CICMT SESSION OUTLINE

Session TA1: Ceramic Microsystems - Energy Systems
Chairs: Nigel Sammes, Colorado School of Mines; Alexander Michaelis, Fraunhofer Institute for Ceramic Technologies and Systems IKTS

Session TA2: RF Devices
Chairs: Mike Janezic, National Institute of Standards and Technology; Amy Moll, Boise State University

Session TP1: Nanoscale Materials
Chairs: Wolfgang Rossner, Siemens AG; Minoru Osada, National Institute for Materials Sciences

Session TP2: Piezo Electric Materials and Devices
Chairs: Jerry Aguirre, Kyocera America Inc.; Yoshihiko Imanaka, Fujitsu Laboratories Limited

Session TP3: Advanced Packaging
Chair: Fred Barlow, University of Idaho

Session WA1: Microsystems Devices
Chairs: Ken Peterson, Sandia National Laboratories; Leszek Golonka, Wroclaw University

Session WA2: Materials Characterization and Reliability
Chairs: Jim Sears, South Dakota School of Mines & Technology; Seung-Hyun Kim, INOSTEK Inc.

Session WP1: Materials Characterization
Chairs: Torsten Rabe, Federal Institute for Materials Research and Testing (BAM); Longtu Li, Tsinghua University

Session WP2: Interactive Forum (Poster Session)
Chair: Donald Plumlee, Boise State University

Session WP3: LTCC Standards
Chairs: Mike Ehliert, Barry Industries Inc.; Yong Soo Cho, Yonsei University

Session THA1: Materials and Processing
Chairs: Hyo Tae Kim, Korea Institute of Ceramic Engineering and Technology; Donald Plumlee, Boise State University

Session THA2: LTCC Processing and Manufacturing
Chairs: Daniel S. Krueger, Honeywell FM&T; Richard Eitel, University of Kentucky
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:30 am - 6:00 pm</td>
<td>Registration</td>
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<tr>
<td>Noon - 6:30 pm</td>
<td>Exhibit Hours</td>
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<tr>
<td>8:30 am - 9:00 am</td>
<td><strong>Keynote Presentation</strong></td>
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<tr>
<td></td>
<td><strong>Title:</strong> Multiscale, Ceramic Microsystems for Heat and Mass Transfer</td>
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<td></td>
<td><strong>Speaker:</strong> Charles Lewinsohn, Ceramatec, Inc. (Co-authors: M. Wilson, J. Fellows, H. Anderson)</td>
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<td>9:00 am - 9:30 am</td>
<td><strong>Keynote Presentation</strong></td>
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<td></td>
<td><strong>Title:</strong> Novel Thermoelectric Materials for Thermophotovoltaic Hybrid Devices</td>
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<td><strong>Speaker:</strong> Kunihiro Koumoto, Nagoya University and CREST (Co-authors: Chunlei Wan, Nagoya University and CREST; Yifeng Wang, Nagoya University; Ning Wang, University of Electronic Science and Technology of China; Ruizhi Zhang, Shandong University)</td>
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<td>9:30 am - 10:00 am</td>
<td><strong>Keynote Presentation</strong></td>
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<td><strong>Title:</strong> Ceramic Devices for Micro Solid-Oxide Fuel Cells</td>
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<td><strong>Speaker:</strong> Thomas Maeder, EPFL - Laboratoire de Production Microtechnique (Co-authors: Bo Jiang, Peter Pyse, EPFL - Laboratoire de Production Microtechnique; Yan Yan, Paul Murait, Ceramics Laboratory (LC))</td>
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<tr>
<td>10:00 am - 10:30 am</td>
<td>Break in Foyer</td>
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<td>Topical Sessions: 10:30 am - 12:10 pm</td>
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<td>12:10 pm - 1:40 pm</td>
<td>Lunch in Exhibit Hall (Food served 12:10 pm - 1:10 pm)</td>
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<td>Topical Session: 1:40 pm - 2:40 pm</td>
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<td><strong>Session TP1:</strong> Nanoscale Materials</td>
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<td><strong>Chairs:</strong> Wolfgang Rossner, Siemens AG; Minoru Osada, National Institute for Materials Sciences</td>
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<td>2:40 pm - 3:50 pm</td>
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<td>Topical Session: 3:50 pm - 5:30 pm</td>
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<td><strong>Session TP2:</strong> Piezo Electric Materials and Devices</td>
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<td><strong>Chairs:</strong> Jerry Aguirre, Kyocera America Inc.; Yoshihiko Imanaka, Fujitsu Laboratories Limited</td>
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<td>5:30 pm - 6:30 pm</td>
<td>Reception in Exhibit Hall</td>
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<td>Tuesday, April 5</td>
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<td>Topical Sessions: 8:30 am - 9:50 am</td>
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<td>Thursday, April 7</td>
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<td>11:50 am</td>
<td>Conference Closing Remarks</td>
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Welcome to the 7th International Conference on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT)!

CICMT, THE premier global forum on ceramic interconnect and ceramic microsystems, continues to benefit from the complementary interests, strengths, leadership, and joint sponsorship of the International Microelectronics And Packaging Society (IMAPS) and The American Ceramic Society (ACerS). This collaboration, in two of the fastest growing areas of ceramic technology, attracts the participation of leading scientists and engineers from esteemed universities, prestigious national laboratories, and the commercial leaders in the industry.

The CICMT Conference is back in the U.S. after a successful meeting in Japan last year. This two and a half day event brought together experts from Asia, Europe, and North and South America to present and discuss the latest advances in ceramic interconnect and ceramic microsystems technologies. Coming from more than 40 different organizations including universities as well as industry and government laboratories, the conference provided a wide spectrum of interests reflected in more than 50 papers in 14 sessions. This year’s keynote and international session speakers focused on multilayer ceramic components and future applications.

We thank our session chairs, technical co-chairs Soshu Kirihara (Osaka University) and Marija Kosec (Jozef Stefan Institute), and the IMAPS staff for their support and leadership in putting this program together. Finally, we thank each and every one of you for contributing to the success of CICMT 2011 through your participation and attendance. We hope that you gain as much from this conference as we have in pulling it together.

Planning for the 2012 CICMT is underway; details will be available at our CICMT website in the future. We welcome your comments, suggestions, and assistance to help us achieve the CICMT goal of accelerating the research, development, and product impact of our exciting ceramic technology thrusts. Please visit our website at www.cicmt.org for information on future events.

Amy Moll, Boise State University and Jens Müller, Technical University Ilmenau
General Co-Chairs

A SPECIAL THANK YOU TO ALL OF THE MEMBERS ON THE ORGANIZING COMMITTEE, SESSION CHAIRS AND SPEAKERS WHO HAVE MADE CICMT 2011 A GREAT SUCCESS!
Tuesday, April 5

REGISTRATION: 7:30 AM - 6:00 PM

CONTINENTAL BREAKFAST: 7:30 AM - 8:15 AM

EXHIBIT HOURS: NOON - 6:30 PM

AFTERNOON REFRESHMENT BREAK, LUNCH & RECEPTION IN EXHIBIT HALL

OPENING REMARKS: 8:15 AM - 8:30 AM

CONFERENCE CHAIRS

KEYNOTE PRESENTATION: 8:30 AM - 9:00 AM
TITLE: MULTISCALE, CERAMIC MICROSYSTEMS FOR HEAT AND MASS TRANSFER
SPEAKER: CHARLES LEWINSOHN, CERAMATEC, INC.
CO-AUTHORS: M. WILSON, J. FELLOWS, H. ANDERSON

KEYNOTE PRESENTATION: 9:00 AM - 9:30 AM
TITLE: NOVEL THERMOELECTRIC MATERIALS FOR THERMOPHOTOVOLTAIC HYBRID DEVICES
SPEAKER: KUNIHITO KOMOTO, NAGOYA UNIVERSITY AND CREST
CO-AUTHORS: CHUNLEI WAN, NAGOYA UNIVERSITY AND CREST; YIFENG WANG, NAGOYA UNIVERSITY;
NING WANG, UNIVERSITY OF ELECTRONIC SCIENCE AND TECHNOLOGY OF CHINA; RUIZHI ZHANG, SHANDONG UNIVERSITY

KEYNOTE PRESENTATION: 9:30 AM - 10:00 AM
TITLE: CERAMIC MODULES FOR MICRO SOLID-OXIDE FUEL CELLS
SPEAKER: THOMAS MAEDER, BO JIANG, PETER RYSER, EPFL - LABORATOIRE DE PRODUCTION MICROTECHNIQUE
CO-AUTHORS: BO JIANG, PETER RYSER, EPFL - LABORATOIRE DE PRODUCTION MICROTECHNIQUE;
YAN YAN, PAUL MURALT, CERAMICS LABORATORY (LC)

BREAK IN FOYER: 10:00 AM - 10:30 AM

SESSION TA1: CERAMIC MICROSYSTEMS - ENERGY SYSTEMS
Chairs: Nigel Sammes, Colorado School of Mines; Alexander Michaelis, Fraunhofer Institute for Ceramic Technologies and Systems IKTS
10:30 am - 12:10 pm

SMART PROCESSING OF SOLID ELECTROLYTE DENDRITES WITH ORDERED POROUS STRUCTURES FOR FUEL CELL MINIATURIZATIONS
Soshu Kirihara, Katsuya Noritake, Satoko Tasaki, Hiroya Abe, Osaka University

DESIGN AND FABRICATION OF A COMPLEX LTCC-BASED REACTOR FOR THE PRODUCTION OF HYDROGEN FOR PORTABLE PEM FUEL CELLS
Darko Belavici, Marina Santo Zarnik, HIPOT-RR/Center of Excellence NAMASTE; Gregor Dolanc, Primož Fajdiga, Jozef Stefan Institute; Stanko Hocevar, Jurka Batista, National Institute of Chemistry; Marko Hrovat, Janez Holc, Kostja Makarovíc, Manja Kosec, Jozef Stefan Institute/Center of Excellence NAMASTE; Iztok Stegel, Ministry of Defense

CERAMIC INTERFACE AND MULTILAYER TECHNOLOGY FOR MICRO FUEL CELLS
Steffen Ziesche, Uwe Partsch, A. Michaelis, Fraunhofer IKTS

NON-LEAD BASED PIEZOELECTRIC THIN FILMS: MATERIALS AND ENERGY HARVESTING DEVICE
Seung-Hyun Kim, Alice Leung, Lindsay Kuhn, Wenyung Jiang, Angus I. Kingon, Brown University; Eun Young Lee, INOSTEK Inc.; Dong-Joo Kim, Auburn University

DESIGN AND FABRICATION OF LTCC CATALYST CHAMBERS
Tyler W. Towner, Donald G. Plumlee, Boise State University

SESSION TA2: RF DEVICES
Chairs: Mike Janezic, National Institute of Standards and Technology; Amy Moll, Boise State University
10:30 am - 12:10 pm

WAVEGUIDE INDUCTIVE STRIP FILTER EMBEDDED IN LTCC
Ehab Abousaif, Aicha Elshabini, Fred Barlow, University of Idaho

A LOW LOSS FULLY EMBEDDED STRIPLINE PARALLEL COUPLED BPF FOR APPLICATIONS USING THE 60 GHz BAND
Alexander Schulz, Sven Rentsch, Lei Xia, Robert Mueller, Jens Mueller, Ilmenau University of Technology

PERFORMANCE IMPROVEMENT OF RF INDUCTORS USING LTCC TECHNOLOGY
Goran Radosavljevic, Walter Smetana, Vienna University of Technology; Andrea Maric, Ljiljana Zivanov, University of Novi Sad

AN ASSEMBLY-BASED STRUCTURAL MODEL FOR LTCC PACKAGE DESIGN AND RELIABILITY
Nathan Young, Jordan Massad, Kevin Ewsuk, Sandia National Laboratories

AN INVESTIGATION OF THE PROCESS STABILITY OF RF SiP MADE OF DuPont 943 and 9K7
Thomas Bartnítzek, Slawomir Kaminski, VIA electronic GmbH; Tatyana Purtova, Till Feger, University of Ulm; Christian Rusch, Karlsruhe Institute of Technology KIT

LUNCH IN EXHIBIT HALL: 12:10 PM - 1:40 PM
(Food served from 12:10 pm - 1:10 pm)
SESSION TP1: NANOSCALE MATERIALS
Chairs: Wolfgang Rossner, Siemens AG; Minoru Osada, National Institute for Materials Sciences
1:40 pm - 2:40 pm

NEW PEROVSKITE NANOMATERIALS AND THEIR INTEGRATIONS INTO HIGH-K DIELECTRICS
Minoru Osada, Takayoshi Sasaki, National Institute for Materials Science/CREST

CONTINUOUS MANUFACTURE OF SUBMICRON THICK CERAMIC GREEN TAPES AND COATINGS DEMONSTRATED FOR TCO NANO PARTICLES
Nadja Straue, Andreas Roosen, University of Erlangen-Nuremberg

3D BRANCHED NANOWIRE PHOTODETECTORS FOR HIGH EFFICIENCY SOLAR WATER SPLITTING AND HYDROGEN PRODUCTION
Ke Sun, Alireza Kargar, Yuchun Zhou, Kristian Madsen, Yi Jing, Deli Wang, University of California - San Diego

BREAK IN EXHIBIT HALL: 2:40 PM - 3:50 PM

SESSION TP2: PIEZOELECTRIC MATERIALS AND DEVICES
Chairs: Jerry Aguirre, Kyocera America Inc.; Yoshihiko Imanaka, Fujitsu Laboratories Limited
3:50 pm - 5:30 pm

CRACK PROPAGATION AND DETECTION IN PZT-MULTILAYER CERAMICS
Tobias Kuehnlein, Silvan Poller, Martin Rauscher, Alexander Klonczynski, Robert Bosch GmbH

SURFACE MICRO MACHINED ACTUATORS ON PIEZOELECTRIC BULK MATERIAL
Sandy Zaehringer, Elisabeth Widmann, Norbert Schwesinger, Technische Universität München

STUDY OF SELF-ACTUATED SCREEN-PRINTED PZT-CANTILEVERS
Riadh Lakhami, Christophe Castille, Hélène Debeda, Mario Maglione, Claude Lucat, Université de Bordeaux

BENZENE GAS SENSOR BASED ON SCREEN-PRINTED PZT CANTILEVERS
Helene Debeda, Riadh Lakhami, Claude Lucat, Université de Bordeaux; Rosa M. Vázquez, Eduard Llobet, Raul Calavia, Universitat Rovira i Virgili; Francisco J. Arregui, Carlos R. Zamarreño, Public University of Navarra; Marc Delgado, Sensotran

SINTERING BEHAVIOR OF CO-FIRED LTCC/PZT-SKN MULTILAYER CERAMICS FOR MICROFLUIDIC AND LAB ON CHIP APPLICATIONS
Wenli Zhang, Richard Eitel, University of Kentucky

SESSION TP3: ADVANCED PACKAGING
Chair: Fred Barlow, University of Idaho
3:50 pm - 5:30 pm

NEW FERRO L8 LTCC SYSTEM READY FOR HIGH RELIABILITY ELECTRONIC PACKAGING APPLICATIONS
Jim Henry, Orville Brown, Ed Graddy, Ed Stadnicar, Bob Gardner, Ferro Corporation

MICROELECTRONICS PACKAGING APPLICATION USING POST-LTCC TECHNOLOGY
Yoshihiko Imanaka, Hideyuki Amada, Fumiaki Kumashita, Fujitsu Laboratories Ltd.

THICK FILM APPROACHES IN HIGH POWER LED ARRAY MODULE
Hyo Tae Kim, Jihoon Kim, Young Joon Yoon, Chang Yeoul Kim, Jongheon Kim, Korea Institute of Ceramic Engineering and Technology; Heungsun Kim, Gi-seok Song, Shinwoo Tech Co., Ltd.

ELECTROLESS NICKEL AND AU PLATED SILVER LTCC SOLUTION FOR ADVANCED HERMETIC PACKAGES
David Ross, Greg Mitchell, Nathan Draney, Simon Gay, Michael Curley, Anaren Ceramics

THIN FILMS ON LTCC FOR CONNECTIVITY AND CONDUCTIVITY
J. A. Wolf, Honeywell FM&T; NNSA's Kansas City Plant; K. A. Peterson, Sandia National Laboratories

RECEPTION IN EXHIBIT HALL: 5:30 PM - 6:30 PM

Technical Conference Registration
Your CICMT registration fee includes all Technical Sessions, Refreshment Breaks, Lunch, Reception, and a CD-ROM Proceedings.

CICMT Tabletop Exhibition
Tuesday, April 5th
Noon - 6:30 PM
Afternoon Refreshment Break, Lunch & Reception will be held in the Exhibit Hall.
(Reception in the Exhibit Hall: 5:30 PM - 6:30 PM)

Wednesday, April 6th
11:00 AM - 5:00 PM
Afternoon Refreshment Break & Lunch will be held in the Exhibit Hall.
**Wednesday, April 6**

**Registration:** 7:30 AM - 5:00 PM

**Continental Breakfast:** 8:00 AM - 9:00 AM

**Exhibit Hours:** 11:00 AM - 5:00 PM

**Afternoon Refreshment Break & Lunch in Exhibit Hall**

**Keynote Presentation:** 9:00 AM - 9:30 AM

**Title:** Bio-Inspired Functional Materials Converted from Nature Species  
**Speaker:** Di Zhang, Shanghai Jiao Tong University  
**Co-authors:** Qinglei Liu, Wang Zhang, Shenming Zhu, Hui Lan Su, Jiajun Gu, Tongxiang Fan, Jian Ding, Shanghai Jiao Tong University; Qixin Guo, Saga University

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**Session WA1: Microsystems Devices**  
**Chairs:** Ken Peterson, Sandia National Laboratories; Leszek Golonka, Wrocław University  
**9:30 am - 11:10 am**

**Measurement of Nitrogen Monoxide Levels in Gas Flows with a Micro Total Analytical System Based on LTCC**  
Thomas Geiling, Tilo Welker, Heike Bartsch, Jens Mueller, Ilmenau University of Technology

**Ceramic-Based Planar Heat Pipe (Plate) for Passive Electronics Cooling**  

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**Session WA2: Materials Characterization and Reliability**  
**Chairs:** Jim Sears, South Dakota School of Mines & Technology; Seung-Hyun Kim, INOSTEK Inc.  
**9:30 am - 11:10 am**

**Z-, Y- and M-Type Hexagonal Ferrites for High-Frequency Inductive Multilayer Devices**  
J. Topfer, S. Bierlich, University of Applied Sciences Jena; S. Barth, B. Pawlowski, Fraunhofer Institute for Ceramic Technologies and Systems; F. Bechtold, VIA Electronic GmbH; J. Müller, Technical University of Ilmenau

**Advanced Ceramic Structures and Materials for High-Reliability Millimeter-Wave Applications**  
Iris Labadie, Kyocera America, Inc.

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**Break in Foyer:** 10:10 AM - 10:30 AM

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**Advanced Ceramic Structures and Materials for High-Reliability Millimeter-Wave Applications**  
Iris Labadie, Kyocera America, Inc.

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**Break in Foyer:** 10:10 AM - 10:30 AM

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**Lunch in Exhibit Hall:** 11:10 AM - 1:20 PM  
(Food served from 11:30 am - 12:30 pm)
SESSION WP1: MATERIALS CHARACTERIZATION
Chairs: Torsten Rabe, Federal Institute for Materials Research and Testing (BAM); Longtu Li, Tsinghua University
1:20 pm - 2:40 pm

EVALUATION OF CERAMIC SUBSTRATES FOR HIGH POWER AND HIGH TEMPERATURE APPLICATIONS
Srikanth Kulkarni, Shams Arifeen, Brian Patterson, Gabriel Potrniche, Aicha Elshabini, Fred Barlow, University of Idaho

ADVANCED 3D ROUGHNESS ANALYSIS FOR THE CHARACTERIZATION OF CERAMIC SURFACES
Karl-Heinz Strass, cyberTECHNOLOGIES GmbH

X-RAY INSPECTION OF LTCC DEVICES
Krzysztof Zaraska, Janina Gaudyn, Adam Bieńkowski, Monika Machnik, Andrzej Czerwiński, Mariusz Pluska, Institute of Electron Technology; Marek Dohnalik, Oil and Gas Institute

WIDE FREQUENCY CHARACTERIZATION OF MAGNETIC PROPERTIES OF COMMERCIAL LTCC FERRITE MATERIAL
Nelu Bla*, Andrea Maric, Ljiljana Ivanov, University of Novi Sad; Goran Radosavljevic, Ibrahim Atassi, Walter Smetana, Vienna University of Technology; Nebojša Mitrovic, University of Kragujevac

BREAK IN EXHIBIT HALL: 2:40 PM - 3:30 PM

SESSION WP2: INTERACTIVE FORUM (POSTER SESSION)
One-on-One Interactive Forum. This is your chance for detailed interaction with authors whose work is too good to miss.
Chair: Donald Plumlee, Boise State University
3:30 PM - 5:00 PM

THE DESIGN AND TESTING OF FLUIDIC OSCILLATORS MADE IN LTCC
David P. Müllner, Donald G. Plumlee, Boise State University

CHEMICAL SOLUTION DEPOSITION OF HIGH-QUALITY SrRuO3 THIN-FILM ELECTRODES AND THE DIELECTRIC PROPERTIES OF INTEGRATED LEAD LANTHANUM ZIRCONATE TITANATE FILMS FOR EMBEDDED PASSIVES
Manoj Narayanan, Beihai Ma, Rachel Koritala, Sheng Tong, U. Balachandran, Argonne National Laboratory

A NOVEL APPROACH TO THE MEASUREMENT AND CHARACTERIZATION OF LOSSES DUE TO SURFACE ROUGHNESS IN HIGH SPEED TRANSMISSION LINES
Femi Akinwale, A. Ege Engin, San Diego State University

DEVELOPMENT OF A NOVEL LTCC-CHIP FOR FAST DSC-ANALYSIS
Beate Pawlowski, J. Kita, W. Missal, E. Wappler, T. Bartnitzek, A. Kipka, R. Moos, Fraunhofer IKTS Hermsdorf

SESSION WP3: LTCC STANDARDS - PANEL DISCUSSION
Chairs: Michael Ehlert, Barry Industries Inc.; Yong Soo Cho, Yonsei University
3:30 PM - 5:00 PM

Having a single coherent set of operating and performance standards is important to the continued growth of the industry. Uniform methods will make it easier for users to design in the technology and will prevent errors.

The panel will feature a cross-section of industry figures including from academics, material makers, fabricators and users from North America, Europe and Asia. We will begin with a brief update and status report on the effort and then open the floor to questions and discussion.

Panelist:
Mike Ehlert, Director of Process Engineering, Barry Industries Inc.
Yong Soo Cho, Professor, Yonsei University
David Ross, R&D Manager, Anaren Ceramics
Others will be added.

Upcoming Events...
Program, Announcements and Call for Papers/Abstracts on-line. Abstract deadline fast approaching for most events!
Visit www.imaps.org or the official website for each event for more information.
View Printed Copies at the Registration Desk!
Thursday, April 7

REGISTRATION: 7:30 AM - 12:00 PM
CONTINENTAL BREAKFAST: 7:30 AM - 8:30 AM

SESSION THA1: MATERIALS AND PROCESSING
Chairs: Hyo Tae Kim, Korea Institute of Ceramic Engineering and Technology; Donald Plumlee, Boise State University
8:30 am - 9:50 am
INK-JET PRINTING OF TiO₂ SUSPENSIONS
Gregor Trefalt, Marija Kosec, Danjela Kuscer, Barbara Malic, Jozef Stefan Institute; Gaj Stavber, Lek Pharmaceuticals d.d.
INKJET PRINTED MgO-THICKFILM-LAYER WITH EMBEDDED BST PILLARS
Wlademar Diel, Marcel Wassmer, Klaus Krueger, Helmut Schmidt University
3D NET-SHAPE MANUFACTURING OF COMPLEX CERAMIC PARTS BY HIGH RESOLUTION STEREO LITHOGRAPHY - EXAMPLES OF APPLICATION TO BIOMEDICAL AND INDUSTRIAL PRODUCTS
Jean Baptiste Lafon, Christophe Chaput, Richard Gaignon, Cyril Delage, 3Dceram
BREAK IN FOYER: 9:50 AM - 10:10 AM

SESSION THA2: PROCESSING AND MANUFACTURING
Chairs: Daniel S. Krueger, Honeywell FM&T; Richard Eitel, University of Kentucky
10:10 am - 11:50 am
PUNCHING TECHNOLOGY FOR CERAMIC APPLICATIONS
Carsen Kohlberger, Groz-Beckert KG
THE FUTURE OF MAXIMUM CAD/CAM AUTOMATION FOR CERAMIC HYBRIDS
John Sovinsky, CTO 1944 - 2011; Geoff Sylvester, CAD Design Services, Inc.
LASER PRINTING OF RFID ANTENNA COILS ON CERAMIC
Dustin Büttner, Klaus Krüger, Helmut Schmidt University; Beat Zobrist, Zobrist Engineering & Consulting; Andreas Schönberger, Dieter Jung, CTG-PrintTEC GmbH
PROCESS EVALUATION OF DuPont™ GREENTAPE™ 9k7 LTCC
Steve Dai, Adrian Casias, Sandia National Laboratories
3D-CERAMIC INTERCONNECT DEVICES
Pascal Metayer, MICROCERTEC
CONFERENCE CLOSING REMARKS: 11:50 AM
Advance Program and Registration on-line: www.imaps.org/hiten

IMAPS International Conference on
High Temperature Electronics Network
(HiTEN 2011)

July 18 - 20, 2011
St. Catherine’s College Oxford
Oxford, United Kingdom

Conference Chairs:
Colin Johnston
Materials KTN
colin.johnston@materials.ox.ac.uk

R. Wayne Johnson
Auburn University
johnsr7@auburn.edu

Organizing Committee:
Alison Crossley, University of Oxford (UK)
Andy Longford, Panda Europe IMAPS UK (UK)
F. Patrick McCluskey, CALCE (US)
Denis Flandre, UCL (B)
Bernd Michel, FHG-IJM (D)
Randy Normann, Perma Works LLC (US)
Bernard Parmentier, Schlumberger (F)
Sascha Schwarz, Baker Hughes INTEQ (D)
Ovidiu Vermesan, SINTEF (N)
Matthias Werner, NMTC (D)
Wolfgang Wondrak, Daimler Chrysler (D)

Session 1: Passives
Chairs: Steve Riches, GE Aviation Systems - Newmarket;
Liang-Yu Chen, Ohio Aerospace Institute/NASA Glenn
Research Center

Session 2: Packaging
Chairs: Joseph A. Henfling, Sandia National Laboratories;
Robert Estes, Baker Hughes

Session 3: SIC
Chairs: F. Patrick McCluskey, University of Maryland -
CALCE; David Shaddock, General Electric Global

Session 4: Power
Chairs: Randy Norman, Perma Works LLC; Milton Watts,
Quartzdyne, Inc.

Session 5: Test & Characterization
Chair: Hector Torres, Texas Instruments, Inc.

Session 6: Packaging Materials
Chair: R. Wayne Johnson, Auburn University

Session 7: Si Devices
Chairs: Thomas Krebs, CISSOID, S.A.; Ovidiu Vermesan,
SINTEF

Program Overview

Early Registration:
June 23, 2011
Room/Food Reservation Deadline:
June 23, 2011

Corporate Sponsors:

Produced by:
International Microelectronics And Packaging Society
(IMAPS)

Bringing Together The Entire Microelectronics Supply ChainTM

PICK UP A COPY - PRINTED PROGRAMS AT THE REGISTRATION DESK!
The 44th International Symposium on Microelectronics will be held at the Long Beach Convention Center, Long Beach, California, USA, and is being sponsored by the International Microelectronics And Packaging Society (IMAPS). The IMAPS Technical Committee seeks original papers that present progress on technologies “between the chip and the system.” The 44th Symposium on Microelectronics will cover four tiers of electronics: Industry, Systems & Applications, Design, and Materials & Process. Abstracts should highlight the major contributions of the work in one or more of these four areas. All abstracts submitted must represent original, previously unpublished work.

Planned Sessions Include

**Industry**
- Consumer, Portable, and Wireless
- Biomedical
- Telecom
- Defense and Security
- Computing and Gaming
- Automotive, Industrial, Harsh Environment Electronics Applications
- Solar and Alternative Energy

**Systems & Applications**
- Thermal Management
- Power Management
- Cost Reduction, Outsourcing and Supply Chain Management
- Electromagnetic Interference (EMI)
- Sensors and Nano Packaging
- Emerging Technologies
- System Packaging
- Microwave & RF Applications
- Electrostatic Discharge (ESD) Protection
- Photonic / Optoelectronic Packaging
- Packaging for Extreme Environments
- MEMS Packaging
- LED Packaging
- Packaging of Compound Semiconductor Devices

**Design**
- Electrical Modeling, Signal & Power Integrity
- High Performance Interconnects and Boards
- 3D Packaging Approaches
- Embedded and Integrated Passives
- Wafer Level Packaging / CSP
- Advanced Materials

**Materials and Process**
- Flip-Chip and Wafer Bumping Processes and Reliability
- Underfill/Encapsulants and Adhesives
- Pb-Free Solder Materials, RoHS, Processes, and Reliability
- Design for Reliability
- Package Reliability Testing
- Wirebonding and Stud Bumping
- Ceramic and LTCC Packaging
- Substrate Materials and Technology
- Printed Electronics

**Poster Session (Interactive Forum)**
Outstanding papers that do not fit in planned or created sessions will be considered for the interactive poster session.

**Invited Sessions - speakers will be invited**
- Packaging in China (Chinese to English translation)
- European Perspective on Electronic Packaging and System-Integration
- Microelectronics Activity in Southern California (Military, Bio-Medical, Wireless, and other topics)

Please send your 250-300 word abstract electronically only using the on-line submittal form at: www.imaps.org/abstracts.htm

Abstract Still Being Accepted Notice of Acceptance: May 13, 2011 Final Manuscript Due: July 8, 2011

All Speakers are required to register for the symposium, but at a reduced registration fee in recognition of their contribution to the event.

Cash Awards Offered: $2000 for Best Paper of Symposium; $500 each for two Outstanding Papers of Symposium.

Accepted papers may be considered for publication in the IMAPS Journal of Microelectronics and Electronic Packaging.

If you need assistance with the on-line submission form, please email Jackki Morris-Joyner (jmorris@imaps.org) or call 305-382-8433.

PROGRAM AND REGISTRATION ONLINE SOON - WWW.IMAPS2011.ORG
Upcoming Events...

ATW and Tabletop Exhibition on Think Thin: IC Packaging for the New Era of Mobile Devices
The Biltmore Hotel & Suites
Santa Clara, California - USA
May 4 - 5, 2011
www.imaps.org/thin

ATW on High Reliability Microelectronics for Military Applications
Holiday Inn Baltimore-BWI International Airport
(Soon to be the Doubletree BWI - March 2011)
Linthicum Heights, Maryland - USA
May 17 - 19, 2011
www.imaps.org/military

ATW and Tabletop Exhibition on Microelectronic Packaging and Materials for Medical Devices
Crowne Plaza Northstar
Minneapolis, Minnesota - USA
June 14 - 15, 2011
www.imaps.org/medical

Mid-Atlantic Microelectronics Conference & Tabletop Exhibition
Atlantic City Hilton
Atlantic City, New Jersey - USA
June 23 - 24, 2011
www.imaps.org/midatlantic

IMAPS/IEEE-CPMT ATW on Optoelectronic Packaging
McDonnell Douglas Engineering Auditorium
University of California - Irvine
Irvine, California - USA
June 28 - 30, 2011
www.imaps.org/opto

IMAPS/SEMI Joint Topical Workshop on Advanced Interconnect & Substrate Technologies
Moscone Center
San Francisco, California - USA
July 13, 2011
www.imaps.org/aict
Co-located with SEMICON WEST 2011

IMAPS/SEMI Joint Topical Workshop on Wire Bonding
Moscone Center
San Francisco, California - USA
July 14, 2011
www.imaps.org/wirebonding
Co-located with SEMICON WEST 2011

International Conference and Exhibition on High Temperature Electronics Network (HITEN 2011)
St. Catherine’s College Oxford
Oxford, United Kingdom
July 18 - 20, 2011
www.imaps.org/hiten

44th International Symposium on Microelectronics (IMAPS 2011)
Long Beach Convention Center
Long Beach, California - USA
October 9 - 13, 2011
www.imaps2011.org

Re-scheduled from September 2011 to February 2012!
ATW and Tabletop Exhibition on RF and Microwave Packaging
The Crowne Plaza San Diego
San Diego, California - USA
February 7 - 9, 2012
www.imaps.org/rf

Upcoming Events...

GOMD 2011 - Glass & Optical Materials Division Annual Meeting
Hilton Savannah DeSoto
Savannah, Georgia, USA
May 15 - 19, 2011
www.ceramics.org/gomd2011

PACRIM9 - The 9th International Meeting of Pacific Rim Ceramic Societies
Cairns, Queensland, Australia
July 10 - 14, 2011

Cements Division & Center for Advanced Cement-based Materials Annual Meeting
Vanderbilt University
Nashville, Tennessee, USA
July 24 - 26, 2011
www.ceramics.org/cements2011

Ceramic Leadership Summit
Hyatt Regency Baltimore
Baltimore, Maryland, USA
August 1 - 3, 2011
www.ceramics.org/cls2011

MS&T’11 - Materials Science & Technology 2011 Conference and Exhibition
Greater Columbus Convention Center
Columbus, Ohio, USA
October 16 - 20, 2011
www.matscitech.org

UNITECR 2011
Kyoto, Japan
October 30 - November 2, 2011
www.unitecr2011.org

ICC4 - International Congress on Ceramics
Chicago, Illinois, USA
July 16 - 19, 2012
www.ceramics.org/icc4

Short Course
Fundamentals of Glass Science & Technology
Savannah, Georgia, USA
May 14 - 15, 2011
www.ceramics.org/shortcourses
Welcome CICMT Exhibitors
April 5 - 6, 2011

Tuesday - April 5
Noon - 6:30 PM (Exhibit Hours)
Afternoon Refreshment Break, Lunch & Reception will be held in the Exhibit Hall.

Wednesday - April 6
11:00 AM - 5:00 PM (Exhibit Hours)
Afternoon Refreshment Break & Lunch will be held in the Exhibit Hall.

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### Exhibitors (as of March 24th)

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Contact Name</th>
<th>Booth Number</th>
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</thead>
<tbody>
<tr>
<td>3DCeram</td>
<td>JB Lafon</td>
<td>04</td>
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<tr>
<td>AI Technology, Inc.</td>
<td>Richard Amigh</td>
<td>07</td>
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<tr>
<td>Chalman Technologies</td>
<td>Ron Chalman</td>
<td>12</td>
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<tr>
<td>Custom Milling &amp; Consulting, Inc.</td>
<td>Leo McWilliams</td>
<td>01</td>
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<tr>
<td>DuPont Microcircuit Materials</td>
<td>Joan Vernon</td>
<td>09</td>
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<tr>
<td>Empower Materials, Inc.</td>
<td>Peter Ferraro</td>
<td>06</td>
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<tr>
<td>FRT of America, LLC</td>
<td>Paul Flynn</td>
<td>02</td>
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<tr>
<td>Harrop Industries</td>
<td>Paul Timmel</td>
<td>10</td>
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<tr>
<td>Kochi University of Technology</td>
<td>Tetsuya Yamamoto</td>
<td>03</td>
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<tr>
<td>Microcertec S.A.S.</td>
<td>Alain Charbonnier</td>
<td>11</td>
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<td>Riv, Inc.</td>
<td>Tania Keefe</td>
<td>05</td>
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<tr>
<td>Utz Technologies, Inc.</td>
<td>Kristian Guidi</td>
<td>08</td>
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**A SPECIAL THANKS TO THE 2011 CICMT CONFERENCE COMMITTEE!**

(Organizing Committee & Session Chairs)

WE ARE GRATEFUL FOR YOUR COMMITMENT!

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**A SPECIAL THANKS TO THE 2011 CICMT PRESENTERS!**

YOUR PARTICIPATION IS GREATLY APPRECIATED!