

■ 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	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
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 ^{1,2} , Kuo-Ning Chiang ^{1,2} , ¹ National Tsing Hua University, ² College of Semiconductor Research, National Tsing Hua University	P43	Wafer Bonding Void Investigation with SiN Dielectric Film Yeong-Jyh Lin, National Sun Yat-sen 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-Universität Erlangen-Nürnberg (FAU), Institute for Factory Automation and Production Systems (FAPS)	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
P04	Intelligent Troubleshooting System for SMT Assembly Lines Using GraphRAG and Knowledge Graphs Felix Mahr, Joerg Franke, Manuela Ockel, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Institute for Factory Automation and Production Systems (FAPS), Germany	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
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	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.
P06	Microstructural and Thermo-mechanical Behavior of CuAl Bilayer Alloy for Low-Temperature Hybrid Bonding Sarabot Singh, Kathleen Dunn, University at Albany, State University of New York	P47	Two Phase Cooling with Microporous Wick and 3D-printed Microchannel Manifold Shangyong Shi ¹ , Shangjin Ning ¹ , Shaofeng Wang ¹ , Jianyu Du ¹ , Wei Wang ^{1,3,4} , Chi Zhang ^{1,4} , 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
P07	Latent Catalysts Development for Energy Saving Semiconductor Packaging Application Yi Chen, Chih Lin, Kai Chen, Industrial Technology Research Institute	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
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	P49	A Multi-Modality Temperature-Pressure-Flow Monitoring Device Based on a Venturi Differential Pressure Sensor Rong Zhang ¹ , Pan Zhang ¹ , Hongxu Wu ¹ , Shengyong Xu ¹ , Yuxuan Yan ¹ , Wei Wang ¹ , ² Wuhan Second Ship Design Institute, ³ Anhui University
P09	Feasibility and Reliability Considerations of Liquid Metal Alloys in Advanced Packaging. Wen-Yu Teng, Silicoware Precision Industries Co., Ltd.	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
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	P51	Room Temperature Direct Bonding of Lithium Niobate Wafers With Different Orientations Yoshiaki Katoda, Junpei Nakamura, Ryo Takigawa, Kyushu University
P11	Synthesis and characterization of thermally conductive carbon nanotube-reinforced polysiloxane composites Chih-Feng Wang ¹ , Pei-Rung Hung ¹ , Pei-Kang Huang ¹ , Ping-Feng Yang ¹ , ¹ National Sun Yat-sen University, ¹ I-Shou University, ³ Advanced Semiconductor Engineering, Inc.	P52	High-efficiency cleaning for particle removal applied in the CoW hybrid bonding process Crystal Hsu, ASE Group
P12	Development of a 650V / 300GaN Half-bridge Power Module Yuto Kinoshita ¹ , Kotaro Okano ¹ , Shota Yamada ¹ , Tatsumi Yamamoto ¹ , Takeya Matsumoto ^{1,3,4} , Eigo Fukuda ^{1,4} , Takaharu Takeshita ^{1,3,4} , Toshihiko Noguchi ^{1,4} , Masato Omoni ^{1,3,4} , ¹ Oita University, ² Nagoya Institute of Technology, ³ Shizuoka University, ⁴ Next Semiconductor, Inc.	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 , Chuantong Chen ¹ , Seungmin Cho ^{1,2} , Myung Sik Choi ¹ , Soongkun Hyun ¹ , Katsukai Suganuma ² , ¹ Inha University, ² The University of Osaka, ³ Kyungpook National University
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	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, Korca Electronics Technology Institute
P14	Thru Kits realized by Substrate-Integrated Waveguide architecture for Double-side calibration Wu Ji-Hsuan, Wu Sung-Mao, National University of Kaohsiung	P55	Reliability Analysis of Copper Paste Joints between Ni/Au-Coated SiC Chips and AMB Substrates during High-Temperature Aging Seungmin Cho ¹ , Chuantong Chen ¹ , Sangmin Lee ¹ , Fupeng Huo ¹ , Minseo Kim ^{1,2} , Katsukai Suganuma ² , ¹ Inha Manufacturing Innovation School, ² The University of Osaka
P15	Nanoindentation Investigation of Through Substrate Vias Drilled by Ultrashort Pulse Laser Percussion RUENN TSAI, Sheng-Wei Tsai, Jihh-Syuan Jhan, National Sun Yat-sen University	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
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, ASE Group Taiwan	P57	ANN Surrogate Model for Signal Integrity Prediction of FCBGA Soojin Lim, Soyoung Kim, Sungkyunkwan University
P17	Construction of Chitosan/Poly(vinyl alcohol)/Poly(ethylene oxide) Scaffolds Via Electrospinning Technology YOUJIE TSAI, JHENGHENTU, ZHEYIYI WU, I-SHOU University	P58	GNN-Based Early Power Integrity Estimation for PDN Design Seonghyun Park, SoYoung Kim, Sungkyunkwan University
P18	Perovskite La _{0.8} Sr _{0.2} Mn _{1-x} Ni _x O ₃ Nanofibers Of Electrospinning Kai Chen, I-SHOU University	P59	Surrogate Model for Junction Temperature Prediction for High-Performance Computing Chips Using Direct-to-Chip Liquid Cooling technology Jiaxin Wang, Xiong Xiao, Jiaxing Huang, Zhizhen Wang, Shenglin Ma, Xiamen University
P19	Analysis of Au and Ru Passivation Layers Deposited via Electroless Plating for Low-Temperature Cu-Cu Bonding Byeongchan Go, hoogwan lee, sarah cunkyung kim, Seoul National University of Science and Technology	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 Xi'an Microelectronic Technology, ³ China Electronics Technology Group Corporation 29th Research Institute Chengdu
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	P61	Interfacial Chemistry-Driven Reliability Enhancement in Air-Cured Bimodal Cu-Filled Conductive Pastes Ayumi Uchida, Masahiro Inoue, Gunma University
P21	New Concept of Intrinsically Switched Tunable Bandpass Filter Using Multi-band Resonators Akehito Shiozaki, Hiroki Matsura, Junichiro Matsuki, Koji Wada, The University of Electro-Communications	P62	Tailoring Electrical Properties of Printed Stretchable Wires via Binder Molecular Design for Electrically Conductive Pastes Togo Hatori, Masahiro Inoue, Haruya Okamura, Gunma University
P22	Fan-out RDL technology development for shuttle service Chen Chun Yu, Industrial Technology Research Institute	P63	Effect of Structural Factors in Enhancing Dynamic Percolation of Multi-walled Carbon-nanotube-filled Conductive Pastes Tomoya Hanada, Gunma University
P23	Development of AlN Fillers for Composite Resins with High Thermal Conductivity and Low Bond-Line Thickness Yusaku Imasaka, Atsushi Sanagawa, Iaso Masada, Go Hamasaki, Yukihiko Kanechika, Tokuyama Corporation	P64	Design Study of Next-Generation Hybrid Bonding Processes Hidetaka Kitada, Koharu Yuzawa, Takayuki Ohba, Institute of Science Tokyo
P24	Investigation of Electrical and Reliability Properties in Nanowinned Sintered Joints Shin-Yi Huang ¹ , Po-Kai Hsu ¹ , Yung-Min Hsieh ¹ , Yu-Hua Wu ¹ , Fan-Yi Ouyang ¹ , ¹ Industrial Technology Research Institute, ² National Tsing Hua University	P65	PHYSICS-INFORMED SMALL-SAMPLE NEURAL NETWORK FOR SUBMICRO ETCH PROFILES PREDICTING IN SF6/O2/SiF4/REACTIVE 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 ^{1,2} , Peking University
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-adapted LTCC horn antenna structures Cathleen Kleinholtz ¹ , Björn Mueller ¹ , Alexander Schulz ¹ , Michael Fischer ¹ , Nesrine Jaziri ¹ , Christian Tschochan ¹ , Karl-Friedrich Becker ¹ , Martin Schneider-Ramelow ¹ , Jens Mueller ¹ , Ilmenau Technical University, ² Fraunhofer Institute for Reliability and Microintegration		
P28	Low-Temperature Curable Photo-Definableellie Polyimide and Its Application as a Sealing Material for RF-MEMS Susumu Tanaka, Tomoki Sakai, Yumiko Okuda, Hitoshi Araki, Toray Industries, Inc.		
P29	UVU-Induced Surface Activation for Cu/SiO ₂ hybrid Bonding -Effect of H ₂ Concentration in H ₂ /H ₂ O 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, Katsuki 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 Seolin Yoon, Hui Won Eom, Haejin Kwak, Yu 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 ¹ , Jing Zhang ¹ , 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, Zhejiang Province		
P39	Interfacial Corrosion Behavior Analysis of Sintered Silver and Sintered Copper Joints for Power Electronics Packaging Letao Bian ¹ , Xinyue Wang ¹ , Guoqi Zhang ¹ , Jing Zhang ¹ , Jianhao Wang ¹ , Pan Liu ^{1,4} , ¹ College of Intelligent Robotics and Advanced Manufacturing, Fudan University, ² Deft 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 , 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		