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TD2-3	Adhesion Characteristics of Sputtered Cu Seed Layer on Cycloolefin Polymer	A. Shimizu[1,2], K. Fukada[3], S. Endo[1,4], [1]Ushio, [2]Gifu University, [3]Shibaura Machine, [4]Osaka Prefecture University / Japan	**125**
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TD3-2	Photonic Curing and Soldering to Printed Silver for Enhanced Attachment and Joint Quality	John Ukwuoma[1], Harry Chou[1], Ara Parsekian[1], Ian Rawson[1], Dave Pope[2], Vahid Akhavan[1], [1]PulseForge, [2]NovaCentrix / USA	**131**
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	**133**
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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	**139**
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	**141**
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	**143**

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TE1-1	Bonding Parameter-Dependent Microstructural and Mechanical Capabilities of Ag Porous Sheet Bonding	YehRi Kim[1,2], Eunjin Jo[1,3], Byeong Kwon Ju[2], Yoongul Lee[4], Jaeup Kim[4], Kijoon Ahn[4], Dongjin Kim[1], [1]Korea Institute of Industrial Technology, [2]Korea University, [3]Andong National University, [4]SP Semiconductor / Korea	**145**
TE1-2	Solid-State Bonding With SAC305 Sheets for Direct Cooling	Eunjin Jo[1,2], YehRi Kim[1,3], Young-Bae Park[2], Dongjin Kim[1], [1]Korea Institute of Industrial Technology, [2]Andong National University, [3]Korea University / Korea	**147**
TE1-3	Thermo-Mechanical Reliability of Ag Porous Sheet Bonding Structures	Dongjin Kim[1], YehRi Kim[1,2], Eunjin Jo[1,3], Seoah Kim[1,4], Jiyong Park[1], Yong-Ho Ko[1], [1]Korea Institute of Industrial Technology, [2]Korea University, [3]Andong National University, [4]Kyonggi University / Korea	**149**

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TE2-1	Investigation of Wafer Warpage Evolution Baesd on Fan-out Chip-first Process	Hung-Chun Yang, Wei-Hong Lai, Chin-Li Kao, Chen-Chao Wang, Chih-Pin Hung, Advanced Semiconductor Engineering / Taiwan	**151**
TE2-2	Solder Joint Reliability Comparison Under JEDEC Drop and System-like Drop Test Conditions	Meng-Kai Shih[1], Zih-Jun Ke[1], Chun-Yu Yen[2], Wei-Hong Lai[2], Chin-Li Kao[2], [1]National Formosa University, [2]Advanced Semiconductor Engineering / Taiwan	**153**
TE2-3	The Effect of Electromigration and Stress Migration on NT-Cu RDLs Passivated With Titanium Dioxide	Yi-Quan Lin, Ching-Yu Tang, Yu-Wen Hung, You-Yi Lin, Chih Chen, National Yang Ming Chiao Tung University / Taiwan	**155**

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TE3-1	Temperature Dependence Mechanical Characteristics of Ag Alloy Wire and Corresponding Influence in Wire Bonding Procedure	D.-S. Liu[1], P.-C. Wen[1], Z.-W. Zhuang[1], Y. C. Chao[2], P.-C. Huang[1], [1]National Chung Cheng University, [2]National Chiayi University / Taiwan	**157**
TE3-2	Simulation Study of Pore Structure Evolution and its Influences on the Properties of Sintered Silver	Han Jiang[1], Shuibao Liang[2], Changqing Liu[3], [1]Anhui University, [2]Hefei University of Technology / China, [3]Loughborough University / UK	**159**
TE3-3	Effect of Phase Evolution on Inhomogeneous Deformation and Fracture Behavior in Sn-Bi Solder Alloys	Shuibao Liang[1], Wangyun Li[2,3], Han Jiang[4,5], Zhihao Guo[1], Zhihong Zhong[1], [1]Hefei University of Technology, [2]Guilin University of Electronic Technology / China, [3]Osaka University / Japan, [4]Anhui University / China, [5]Loughborough University / UK	**161**

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TE4-1	Prediction of High-Speed Oscillator Frequency Drift Under Package Level Reliability Tests	Ming-Han Wang[1], Christine Xiao[2], Chien Liu[1], Hassan Hashemi[2], [1]Synaptics / Taiwan, [2]Synaptics / USA	**163**
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	**165**
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	**167**
TE4-4	Power Device Structure Optimization by Sequential Approximation Optimization Method	Tomoki Takao, Yoshiharu Iwata, Hidefumi Wakamatsu, Osaka University / Japan	**169**

FA1: Glass PKG-1

9:40-11:20 Friday, April 19

FA1-1 <Session Invited>	Markets, Opportunities, and Challenges with Glass Package Applications: Today +10	E Jan Vardaman, TechSearch International, / USA	-
FA1-2 <Session Invited>	Glass Material and TGV Formation Technologies	Yoichiro Sato, AGC / Japan	-
FA1-3 <Session Invited>	The Role of Structured Glass Substrates for Heterogeneous Integration of Electronics	Martin Letz, Schott / Germany	-
FA1-4 <Session Invited>	High Volume Glass Microhole Formation by LIDE	Hiroyuki Kamidate, LPKF Laser & Electronics / Japan, Richard Noack, LPKF Laser & Electronics / Germany	-

FA2: Glass PKG-2

11:30-13:10 Friday, April 19

FA2-1 <Session Invited>	Challenge of Metallization on Glass Core and Through-Glass Vias	Tomoki Shinohara, Toshio Honda, Toshiya Fujiwara, Atotech Japan / Japan	-
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	**171**
FA2-3	Physical and Thermal Characteristics of the Advanced Package with Glass Core Substrate	S. Mitarai, K. Adachi, T. Igarashi, K. Seki, N. Kakoiyama, Y. Tanaka, S. Oka, M. Nakazawa, H. Iwamoto, Sony Semiconductor Solutions / Japan	**173**
FA2-4 <Session Invited>	Glass Package Trends & Core Technologies	Tetsuya Onishi, Grand Joint Technology / Hong Kong	-

FA3: Nano-imprint

14:00-15:40 Friday, April 19

FA3-1 <Session Invited>	Synchronization of Process and Material to Achieve Best Results in Nano-Imprinting Lithography	Patrick Schuster, EV Group / Austria	-
FA3-2 <Session Invited>	Advanced Manufacturing Techniques for Freeform Micro-Optics Elements	Anna Dudus, EV Group / Austria	-
FA3-3 <Session Invited>	Advanced Technologies for Large FOV Waveguide	Satoshi Shiraga, Cellid / Japan	-
FA3-4 <Session Invited>	Wearable Devices Using Microfabrication and Nanoimprinting of Conductive Polymers	Seiichi Takamatsu, The University of Tokyo / Japan	-

FA4: Professor S. Denda Memorial Session

16:00-17:40 Friday, April 19

FA4-1 <Session Invited> (10min.)	Reminiscence of Dr. Seiichi Denda- "Japanese Session" in ISHM/IMAPS Conference	Fumio Miyashiro, Yokohama Jisso Consortium / Japan	-
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	-
FA4-3 <Session Invited> (30min.)	Toward Glass Core Substrate From Si Interposer for the Future Advanced Packaging	Satoru Kuramochi, Dai Nippon Printing / Japan	-
FA4-4 <Session Invited> (30min.)	Multilayer Glass Core Substrate Technology with Using Conductive Paste	Taiji Sakai, FICT / Japan	-

FB1: Advanced Packaging-5

9:40-11:20 Friday, April 19

FB1-1	Approach With Large Panel Fan-Out Technology	Ping-Ching Shen[1], Sheng-Feng Huang[1], Ping-Feng Yang[1], Jen-Kuang Fang[1], [1]Advanced Semiconductor Engineering / Taiwan	**175**
FB1-2	Approach for Advanced Packaging for 2.5D/3D Chiplets	T. Kubota, H. Oshida, S. Hayashiguchi, Y. Kajikawa, TOWA / Japan	**177**
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	**179**
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	**181**

FB2: Advanced Packaging-6

11:30-13:10 Friday, April 19

FB2-1 <Session Invited>	Design Considerations for 2.5D Interposer Technologies	Gu-Sung Kim, Kangnam University / Korea	**-**
FB2-2	The Strategy on Artificial Neural Networks for Predicting Advanced Packaging Reliability Under Small Dataset	Qinghua Su[1], Cadmus Yuan[2], K.N. Chiang[1], [1]National Tsing Hua University, [2]Feng Chia University / Taiwan	**183**
FB2-3	Hybrid Numerical Simulation for Capillary Underfill Flow Over a Fine Pitch HBM Packaging	Chien-Ting Wu, Leo Shen, CoreTech System (Moldex3D) / Taiwan	**185**
FB2-4	RDL Embedded Coreless Substrate for Hetelogenious Integlation	Fusao Takagi, Takashi Fujita, Masahiro Kosugi, Hiroyuki Ishida, Akane Kobayashi, Shuji Kiuchi, TOPPAN Holdings / Japan	**187**

FB3: High-Speed, Wireless & Components-1

14:00-15:40 Friday, April 19

FB3-1	A Compact AiP with a Dual-Polarized 1x4 Antenna Array for 5G Smartphone Applications	Sheng-Chi Hsieh[1], Hong-Sheng Huang[1], Wen-Chun Hsiao[1], Cheng-Yu Ho[1], Tai-Jung Lee[2], Chen-Chao Wang[1], Hsu-Yang Lee[1], [1]Advanced Semiconductor Engineering, [2]National Chi Nan University / Taiwan	**189**
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	**191**
FB3-3	Microwave Patch Antenna Placement on 6U CubeSat	Daisuke Nakayama, Kei Sano, Tohlu Matsushima, Yuki Fukumoto, Kyushu Institute of Technology / Japan	**193**
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	**195**

FB4: High-Speed, Wireless & Components-2

16:00-17:40 Friday, April 19

FB4-1	Development of Cast Iron Manhole Steel Covers With Improved Radio Wave Permeability	Eiichi Tateishi[1,2], Yuantong Yi[1], Nobuhiro Kai[2], Takaya Kumagae[2], Tatsuya Yamaguchi[3], Haruichi Kanaya[1], [1]Kyushu University, [2]HINODE Holdings, [3]HINODE / Japan	**197**
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	**199**

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FC1-1	Study of Wetting and Interfacial Reactivity in Au/Liquid in System for Photonic Packaging	O. Belhaddad[1,2], O. Mailliart[1], F. Hodaj[2], [1]CEA, LETI, [2]Univ. Grenoble Alpes / France	**201**
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	**203**
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	**205**
FC1-4	Temperature-Dependent Electrical Resistivity in Sn-Bi Alloys	Xin F. Tan[1,2], Qichao Hao[1], Jiye Zhou[1], Stuart D. McDonald[1], Keith Sweatman[1,3], Kazuhiro Nogita[1], [1]The University of Queensland / Australia, [2]Kyushu University, [3]Nihon Superior / Japan	**207**

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FC2-1	Surface Manipulation of Ag Metallization to Improve the Adhesion Strength for Soldering Applications on LTCC	C. Kleinholz[1], B. Muller[1], M. Fischer[1], C. Tschoban[2], J.-M. Koszegi[2], H. Potter[2], I. Ndip[2], M. Schneider-Ramelow[2], J. Muller[1], [1]Technische Universitat Ilmenau, [2]Fraunhofer Institute for Reliability and Microintegration / Germany	**209**
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	**N/A**

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	**213**
FC2-4	In-Situ Observations of Cu_6Sn_5 Morphological Changes at the Liquid SAC305/ Solid OSP-Cu Interface	Kazuhiro Nogita[1], Xin F. Tan[1,2], Flora Somidin[3], Stuart D. McDonald[1], Hiroshi Maeno[2], Syo Matsumura[1,2], [1]The University of Queensland / Australia, [2]Kyushu University / Japan, [3]Universiti Malaysia Perlis / Malaysia	**215**

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FC3-2	Dvelopment of Novel Low Dielectric Epoxy Resin	Kentaro Tanaka, Masanari Nishimura, Noriyuki Kida, Takaaki Watanabe, Mitsubishi Chemical / Japan	**219**
FC3-3	Kinetics on Dynamic Percolation of Carbon-Nanotube-Filled Electrically Conductive Pastes Depending on Binder Chemistry	Masahiro Inoue, Subaru Tsujimura, Jinseok Won, Gunma University / Japan	**221**
FC3-4	Ultra-sensitive Visualization and Identification of Defects in Microelectronics Packaging	Michael K. F. Lo, Eoghan P. Dillon, Jay Anderson, Photothermal Spectroscopy / USA	**223**

FC4: Advanced Packaging Materials and Related Technologies
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FC4-1	Surface Topography Control for Polymer/Cu Hybrid Bonding	Yuzo Nakamura[1,2], Yusuke Kondo[1], Kenta Hayama[1], Fabiana Lie Tanaka[1], Fumihiro Inoue[1], [1]Yokohama National University, [2]Mitsui Chemicals / Japan	**225**
FC4-2	Development of Fast Filling Acid Copper Plating for Through Silicon Via	Nobuaki Nagano, Shota Suzuki, Reito Kobayashi, JCU / Japan	**227**
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	**229**
FC4-4	A Special Holding System for Large Package in 3D X-ray Inspection	Chia-Ju Huang[1], Yu-Hsiang Hsiao[1], Yi-Sheng Lin[1], Cheng-Hsin Liu[1], [1]Advanced Semiconductor Engineering / Taiwan	**231**

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FD1-1	Issues of Using Unsaturated Heating Time for Transient Thermal Measurement Part 2	Tomoaki Hara[1], Shuhei Fukunaga[2], Tsuyoshi Funaki[2], [1]Siemens, [2]Osaka University / Japan	**233**
FD1-2	Influence of Heat Losses on Measurement of Thermal Contact Resistance	U. Akram, T. Hatakeyama, R. Kibushi, Toyama Prefectural University / Japan	**235**
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	**237**

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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	**241**
FD2-3	Metal Sinter Material Technology for Power Module Packaging	Chen-Chun Chao, Yi-Chi Yang, Jyh-Long Jeng, Industrial Technology Research Institute / Taiwan	**243**
FD2-4	Cooling Performance Evaluation of Microprocessor Package and Heat Sink	K. Nishi, C. Shibata, Ashikaga University / Japan	**245**

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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	**249**
FD3-3	Assessment of Thermal Dissipation Ability of Assembled Modules Bonded by Metallic Pastes, Pb-free Solder, and Thermally Conductive Sheet	Ming-chun Hsieh[1], Aiji Suetake[1], Zheng Zhang[1], Rieko Okumura[1], Kei Anai[2], Takashi Hattori[2], Katsuaki Suganuma[1], [1]Osaka University, [2]Mitsui Mining & Smelting / Japan	**251**
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	**253**

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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	**257**
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	**259**
FE1-4	Design and Evaluation of On-Chip Terahertz Wave Power Combiner for Beyond 5G/6G	Y. Kamiura, H. Ssali, H. Agemori, R. Doi, M. Che, Y. Mikami, K. Kato, Kyushu University / Japan	**261**

FE2: Optoelectronics-2

11:30-13:10 Friday, April 19

FE2-1 <Session Invited>	Dinuclear Eu (III)-β-Diketonates With Tetraphosphine Tetraoxide Ligand and Their LED Applications	Hiroki Iwanaga[1], Chingchun Huang[1], Takeshi Hongo[1], Atsushi Okuno[2], [1]Toshiba, [2]Green Planets / Japan	**263**
FE2-2 <Session Invited>	Light-Reflection-Type High-Power Distar Engine Capable Easy Heat Dissipation	Kensho Okamoto, Kyoto University / Japan	**265**
FE2-3 <Session Invited>	Superior Characteristics of 405nm-Based High-CRI White LEDs	Atsushi Okuno[1], Jang Uk An[2], [1]Green Planets / Japan, [2]ALLIX / Korea	**-**

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14:00-15:40 Friday, April 19

FE3-1 <Session Invited>	New Development of Eu-Doped Gan Red LEDs for Small Micro-LED Displays With Ultrahigh Definition	Yasufumi Fujiwara[1,2], [1]Ritsumeikan University, [2]Osaka University / Japan	**-**
FE3-2 <Session Invited>	How can Micro-LEDs for Next Generation Displays Leverage The Learnings of Electronics Assembly / Packaging Industry?	Makaren Hussein, LuxNour Technology / USA	**-**

Poster Session

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[3], Hao-Yu[2], Ehsan Shafahian[2], Zaid El-Mekki[2], Tom Cochet[2], Masataka Maehara[2], Eric Beyne[2], [1]Hanyang University / Korea, [2]imec / Belgium, [3]Atotech Deutschland / Germany	**267**
P02	High Speed D2D Interface Applied on Advanced Package	Chen Chao Wang, Chih Yi Huang, Hung Chun Kuo, Ming Fong Jhong, Fu Chen Chu, Hsu Yang Lee, Advanced Semiconductor Engineering / Taiwan	**269**
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	**271**
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	**273**

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	**275**
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	**277**
P07	Low Dielectric Materials for High Frequency Semiconductor Packaging Application	Meei-Yu Hsu, Chih-Hao Lin, Kai-Chi Chen, Industrial Technology Research Institute / Taiwan	**279**
P08	Reliability Study of Ag Through via Interconnects for Integrated Horn Antennas in LTCC Substrates	C. Kleinholz, M. Fischer, J. Muller, Technische Universitat Ilmenau / Germany	**281**
P09	Excitation Technology for Substrate-Integrated Waveguide Magnetic Mode	Yu Hsien Wu, National University of Kaohsiung / Taiwan	**283**
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-Jenq Ho, Lien-Wen Chen, National Cheng-Kung University / Taiwan	**285**
P11	Thermal Cycle Reliability of BGA Package With Board-Level Underfill Materials	Jiyeon Park[1], Dajung Kim[1], Hyunseung Yang[1], Myeonghyeon Jeon[1], Chulmin Oh[1], [1]Korea Electronics Technology Institute / Korea	**287**
P12	Investigation of Plasma Gases for Polysilazane Conversion into SiO_2 for Wafer Bonding	Daiki Nemoto, Kai Takeuchi, Eiji Higurashi, Tohoku University / Japan	**289**
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[2], [1]Tokyo University of Science, [2]National Institute of Advanced Industrial Science and Technology / Japan, [3]Jožef Stefan Institute / Slovenia	**291**
P14	Development of Laminate Materials With Low D_f 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	**293**
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