

■ 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-Nuernberg (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-Jeng 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 ³ , Ping-Feng Yang ¹ , ¹ National Sun Yat-sen University, ² Shou University, ³ Advanced Semiconductor Engineering, Inc.
P12	Development of A 650V / 300GaN Half-bridge Power Module Yuto Kinoshita ¹ , Kotaro Okano ¹ , Shota Yamada ¹ , Tatsumi Yamamoto ¹ , Takeya Matsumoto ^{1,2,4} , Eigo Fukuda ⁴ , Takaharu Takeshita ^{1,2,4} , Toshihiko Noguchi ¹ , Masato Omori ^{1,2,4} , 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, Jihli-Syuan Jian, 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 ¹ , 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-xNixO3 Nanofibers 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 eunkyoung 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 ¹ , ¹ Hanbat National University, ² UNIST
P21	New Concept of Intrinsically Switched Tunable Bandpass Filter Using Multi-band Resonators Akchito 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 AIM Fillers for Composite Resins with High Thermal Conductivity and Low Bond-Line Thickness Yusaku Imasaka, Atsushi Sanagawa, Isao Masada, Go Hamasaka, Yukihiko Kanechika, Tokuyama Corporation
P24	Investigation of Electrical and Reliability Properties in Nanowinned Sintered Joints Shin-Yi Huang ¹ , Po-Kai Chiu ¹ , Yung-Min Hsieh ¹ , Yu-Hua Wu ¹ , Fan-Yi Ouyang ¹ , 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 ¹ , Chun-Ming (Albert) Wang ¹ , 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 ¹ , Chih-Cheng Hsiao ¹ , 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 , Bjorn Mueller ¹ , Alexander Schulz ¹ , Michael Fischer ¹ , Nesrine Jazini ¹ , Christian Tschoban ¹ , Karl-Friedrich Becker ¹ , Martin Schneider-Ramelow ¹ , Jens Mueller ¹ , ¹ Ilmenau Technical University, ² Fraunhofer Institute for Reliability and Microintegration
P28	Low-Temperature Curable Photo-Definable 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 ¹ , 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 ² , 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 ² , Jianhao Wang ¹ , 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 Dielectric 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 ¹ , Shaofeng Wang ¹ , Jianyu Du ¹ , Wei Wang ^{1,2,4} , Chi Zhang ^{1,2,4} , 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 ¹ , Feng Ji ¹ , Jiajie Kang ¹ , 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-Mold 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 ¹ , Yuxuan Yan ¹ , 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 ¹ , Chantlong Chen ¹ , Seungmin Cho ^{1,2} , Myung Sik Choi ¹ , Soongkeun Hyun ¹ , Katsuki Suganuma ¹ , 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} , Chantlong Chen ¹ , Sangmin Lee ¹ , Fupeng Huo ¹ , Minseo Kim ^{1,2} , Katsuki Suganuma ¹ , ¹ Inha Manufacturing 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 FCGBA 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 Wang, 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 ¹ , Shuwei He ¹ , Shenglin Ma ¹ , ¹ Xiamen University, ² Xian 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 University
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 ¹ , Lang Chen ¹ , Yihui Cheng ¹ , Chong Chen ¹ , Yufeng Jin ¹ , Chi Zhang ¹ , Pan Zhang ¹ , Wei Wang ^{1,3} , ¹ Peking University

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