IMAPS/ACerS 3rd International Conference and Exhibition on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT)

Grand Hyatt Hotel
Denver, Colorado - USA
April 23 - 26, 2007

CICMT Session Outline

Session TA1: Materials and Processes for Microsystems
Chair: Dan Krueger, Honeywell

Session TA2: Co-Firing Processes and Dimensional Control in LTCC
Chair: Hyo Tae Kim, Korea Institute of Ceramic Engineering & Technology

Session TP1: High Frequency Characterization and Simulation
Chairs: Michael Janezic, NIST; Rhonda Franklin Drayton, University of Minnesota

Session TP2: Ceramic Actuators
Chairs: Richard Eitel, University of Kentucky; Clive Randall, The Pennsylvania State University

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

Session TP4: Direct Write Technology
Chairs: Paul Clem, Sandia National Laboratories; Jim Smay, Oklahoma State University

Session WA1: International Session on Microsystems I
Chairs: Yong Soo Cho, Yonsei University; Takaaki Tsurumi, Tokyo Institute of Technology

Session WA2: Microsystem Applications

Session WA3: Processing and Design of Integrated Passives in LTCC
Chairs: Timothy Mobley, DuPont; Jerry Aguirre, Kyocera America Inc.

Session WP1: Microsystem Materials and Processes
Chair: Ken Peterson, Sandia National Laboratories

Session WP2: Advanced Packaging Technology II
Chairs: Martin Oppermann, EADS Deutschland GmbH; Jouko Vähäkangas, University of Oulu

Session WP3: Interactive Forum (Poster Session)
Chair: Michael Lanagan, Penn State University

Session THA1: International Session on Microsystems II
Chairs: Jens Mueller, Technical University of Ilmenau; Leszek Golonka, Wroclaw University of Technology

Session THA2: Design and Fabrication of Ceramic Microsystems and Devices
Chair: Torsten Rabe, Federal Institute for Materials Research and Testing

Early Registration Discount Ends: March 23, 2007
Hotel Cut-off: March 23, 2007

Co-sponsored by:
International Microelectronics and Packaging Society (IMAPS)
Bringing Together the Entire Microelectronics Supply Chain!
&
The American Ceramic Society (ACerS)
The 2nd International Conference on Ceramic Interconnect and Ceramic Microsystems Technologies (CICMT) held 2006 in Denver was a great success and has established CICMT as the premier global forum on ceramic interconnect and ceramic microsystems. The International Microelectronics And Packaging Society (IMAPS) and the American Ceramic Society (ACerS) have jointly decided to sponsor the 3rd CICMT to further strengthen the advances in these two fast growing areas of ceramic technology.

We thank our 22-member international advisory board, the Technical Co-Chairs, Michael Lanagan (Penn State University) and Andreas Roosen (University of Erlangen), session organizers / leaders, and the IMAPS and ACerS staff for their support and leadership in putting this program together.

This three day event will bring together experts from Asia, Europe, North and South America to present and discuss the latest advances in ceramic interconnect and ceramic microsystems technologies. Coming from more than 60 different organizations including universities as well as industrial R&D, the conference will provide a wide spectrum of interests reflected in 60 contributed papers in 14 sessions. This year’s keynote speakers will focus on: Molecular Medical Diagnostics, Microsystems and Microfluidics and Terabit Wireless Devices.

Finally, to provide an opportunity for those involved in development and manufacturing to meet suppliers who support the industry, space has been set aside for tabletop exhibits. To facilitate networking, these exhibits will be located in the same room used for breaks and meals. To reserve space, visit www.cicmt.org or contact Ann Bell (abell@imapss.org; 202-548-8717).

Do not miss THE ceramic interconnect and ceramic microsystems event in Denver, April 23-26, 2007.

Christian Hoffmann and Kevin G. Ewsuk
General Co-Chairs
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Chair(s)</th>
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<tbody>
<tr>
<td>8:30 am – 9:00 am</td>
<td><strong>Keynote Presentation</strong>&lt;br&gt;Title: Piezoelectric MEMS for Molecular Medical Diagnostics&lt;br&gt;Speaker: Wolfgang Rossner, M. Schreiter, Siemens AG, Corporate Technology</td>
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<tr>
<td>9:00 am – 9:30 am</td>
<td><strong>Keynote Presentation</strong>&lt;br&gt;Title: Microsystems and Microfluidics: Why not LTCC?&lt;br&gt;Speaker: Amy J. Moll, Boise State University</td>
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<td>9:30 am – 10:00 am</td>
<td><strong>Keynote Presentation</strong>&lt;br&gt;Title: The Development of Multi-Gigabit Radio Technology for Terabit Wireless Personal Area Networks&lt;br&gt;Speaker: Joy Laskar, Georgia Institute of Technology</td>
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<td>10:00 am – 10:30 am</td>
<td><strong>Break in Exhibit Hall</strong></td>
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<td>Topical Sessions: 10:30 am - 12:10 pm&lt;br&gt;Session TA1: Materials and Processes for Microsystems&lt;br&gt;Chair: Dan Krueger, Honeywell</td>
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<td><strong>Closing Remarks</strong></td>
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Monday, April 23

REGISTRATION: 4:00 PM - 7:00 PM
WELCOME RECEPTION: 6:00 PM – 7:00 PM

Tuesday, April 24

REGISTRATION: 7:00 AM - 7:30 PM
CONTINENTAL BREAKFAST: 7:00 AM - 8:00 AM
EXHIBIT HOURS: 10:00 AM - 7:30 PM
REFRESHMENT BREAKS, LUNCH & RECEPTION IN EXHIBIT HALL
OPENING REMARKS: 8:15 AM - 8:30 AM
CONFERENCE CHAIRS

KEYNOTE PRESENTATION: 8:30 AM - 9:00 AM
TITLE: PIEZOELECTRIC MEMS FOR MOLECULAR MEDICAL DIAGNOSTICS
SPEAKER: WOLFGANG ROSSNER, M. SCHREITER, SIEMENS AG, CORPORATE TECHNOLOGY

KEYNOTE PRESENTATION: 9:00 AM - 9:30 AM
TITLE: MICROSYSTEMS AND MICROFLUIDICS: WHY NOT LTCC?
SPEAKER: AMY J. MOLL, BOISE STATE UNIVERSITY

KEYNOTE PRESENTATION: 9:30 AM - 10:00 AM
TITLE: THE DEVELOPMENT OF MULTI-GIGABIT RADIO TECHNOLOGY FOR TERABIT WIRELESS PERSONAL AREA NETWORKS
SPEAKER: JOY LASKAR, GEORGIA INSTITUTE OF TECHNOLOGY

BREAK IN EXHIBIT HALL: 10:00 AM – 10:30 AM

CICMT Tabletop Exhibition

Tuesday, April 24th
10:00 AM - 7:30 PM
(Reception in the Exhibit Hall: 5:00 PM - 7:30 PM)

Wednesday, April 25th
10:00 AM - 5:00 PM
SESSION TA1: MATERIALS AND PROCESSES FOR MICROSYSTEMS
Chair: Dan Krueger, Honeywell
10:30 AM – 12:10 PM

EVALUATION OF THICK FILM CONDUCTIVE PASTES BY USING LEAD FREE SOLDER ALLOYS
Lars Rebenklau, Thomas Herzog, Klaus-Jürgen Wolter, Technische Universität Dresden

POWDER INJECTION MOLDED CERAMIC MICROSYSTEMS
Sundar V. Atre, Carl Wu, Seong-Jin Park, Don Whychell, Oregon State University

CERAMIC MICRO-TWEETERS AND TIPS WITH SENSOR ELECTRODES FOR MICROMANIPULATION AND SENSING
Jouko Vähäkangas, Tuomas Haapa-aho, Marko Pudas, University of Oulu

UV LASER PROCESSING OF ALUMINA (Al2O3) ULTRAMINIATURE CIRCUIT SUBSTRATES

EDA SOFTWARE REQUIREMENTS FOR A FLEXIBLE DESIGN OF LTCC CIRCUITS
Horst Durst, Durst CAD/Consulting GmbH

SESSION TA2: CO-FIRING PROCESSES AND DIMENSIONAL CONTROL IN LTCC
Chair: Hyo Tae Kim, Korea Institute of Ceramic Engineering & Technology
10:30 AM – 12:10 PM

STRUCTURE AND THE APPLICATION OF Al2O3-GLASS BASED SELF-CONstrained LTCC
Takahiro Takada, Shuya Nakao, Masaru Kojima, Yukio Higuchi, Murata Manufacturing Co., Ltd.

SINTERKINETIC MODELING FOR LTCC MATERIALS
Markus Eberstein, Ralf Mueller, Stefan Reinsch, Torsten Rabe, Federal Institute for Materials Research and Testing (BAM)

INTERPRETATION OF THE INFLUENCE OF LTCC GREEN TAPE CHARACTERISTICS ON SHRINKAGE BEHAVIOR
Martin Rauscher, Andreas Roosen, University of Erlangen-Nuremberg

NEW LANTHANUM BORATES-BASED LOW TEMPERATURE DIELECTRICS
Yong Soo Cho, Yeon Hwa Jo, Deuk Ho Yeon, Yonsei University

CO-FIRING OF EMBEDDED PASSIVES FABRICATED WITH PHOTO-IMAGEABLE THICK FILM TECHNOLOGY ON THE ZERO-SHRINKAGE LTCC SUBSTRATE
Hyo Tae Kim, Jong-Woo Lim, Joong-Hee Nam, Dong-Hoon Yeo, Hyo-Soon Shin, Jonghee Kim, Korea Institute of Ceramic Engineering & Technology; Ungyu Paik, Hanyang University; Dong Yun Jung, Chul-soon Park, School of IT Engineering, Information and Communications University

SESSION TP1: HIGH FREQUENCY CHARACTERIZATION AND SIMULATION
Chairs: Michael Janezic, NIST; Rhonda Franklin Drayton, University of Minnesota
1:20 PM – 3:00 PM

COMPLEX PERMITTIVITY MEASUREMENTS AT MILLIMETER WAVES
Bill Riddle, Michael Janezic, National Institute of Standards and Technology

DESIGN AND FABRICATION OF TERAHERTZ WAVE CONTROL DEVICES BY MICRO-STEREOLITHOGRAPHY
Soshu Kirihara, Hideaki Kanaoka, Takanori Hibino, Yoshinari Miyamoto, Osaka University

DESIGN AND IMPLEMENTATION OF BALUNS AT 60GHz ON LTCC
Sven Rentsch, Jens Müller, Ralf Stephan, Matthias Hein, Technische Universität Ilmenau

COMPARISON OF IBM POWERPC PROCESSORS IN HIGH SPEED MULTI-LAYER CERAMIC PACKAGES: CERAMIC DESIGNS AND INFLUENCE OF WIRING LAYOUT
Christopher Spring, Warren D. Dyckman, Erwin Cohen, Michael Stopford, Benjamin Fasano, Michael J. Longo, IBM Corporation

SESSION TP2: CERAMIC ACTUATORS
Chairs: Richard Eitel, University of Kentucky; Clive Randall, The Pennsylvania State University
1:20 PM – 3:00 PM

MULTILAYER PIEZO ACTUATORS FOR INJECTION VALVES
Bertram Sugg, Petra Vogel, Sandrine Baudry, Friederike Lindner, Friedrich Boecking, Robert Bosch GmbH

ELECTRODE-CERAMIC INTERACTIONS IN LOW-FIRING PZT MULTILAYER ACTUATORS WITH Ag-Pd ELECTRODES
Niall Donnelly, T. R. Shrout, C. A. Randall, Penn State University

NOVEL PIEZOELECTRIC SENSORS AND ACTUATORS
Ahmad Safari, Rutgers University

PROCESSING OF 0.65 Pb (Mg1/3Nb2/3)O3 – 0.35 PbTiO3 THICK FILMS ON ALUMINA AND LTCC CERAMIC SUBSTRATE
Marija Kosec, J. Holc, M. Hrovat, S. Drnovšek, Josef Stefan Institute

CHARACTERIZATION OF LITHOGRAPHICALLY STRUCTURED PZT THICK FILM STRUCTURES
Stefan Schimpf, Matthias Hartmann, Thomas Lemke, Otto-von-Guericke-University Magdeburg

LUNCH IN EXHIBIT HALL: 12:10 PM – 1:20 PM

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**SESSION TP3: ADVANCED PACKAGING TECHNOLOGY I**
Chair: Fred Barlow, University of Idaho
3:30 PM – 4:50 PM

A SIMPLE AND ROBUST STRUCTURE FOR LTCC GREEN TAPE CHARACTERIZATION AND PROCESS CONTROL MONITORING
George Kang, Simon Gay, Mike Curley, David Ross, Jamie McCormick, Anaren Ceramics, Inc.

EXAMINATION OF SURFACE ROUGHNESS EFFECT ON INSERTION LOSS AT MICROWAVE FREQUENCIES WITHIN LTCC STRUCTURES
Tracey S. Vincent, Barry Industries and Worcester Polytechnic Institute; I. Bar-On, C. A. Brown, Worcester Polytechnic Institute

LOW-K WITH LOW-LOSS LTCC MATERIALS BASED ON DOLOMITE-TYPE BORON COMPOUNDS
Hyo Tae Kim, Myoung-Hwa Nam, Joong-Hee Nam, Dong-Hoon Yeo, Hyo-Soon Shin, Jonghee Kim, Korea Institute of Ceramic Engineering & Technology; Sahn Nahm, Korea University

BROADBAND DIELECTRIC CHARACTERIZATION OF ALUMINUM OXIDE (AL2O3)
Khalid Z. Rajab, Mira Naftaly, Edmund H. Linfield, Juan C. Nino, Daniel Arenas, David Tanner, Raj Mittra, Michael T. Lanagan, The Pennsylvania State University

**SESSION TP4: DIRECT WRITE TECHNOLOGY**
Chairs: Paul Clem, Sandia National Laboratories; Jim Smay, Oklahoma State University
3:30 PM – 4:50 PM

SYSTEM ANALYSIS OF A DoD PRINT HEAD FOR DIRECT WRITING OF CONDUCTIVE CIRCUITS
Dominik Cibis, Klaus Krueger, Helmut-Schmidt University

A SQUARE UNIFORM UV LASER BEAM FOR SCREEN PRINTING ENHANCEMENT AND PHOTORESIST ABLATION FOR ULTRAMINIATURE CHIP RESISTORS

NANO-PARTICLES FOR LOW TEMPERATURE PROCESSING OF INTERCONNECTS
Lance Swann, B. Li, X. Dongjiang, K. Church, nScrypt

AEROSOL DEPOSITION OF INTEGRATED CAPACITORS

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**Reception in Exhibit Hall: 5:00 PM – 7:30 PM**

**Wednesday, April 25**

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

**Continental Breakfast:** 7:00 AM - 8:00 AM

**Exhibit Hours:** 10:00 AM - 5:00 PM

**Refreshment Break & Lunch in Exhibit Hall**

**SESSION WA1: INTERNATIONAL SESSION ON MICROSYSTEMS I**
Chairs: Yong Soo Cho, Yonsei University; Takaaki Tsurumi, Tokyo Institute of Technology
8:30 AM – 10:00 AM

**DIRECT PATTERNING FOR PRINTABLE ELECTRONICS BY INKJET TECHNOLOGIES**
Shin-ichi Nishi, Konica Minolta IJ Technologies, Inc.

**HIGH K EMBEDDED THIN FILM CAPACITOR FOR PCB APPLICATION**
Jung-Won Lee, Inhyung Lee, Seung Eun Lee, Yul Kyo Chung, Yong Soo Oh, Samsung Electro-Mechanics

**STUDY ON MICROSTRUCTURE AND PROPERTIES OF NANOGRAIN FERROELECTRIC CERAMICS**
Longtu Li, Xiaohui Wang, Xiangyun Deng, Hai Wen, Zhilun Gui, Tsinghua University

**Break in Exhibit Hall:** 10:00 AM – 10:30 AM
SESSION WA2: MICROSYSTEM APPLICATIONS
10:30 AM – 12:10 PM

DESIGN AND FABRICATION OF CERAMIC MICROCHANNEL MICROREACTORS

SYNTHESIS OF NANOPARTICLES IN HIGH TEMPERATURE CERAMIC MICROREACTORS: DESIGN, FABRICATION & TESTING
Sundar V. Atre, Kartavya Jain, Carl Wu, Shoichi Kimura, Goran Jovanovic, Vinod Narayanan, Sukumar Roy, Vincent Spenkle, Oregon State University

LTCC-BASED FLUIDIC COMPONENTS FOR CHEMICAL APPLICATIONS
Torsten Thelemann, J. Müller, M. Fischer, A. Groß, Technical University of Ilmenau

MICROFLUIDIC LTCC DEVICES FOR CELLULAR BIOLOGY
Richard E. Eitel, Wenli Zhang, Janet Lumpp, University of Kentucky

LTCC ENZYMATIC MICROREACTOR
Leszek J. Golonka, Karol Malecha, Dorota Pijanowska, Władysław Torbicz, Wrocław University of Technology

SESSION WA3: PROCESSING AND DESIGN OF INTEGRATED PASSIVES IN LTCC
Chairs: Timothy Mobley, DuPont; Jerry Aguirre, Kyocera America Inc.
10:30 AM – 12:10 PM

SUPPRESSION OF SIMULTANEOUS SWITCHING NOISE BY EMBEDDED DECOUPLING CAPACITOR IN LTCC PACKAGE
Yun-Hwi Park, Kwangje Oh, Ikseop Kim, Hosung Chu, Jehong Sung, Seokchul Yun, Jinwaun Kim, Samsung Electro-Mechanics Co., Ltd.

PZT-BASED THIN FILM EMBEDDED CAPACITORS FOR HIGH DENSITY PRINTED CIRCUIT BOARDS

STRUCTURAL DESIGN OF FUTURE MLCCS USING COMPUTER SIMULATION
Takaaki Tsurumi, Youichi Mizuno, Hiroshi Kishi, Hirokazu Chazono, Tokyo Institute of Technology

Mg-Cu-Zn FERRITES FOR MULTILAYER INDUCTORS
Jorg Topfer, Julia Mürbe, University of Applied Science Jena

INVESTIGATE ON THE INTER-DIFFUSION AND MICROSTRUCTURE IN MULTILAYER CERAMIC CAPACITORS
Zhilun Gui, Xiaohui Wang, Hai Wen, Lei Chen, Longtu Li, Tsinghua University

LUNCH IN EXHIBIT HALL: 12:10 PM – 1:20 PM

SESSION WP1: MICROSYSTEM MATERIALS AND PROCESSES
Chair: Ken Peterson, Sandia National Laboratories
1:20 PM – 3:00 PM

HEATERS FOR LTCC-SENSORS MADE OF RESINATE PASTES
Jaroslav Kita, Ralf Moos, Universität Bayreuth

NON-ABRASIVE REMOVAL OF ZERO SHRINK LTCC CONSTRAINT LAYER
Cristina Lopez, Dan Krueger, Gregg Barner, Brent Duncan, Honeywell FM&T

NEW SACRIFICIAL LAYER-BASED SCREEN-PRINTING PROCESS FOR FREE-STANDING THICK-FILMS APPLIED TO MEMS
Claude Lucat, Patrick Ginet, Francis Menil, Université Bordeaux

MODELING AND CHARACTERIZATION OF SCREEN-PRINTED METALLIC ELECTROTHERMAL MICROACTUATORS
Patrick Ginet, Claude Lucat, Francis Ménil, Jean-Luc Battaglia, Université Bordeaux

BENCHMARKING DIFFERENT TYPES OF THICK-FILM PRESSURE SENSORS
Darko Belavic, Marina Santo Zarnik, Marko Hrovat, Srecoo Macek, Marko Pavlin, Mitja Jerlah, Janez Holc, Silvo Dmovsek, Jena Cilensek, Marija Kosec, Jozef Stefan Institute

SESSION WP2: ADVANCED PACKAGING TECHNOLOGY II
Chairs: Martin Oppermann, EADS Deutschland GmbH; Jouko Vähäkangas, University of Oulu
1:20 PM – 3:00 PM

COMMERCIAL PZT THICK FILM FOR INTEGRATED AND MINIATURIZED DEVICES AND HIGH FREQUENCY ULTRASOUND
Rasmus Lou-Møller, Erling Ringgaard, Wanda W. Wolny, Annette Foged Pedersen, Ferroperm Piezoceramics A/S

RESEARCH INTO CERAMIC INJECTION MOLDING OF PZT FOR NEW 3D SHAPES ON PROTOTYPING AND MASS PRODUCTION IN MICROSYSTEMS
Matthias Hartmann, Stefan Schimpf, Thomas Lemke, Bertram Schmidt, University of Magdeburg IMOS

2-DEGREES OF FREEDOM ULTRASONIC MOTORS CO-SINTERED WITH LOW TEMPERATURE COFIRED CERAMICS (LTCC)
Seung-Ho Park, Seung-Ho Park, Kenji Uchino, Amanda Baker, Clive A. Randall, The Pennsylvania State University; Richard Eitel, University of Kentucky

DIELECTRIC PROPERTIES OF LIQUID CRYSTAL POLYMER AND CATiO3-LAAlO3 COMPOSITES FOR EMBEDDED MATCHING CAPACITORS
Jin Cheol Kim, Jun Rok Oh, Samsung Electro Mechanics

THE STUDY OF ADHESION ENHANCEMENT BETWEEN METAL TOP ELECTRODE AND FERROELECTRIC MATERIALS FOR MEMS PROCESS
Jung-Hoon Yeom, Seung-Hyun Kim, Chang Young Koo, Jowoong Ha, INOSTEK Inc., R & D Center
SESSION WP3: 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.
3:00 PM – 5:00 PM

SYNTHESIS OF NANO-SIZED CORDIERITE BASED MATERIALS AND THEIR MODIFICATION FOR LTCC APPLICATION
Hyo Tae Kim, Jonghee Kim, Myoung-Hwa Nam, Joong-Hee Nam, Dong-Hoon Yeo, Hyo-Soon Shin, Korea Institute of Ceramic Engineering & Technology

MINIATURIZATION OF LTCC DEVICES BY USING MIXED DIELECTRIC SUBSTRATES
Amanda Baker, Michael Lanagan, Elena Semouchkina, George Semouchkin, Thomas Kerr, The Pennsylvania State University

COLD PLASMA GENERATOR
Alex Miller, Boise State University

CERAMIC MICRO-NOZZLE MODEL VERIFICATION THROUGH SCHLIEREN AND IR PHOTOGRAPHY
Aaron Coulter, Boise State University

ELECTROSPINNING OF CERAMIC FIBER MATS FROM A SUSPENSION
Hongbo Zhang, M. J. Edirisinghe, East China University of Science and Technology

FABRICATION OF MICRO-CHANNELS IN LTCC DEVICES
Douglas Kellis, Amy Moll, Donald Plumlee, Boise State University

ANODIC BONDABLE GLASS-CERAMIC LTCC TAPE
Beate Pawlowski, E. Müller, R. Ehrt, Hermsdorfer Institut für Technische Keramik e.V.

POST-BONDING AND FABRICATION OF LOW TEMPERATURE CO-FIRED CERAMIC
Hope Weston, Boise State University

FABRICATION OF MOVING PARTS WITHIN AN LTCC STRUCTURE
John Gustav Engstrom, Boise State University

APPLICATION OF NANOCERAMIC PROCESSING FOR HIGH POWER MULTI-CHANNEL ELECTRON MULTIPLIER IN LOW TEMPERATURE COFIRE CERAMIC (LTCC)
Feng Zheng, Wenzhong Wu, W. Kinzy Jones, Florida International University

STRUCTURAL ELECTRICAL AND SURFACE TENSIONAL PROPERTIES OF CERAMIC POLYMER COMPOSITES
Rosalin Abraham, Jayakumari Isac, Sabu Thomas, St. Dominics College

TUNABLE METAMATERIALS BASED ON LTCC
Zhou Ji, Du Bo, Zhao Qian, Kang Lei, Tsinghua University

EUCRYPTITE FILLER FOR CTE CONTROL OF ORGANIC SUBSTRATES
Jin Cheol Kim, Tae Kyoung Kim, Jun Rok Oh, Hwa Young Lee, Keum Hee Yun, Samsung Electro Mechanics

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Thursday, April 26

REGISTRATION: 7:30 AM - NOON
CONTINENTAL BREAKFAST: 7:30 AM - 8:30 AM

SESSION THA1: INTERNATIONAL SESSION ON MICROSYSTEMS II
Chairs: Jens Mueller, Technical University of Ilmenau; Leszek Golonka, Wroclaw University of Technology
8:30 AM – 10:00 AM

APPLICATION OF CERAMIC TECHNOLOGY FOR COST EFFECTIVE MANUFACTURING OF MICRO FUEL CELL SYSTEMS
Alexander Michaelis, Fraunhofer Institute for Ceramic Technologies and Systems

A CHARGING UNIT BASED ON MICRO-PEM-FUEL CELLS IN LTCC-TECHNOLOGY
Adrian Goldberg, Uwe Partsch, Michael Stelter, Fraunhofer Institut Keramische Technologien und Systeme

SACRIFICIAL LAYER MATERIALS FOR 3D STRUCTURATION OF LTCC AND THICK-FILM SENSORS
Thomas Maeder, Yannick Fournier, Hansu Birol, Simon Wiedmer, Caroline Jacq, Peter Ryser, Ecole Polytechnique Fédérale de Lausanne

BREAK: 10:00 AM - 10:20 AM

SESSION THA2: DESIGN AND FABRICATION OF CERAMIC MICROSYSTEMS AND DEVICES
Chair: Torsten Rabe, Federal Institute for Materials Research and Testing
10:20 AM – Noon

DESIGN AND FABRICATION OF AN EMBEDDED HYDROGEN PEROXIDE CATALYST CHAMBER IN LTCC
Donald Plumlee, Matt McCrink, Doug Kellis, Amy Moll, Judi Steciak, Boise State University

A LTCC BURNER FOR STUDYING SUB-MILLIMETER SCALE FLAMES
Ming-Hsun Wu, Richard A. Yetter, Pennsylvania State University

STUDY ON PRODUCING HIGH PRECISION MICRO CERAMIC DEVICE WITH HIGH ASPECT RATIO BY LIGA PROCESS
Jun Wang, Gang Liu, Yangchao Tian, National Synchrotron Radiation Laboratory (NSRL)

A NEW CONCEPT FOR LTCC-BASED PRESSURE SENSORS
Uwe Partsch, Fraunhofer IKTS; Dietmar Arndt, Hannes Georgi, ADZ Nagano

NANOSCALE SiC SINTERED STRUCTURES FOR POWER ELECTRONICS PACKAGING AND ADVANCED MICROSYSTEMS
Manish Bothara, S. J. Park, R. M. German, T. S. Sudarshan, R. Radhakrishnan, S. V. Atre, Oregon Nanoscience & Microtechnologies Institute

CLOSING REMARKS: NOON

Conference Hotel

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<tr>
<th>Grand Hyatt Denver Hotel</th>
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<tbody>
<tr>
<td>1750 Welton Street</td>
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<td>Denver, Colorado 80202</td>
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<td>PHONE: 303-295-1234 or 800-233-1234</td>
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Wednesday - April 25 10:00 AM - 5:00 PM (Exhibit Hours)
Refreshment Break & Lunch will be held in the Exhibit Hall.

Tabletop Registration Fees

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<th>On or before 3/23/07</th>
<th>After 3/23/07</th>
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<td>IMAPS/ACerS Corporate/Organizational Member</td>
<td>$550 per booth</td>
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November 11 - 15, 2007
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