Date: Monday, 11/Sep/2017

8:45am - 9:00am

Opening session

9:00am - 10:30am

Plenary session 1

3D System Integration. An Interconnect Hierarchy driven Technology Landscape
Eric Beyne
imec, Belgium

Printed stretchable electronics – enabler of unobtrusive biosignal monitoring
Matti Mäntysalo
Tampere University of Technology, Finland

11:00am - 1:00pm

Session 1: Advanced packaging and interconnects (1)

Small Form-Factor, Liquid-Cooled SiPM Module for PET/MRI Applications
Dr. Rainer Dohle[1], Thomas Rittweg[2], Dr. Ilaria Sacco[3]
1: Micro Systems Engineering GmbH, 95180 Berg, Germany; 2: Micro Systems Engineering GmbH, ENS, 95180 Berg, Germany; 3: Institut für Technische Informatik der Universität Heidelberg, B6, 26, 68131 Mannheim

Direct copper metallization on TGV Thru-Glass-Via) for high performance glass substrate
Tsubasa Fujimura, Kotoku Inoue, Masatoshi Takayama, Sigeo Onitake
Koto Electric Co.,Ltd., Japan

Impact of the combination of a stress buffer layer and a wafer level underfill on 3D IC assembly using thermal compression bonding
Fabrice F. C. Duval, Teng Wang, Giovanni Capuz, Pieter Bex, Kenneth J. Rebibis, Melina Lofrano, Erik Sleeckx, Eric Beyne
Imec, Belgium

Experimental LTCC platform for millimeter-wave applications
Camilla R. G. Kärnfelt[1,2], François Gallée[1,2], Vincent Castel[1,2], Maïna Sinou[1], Pascal Coant[1,2]
1: Institut Mines-Telecom/IMT Atlantique, France; 2: Lab-STICC UMR CNRS 6285

Hot bar joining method for medical applications
David Wagner, Kai Pitschmann, Ulrich Schumann, Sebastian Freidank, Bertram Schmidt, Markus Detert
Otto-von-Guericke-Universität Magdeburg, Germany

Fine Pitch High Bandwidth Flip Chip Package-on-Package Development
Stanley Lin[2], Ian Hsu[2], Chi-Yuan Chen[2], NamJu Cho[1], Ming-Che Hsieh[1]
1: STATS ChipPAC Pte. Ltd., Singapore; 2: MediaTek, Inc.

Session 2: Printed, hybrid and flexible electronics

Experimental Investigation on 3D Metal Interconnection for HySiF(hybrid system in flexible) Devices Using ElectroHydroDynamic (EHD) System
Joon Yub Song, Yongjin Kim, Jae Hak Lee, Seung Man Kim, Sangil Lee
Korea Institute of Machinery and Materials, Korea, Republic of (South Korea)

3D printed flexible substrate with pneumatic driven electrodes for health monitoring
Martin Schubert, Sabine Friedrich, Karlheinz Bock
TU Dresden, Electronics Packaging Laboratory, Germany

Optimized Adaptive Layout Technique for Hybrid System in Foil
Golzar Alavi[1], Holger Sailer[2], Bjoern Albrecht[2], Christine Harendt[2], Joachim N.Burghartz[1,2]
1: Institute for Nano and Microelectronic system, Stuttgart, Germany; 2: Institute for Microelectronics Stuttgart (IMS CHIPS),Stuttgart, Germany

Additive waveguide manufacturing for optical bus couplers by aerosol jet printing using conditioned flexible substrates
Lukas Lorenz[1], Krzysztof Nieweglowski[1], Klaus-Jürgen Wolter[1], Gerd-Albert Hoffmann[2], Ludger Overmeyer[2], Thomas Reitberger[3], Jörg Franke[3], Karlheinz Bock[1]
1: Technische Universität Dresden, Germany; 2: Leibniz Universität Hannover, Germany; 3: Friedrich Alexander Universität Erlangen-Nürnberg

Data and Power Distribution via Printed Electronics in Aerospace Applications
Daniel Gräf[1], Nils Ischdonat[2], Martin Hedges[3], Jörg Franke[1]
1: Friedrich-Alexander-University of Erlangen-Nuremberg, Germany; 2: Fraunhofer Institute for Applied Polymer Research IAP, Germany; 3: Neotech AMT – Advanced Manufacturing Technologies, Germany

Pads and microscale vias with aerosol jet printing technique
Jakub Krzemiński[1], Akhil Kanthamneni[2], David Wagner[2], Markus Detert[2], Bertram Schmidt[2], Małgorzata Jakubowska[1]
1: Warsaw Univ. of Tech. Faculty Mechatronics, Poland; 2: Otto-von-Guericke- Universität Magdeburg, Institut für Mikro- und Sensorsysteme, Germany

2:00pm - 3:40pm

Session 3: Materials and processes (1)

The importance of shear thinning, thixotropic and viscoelastic properties of thick film pastes to predict effects on printing performance
Kathrin Reinhardt, Nancy Hofmann
Fraunhofer IKTS, Germany

Passive component development in LTCC
Camilla R. G. Kärnfelt[1,2]
1: Institut Mines-Telecom/IMT Atlantique, France; 2: Lab-STICC UMR CNRS 6285

Evaluation of Piezoelectric Parameters of Several Commercial Thick Film Capacitor Dielectrics
Artem Ivanov
University of Applied Sciences Landshut, Germany

Thermal Peak Management using Organic Phase Change Materials for Latent Heat Storage in Electronic Applications
Jacob Maxa, Andrej Novikov, Mathias Nowottnick
Rostock University, Germany

Solvent-free fluxing underfill film for electrical interconnection
Keon-Soo Jang, Yong-Sung Eom, Kwang-Seong Choi, Hyun-Cheol Bae
Electronics and Telecommunications Research Institute, Korea, Republic of (South Korea)

Session 4: Functional systems (actuators, sensors, photovoltaics and related) (1)

Flexible optical waveguide-based interconnects for electro-optical system integration
Krzysztof Nieweglowski, Lukas Lorenz, Sebastian Lüngen, Tobias Tiedje, Karlheinz Bock
Technische Universität Dresden, Germany

TEMPERATURE MODULATED SEMICONDUCTOR GAS SENSOR UNDER HUMIDITY INTERFERENCE
Łukasz Rafał Woźniak, Paweł Jan Kalinowski, Grzegorz Paweł Jasiński, Piotr Zbigniew Jasiński
Gdansk University of Technology, Poland

Distribution of relaxation times as a method of separation and identification of complex processes measured by impedance spectroscopy
Justyna Bartoszek[1], Jakub Karczewski[1], Aleksander Mroziński[1], Sea-Fue Wang[2], Piotr Jasiński[1]
1: Gdansk University of Technology, Poland; 2: National Taipei University of Technology, Taiwan, R.O.C.

Signal analyses of airbag sensor by side impact.
Yeong K. Kim, Sojin Shin
Inha University, Korea, Republic of (South Korea)

Reliability evaluation of solder joints in electronics assemblies
Enrico Galbiati
SEM Communitation & GESTLABS, Italy

4:10pm - 5:30pm

Session 5: Materials and processes (2)

Technological Innovations for the Manufacturing of Multilayer Ceramic Micro-Electro-Mechanical-Systems
Steffen Ziesche
Fraunhofer IKTS, Germany

Residual Free Solder Processes for Fluxless Solder Pastes
Alexander Hanss, Gordon Elger
Technische Hochschule Ingolstadt, Germany

3D printed ceramic structures based on LTCC: Materials, Processes and Characterizations
Alexander Schulz[1], Ourania Menti Goudouri[2], Wolfgang Kollenberg[2], Jens Müller[1]
1: TU Ilmenau, Germany; 2: WZR Ceramic Solutions GmbH

Multilayer thick-film ceramic for MCM with Laser Microvias
Sebastian Löffler, Nico Richter, Christopher Mauermann, Angela Rebs, Dr.Günter Reppe
Cicor Advanced Microelectronics & Substrates - RHe Microsystems GmbH, Germany

Session 6: Modeling, design test & reliability (1)

Impact of process induced stresses in flip chip package
Lei Wang[1,2,3], Cheng Xu[1], Liqiang Cao[1,3], Wenqi Zhang[1]
1: National Center for Advanced Packaging,Wuxi, China, People's Republic of; 2: Fudan university, Shanghai, China, People's Republic of; 3: Institute of Microelectronics of Chinese Academy of Sciences, Beijing,China, People's Republic of

The influence of humidity, temperature and electrical fields on the insulating properties of power electronics housing materials
Bianca Boettge, Sandy Klengel
Fraunhofer Institute for Microstructure of Materials and Systems, Germany

Investigation of the Influence of Voids on the Reliability of LED Solder Joints by Computer Tomography and Forward Voltage Measurement
Christian Schwarzer[1], Dennis Fuchs[2], Miriam Rauer[2], Kurt-Juergen Lang[3], Andreas Krügelstein[4], Michael Kaloudis[2], Jörg Franke[4]
1: Fraunhofer-Anwendungszentrum Ressourceneffizienz, Germany; 2: Hochschule Aschaffenburg, Germany; 3: OSRAM OS GmbH, Germany; 4: Lehrstuhl für Fertigungsautomatisierung und Produktionssystematik, Germany

Advances in X-ray for Semicon Applications
Keith Bryant, Ragnar Vaga
SMART Group, United Kingdom

5:30pm - 7:00pm	Poster Session 1

Time evolution of strain distribution during ultrasonic bonding of Cu wire --- Impact of bonding temperature ---
Mamoru Sakamoto, Kenichi Nakadozono, Keiichiro Iwanabe, Tanemasa Asano
Kyushu University, Japan

High-precision picosecond laser structuring on LTCC for silicon chip assembly with high electrical contact density
Nam Gutzeit, Alexander Schulz, Tilo Welker, Christoph Wagner, Eric Schäfer, Jens Müller
Technische Universität Ilmenau, Germany

Ceramic in Board (CIB) substrate for high power applications
Ho Chieh {Jay} Yu, Jason Huang
Sentec E&E Co.,LTD, Taiwan

Optical pressure sensors for harsh environment
Jakub Somer, Frantisek Urban, Ivan Szendiuch
Brno university of Technology, Czech Republic

Investigations of temperature resistance of memory BGA components during multi-reflow processes for Circular Economy applications
Janusz Sitek[1], Marek Koscielski[1], Piotr Dawidowicz[2], Piotr Ciszewski[2], Mariia Khramova[3], Duc Nguyen Quang[3], Sergio Martinez[3]
1: Tele and Radio Research Institute, Poland; 2: Semicon Sp. z o.o., Poland; 3: Blancco Technology Group IP Oy, Finland

Influence of Heating Direction on BGA Solder Balls Structure
Alexandr Otáhal, Jakub Somer, Ivan Szendiuch
Brno University of Technology, Czech Republic

Fabrication of Dry-patching Superhydrophobic Flexible Platform for HySiF (hybrid system in flexible) Applications
Yongjin Kim, Syed Asad Ali Zaidi, Jae Hak Lee, Seung Man Kim, Joon Yub Song
Korea Institute of Machinery and Materials, Korea, Republic of (South Korea)

Low-temperature Sintering Behavior of Ternary solder and Copper Powder for High-power Device Packaging
Yong-Sung EOM, Keon-Soo JANG, Ji-Hye SON, Hyun-Cheol BAE, Kwang-Seong CHOI
ETRI, Korea, Republic of (South Korea)

Enhanced Heat Spreading in LTCC Packages utilizing Thick Silver Tape in the Co-fire Process
Tilo Welker, Nam Gutzeit, Jens Müller
Technische Universität Ilmenau, Germany

The Transmittance Properties of Optical Adhesives in Humid Environmental Aging
Sanna Lahokallio, Janne Kiilunen, Laura Frisk
Trelic Ltd, Finland

High voltage WireLED powered directly by mains 230 Volts
AIT MANI ABDENACER[1], BOUILLARD BORIS[1], GASSE ADRIEN[1], VOLPERT MARION[1], SOULIER BRIGITTE[1], HENRY DAVID[1], VANDENEYNDE AURELIE[1], CHAMBION BERTRAND[1], RUEDA PAMELA[2], MERCIER FREDERIC[2], GILET PHILIPPE[2]
1: CEA GRENOBLE, France; 2: ALEDIA SAS,France

Preforms based diffusion soldering process to be used under conventional soldering process conditions
Haneen Daoud, Stephan Reichelt, Angela Loidolt
Pfarr Stanztechnik GmbH, Germany

Sintered Ag joints on copper lead frame TO220 by pressure sintering process with improved reliability and bonding strength
Ly May Chew, Wolfgang Schmitt, Jens Nachreiner, Daniel Schnee
Heraeus Deutschland GmbH & Co. KG, Germany

Date: Tuesday, 12/Sep/2017

9:00am - 10:30am

Plenary session 2

Future of Embedding and Fanout Packaging Technologies
Rao Tummala
Georgia Institute of Technology, United States of America

Large scale sustainable production of graphene for real-life applications
Krzysztof Koziol
University of Cambridge

10:30am - 12:30pm

Session 7: Materials and processes (3)

Low temperature sintering of silver micro-particles induced by organic accelerators in epoxy-based binders
Masahiro Inoue, Masaki Iida, Yoshiaki Sakaniwa
Gunma University, Japan

Solderability and Reliability Evolution of No-Clean Solder Fluxes
Rodrigo Aguilar
Inventec Performance Chemicals, France

Development of Low-temperature Sintering Nano-silver Die Attach Materials for Bare Cu Application
Akira Tsuno[1], Koji Sasaki[2], Noritsuka Mizumura[2]
1: Namics Europ EmbH, Germany; 2: Namics Corporation

Development of selective conformal coating process based on advanced packaging for harsh environments
Eric Cadalen, Olivier Maire, David Manteigas
MBDA, France

Are tin-rich solder alloys resistant to tin pest?
Agata Skwarek[1], Piotr Zachariasz[1], Balázs Illés[2], Tomasz Czeppe[3], Grzegorz Garzeł[3], Krzysztof Witek[1]
1: Institute of Electron Technology, Krakow, Poland; 2: Budapest University of Technology and Economics, Department of Electronics Technology, Hungary; 3: Institute of Metallurgy and Materials Science, PAS, Krakow, Poland

Acceleration Measurements during Reactive Bonding Processes
Irina Spies[1], Axel Schumacher[1], Stephan Knappmann[1], Bastian Rheingans[2], Jolanta Janczak-Rusch[2], Lars P.H. Jeurgens[2]
1: Hahn-Schickard, Villingen-Schwenningen, Germany; 2: EMPA, Dübendorf, Switzerland

Session 8: Functional systems (actuators, sensors, photovoltaics and related) (2)

Printed heater elements for smart sensor packages in LTCC
Heike Bartsch[1], Artur Rydosz[2], Wojciech Maziarz[2], Tadeusz Pisarkiewicz[2], Dirk Stöpel[1], Jens Müller[1]
1: Technische Universität Ilmenau, Germany; 2: AGH University of Science and Technology

LTCC-Based Micro Plasma Source for the Selective Treatment of Cell Cultures
Michael Fischer[1], Mike Stubenrauch[1], Ady Naber[2], Nam Gutzeit[1], Maren Klett[1], Sukhdeep Singh[1], Andreas Schober[1], Hartmut Witte[1], Jens Müller[1]
1: Technische Universität Ilmenau, Germany; 2: Karlsruher Institut für Technologie, Germany

LTCC Technology for Active Eddy Current Turbocharger Speed Sensors
Martin Ihle[1], Steffen Ziesche[1], Paul Gierth[1], Andreas Tuor[2], Jonathan Tigelaar[2]
1: Fraunhofer IKTS, Germany; 2: JAQUET Technology Group AG, Switzerland

Influence of various micro channels integrated in LTCC multilayer module on the thermal resistance
Tomas Girasek[1], Alena Pietrikova[1], Tilo Welker[2], Jens Muller[2]
1: Technical University of Kosice, Slovak Republic; 2: Ilmenau University of Ilmenau

Basic microfluidic elements in the LTCC structures
Darko Belavič[1,2,3], Andraž Bradeško[2,5], Kostja Makarovič[2,3,4], Marjan Hodnik[1], Hana Uršič[2]
1: HIPOT-RR c/o Jožef Stefan Institute, Slovenia; 2: Jožef Stefan Institute, Slovenia; 3: Centre of Excellence NAMASTE, Slovenia; 4: KEKO Equipment, Slovenia; 5: Jožef Stefan International Postgraduate School, Slovenia

Comparison of an electronic noses based on the semiconducting and electrochemical gas sensors performance for an analysis of toxic gas concentration
Grzegorz Jasiński, Paweł Kalinowski, Łukasz Woźniak, Piotr Jasiński
Gdańsk University of Technology, Poland

2:00pm - 3:40pm

Session 10: Modeling, design test & reliability (2)

Modelling the 3D-Printing Process for Electronic Packaging
Chris Bailey
University of Greenwich, United Kingdom

A new method for prediction of corrosion processes in Aluminum housing materials for electronic components
Sandy Klengel, Tino Stephan, Bolko Mühs-Portius
Fraunhofer Institute for Microstructure of Materials and Systems IMWS

Comparative FEM thermo-mechanical simulations for built-in reliability: surface mounted technology versus embedded technology for silicon dies
Mickaël BALMONT, Isabelle BORD-MAJEK, Yves OUSTEN
IMS Bordeaux, France

Pulse stability of low ohmic thick film resistors
Arkadiusz Dąbrowski, Andrzej Dziedzic, Jakub Czarachowicz
Wrocław University of Science and Technology, Poland

Reliability of Embedded Wafer Level Ball Grid Arrays in Automotive Applications
Michael Novak[1], Wolfgang Grübl[1], Bernhard Schuch[1], Peter Ossimitz[2]
1: Continental, Germany; 2: Infineon Technologies AG

Session 9: Advanced packaging and interconnects (2)

Newly Developed High Reliability Palladium Coated Cu Wire for Automotive Application
Motoki Eto[1], Teruo Haibara[1], Ryo Oishi[1], Takashi Yamada[1], Tomohiro Uno[2], Tetsuya Oyamada[2]
1: Nippon Micrometal Corporation; 2: Nippon Steel & Sumitomo Metal Corporation

In-line Metrology for Cu Pillar Applications in Interposer based Packages for 2.5D Integration
Iuliana Panchenko[1,2], Martin Kunz[3], Lothar Lehmann[4], Tanya Atanasova[4], Mathias Boettcher[2], Marcel Wieland[4], Juergen M. Wolf[2]
1: Institute of Electronic Packaging Technology, TU Dresden, 01062, Dresden, Deutschland; 2: Fraunhofer Institute for Reliability and Microintegration IZM, ASSID, Ringstr. 12, 01468, Moritzburg, Deutschland; 3: NanoFocus AG, Max-Planck-Ring 48, 46049, Oberhausen, Deutschland; 4: Globalfoundries, Wilschdorfer Landstr. 101, 01109, Dresden, Deutschland

Flip-chip bonding: how to meet the high accuracy requirements?
Caroline AVRILLIER, Pascal METZGER, Jean-Stéphane MOTTET, Joseph MACHEDA
SET, France

High Efficient Mid Power Modules by Next Generation Chip Embedding Technology
Kay Stefan Essig[1], CT Chiu[2], Jarris Kuo[2], Phidia Chen[2], Jean-Marc Yaonnou[1]
1: ASE (Europe) Inc.; 2: ASE Group, Taiwan

Characterisation of Cu/Cu bonding using self-assembled monolayer as oxidation inhibitor
Maria Lykova[1], Iuliana Panchenko[1,2], Marion Geidel[3], Johanna Reif[3], Ulrich Künzelmann[3], Klaus-Dieter Lang[4]
1: Institute of Electronic Packaging Technology (IAVT), TU Dresden, Dresden, Germany; 2: All Silicon System Integration Dresden (ASSID), Fraunhofer Institute for Reliability and Microintegration (IZM), Dresden, Germany; 3: Institute of Semiconductors and Microsystems (IHM), TU Dresden, Dresden, Germany; 4: Fraunhofer Institute for Reliability and Microintegration (IZM), Berlin, Germany

4:10pm - 5:30pm

Session 11: Advanced packaging and interconnects (3)

Comparison of Microvia HDI PCBs with ACF interconnections in accelerated life testing
Laura Frisk, Sanna Lahokallio, Janne Kiilunen
Trelic Ltd, Finland

In–Bi Low-Temperature SLID Bonding for piezoelectric materials
Knut E Aasmundtveit[1], Trym Eggen[1,2], Hoang-Vu Nguyen[1]
1: University College of Southeast Norway, Norway; 2: GE Vingmed Ultrasound, Norway

Liquid Solid Diffusion (LSD) Bonding – A novel joining technology
Andreas Larsson[1,2], Torleif A Tollefsen[3], Ole Martin Løvvik[4], Knut E Aasmundtveit[2]
1: TECHNI AS, Norway; 2: University College of Southeast Norway, Norway; 3: TEGma AS, Norway; 4: SINTEF Materials and Chemistry, Norway

Polyimide Foil Flip-Chip Direct Bonding
Martin Deckert[1], Michael Thomas Lippert[2], Jakub Krzemiński[3], Kentaroh Takagaki[2], Frank W. Ohl[2], Bertram Schmidt[1]
1: Otto von Guericke University Magdeburg, Germany; 2: Leibniz Institute for Neurobiology, Magdeburg, Germany; 3: Warsaw University of Technology, Poland

Session 12: Electronics components assembly and PCB solutions

Embedded mini Heat Pipes as Thermal Solution for PCBs
Jonathan Silvano de Sousa[1], Paul Fulmek[2], Michael Unger[2], Paul Haumer[2], Johann Nicolics[2]
1: AT&S AG, Austria; 2: Vienna University of Technology (TU-WIEN)

The Mechanical Strength of Microvias in Reflow Cycling and Environmental Aging
Janne Juha Matti Kiilunen, Laura Frisk
Trelic Ltd, Finland

Embedding technologies for heterogeneous integration of components in PCBs-an innovative modularisation approach with environmental impact
Dionysios Manessis[1], Jakub Pawlikowski[1], Andreas Ostmann[1], Karsten Schischke[1], Thomas Krivec[2], Gerhard Podhradsky[3], Martin Ramellow-Schneider[1], K-D. Lang[4]
1: Fraunhofer IZM Berlin, Germany; 2: AT&S AG, Fabriksgasse 13, 8700 Leoben, Austria; 3: SPEECH, Speech Processing Solutions GmbH, Gutheil-Schoder-Gasse 8-12, 1100 Vienna, Austria; 4: Technical University of Berlin, Gustav-Meyer-Alle 25, 13355 Berlin, Germany

Mechatronic Integrated Devices based on Ceramic Injection Molding for Power Electronics by using Active Solder
Andreas Kruegelstein[1], Joerg Franke[1], Elisa Goetze[2], Frederik Zanger[2], Volker

		Schulze[2], Magnus Rohde[3] 1: Friedrich-Alexander-University Erlangen-Nuremberg, Institute for Factory Automation and Production Systems, Germany; 2: Karlsruhe Institute of Technology, wbk Institute of Production Science, Germany; 3: Karlsruhe Institute of Technology, IAM Institute for Applied Materials, Germany

5:30pm - 7:00pm

Poster Session 2

Development of PEB Face-Down Interconnection Process for Ultra Thin Flexible Package
Jae Hak Lee, Chung Woo Lee, Yong Jin Kim, Seung Man Kim, Jun-Yeob Song
Korea Institute of Machinery and Materials, Korea, Republic of (South Korea)

Integration of Screen-Printed Electroluminescent Matrix Displays in Smart Textile Items – Implementation and Evaluation
Artem Ivanov, Maximilian Wurzer
University of Applied Sciences Landshut, Germany

Open resonator technique for measuring thin dielectric Plate and film
Chiung-Hsiung Chen, Chun-An Lu
ITRI, Taiwan

Physical reliability of textile electronics
Hartmann Hieber
ICR, Germany

High speed interfaces for chip to chip communication on interposer based integration
Andy Heinig
Fraunhofer IIS/EAS, Germany

Image approximation using B-Spline surfaces
Zbigniew Suszyński, Robert Świta
Koszalin Technical University, Poland

Modelling power LEDs in the COB case with thermal phenomena taken into account
Krzysztof Górecki, Przemysław Ptak
Gdynia Maritime University, Poland

Capacitive touch sensor
Samuel Zuk, Alena Pietrikova, Igor Vehec
Department of Technologies in Electronics, Technical University of Kosice, Slovak Republic

Ceramic packaging of PiezoMEMS devices
Darko Belavič[1,2,3], Katarina Vojisavljević[2], Danjela Kuščer[2]
1: HIPOT-RR c/o Jožef Stefan Institute, Slovenia; 2: Jožef Stefan Institute, Slovenia; 3: Centre of Excellence NAMASTE, Slovenia

Thick film resistive sensors based on Pr0.9Sr0.1CoO3-δ and Sm0.9Sr0.1CoO3-δ cobaltites for carbon monoxide and nitric oxide detection
Piotr Zachariasz, Katarina Cvejin, Dorota Szwagierczak, Agata Stoch
Institute of Electron Technology, Poland

TIME WINDOW BASED FEATURES EXTRACTION FROM TEMPERATURE MODULATED GAS SENSORS FOR PREDICTION OF AMMONIA CONCENTRATION
Paweł Jan Kalinowski, Łukasz Rafał Woźniak, Grzegorz Paweł Jasiński, Piotr Zbigniew Jasiński
Gdansk University of Technology, Poland

Influence of operation temperature instability on gas sensor performance
Grzegorz Jasiński
Gdańsk University of Technology, Poland

Date: Wednesday, 13/Sep/2017

Time	Session	
9:15am - 10:00am	**Plenary session 3** **Developing Damage Models for Solder Joints Exposed to Complex Stress States: Influence of Potting, Coating, BGA Mirroring, and Housing on Solder Joint Fatigue** **Craig Hillman** DFR Solutions, United States of America	
10:30am - 12:30pm	**Session 13: Materials and processes (4)** **Effect of bonding conditions on shear strength of joints at 200 ℃ using Sn-coated Cu particle** **Hiroshi Nishikawa, Xiangdong Liu** Osaka University, Japan **Mechanical properties and life time of high Pb-containing solder joints** **Golta Khatibi, Agnieszka Betzwar Kotas** TU Wien, Austria **Low Temperature Co-fired Ceramics; Physical and Electrical Properties as a Function of Firing Temperature.** **Jim Walker, Jim Henry, Ed Graddy, Barbara Adrian** Ferro Electronic Materials **Design, fabrication and experimental characterization of mixed thick-/thin film thermoelectric microgenerators based on constantan/silver** **Mirosław Gracjan Gierczak, Joanna Prażmowska-Czajka, Andrzej Dziedzic** Wrocław University of Science and Technology, Poland **Silver sinter paste for SIC bonding with improved mechanical properties** **Wolfgang Schmitt, Ly May Chew, Daniel Schnee** Heraeus Deutschland GmbH & Co. KG, Germany **Benchmark Study of Screen Printable Silver Inks on a PPE Based Substrate** **Riikka Maria Mikkonen** Tampere University of Technology, Finland	**Session 14: Modeling, design test & reliability (3)** **A novel experimental approach to calibrating cohesive zone elements for advanced risk analysis of interface delamination in semiconductor packages** **Georg M. Reuther[1], Nadine Pflügler[1], Dominik Udiljak[1], Reinhard Pufall[1], Bernhard Wunderle[2]** 1: Infineon Technologies AG, Germany; 2: Technische Universität Chemnitz, Germany **A Combined Simulation and Optical Measurement Technique for Investigation of System Effects on Components Solder Fatigue** **Rainer Dudek** Fraunhofer ENAS, Germany **Influence of thermal phenomena on characteristics of components of the IGBT module** **Paweł Górecki, Krzysztof Górecki** Gdynia Maritime University, Poland **The combined effect of mechanical package stress and humidity on chip corrosion probability** **Georg Lorenz[1], Michél Simon-Najasek[1], Achim Lindner[2]** 1: Fraunhofer IMWS, Germany; 2: Micronas GmbH, Germany **A delamination study on metallization stacks of power semiconductors** **Thomas Walter, Golta Khatibi** Christian Doppler Laboratory for Lifetime and Reliability of Interfaces in Complex Multi-Material Electronics, CTA, TU Vienna, Austria **Crystal plasticity modeling of the heat affected zone of copper micro-wires** **Ali Mazloum-Nejadari[1,2], Martin Lederer[3], Golta Khatibi[3], Johann Nicolics[2]** 1: Institute of sensor and actuator systems, TU Wien, Austria; 2: Institute of sensor and actuator systems, TU Wien, Austria; 3: Christian Doppler Laboratory for Lifetime and Reliability of Interfaces in Complex Multi-Material Electronic, Institute CTA, TU Wien, Austria
12:30pm - 1:00pm	**Closing session - Awards - Advance information on ESTC 2018 and EMPC 2019**	