

Sunday, 10 September 2017

15:00 – 20:00	REGISTRATION (Main Building)
18:00 – 20:00	GET-TOGETHER PARTY (Main Building – Main Hall)

Monday, 11 September 2017

8:45-10:30	Plenary session 1 (Main Building – Minor Hall 237) Session chairs: Małgorzata Jakubowska (Warsaw University of Technology, Poland) and Martin Schneider-Ramelow (Fraunhofer IZM, Berlin, Germany)		
8:45-9:00	Conference opening		
9:00-9:45	201 3D System Integration. An Interconnect Hierarchy driven Technology Landscape <u>Eric Beyne</u> Imec Leuven, Belgium		
9:45-10:30	202 Printed stretchable electronics – enabler of unobtrusive biosignal monitoring <u>Matti Mäntysalo</u> Tampere University of Technology, Finland		
10:30-11:00	Coffee break (Main Hall)		
11:00-13:00	Session 1: Advanced packaging and interconnects (Main Building – Minor Hall 237) Session chairs: Andrzej Dziedzic (Wrocław Univ. of Science and Technology) and John Lipp (STFC Rutherford Appleton Laboratory, UK)	Session 2: Printed, hybrid and flexible electronics (Main Building – Senate Hall 124) Session chairs: Karlheinz Bock (TU Dresden, Germany) and Agata Skwarek (Inst. of Electron Technology, Cracow Branch, Poland)	
11:00-11:20	102 Small Form-Factor, Liquid-Cooled SiPM Module for PET/MRI Applications <u>Rainer Dohle</u> ¹ , <u>Thomas Rittweg</u> ² , <u>Ilaria Sacco</u> 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, Germany	111 Experimental Investigation on 3D Metal Interconnection for HySiF (hybrid system in flexible) Devices Using ElectroHydroDynamic (EHD) System <u>Joon Yub Song</u> , <u>Yongjin Kim</u> , <u>Jae Hak Lee</u> , <u>Seung Man Kim</u> Korea Institute of Machinery and Materials, Republic of Korea (South Korea)	

11:20-11:40	<p>110 Direct copper metallization on TGV (Thru-Glass-Via) for high performance glass substrate <u>Kotoku Inoue</u>, Tsubasa Fujimura, Masatoshi Takayama, Sigeo Onitake Koto Electric Co., Ltd., Japan</p>	<p>123 3D printed flexible substrate with pneumatic driven electrodes for health monitoring <u>Martin Schubert</u>¹, Daniel Wedekind², Sebastian Zaunseder², Sabine Friedrich¹, Hagen Malberg², Karlheinz Bock¹ ¹TU Dresden, Electronics Packaging Laboratory, Germany; ²TU Dresden, Institute of Biomedical Engineering, Germany</p>	
11:40-12:00	<p>112 Impact of the combination of a stress buffer layer and a wafer level underfill on 3D IC assembly using thermal compression bonding <u>Fabrice F.C. Duval</u>, Teng Wang, Pieter Bex, C. Gerets, Melina Lofrano, Kenneth J. Rebibis, Erik Sleeckx, Eric Beyne Imec Leuven, Belgium</p>	<p>128 Optimized Adaptive Layout Technique for Hybrid System in Foil <u>Golzar Alavi</u>¹, Holger Sailer², Bjoern Albrecht², Christine Harendt², Joachim N. Burghartz^{1,2} ¹Institute for Nano and Microelectronic System, Stuttgart, Germany; ²Institute for Microelectronics, Stuttgart (IMS CHIPS), Stuttgart, Germany</p>	
12:00-12:20	<p>115 Experimental LTCC platform for millimeter-wave applications Camilla R.G. Kärnfelt^{1,2}, <u>François Gallée</u>^{1,2}, Vincent Castel^{1,2}, Malika Tlili¹, Maïna Sinou¹, Pascal Coant^{1,2} ¹Institut Mines-Telecom/IMT Atlantique, France; ²Lab-STICC UMR CNRS 6285, France</p>	<p>137 Additive waveguide manufacturing for optical bus couplers by aerosol jet printing using conditioned flexible substrates Lukas Lorenz¹, <u>Krzysztof Niewegłowski</u>¹, Klaus-Jürgen Wolter¹, Gerd-Albert Hoffmann², Ludger Overmeyer², Thomas Reitberger³, Jörg Franke³, Karlheinz Bock¹ ¹Technische Universität Dresden, Germany; ²Leibniz Universität Hannover, Germany; ³Friedrich Alexander Universität Erlangen-Nürnberg, Germany</p>	

12:20-12:40	121 Hot bar joining method for medical applications <u>David Wagner</u> , Kai Pitschmann, Ulrich Schumann, Sebastian Freidank, Bertram Schmidt, Markus Detert Otto-von-Guericke-Universität Magdeburg, Germany	141 Data and Power Distribution via Printed Electronics in Aerospace Applications <u>Daniel Gräf</u> ¹ , Nils Ischdonat ² , Martin Hedges ³ , Johannes Hörber 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	
12:40-13:00	124 Fine Pitch High Bandwidth Flip Chip Package-on-Package Development <u>Ming-Che Hsieh</u> ¹ , Stanley Lin ² , Ian Hsu ² , Chi-Yuan Chen ² , NamJu Cho ³ ¹ STATS ChipPAC Pte. Ltd.; ² MediaTek, Inc.; ³ STATS ChipPAC Korea Ltd., Republic of Korea (South Korea)	152 Pads and microscale vias with aerosol jet printing technique <u>Jakub Krzemiński</u> 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	
13:00-14:00	Lunch (Main Building – 206)		
14:00-15:40	Session 3: Materials and processes (Main Building – Minor Hall 237) Session chairs: Małgorzata Jakubowska (Warsaw Univ. of Technology, Poland) and Uwe Partsch (Fraunhofer IKTS, Dresden, Germany)	Session 4: Functional systems (actuators, sensors, photovoltaics and related) (Main Building – Senate Hall 124) Session chairs: Jerzy Potencki (Rzeszów Univ. of Technology, Poland) and Janusz Sitek (Tele and Radio Research Inst., Warsaw, Poland)	
14:00-14:20	105 The importance of shear thinning, thixotropic and viscoelastic properties of thick film pastes to predict effects on printing performance <u>Kathrin Reinhardt</u> , Nancy Hofmann, Markus Eberstein Fraunhofer IKTS, Dresden, Germany	184 Flexible optical waveguide-based interconnects for electro-optical system integration <u>Krzysztof Niewegłowski</u> , Lukas Lorenz, Sebastian Längen, Tobias Tiedje, Klaus-Jürgen Wolter, Karlheinz Bock Technische Universität Dresden, Germany	

14:20-14:40	114 Passive component development in LTCC <u>Camilla R.G. Kärfelt</u> ^{1,2} ¹ Institut Mines-Telecom/IMT Atlantique, France; ² Lab-STICC UMR CNRS 6285, France	185 Temperature modulated semiconductor gas sensor under humidity interference <u>Łukasz Woźniak</u> , Paweł Kalinowski, Grzegorz Jasiński, Piotr Jasiński Gdansk University of Technology, Poland	
14:40-15:00	122 Evaluation of Piezoelectric Parameters of Several Commercial Thick Film Capacitor Dielectrics <u>Artem Ivanov</u> University of Applied Sciences Landshut, Germany	196 Distribution of relaxation times as a method of separation and identification of complex processes measured by impedance spectroscopy <u>Justyna Bartoszek</u> ¹ , Jakub Karczewski ¹ , Aleksander Mroziński ¹ , Yi-Xin Liu, Sea-Fue Wang ² , Piotr Jasiński ¹ ¹ Gdansk University of Technology, Poland; ² National Taipei University of Technology, Taiwan, R.O.C.	
15:00-15:20	126 Thermal Peak Management using Organic Phase Change Materials for Latent Heat Storage in Electronic Applications <u>Jacob Maxa</u> , Andrej Novikov, Mathias Nowotnick Rostock University, Germany	118 Signal analyses of airbag sensor by side impact <u>Yeong K. Kim</u> , Sojin Shin Inha University, Republic of Korea (South Korea)	
15:20-15:40	127 Solvent-free fluxing underfill film for electrical interconnection <u>Keon-Soo Jang</u> , Yong-Sung Eom, Kwang-Seong Choi, Hyun-Cheol Bae Electronics and Telecommunications Research Institute, Republic of Korea (South Korea)	119 Reliability evaluation of solder joints in electronics assemblies <u>Enrico Galbiati</u> SEM Communitation & GESTLABS, Italy	
15:40-16:10	Coffee break (Main Hall)		
16:10-17:30	Session 5: Materials and processes (Main Building – Minor Hall 237) Session Chairs: Andrzej Dzedzic (Wrocław Univ. of Science and Technology, Poland) and Darko Belavic (Jozef Stefan Inst., Ljubljana, Slovenia)	Session 6: Modeling, design test & reliability (Main Building – Senate Hall 124) Session Chairs: Knut E. Aasmundtveit (Univ. College of Southeast Norway, Norway) and Krzysztof Górecki (Gdynia Maritime Univ., Poland)	

16:10-16:30	<p>135 Residual Free Solder Processes for Fluxless Solder Pastes <u>Alexander Hanss</u>, Gordon Elger Technische Hochschule Ingolstadt, Germany</p>	<p>113 The influence of humidity, temperature and electrical fields on the insulating properties of power electronics housing materials <u>Bianca Böttge</u>¹, Rico Bernhardt¹, Sandy Klengel¹, Sebastian Wells², Albert Claudi² ¹Fraunhofer IMMS, Halle, Germany; ²Univeristy of Kassel, Germany</p>	
16:30-16:50	<p>142 3D printed ceramic structures based on LTCC: Materials, Processes and Characterizations <u>Alexander Schulz</u>¹, Ourania Menti Goudouri², Wolfgang Kollenberg², Tilo Welker¹, Nam Gutzeit¹, Dieter Nikolay², Niklas Kemmling², Jens Müller¹ ¹TU Ilmenau, Germany; ²WZR Ceramic Solutions GmbH, Germany</p>	<p>116 Investigation of the influence of voids on the reliability of LED solder joints by computer tomography and forward voltage measurements <u>Christian Schwarzer</u>¹, Dennis Fuchs², Miriam Rauer², Kurt-Juergen Lang³, Andreas Krügelstein⁴, Michael Kaloudis², Jörg Franke⁴ ¹Fraunhofer-Anwendungszentrum Ressourceneffizienz, Germany; ²Hochschule Aschaffenburg, Germany; ³OSRAM OS GmbH, Germany; ⁴Lehrstuhl für Fertigungsautomatisierung und Produktionssystematik, Germany</p>	
16:50-17:10	<p>144 Multilayer thick-film ceramic for MCM with laser microvias <u>Sebastian Löffler</u>, Nico Richter, Christopher Mauermann, Angela Rebs, Günter Reppe Cicor Advanced Microelectronics & Substrates - RHe Microsystems GmbH, Radeberg, Germany</p>	<p>198 Advances in X-ray for Semicon Applications Keith Bryant, <u>Ragnar Vaga</u> YXLON International GmbH</p>	
17:10-17:30	<p>134 Technological Innovations for the Manufacturing of Multilayer Ceramic Micro-Electro-Mechanical-Systems <u>Steffen Ziesche</u> Fraunhofer IKTS, Dresden, Germany</p>	<p>210 Gaze controlled prosthetic arm with EMG and EEG input interface <u>Tomasz Kocejko</u> Gdansk University of Technology, Poland</p>	

17:30-19:00	Poster Session 1 (Main Building – Main Hall) Session Chair: Nihal Sinnadurai (ATTAC, London, UK)	IMAPS Poland Poster Session 1 (Main Building – Main Hall) Session chair: Ryszard Kisiel (Warsaw Univ. of Technology, Poland)
Each poster needs to be overviewed in 3 minutes presentation at the beginning of poster session.	129 Time evolution of strain distribution during ultrasonic bonding of Cu wire: Impact of bonding temperature <u>Mamoru Sakamoto</u> , Kenichi Nakadozono, Keiichiro Iwanabe, Tanemasa Asano Kyushu University, Japan	i104 Influence of ammonium tungstate (NH ₄) ₂ WO ₄ additive in metallization baths on Ni-Cu-P resistive layer properties <u>Zbigniew Pruszowski</u> ¹ , <u>Wojciech Filipowski</u> ¹ , Krzysztof Waczyński ¹ , Piotr Kowalik ¹ , Andrzej Czerwiński ² , Mariusz Płuska ² , Jan Kulawik ³ , Natalia Waczyńska-Niemiec ¹ ¹ Institute of Electronics, Silesian University of Technology, Poland; ² Institute of Electron Technology, Warsaw, Poland; ³ Institute of Electron Technology, Kraków Division, Krakow, Poland
	149 High-precision picosecond laser structuring on LTCC for silicon chip assembly with high electrical contact density <u>Nam Gutzeit</u> , Alexander Schulz, Tilo Welker, Christoph Wagner, Eric Schäfer, Jens Müller Technische Universität Ilmenau, Germany	i115 Measurements of transient thermal impedance of ferrite cores Kalina Detka, <u>Krzysztof Górecki</u> Gdynia Maritime University, Poland
	151 Optical pressure sensors for harsh environment <u>Jakub Somer</u> , Frantisek Urban, Ivan Szendiuch Brno University of Technology, Czech Republic	i114 Non-linear compact thermal model of IGBTs Paweł Górecki, <u>Krzysztof Górecki</u> Gdynia Maritime University, Poland
	130 Investigations of temperature resistance of memory BGA components during multi-reflow processes for Circular Economy applications <u>Janusz Sitek</u> 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 Blanco Technology Group IP Oy, Finland	i122 Parameters Estimation of SPICE Models for Silicon Carbide Devices <u>Damian Bisewski</u> Gdynia Maritime University, Poland
	165 Influence of Heating Direction on BGA Solder Balls Structure <u>Alexandr Otáhal</u> , Jakub Somer, Ivan Szendiuch Brno University of Technology, Czech Republic	i110 The rheology of aqueous, graphene inks for ink-jet printing <u>Łucja Dybowska-Sarapuk</u> , Olga Świętoń, Jerzy Szałapak, Marcin Słoma, Daniel Janczak, Jakub Krzemiński, Małgorzata Jakubowska Warsaw University of Technology, Poland

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<p>106 Fabrication of dry-patching superhydrophobic flexible platform for HySiF (hybrid system in flexible) applications <u>Yongjin Kim</u>, Syed Asad Ali Zaidi, Jae Hak Lee, Seung Man Kim, Joon Yeob Song Korea Institute of Machinery and Materials, Republic of Korea (South Korea)</p>	<p>i137 Method and Laboratory Stand for Testing of RFID Systems in Static and Dynamic States <u>Jerzy Potencki</u>, Mariusz Skoczylas Department of Electronic and Telecommunications Systems, Rzeszow University Of Technology, Rzeszow, Poland</p>
<p>108 Low-temperature Sintering Behavior of Ternary Solder and Copper Powder for High-Power Device Packaging <u>Yong-Sung Eom</u>, Keon-Soo Jang, Ji-Hye Son, Hyun-Cheol Bae, Kwang-Seong Choi ETRI, Republic of Korea (South Korea)</p>	<p>i109 Modelling of Silicon Carbide JFET in SPICE <u>Kamil Bargieł</u>, Damian Bisewski Gdynia Maritime University, Poland</p>
<p>140 Enhanced Heat Spreading in LTCC Packages utilizing Thick Silver Tape in the Co-fire Process <u>Tilo Welker</u>, Nam Gutzeit, Jens Müller Technische Universität Ilmenau, Germany</p>	<p>i118 Application of RFID Technology in Navigation of Mobile Robot Marcin Konieczny¹, <u>Bartosz Pawłowicz</u>², Jerzy Potencki², Mariusz Skoczylas² ¹Faculty of Electrical and Computer Engineering, Rzeszow University of Technology, Rzeszow, Poland; ²Department of Electronic and Telecommunications Systems, Rzeszow University of Technology, Rzeszow, Poland</p>
<p>148 The Transmittance Properties of Optical Adhesives in Humid Environmental Aging <u>Sanna Lahokallio</u>, Janne Kiilunen, Laura Frisk Trelis Ltd, Finland</p>	<p>i112 Mathematical model of the process of creating film resistors with a Ni-P resistive layer <u>Piotr Kowalik</u>, Wojciech Filipowski, Zbigniew Pruszowski Silesian University of Technology, Poland</p>
<p>172 High voltage WireLED powered directly by mains 230 Volts <u>Ait Mani Abdenacer</u>¹, Bouillard Boris¹, Gasse Adrien¹, Volpert Marion¹, Soulier Brigitte¹, Henry David¹, Vandeneynde Aurelie¹, Chambion Bertrand¹, Rueda Pamela², Mercier Frederic², Beix Vincent², Lacave Thomas² ¹CEA GRENOBLE, France; ²ALEDIA SAS, France</p>	<p>i116 Non-linear thermal model of a planar transformer <u>Krzysztof Górecki</u>, Krzysztof Górski Gdynia Maritime University, Poland</p>
<p>180 Preforms based diffusion soldering process to be used under conventional soldering process conditions <u>Haneen Daoud</u>, Stephan Reichelt, Angela Loidolt Pfarr Stanztechnik GmbH, Germany</p>	<p>i134 Hydrogen Sensing Properties of SnO2 Nanocrystalline Thin Films Weronika Izydorczyk, Natalia Niemiec, <u>Krzysztof Waczyński</u>, Jerzy Uljanow Silesian University of Technology, Poland</p>

Each poster needs to be overviewed in 3 minutes presentation at the beginning of poster session.	<p>199 Sintered Ag joints on copper lead frame TO220 by pressure sintering process with improved reliability and bonding strength Ly May Chew, <u>Wolfgang Schmitt</u>, Jens Nachreiner, Daniel Schnee Heraeus Deutschland GmbH & Co. KG, Germany</p>	<p>i144 Analysis of propagation process of conductive electromagnetic disturbances in AC/DC low power converter Wiesław Sabat, <u>Dariusz Klepacki</u>, Kazimierz Kuryło, Kazimierz Kamuda Rzeszów University of Technology, Poland</p>
	<p>209 Flexiramics: Flexible ceramics to tackle thermal management problems in electronics <u>Gerard Cadafalch</u>, Roger Brunet, Marcel ten Hove, Ruta Stankeviciute, Ties Lubbers Eurekite, Netherlands</p>	<p>i143 Mechanisms of radio-electric conductive disturbances on example of LED lamp Kazimierz Kuryło, Wiesław Sabat, <u>Dariusz Klepacki</u>, Kazimierz Kamuda Rzeszów University of Technology, Poland</p>
		<p>i121 ISFET structures with chemically modified membrane for bovine serum albumin detection <u>Piotr Firek</u>¹, Michał Cichomski², Michał Waśkiewicz¹, Ireneusz Piwoński², Aneta Kisielewska² ¹Institute of Microelectronics and Optoelectronics, Warsaw University of Technology, Poland; ²Department of Materials Technology and Chemistry, Faculty of Chemistry, University of Lodz, Poland</p>
		<p>i147 Long time stability of backlight lamps with nanostructural carbon field emission cathodes <u>Jerzy Kalenik</u>¹, Piotr Firek¹, Jan Szmidt¹, Elżbieta Czerwosz², Mirosław Kozłowski², Izabela Stępińska², Tomasz Wódka² ¹Institute of Microelectronics and Optoelectronics, Warsaw University of Technology, Warsaw, Poland; ²Tele and Radio Research Institute, Warsaw, Poland</p>
		<p>i148 The influence of Al₂O₃ thickness on antireflective and passivation properties of a photovoltaic structure <u>Barbara Swatowska</u>¹, Piotr Panek², Katarzyna Gawlińska², Rafał Pietruszka³ ¹AGH University of Science and Technology, Poland; ²Institute of Metallurgy and Material Science PAS, Poland; ³Institute of Physics PAS, Poland</p>

		i117 Packing Density of Inkjet Printed Paths <u>Grzegorz Tomaszewski</u> , Jerzy Potencki, Tadeusz Wałach Rzeszów University of Technology, Poland
19:00-21:00	Welcome reception (Main Building – Main Hall)	

Tuesday, 12 September 2017

9:00-10:30	Plenary session 2 (Main Building – Minor Hall 237) Session Chairs: Piotr Jasiński (Gdańsk University of Technology, Poland) and Nihal Sinnadurai (ATTAC, London, UK)		
9:00-9:45	203 Future of Embedding and Fanout Packaging Technologies <u>Rao Tummala</u> Georgia Institute of Technology, United States of America		
9:45-10:30	204 Large scale sustainable production of graphene for real-life applications <u>Krzysztof Koziol</u> University of Cambridge, United Kingdom		
10:30-11:00	Coffee break (Main Hall)		
11:00-13:00	Session 7: Materials and processes (Main Building – Minor Hall 237) Session Chairs: Achim Bittner (Hahn-Schickard, Germany) and Yves Ousten (IMS Bordeaux, France)	Session 8: Functional systems (actuators, sensors, photovoltaics and related) (Main Building – Senate Hall 124) Session Chairs: Rolf Aschenbrenner (Fraunhofer IZM, Berlin, Germany) and Matti Mantysalo (Tampere Univ. of Technology, Finland)	IMAPS Poland Oral Session 1 (Main Building – 123) Session Chairs: Jan Felba (Wrocław Univ. of Science and Technology, Poland) and Jarosław Kita (Univ. of Bayreuth, Germany)
11:00-11:20	160 Development of Low-temperature Sintering Nano-silver Die Attach Materials for Bare Cu Application Akira Tsuno ¹ , S. Yagci ¹ , G. Kopp ¹ , <u>Koji Sasaki</u> ² , Noritsuka Mizumura ² ¹ Namics Europe GmbH, Germany; ² Namics Corporation, Japan	117 Printed heater elements for smart sensor packages in LTCC <u>Heike Bartsch</u> ¹ , Artur Rydosz ² , Wojciech Maziarz ² , Tadeusz Pisarkiewicz ² , Dirk Stöpel ¹ , Jens Müller ¹ ¹ Technische Universität Ilmenau, Germany; ² AGH Univ. of Science and Technology, Poland	i101 Investigating the Attack Angle of Squeegees with Different Geometries <u>Oliver Krammer</u> , László Jakab, Balázs Illés Budapest University of Technology and Economics, Hungary
11:20-11:40	161 Development of selective conformal coating process based on advanced packaging for harsh environments <u>Eric Cadalen</u> , Olivier Maire, David Manteigas MBDA, France	132 LTCC-Based Micro Plasma Source for the Selective Treatment of Cell Cultures <u>Michael Fischer</u> 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	i129 Influence of short voltage pulses on thick-film resistors at elevated temperature <u>Damian Nowak</u> , Konrad Idziorek Wrocław University of Science and Technology, Poland

11:40-12:00	<p>167 Are tin-rich solder alloys resistant to tin pest? <u>Agata Skwarek</u>¹, Piotr Zachariasz¹, Balázs Illés², Tomasz Czeppe³, Grzegorz Garzel³, Krzysztof Witek¹ ¹Institute of Electron Technology, Krakow, Poland; ²Budapest University of Technology and Economics, Department of Electronics Technology, Hungary; ³Institute of Metallurgy and Materials Science, PAS, Krakow, Poland</p>	<p>136 LTCC Technology for Active Eddy Current Turbocharger Speed Sensors <u>Martin Ihle</u>¹, Steffen Ziesche¹, Paul Gierth¹, Andreas Tuor², Jonathan Tigelaar², Oliver Hirsch² ¹Fraunhofer IKTS, Germany; ²JAQUET Technology Group AG / TE Connectivity, Basel, Switzerland</p>	<p>i135 Resistance Development on Embedded Heating Layers during Climatic Test <u>Dirk Seehase</u>, Andrej Novikov, Mathias Nowottnick Institute of Electronic Appliances and Circuits, Faculty of Computer Science and Electrical Engineering/University of Rostock, Rostock, Germany</p>
12:00-12:20	<p>169 Acceleration Measurements during Reactive Bonding Processes <u>Irina Spies</u>¹, Axel Schumacher¹, Stephan Knappmann¹, Bastian Rheingans², Jolanta Janczak-Rusch², Lars P.H. Jeurgens² ¹Hahn-Schickard, Villingen-Schwenningen, Germany; ²EMPA, Dübendorf, Switzerland</p>	<p>168 Influence of various micro channels integrated in LTCC multilayer module on the thermal resistance <u>Tomas Girasek</u>¹, Alena Pietrikova¹, Tilo Welker², Jens Muller² ¹Technical University of Kosice, Slovak Republic; ²Ilmenau University of Ilmenau, Germany</p>	<p>i136 Depositing of conductive silver nanoparticles layer on cellulose fibers <u>Olga Rac-Rumijowska</u>¹, Marta Fiedot¹, Patrycja Suchorska-Woźniak¹, Iwona Karbownik², Helena Teterycz¹ ¹Wroclaw University of Science and Technology, Poland; ²Faculty of Material Technologies and Textile Design, Technical University of Łódź, Łódź, Poland</p>
12:20-12:40	<p>147 Low temperature sintering of silver micro-particles induced by organic accelerators in epoxy-based binders <u>Masahiro Inoue</u>, Masaki Iida, Yoshiaki Sakaniwa Gunma University, Japan</p>	<p>175 Basic microfluidic elements in the LTCC structures <u>Darko Belavic</u>^{1,2,3}, Andraž Bradeško^{2,5}, Kostja Makarovič^{2,3,4}, Marjan Hodnik¹, Hana Uršič² ¹HIPOT-RR c/o Jožef Stefan Institute, Slovenia; ²Jožef Stefan Institute, Slovenia; ³Centre of Excellence NAMASTE, Slovenia; ⁴KEKO Equipment, Slovenia; ⁵Jožef Stefan International Postgraduate School, Slovenia</p>	<p>i102 Effect of the Vapour Concentration Decrease on the Solder Joints Temperature in a Vacuum Vapour Phase Soldering System <u>Balázs Illés</u>¹, Agata Skwarek², Attila Géczy¹, László Jakab¹ ¹Budapest University of Technology and Economics, Hungary; ²Department of Microelectronics, Institute of Electron Technology, Krakow, Poland</p>

12:40-13:00	159 Solderability and Reliability Evolution of No-Clean Solder Fluxes <u>Rodrigo Aguilar</u> Inventec Performance Chemicals, France	190 Comparison of an electronic noses based on the semiconducting and electrochemical gas sensors performance for an analysis of toxic gas concentration <u>Grzegorz Jasiński</u> , Paweł Kalinowski, Łukasz Woźniak, Piotr Jasiński Gdańsk University of Technology, Poland	i128 Borosilicate spray-on glass solutions for fabrication silicon solar cell back surface field <u>Wojciech Filipowski</u> ¹ , Kazimierz Drabczyk ² , Edyta Wróbel ¹ , Krzysztof Waczyński ¹ , Piotr Sobik ³ , Natalia Waczyńska-Niemiec ¹ ¹ Silesian University of Technology, Poland; ² Institute of Metallurgy and Materials Science, Krakow, Poland; ³ Helioenergia sp. z o.o., Czerwionka-Leszczyny, Poland
13:00-14:00	Lunch (Main Building – 206)		
14:00-15:40	Session 9: Advanced packaging and interconnects (Main Building – Minor Hall 237) Session Chairs: Johann Nicolics (Vienna Univ. of Technology, Austria) and Klaus Juergen Wolter (TU Dresden, Germany)	Session 10: Modeling, design test & reliability (Main Building – Senate Hall 124) Session Chairs: Luigi Calligarich (Electron-Mec Srl., Italy) and Rainer Dudek (Fraunhofer ENAS, Chemnitz, Germany)	IMAPS Poland Oral Session 2 (Main Building – 123) Sessions chairs: Dariusz Klepacki (Rzeszów Univ. of Technology, Poland) and Piotr Markowski (Wrocław Univ. of Science and Technology, Poland)
14:00-14:20	125 Newly Developed High Reliability Palladium Coated Cu Wire for Automotive Application <u>Motoki Eto</u> 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, Japan	183 Modelling the 3D-Printing Process for Electronic Packaging <u>Chris Bailey</u> , Stoyan Stoyanov, Tim Tilford University of Greenwich, United Kingdom	i140 The sintering of nanosilver particles – the low-temperature joining technique for electronic packaging <u>Jan Felba</u> Wrocław University of Science and Technology, Poland
14:20-14:40	143 In-line Metrology for Cu Pillar Applications in Interposer based Packages for 2.5D Integration Iuliana Panchenko ^{1,2} , Martin Kunz ³ , <u>Lothar Lehmann</u> ⁴ , Tanya Atanasova ⁴ , Mathias Boettcher ² , Marcel Wieland ⁴ , Juergen M. Wolf ² ¹ Institute of Electronic Packaging Technology, TU Dresden, Dresden, Germany; ² Fraunhofer Institute for Reliability and Microintegration IZM, ASSID, Moritzburg, Germany; ³ NanoFocus AG, Oberhausen, Germany; ⁴ Globalfoundries, Dresden, Germany	138 A new method for prediction of corrosion processes in aluminum housing materials for electronic components <u>Sandy Klengel</u> , Tino Stephan, Bolko Mühs-Portius Fraunhofer Institute for Microstructure of Materials and Systems IMWS, Germany	i113 Aerosol Deposition Method vs. Screen-Printing Technique – Novel Manufacturing Process for NTCR Thermistor Devices Michaela Bruckner ¹ , <u>Jaroslav Kita</u> ¹ , Christian Muench ² , Ralf Moos ¹ ¹ Functional Materials, University of Bayreuth, Germany; ² Vishay Electronic GmbH, Selb, Germany

14:40-15:00	<p>145 Flip-chip bonding: how to meet the high accuracy requirements? <u>Caroline Avrillier</u>, Pascal Metzger SET, France</p>	<p>150 Comparative FEM thermo-mechanical simulations for built-in reliability: surface mounted technology versus embedded technology for silicon dies <u>Mickaël Balmont</u>, Isabelle Bord-Majek, Yves Ousten IMS Bordeaux, France</p>	<p>i123 Implementation of alternative fabrication routes for developing vertical stacked All-inkjet-printed Thin Film-transistors suitable for flexible electronic applications <u>Kalyan Yoti Mitra</u>, Sunil Kapadia, V.A. Gopi Dinesh Challa, Reinhard R. Baumann Technical University of Chemnitz, Germany</p>
15:00-15:20	<p>146 High Efficient Mid Power Modules by Next Generation Chip Embedding Technology <u>Kay Stefan Essig</u>¹, C.T Chiu², Jarris Kuo², Phidia Chen², Jean-Marc Yaonnou¹ ¹ASE (Europe) Inc. Belgium; ²ASE Group, Taiwan</p>	<p>177 Pulse stability of low ohmic thick-film resistors <u>Arkadiusz Dąbrowski</u>, Andrzej Dziedzic, Jakub Czarachowicz Wrocław University of Science and Technology, Poland</p>	<p>i125 Thermal stability analysis of passive devices embedded into printed circuit boards <u>Wojciech Stęplewski</u>¹, Andrzej Dziedzic², Kamil Janeczek¹, Aneta Araźna¹, Krzysztof Lipiec¹, Janusz Borecki¹, Tomasz Serzysko¹ ¹Tele and Radio Research Institute, Poland; ²Wrocław University of Science and Technology, Faculty of Microsystem Electronics and Photonics, Poland</p>
15:20-15:40	<p>153 Characterisation of Cu/Cu bonding using self-assembled monolayer as oxidation inhibitor <u>Maria Lykova</u>¹, Iuliana Panchenko^{1,2}, Marion Geidel³, Johanna Reif³, Ulrich Künzelmann³, M. Jürgen Wolf², Klaus-Dieter Lang⁴ ¹Institute of Electronic Packaging Technology (IAVT), TU Dresden, Dresden, Germany; ²All Silicon System Integration Dresden (ASSID), Fraunhofer Institute for Reliability and Microintegration (IZM), Dresden, Germany; ³Institute of Semiconductors and Microsystems (IHM), TU Dresden, Dresden, Germany; ⁴Fraunhofer Institute for Reliability and Microintegration (IZM), Berlin, Germany</p>	<p>131 Reliability of Embedded Wafer Level Ball Grid Arrays in Automotive Applications <u>Michael Novak</u>¹, Wolfgang Grübl¹, Bernhard Schuch¹, Peter Ossimitz² ¹Continental, Germany; ²Infineon Technologies AG, Germany</p>	
15:40-16:10	Coffee break (Main Hall)		

16:10-17:30	Session 11: Advanced packaging and interconnects (Main Building – Minor Hall 237) Session Chairs: Eric Beyne (IMEC Leuven, Belgium) and Martin Schneider-Ramelow (Fraunhofer IZM, Berlin, Germany)	Session 12: Electronics components assembly and PCB solutions (Main Building – Senate Hall 124) Session Chairs: Alena Pietrikova (Technical Univ. Kosice, Slovakia) and Thomas Zerna (TU Dresden, Germany)	
16:10-16:30	154 Comparison of Microvia HDI PCBs with ACF interconnections in accelerated life testing <u>Laura Frisk</u> , Sanna Lahokallio, Janne Kiilunen Trelic Ltd, Finland	103 Embedded mini Heat Pipes as Thermal Solution for PCBs <u>Jonathan Silvano de Sousa</u> ¹ , Paul Fulmek ² , Michael Unger ² , Peter Haumer ² , Johann Nicolics ² ¹ AT&S AG, Austria; ² Vienna University of Technology (TU Wien), Austria	
16:30-16:50	164 In–Bi Low-Temperature SLID Bonding for piezoelectric materials <u>Knut E Aasmundtveit</u> ¹ , Trym Eggen ^{1,2} , Tung Manh ¹ , Hoang-Vu Nguyen ¹ ¹ University College of Southeast Norway, Norway; ² GE Vingmed Ultrasound, Norway	166 Embedding technologies for heterogeneous integration of components in PCBs - an innovative modularisation approach with environmental impact <u>Dionysios Manassis</u> ¹ , Jakub Pawlikowski ¹ , Andreas Ostmann ¹ , Karsten Schischke ¹ , Thomas Krivec ² , Gerhard Podhradsky ³ , Rolf Aschenbrenner ¹ , Martin Ramellow-Schneider ¹ , K-D. Lang ⁴ ¹ Fraunhofer IZM Berlin, Germany; ² AT&S AG, Leoben, Austria; ³ SPEECH, Speech Processing Solutions GmbH, Vienna, Austria; ⁴ Technical University of Berlin, Berlin, Germany	
16:50-17:10	176 Liquid Solid Diffusion (LSD) Bonding – A novel joining technology <u>Andreas Larsson</u> ^{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	156 The Mechanical Strength of Microvias in Reflow Cycling and Environmental Aging Janne Kiilunen, <u>Laura Frisk</u> Trelic Ltd, Finland	

17:10-17:30	<p>192 Polyimide Foil Flip-Chip Direct Bonding <u>Martin Deckert</u>¹, Michael Thomas Lippert², Jakub Krzemiński³, Kentaroh Takagaki², Frank W. Ohl², Bertram Schmidt¹ ¹Otto von Guericke University Magdeburg, Germany; ²Leibniz Institute for Neurobiology, Magdeburg, Germany; ³Warsaw University of Technology, Poland</p>	<p>212 BAMFIT – Accelerated Lifetime Tests for Heavy Wire Bonds <u>Josef Sedlmair</u>¹, Golta Khatibi², Bernhard Czerny² ¹F&S Bondtec Semiconductor GmbH, Austria; ²Technical University Vienna, Austria</p>	
17:30-19:00	<p>Poster Session 2 (Main Building – Main Hall) Session Chairs: Paul Collander (Poltronic, Espoo, Finland)</p>	<p>IMAPS Poland Poster Session 2 (Main Building – Main Hall) Session chair: Leszek Golonka (Wrocław Univ. of Science and Technology, Poland)</p>	
Each poster needs to be overviewed in 3 minutes presentation at the beginning of poster session.	<p>104 Development of PEB Face-Down Interconnection Process for Ultra Thin Flexible Package <u>Jae Hak Lee</u>, Chung Woo Lee, Yong Jin Kim, Seung Man Kim, Jun-Yeob Song Korea Institute of Machinery and Materials, Republic of Korea (South Korea)</p>	<p>i132 Non-enzymatic glucose sensor based on poly(3,4-ethylenedioxythiophene) decorated with Cu nanoparticles <u>Aleksander Mroziński</u>, Karolina Cysewska, Justyna Bartoszek, Piotr Jasiński Gdańsk University of Technology, Faculty of Electronics Telecommunications and Informatics, Poland</p>	
	<p>158 Integration of Screen-Printed Electroluminescent Matrix Displays in Smart Textile Items – Implementation and Evaluation <u>Artem Ivanov</u>, Maximilian Wurzer University of Applied Sciences Landshut, Germany</p>	<p>i103 Effects of high current load on lead-free solder joints of small scale passive SMD components <u>Attila Géczy</u>¹, Dániel Straubinger¹, Olivér Krammer¹, András Kovács¹, David Busek², Gábor Harsányi¹ ¹Budapest University of Technology and Economics, Hungary; ²Czech Technical University in Prague, Faculty of Electrical Engineering, Czech Republic</p>	
	<p>155 Physical reliability of textile electronics <u>Hartmann Hieber</u> ICR, Germany</p>	<p>i100 Novel Oxidoreductase-based Sensor for Optical Neurotransmitters Detection <u>Sylwia Baluta</u>, Joanna Cabaj, Karol Malecha Wrocław University of Science and Technology, Poland</p>	
	<p>157 High speed interfaces for chip to chip communication on interposer based integration Muhammad Waqas Chaudhary, <u>Andy Heinig</u> Fraunhofer IIS/EAS, Germany</p>	<p>i130 The influence of corner bonding and underfilling techniques on the reliability of 3D TMV PoP structures in SMT assembly <u>Marek Kościelski</u>, Janusz Sitek, Janusz Borecki, Tomasz Serzysko Tele and Radio Reserch Institute, Poland</p>	

Each poster needs to be overviewed in 3 minutes presentation at the beginning of poster session.	<p>170 Image approximation using B-Spline surfaces Zbigniew Suszyński, <u>Robert Świta</u> Koszalin Technical University, Poland</p>	<p>i107 The Materials and Technology Parameters Influenced on the Mechanical Properties of Low Temperature Sintered Silver Joints <u>Krzysztof Jakub Stojek</u>¹, Jan Felba¹, Tomasz Fałat¹, Andrzej Mościcki² ¹Wrocław University of Science and Technology, Poland; ²Amepox Microelectronics LTD, Łódź, Poland</p>
	<p>173 Modelling power LEDs in the COB case with thermal phenomena taken into account <u>Krzysztof Górecki</u>, Przemysław Ptak Gdynia Maritime University, Poland</p>	<p>i131 Quality assessment and failures analysis in assembled printed circuit boards <u>Wojciech Stęplewski</u>, Kamil Janeczek, Aneta Araźna, Krzysztof Lipiec Tele and Radio Research Institute, Poland</p>
	<p>187 Capacitive touch sensor <u>Samuel Zuk</u>, Alena Pietrikova, Igor Vehec Department of Technologies in Electronics, Technical University of Kosice, Slovak Republic</p>	<p>i111 Measurements and Simulations of Silicon Carbide Current-Controlled Transistors <u>Joanna Patrzyk</u>, Damian Bisewski Gdynia Maritime University, Poland</p>
	<p>178 Ceramic packaging of PiezoMEMS devices <u>Darko Belavič</u>^{1,2,3}, Katarina Vojisavljevič², Danjela Kuščer², Tanja Pečnik², Jerzy Zając⁴, Adrian Anghelescu⁵, George Muscalu⁵, Marjan Hodnik¹, Tomaž Kos², Silvio Drnovšek², Barbara Malič² ¹HIPOT-RR c/o Jožef Stefan Institute, Slovenia; ²Jožef Stefan Institute, Slovenia; ³Centre of Excellence NAMASTE, Slovenia; ⁴Institute of Electron Technology, Poland; ⁵National Inst. for R&D in Microtechnologies, Bucharest, Romania</p>	<p>i108 The influence of a soldering manner on thermal properties of LED modules <u>Krzysztof Górecki</u>¹, Barbara Dziurdzia², Przemysław Ptak¹ ¹Gdynia Maritime University, Poland; ²University of Science and Technology, Kraków</p>
	<p>179 Thick film resistive sensors based on Pr_{0.9}Sr_{0.1}CoO_{3-δ} and Sm_{0.9}Sr_{0.1}CoO_{3-δ} cobaltites for carbon monoxide and nitric oxide detection <u>Piotr Zachariasz</u>, Katarina Cvejn, Dorota Szwagierczak, Agata Stoch Institute of Electron Technology, Poland</p>	<p>i133 Temperature Transducer with Frequency Output made in LTCC Technology Witold Malikowski², Jerzy Potencki¹, <u>Grzegorz Tomaszewski</u>¹, Tadeusz Wałach¹ ¹Rzeszów University of Technology, Poland; ²Faculty of Electrical and Computer Engineering, Poland</p>

Each poster needs to be overviewed in 3 minutes presentation at the beginning of poster session.	<p>186 Time window based features extraction from temperature modulated gas sensors for prediction of ammonia concentration <u>Paweł Jan Kalinowski</u>, Łukasz Rafał Woźniak, Grzegorz Paweł Jasiński, Piotr Zbigniew Jasiński Gdansk University of Technology, Poland</p>	<p>i138 Au wire and ribbon thermosonic bonding for high temperature applications <u>Marcin Myśliwiec</u>^{1,2}, Ryszard Kisiel¹ ¹Institute of Microelectronics and Optoelectronics, Warsaw University of Technology, Poland; ²Central Laboratory of CEZAMAT, Warsaw University of Technology, Poland</p>
	<p>191 Influence of operation temperature instability on gas sensor performance <u>Grzegorz Jasiński</u> Gdańsk University of Technology, Poland</p>	<p>i141 Dielectric characterization of selected LTCC materials for microwave applications <u>Laura Jasińska</u>, Jan Macioszczyk, Piotr Słobodzian, Karol Malecha Wroclaw University of Science and Technology, Poland</p>
	<p>213 Laserbonding: Combining wire bonding and laser welding <u>Josef Sedlmair</u>¹, Benjamin Mehlmann¹, Alexander Olowinsky² ¹F&K Delvotec Bondtechnik GmbH, Germany; ²Fraunhofer-Institut für Lasertechnik, Aachen, Germany</p>	<p>i126 Electrodeposition of copper on screen printed fine line front electrodes of solar cells <u>Kazimierz Drabczyk</u>¹, Bigos Agnieszka¹, Skwarek Agata², Sobik Piotr³ ¹Institute of Metallurgy and Materials Science of PAS, Poland; ²Institute of Electron Technology, Krakow, Poland; ³Helioenergia sp. z o.o., Czerwionka-Leszczyny, Poland</p>
		<p>i120 Application of microwave heating in ceramic-based microfluidic module <u>Karol Malecha</u>¹, Jan Macioszczyk¹, Piotr Słobodzian², Jacek Sobków¹ ¹Faculty of Microsystem Electronics and Photonics, Wrocław University of Science and Technology, Poland; ²Faculty of Electronics, Wrocław University of Science and Technology, Poland</p>
		<p>i124 Reliability studies of InnoLot and SnBi joints soldered on DBC substrate <u>Agata Skwarek</u>¹, Balázs Illés², Krzysztof Witek¹, Sebastian Wroński³, Tamás Hurtony², Beata Synkiewicz Synkiewicz¹ ¹Institute of Electron Technology, Poland; ²Budapest University of Technology and Economics, Hungary; ³AGH University of Science and Technology, Poland</p>
		<p>i142 Convection vs vapour phase reflow in LED assembly <u>Barbara Dziurdzia</u>¹, Maciej Sobolewski², Janusz Mikołajek³ ¹AGH University of Science and Technology, Poland; ²Fideltronik SA; ³Fideltronik Poland Ltd, Poland</p>

		i145 Influence of platinum as a dopant in resistive gas sensor <u>Marta Fiedot</u> , Patrycja Suchorska-Woźniak, Olga Rac-Rumijowska, Andrzej Stafiniak, Helena Teterycz Wrocław University of Science and Technology, Poland
19:00-22:30	Gala Dinner (Faculty of Physics – Main Hall)	

Wednesday, 13 September 2017

9:00-9:45	Plenary session 3 (Main Building – Minor Hall 237) Session Chair: Jerzy Potencki (Rzeszów University of Technology, Rzeszów, Poland)		
9:00-9:45	Developing Damage Models for Solder Joints Exposed to Complex Stress States: Influence of Potting, Coating, BGA Mirroring, and Housing on Solder Joint Fatigue <u>Craig Hillman</u> DfR Solutions, United States of America		
9:45-10:15	Coffee break (Main Hall)		
10:15-12:15	Session 13: Materials and processes (Main Building – Minor Hall 237) Session Chairs: Jens Mueller (TU Ilmenau, Germany) and Marcin Słoma (Warsaw Univ. of Technology, Poland)	Session 14: Modeling, design test & reliability (Main Building – Senate Hall 124) Session Chairs: Chris Bailey (University of Greenwich, UK) and Piotr Jasiński (Gdańsk Univ. of Technology, Poland)	IMAPS Poland Oral Session 3 (Main Building – 123) Sessions Chairs: Jerzy Potencki (Rzeszów Univ. of Technology, Poland) and Piotr Firek (Warsaw Univ. of Technology, Poland)
10:15-10:35	181 Effect of bonding conditions on shear strength of joints at 200 °C using Sn-coated Cu particle <u>Hiroshi Nishikawa</u> , Xiangdong Liu Osaka University, Japan	163 A novel experimental approach to calibrating cohesive zone elements for advanced risk analysis of interface delamination in semiconductor packages Georg M. Reuther ¹ , <u>Nadine Pflügler</u> ¹ , Dominik Udiljak ¹ , Reinhard Pufall ¹ , Bernhard Wunderle ² ¹ Infineon Technologies AG, Germany; ² Technische Universität Chemnitz, Germany	i106 Reliability of Cu-based interconnections for Power Devices <u>Marek Guzewicz</u> ¹ , Karolina Pagowska ¹ , Adam Laszcz ¹ , Marcin Mysliwiec ² ¹ Institute of Electron Technology, Warsaw; ² Laboratory of CEZAMAT, Warsaw University of Technology, Warsaw and Warsaw Institute of Microelectronics and Optoelectronics, Warsaw University of Technology, Poland
10:35-10:55	193 Mechanical properties and life time of high Pb-containing solder joints Golta Khatibi, <u>Agnieszka Betzwar Kotas</u> TU Wien, Austria	171 A Combined Simulation and Optical Measurement Technique for Investigation of System Effects on Components Solder Fatigue <u>Rainer Dudek</u> ¹ , M. Hildebrand ¹ , S. Rzepka ¹ , Th. Fries ² , R. Döring ³ , B. Seiler ³ , A. Gerl ⁴ , R.W. Ortmann ⁵ ¹ Fraunhofer ENAS, Germany; ² FRT GmbH, Bergisch-Gladbach, Germany; ³ CWM GmbH Chemnitz, Germany; ⁴ Continental, Nuremberg, Germany; ⁵ Continental Automotive France, Toulouse, France	i139 High voltage applications of Low Temperature Co-fired Ceramics <u>Arkadiusz Dąbrowski</u> ¹ , Przemysław Rydygier ² , Mateusz Czok ¹ , Leszek Golonka ¹ ¹ Wrocław University of Science and Technology, Poland; ² ABB Corporate Research Centre Krakow, Poland

10:55-11:15	194 Low Temperature Co-fired Ceramics: Physical and Electrical Properties as a Function of Firing Temperature. Jim Walker, Jim Henry, Ed Graddy, <u>Barbara Adrian</u> Ferro GmbH, Hanau, Germany	174 Influence of thermal phenomena on characteristics of components of the IGBT module <u>Paweł Górecki</u> , Krzysztof Górecki Gdynia Maritime University, Poland	i119 PDMS – LTCC Lab on Chip for Photocatalytic Effect Analysis <u>Witold Nawrot</u> , Marta Fiedot, Karol Malecha Faculty of Microsystem Electronics and Photonics, Wrocław University of Science and Technology, Poland
11:15-11:35	195 Design, fabrication and experimental characterization of mixed thick-/thin film thermoelectric microgenerators based on constantan/silver <u>Mirosław Gracjan Gierczak</u> , Joanna Prażmowska-Czajka, Andrzej Dziejczak Wrocław University of Science and Technology, Poland	182 Finite Element Study of Chip Package Induced Mechanical and Corrosive Failure Modes Complementing Microstructural Root Cause Analyses <u>Georg Lorenz</u> ¹ , Michél Simon-Najasek ¹ , Achim Lindner ² ¹ Fraunhofer IMWS, Halle, Germany; ² Micronas GmbH, Freiburg, Germany	i105 Portable reactor with LTCC electrodes for production of plasma activated water <u>Jan Macioszczyk</u> ¹ , Piotr Olszewski ¹ , Piotr Jamróz ² , Leszek Golonka ¹ ¹ Fac. of Microsystem Electronics and Photonics, Wrocław University of Science and Technology, Poland; ² Fac. of Chemistry, Wrocław University of Science and Technology, Poland
11:35-11:55	200 Silver sinter paste for SiC bonding with improved mechanical properties <u>Wolfgang Schmitt</u> , Ly May Chew, Daniel Schnee Heraeus Deutschland GmbH & Co. KG, Hanau, Germany	197 A delamination study on metallization stacks of power semiconductors <u>Thomas Walter</u> , Golta Khatibi Christian Doppler Laboratory for Lifetime and Reliability of Interfaces in Complex Multi-Material Electronics, CTA, TU Vienna, Austria	i146 LTCC-based Temperature Difference Sensor <u>Piotr Markowski</u> Wrocław University of Science and Technology, Poland
11:55-12:15	189 Benchmark Study of Screen Printable Silver Inks on a PPE Based Substrate <u>Riikka Maria Mikkonen</u> , Matti Mäntysalo Tampere University of Technology, Finland	188 Crystal plasticity modeling of the heat affected zone of copper micro-wires <u>Ali Mazloum-Nejadari</u> ^{1,2} , Martin Lederer ³ , Golta Khatibi ³ , Johann Nicolics ² ¹ Infineon AG, Neubiberg, Germany; 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, CTA, TU Wien, Austria	
12:15-12:45	Closing session - Awards - Advance information on ESTC 2018 and EMPC 2019 (Main Building – Minor Hall 237) Sessions chairs: Małgorzata Jakubowska (Warsaw University of Technology, Poland), Karlheinz Bock (TU Dresden, Germany) and Luigi Calligarich (Electron-Mec Srl., Italy)		
12:45-13:30	Lunch (Main Building – 206)		
13:45-15:00	General Assembly Meeting of IMAPS Poland (Main Building – 123)		