mao Wu, National University of Kaohsiung / Taiwan	P25	Effect of the Ratio of Na, K and Li on the PL Performance, Color and Composition of UC ₂ C ₄ Phosphor J. Y. Shih, C. L. Chung, J. D. Lin, I-SHOU University / Taiwan	P35	Aluminum Nitride Filler For Thermally Conductive Resin Materials Koki Tsuchida, Suzu Tanaka, Hisamori Inagawa, Yoshitaka Inaki, Tokuyama / Japan
P07	Low Dielectric Materials for High Frequency Semiconductor Packaging Application Mei-Yu Hsu, Chih-Hao Lin, Kai-Chi Chen, Industrial Technology Research Institute / Taiwan	P16	Electromagnetic Susceptibility of System Circuit Based on Near-Field Measurement Techniques Chin-Yi Chou ¹ , Jing-Wei Zhang ¹ , Yu-Ming Su ¹ , Sung-Mao Wu ^{1,2} , ¹ National University of Kaohsiung, ² Micro-Electronic Packaging Laboratory / Taiwan	P26	Preparation of Metal Salt-Doped Silicon/Silicon Titanium Nanofibers by Electrospinning and Heat Treatment C. S. Yu, Y.J. Zhu, C. L. Chung, I-SHOU University / Taiwan	P36	Heat Dissipation Characteristics of Cu-MWNT Nanocomposites Coated by Plasma Spray Process on Al Substrates Geon-Joo Jeong ¹ , Tae-Yoo Kim ² , Seung-Boo Jung ¹ , Kwang-Seok Kim ¹ , ¹ Sungkyunkwan University, ² Korea Institute of Industrial Technology / Korea
P08	Reliability Study of Ag Through via Interconnects for Integrated Hom Antennas in LTCC Substrates C. Kleinholz, M. Fischer, J. Muller, Technische Universität Ilmenau / Germany	P17	Effect of Evaporated and Sputtered Au Nanolayers on Cu Surface for Low-Temperature Cu-To-Cu Bonding Sangmin Lee, Sangwoo Park, Junyoung Choi, Sarah Funkyung Kim, Seoul National University of Science and Technology / Korea	P27	Characterization of Chitin or Chitosan/PEO Nanofibers Prepared by Electrospinning K. H. Wu, C. Y. Wu, C. L. Chung, I-SHOU University / Taiwan	P37	Novel Lightweight, Highly Thermally Conductive Graphene-Enhanced Heat Pipes for Electronics Cooling and Thermal Management Applications Zhiyang Shen ¹ , Jijia Chen ¹ , Sihua Guo ¹ , Amos Nkansah ² , Hongfeng Zhang ² , Johan Moller ² , Johan Liu ¹ , ¹ Shanghai University / China, ² SHT Smart High Tech, ³ Chalmers University of Technology / Sweden
P09	Excitation Technology for Substrate-Integrated Waveguide Magnetic Mode Yu Hsien Wu, National University of Kaohsiung / Taiwan	P18	Bi Segregation in the Solid/Liquid Cu-0.1wt.% Fe (C19210)/Sn-58Bi Solder A. D. Laksono, J. T. Chou, Y. W. Yen, National Taiwan University of Science and Technology / Taiwan	P28	Influence of Bi Content on Strain Rate Sensitivity of Sn-Bi Alloys Akira Yamauchi, Masashi Kurose, National Institute of Technology, Gumma College / Japan	P38	Effectiveness of the Inhibitor EDTA on Cooling Performance of Long Life Coolant Under Flow Boiling Conditions Kazuhisa Yuki ¹ , Hitoshi Yoshimura ¹ , Naoya Sakamoto ¹ , Kohei Yuki ¹ , Hitoshi Asano ¹ , Takuro Nakaoka ² , Mutsuaki Goto ³ , ¹ Sanyo-Onoda City University, ² DENSO / Japan
		P19	Optimization of O ₂ Plasma Treatment on Cu Surface for Hybrid Cu Bonding Sangwoo Park, Sangmin Lee, Junyoung Choi, Sarah Funkyung Kim, Seoul National University of Science and Technology / Korea	P29	Study on Electro-Optical Customizability Improvement Using Modular Design with Discrete Controllable External Electrode Tritnai Chingungval ¹ , Daichi Nagai ¹ , Chikara Shirahama ¹ , Hideki Yokoi ^{1,2} , ¹ Shibaura Institute of Technology, ² International Research Center for Green Electronics / Japan		