



4th International Congress on Ceramics

Preliminary Program

This program is organized in the following order:

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See www.ceramics.org/icc4 for a complete schedule of events and details on receptions, ICC4 exhibit, Art Institute of Chicago Dinner, optional tours, etc.

Sunday, July 15, 2012

| | |
|--|-------------------|
| Registration | 2:30 to 8 p.m. |
| Opening Ceremony and Keynote (Co-sponsored by Northwestern University and Argonne National Lab) | 6 to 7:25 p.m. |
| Keynote Speaker - Maxine Savitz | |
| Welcome Reception | 7:30 to 9:00 p.m. |

Monday, July 16, 2012

| | |
|--|---------------------|
| Registration | 7:30 a.m. to 6 p.m. |
| Plenary Session Introduction | 8:30 to 8:45 a.m. |
| Plenary Speaker - Gary Calabrese | 8:45 to 9:40 a.m. |
| Break (Sponsored by Corning Incorporated) | 9:40 to 10 a.m. |
| Plenary Speaker - Chang-Hoon Kim | 10 to 10:55 a.m. |
| Plenary Speaker - John Tracy | 11 to 11:55 a.m. |
| Lunch (Sponsored by The Boeing Co.) | Noon to 12:45 p.m. |
| Plenary Speaker - Athanasios Konstandopoulos | 12:45 to 1:30 p.m. |
| Concurrent Sessions | 1:40 to 3:40 p.m. |
| – Aerospace Session I | |
| – Nanostructured Ceramics Session I | |
| – Environment, Energy and Transportation Session I | |
| – Electronic, Optical and Magnetic Ceramics and Devices Session I | |
| – Workforce Development Session I | |
| Exhibit I | 3:30 to 6:30 p.m. |
| Interactive Technology Forum (Sponsored by Samsung Electro-Mechanics) | 3:45 to 6:30 p.m. |

Tuesday, July 17, 2012

| | |
|---|---------------------|
| Registration | 7:45 a.m. to 6 p.m. |
| Plenary Speaker - Delbert Day | 8:45 to 9:40 a.m. |
| Break (Sponsored by Kyocera) | 9:40 to 10 a.m. |
| Concurrent Sessions | 10 a.m. to Noon |
| – Aerospace Session II | |
| – Nanostructured Ceramics Session II | |
| – Environment, Energy and Transportation Session II | |
| – Electronic, Optical and Magnetic Ceramics and Devices Session II | |
| – 3rd Ceramic Leadership Summit Track (Sponsored by Morgan Crucible) | |
| Lunch | Noon to 12:45 p.m. |
| Plenary Speaker - Michael Murray | 12:45 to 1:30 p.m. |
| Concurrent Sessions | 1:40 to 3:40 p.m. |
| – Aerospace Session III | |
| – Nanostructured Ceramics Session III | |
| – Environment, Energy and Transportation Session III | |
| – Electronic, Optical and Magnetic Ceramics and Devices Session III | |

Tuesday, July 17, 2012 (continued)

| | |
|--|-------------------|
| – Workforce Development Session II | |
| – 3rd Ceramic Leadership Summit Track (Sponsored by Morgan Crucible) | |
| Exhibit II | 3:30 to 6:30 p.m. |
| Interactive Technology Forum (Sponsored by Samsung Electro-Mechanics) | 3:45 to 6:30 p.m. |

Wednesday, July 18, 2012

| | |
|---|------------------------|
| Registration | 7:45 a.m. to 4:30 p.m. |
| Plenary Speaker - Yukio Sakabe | 8:45 to 9:40 a.m. |
| Break | 9:40 to 10 a.m. |
| Concurrent Sessions | 10 a.m. to Noon |
| – Aerospace Session IV | |
| – Security and Strategic Materials Session I | |
| – Environment, Energy and Transportation Session IV | |
| – Infrastructure Session I | |
| – Workforce Development Session III | |
| – Biology and Medicine Session I | |
| Lunch on Own | Noon to 1:30 p.m. |
| Plenary Speaker - David Bem | 1:30 to 2:15 p.m. |
| Break | 2:15 to 2:30 p.m. |
| Concurrent Sessions | 2:30 to 4:30 p.m. |
| – Security and Strategic Materials Session II | |
| – Environment, Energy and Transportation Session V | |
| – Nanostructured Ceramics Session IV | |
| – Infrastructure Session II | |
| – Biology and Medicine Session II | |
| Art Institute of Chicago Dinner | 6:30 to 9:30 p.m. |

Thursday, July 19, 2012

| | |
|--|--------------------------|
| Registration | 7:30 a.m. to Noon |
| Concurrent Sessions | 8 to 9:20 a.m. |
| – Environment, Energy and Transportation Session VI | |
| – Environment, Energy and Transportation Session VII | |
| – Infrastructure Session III | |
| – Biology and Medicine Session III | |
| Break | 9:20 to 9:40 a.m. |
| Plenary Speaker - Michael Holman | 9:40 to 10:40 a.m. |
| Shaping the Future of Ceramics Wrap Up Session | 10:40 a.m. to 12:15 p.m. |

Sunday, July 15, 2012

Opening Ceremony and Keynote Session

Co-sponsored by Northwestern University and Argonne National Lab

6:00 PM-7:30 PM

Room: Chicago Ballroom 6 & 7 (Level 4)

6:00 PM

Opening Ceremony

Kathrine Faber, ICC4 President; Gary Messing, ICF President; George Wicks, ACerS President; David Pye, ACerS Past President; Cewen Nan, ICF President-Elect; Longtu Li, ICC5 President.

6:30 PM - KEYNOTE PRESENTATION

(ICC-001-2012) Materials: An Enabler

Maxine Savitz*, Honeywell, retired, USA

Monday, July 16, 2012

Plenary Session I

8:30 AM-1:30 PM

Room: Chicago Ballroom 6 & 7 (Level 4)

8:30 AM

(ICC-002-2012) Inventing the Future with New Materials

Gary S. Calabrese*, Corning Incorporated, USA

9:30 AM

Break (Sponsored by Corning Incorporated)

10:00 AM

(ICC-003-2012) The Technical Trend of Dielectrics of the Multi-Layer Ceramic Capacitors

Chang-Hoon Kim*, Samsung Electro-Mechanics Co., Ltd., Korea

11:00 AM

(ICC-004-2012) Materials and Technical Achievement: An Aerospace Perspective

John Tracy*, The Boeing Company, USA

Monday, July 16, 2012
Plenary Session II

12:00 PM-1:30 PM

Room: Chicago Ballroom 6 & 7 (Level 4)

12:00 PM

Lunch (Sponsored by The Boeing Co.)

12:45 PM

(ICC-005-2012) Multifunctional Ceramic Reactors for Green Mobility and Clean Energy Production

Athanasios G. Konstandopoulos*, CERTH/CPERI, Greece

Tuesday, July 17, 2012
Plenary Session III

8:45 AM-10:00 AM

Room: Chicago Ballroom 6 & 7 (Level 4)

8:45 AM

(ICC-006-2012) From Academia to Business

Delbert E. Day*, Missouri University of Science and Technology/MO-SCI Corp., USA

9:40 AM

Break (Sponsored by Kyocera)

Plenary Session IV

12:00 PM-1:30 PM

Room: Chicago Ballroom 6 & 7 (Level 4)

12:00 PM

Lunch

12:45 PM

Emerging Ceramic Technologies: A Perspective from Morgan Crucible Co.

Michael Murray*, Morgan Crucible Co., USA

Wednesday, July 18, 2012

Plenary Session V

8:45 AM-10:00 AM

Room: Chicago Ballroom 6 & 7 (Level 4)

8:45 AM

(ICC-007-2012) Development of Electro-ceramics of Today and the Future

Yukio Sakabe*, Tokyo Institute of Technology, Japan

Plenary Session VI

1:30 PM-2:30 PM

Room: Chicago Ballroom 6 & 7 (Level 4)

1:30 PM

(ICC-008-2012) Dow Materials Innovation - Impacting the Future of Energy

David S Bem*, The Dow Chemical Company, USA

2:15 PM

Break

Thursday, July 19, 2012

Plenary Session VII and Wrap Up Session

9:40 AM-12:15 PM

Room: Chicago Ballroom 6 & 7 (Level 4)

9:40 AM

(ICC-009-2012) New Material Opportunities from Emerging Technology

Michael Holman*, Lux Research, USA

10:40 AM

(ICC-010-2012) Report from the Workshop on Emerging Areas of Ceramics Research (Invited Speaker)

Gregory S. Rohrer*, Carnegie Mellon University, USA

11:10 AM

Shaping the Future of Ceramics: Wrap Up

3rd Ceramic Leadership Summit Track

Sponsored by Morgan Crucible

Tuesday, July 17, 2012

Plenary Session III

8:45 AM-10:00 AM

Room: Chicago Ballroom 6 & 7 (Level 4)

8:45 AM

(ICC-006-2012) From Academia to Business

Delbert E. Day*, Missouri University of Science and Technology/MO-SCI Corp., USA

3rd Ceramic Leadership Summit Panel Discussion

10:00 AM-12:00 PM

Room: Chicago Ballroom 10 (Level 4)

10:00 AM

Panel Discussion: Technology Entrepreneurship - The Next Generation of Technology Transfer

Many people perceive the USA as the leader in entrepreneurship and technology transfer from basic research to a commercial setting. This moderated panel discussion will explore the development of commercial products through directed R&D with a focus on US-based small business ventures. It will follow a plenary talk by the founder of a successful ceramic materials company that takes technologies from the lab bench to established commercial products. The panel members - entrepreneurs, investors and technology transfer experts - will each make brief opening remarks. They will be followed by a question and answer session in which the moderator will develop the theme of starting, funding, staffing and growing technology-based businesses. There will be time for questions from the audience.

Organizer: Richard Weber, Materials Development, Inc.

Moderator: Tim Lavengood, Evanston Technology Innovation Center

Panel Members:

Delbert Day, Mo-Sci Corporation; Collin Anderson, Digital Innovations; Alex Arzoumanidis, Psylotech, Inc.; Jonathan Goodman, Synthesis Intellectual Property, LLC; Leslie Millar, University of Illinois Urbana-Champaign; John Banta, IllinoisVentures, LLC

Tuesday, July 17, 2012

Plenary Session VI

12:45 PM-1:30 PM

Room: Chicago Ballroom 6 & 7 (Level 4)

Emerging Ceramic Technologies: A Perspective from Morgan Crucible Co.

Michael Murray*, Morgan Crucible Co., USA

International Technology Transfer and Entrepreneurship Case Studies

1:40 PM-4:10 PM

Room: Chicago Ballroom 10 (Level 4)

1:40 PM

(ICC-088-2012) Entrepreneurial Success of Balder LTD - Electro-optic Light Shutters for Eye-protection (Invited Speaker)

Janez Pirs*, M. Kosec, Jozef Stefan Institute, Slovenia

2:10 PM

(ICC-089-2012) Development and Commercialization of High Performance Ceramics for Oil and Natural Gas Recovery (Invited Speaker)

John R Hellmann*, Barry E Scheetz, Ryan P Koseski, Penn State, USA; Marty Bradley, Tim Hurley, Nittany Extraction Technologies LLC, USA

2:40 PM

(ICC-090-2012) From technology innovation to industrialization: a case of ceramic microbeads based on gel-bead forming (Invited Speaker)

Jinlong Yang*, Xiaoqing Xi, Yong Huang, Tsinghua University, China

3:10 PM

(ICC-091-2012) Neoker, a Spin-Out of the University of Santiago de Compostela (Spain) (Invited Speaker)

Victor Valcarcel*, Carmen Cerecedo, Neoker, Spain

3:40 PM

(ICC-092-2012) Thermoelectric Power Generation in Wide Temperature Region (Invited Speaker)

Ryoji Funahashi*, National Institute of Advanced Industrial Science & Technology, Japan

Related Presentation: Angus Kingon, *What is the Role of Entrepreneurship in Workforce Development?*, Workplace Development I, Monday, 1:45 PM

Monday, July 16, 2012

Aerospace I

1:40 PM-3:40 PM

Room: Michigan A & B (Level 2)

1:40 PM

(ICC-011-2012) Ceramics for Defense Aerospace Applications (Invited Speaker)

Allan Katz*, Air Force Research Laboratory, Materials and Manufacturing Directorate, USA

2:20 PM

(ICC-012-2012) Research and Development of Structural Materials for Mach 5 Hypersonic Aircraft (Invited Speaker)

Takuya Aoki*, Takayuki Kojima, Hideyuki Taguchi, Japan Aerospace Exploration Agency, Japan;
Toshio Ogasawara, Japan Aerospace Exploration Agency, Japan

Tuesday, July 17, 2012

Aerospace II

10:00 AM-12:00 PM

Room: Michigan A & B (Level 2)

10:00 AM

(ICC-013-2012) Ceramic Innovations at Rolls-Royce (Invited Speaker)

Jay Lane*, Ann Bolcavage, Rolls-Royce Corporation, USA

10:40 AM

(ICC-014-2012) Ceramic Matrix Composites for Structural Aerospace Applications (Invited Speaker)

Miklos Petervary*, Todd Steyer, Boeing Company, USA

11:20 AM

(ICC-015-2012) Post Processing of Advanced Thermal Barrier Coatings (Invited Speaker)

Christopher Berndt*, Swinburne University of Technology, Australia

Tuesday, July 17, 2012

Aerospace III

1:40 PM-3:40 PM

Room: Michigan A & B (Level 2)

1:40 PM

(ICC-016-2012) Potential and Limits of SiC Chopped Fiber-reinforced Ultra High Temperature Ceramics. (Invited Speaker)

Diletta Sciti*, Laura Silvestroni, Stefano Guicciardi, Alida Bellosi, National Research Council, Italy

2:20 PM

(ICC-017-2012) Space Shuttle Tile Thermal Protection System History, Improvements & Future (Invited Speaker)

Daniel Leiser*, NASA Ames Research Center, USA

3:00 PM

(ICC-018-2012) UBE's Ceramic Strategy for Aerospace and Other Applications (Invited Speaker)

Toshihiro Ishikawa*, Ube Industries, Ltd., Japan

Wednesday, July 18, 2012

Aerospace IV

10:00 AM-12:00 PM

Room: Michigan A & B (Level 2)

10:00 AM

(ICC-019-2012) FAA Technology Development of Ceramic Matrix Composite Aircraft Components (Invited Speaker)

Rhett Jefferies*, Federal Aviation Administration, USA

10:40 AM

(ICC-020-2012) Testing Developments for Ceramic Matrix Composites in Extreme Environments (Invited Speaker)

John R Koenig*, Jacques C Cuneo, Bhavesh V Patel, Southern Research Institute, USA

11:20 AM

(ICC-021-2012) Overview of Industry Producability Roadmapping Efforts for Advanced Ceramics (Invited Speaker)

Glen Mandigo*, Doug Freitag, U.S. Advanced Ceramics Association, USA

Wednesday, July 18, 2012
Biology and Medicine I

10:00 AM-12:00 PM

Room: Chicago Ballroom 10 (Level 4)

10:00 AM

(ICC-022-2012) Biosilicate - a Highly Bioactive Glass-ceramic. In vitro, In Vivo and Clinical Tests (Invited Speaker)

Edgar Dutra Zanotto*, Federal University of Sao Carlos, Brazil

10:40 AM

(ICC-023-2012) Apatite-based Ceramics for Orthopaedic Applications (Invited Speaker)

Serena Michelle Best*, University of Cambridge, United Kingdom

11:20 AM

(ICC-024-2012) Bioceramic Scaffolds for Tissue Engineering Applications (Invited Speaker)

Kajal Mallick*, University of Warwick, United Kingdom

Biology and Medicine II

2:30 PM-3:50 PM

Room: Chicago Ballroom 10 (Level 4)

2:30 PM

(ICC-025-2012) Nanoceramics in Dentistry (Invited Speaker)

Richard P. Rusin*, 3M, USA

3:10 PM

(ICC-026-2012) An Innovative Shaping Technique to Build Ceramic Prosthesis for the Repair of Large Craniofacial Bone Defects (Invited Speaker)

Christophe Chaput*, 3dceram, France; Thierry Chartier, SPCTS CNRS, France; Joel Brie, CHU Limoges Hospital, France; Jean Baptiste Lafon, 3dceram, France

Thursday, July 19, 2012
Biology and Medicine III

8:00 AM-9:20 AM

Room: Chicago Ballroom 10 (Level 4)

8:00 AM

(ICC-027-2012) Silicon Nitride: A Novel Biomaterial (Invited Speaker)

Ashok C Khandkar*, BloXR, USA

8:40 AM

(ICC-028-2012) Strong Oxide Ceramics for Medical Applications (Invited Speaker)

Meinhard Helmut Kuntz*, CeramTec GmbH, Germany

Monday, July 16, 2012
Electronic, Optical and Magnetic Ceramics
and Devices I

1:40 PM-3:40 PM

Room: Chicago Ballroom 9 (Level 4)

1:40 PM

(ICC-029-2012) Rigid Electronic Materials for Stretchable Device Applications (Invited Speaker)

John A. Rogers*, University of Illinois at Urbana/Champaign, USA

2:20 PM

Title TBD (Invited Speaker)

Jon-Paul Maria*, North Carolina State University, USA

3:00 PM

(ICC-030-2012) Ceramic Packaging Morphs to Keep Up With The Challenges in the Semiconductor Industry (Invited Speaker)

Chong Park*, Kyocera America, Inc., USA

Tuesday, July 17, 2012
Electronic, Optical and Magnetic Ceramics
and Devices II

10:00 AM-12:00 PM

Room: Chicago Ballroom 9 (Level 4)

10:00 AM

(ICC-031-2012) TSDC Analysis for Oxygen Vacancy Study in Rare Earth and Magnesium co-doped BaTiO₃ (Invited Speaker)

Noriyuki Inoue*, Russell A Maier, The Pennsylvania State University, USA; Atsushi Honda, Hiroshi Takagi, Murata Manufacturing Co.,Ltd., Japan; Clive A Randall, The Pennsylvania State University, USA

10:40 AM

(ICC-032-2012) Recent Topics of Soft Ferrites (Invited Speaker)

Takuya Aoki*, Shenglai Che, TDK Corporation, Japan; Masahiko Watanabe, TDK-EPC Corporation, Japan; Kentaro Mori, Naoyoshi Sato, Katsushi Yasuhara, TDK Corporation, Japan; Taku Murase, TDK-EPC Corporation, Japan

11:20 AM

(ICC-033-2012) Thermoelectric Oxides- From Materials Design to Modules (Invited Speaker)

Anke Weidenkaff*, Sascha Populoh, Lassi Karvonen, Matthias Trottman, Gesine Saucke, Empa, Switzerland

Tuesday, July 17, 2012
Electronic, Optical and Magnetic Ceramics
and Devices III

1:40 PM-3:40 PM

Room: Chicago Ballroom 9 (Level 4)

1:40 PM

(ICC-034-2012) Future Directions in Piezoceramics (Invited Speaker)

Juergen Roedel*, Wook Jo, Robert Dittmer, TU Darmstadt, Germany

2:20 PM

(ICC-035-2012) High Energy Dielectrics for Pulse Power and Power Electronic Applications (Invited Speaker)

Michael Lanagan*, Penn State, USA

3:00 PM

(ICC-036-2012) Integration of Functional Materials into LTCC Multilayer Modules (Invited Speaker)

Jorg Topfer*, Timmy Reimann, Silvia Bierlich, University Appl. Science, Germany; Stefan Barth, Beate Pawlowski, Fraunhofer Institute IKTS, Germany; Heike Bartsch-de Torres, Jens Müller, Technical University Ilmenau, Germany

Related Presentation: Zhong Lin Wang, *Nanoceramics for New Energy and Piezotronics*, Nanostructured Ceramics IV, Wednesday, 2:30 PM

Related Presentation: Minoru Kanehira, *Thin Films and Nanostructures for Thermochromic Smart Window*, Environment, Energy, and Transportation VII, Thursday, 8 AM

Related Presentation: S. K. Sundaram, *THz Ceramics for Novel Applications*, Environment, Energy, and Transportation VII, Thursday, 8:40 AM

Monday, July 16, 2012

Environment, Energy and Transportation I

1:40 PM-3:40 PM

Room: Chicago Ballroom 8 (Level 4)

1:40 PM

(ICC-037-2012) Emerging Applications of Ceramics at General Electric (Invited Speaker)

Krishan Lal Luthra*, General Electric Global Research, USA

2:20 PM

(ICC-038-2012) Change of Energy Mix - Challenges on the Materials Level (Invited Speaker)

Wolfgang Rossner*, Siemens AG, Germany

3:00 PM

(ICC-039-2012) The Unique Role of Ceramics in Energy Technologies: Recent Developments and Opportunities (Invited Speaker)

Juan C Nino*, University of Florida, USA

Tuesday, July 17, 2012

Environment, Energy and Transportation II

10:00 AM-12:00 PM

Room: Chicago Ballroom 8 (Level 4)

10:00 AM

(ICC-040-2012) Future of Porous Ceramics in Environmental, Energy and Related Applications (Invited Speaker)

Paolo Colombo*, University of Padova, Italy

10:40 AM

Trends and Opportunities for Advanced Ceramics in the Field of Energy and Environment (Invited Speaker)

William Mustel*, Saint-Gobain High Performance Refractories, France

11:20 AM

(ICC-041-2012) Development Strategies for SiAlON Ceramics in Wear Applications: Challenges and Potentials (Invited Speaker)

Hasan Mandal*, Sabanci University, Turkey

Tuesday, July 17, 2012

Environment, Energy and Transportation III

1:40 PM-3:40 PM

Room: Chicago Ballroom 8 (Level 4)

1:40 PM

(ICC-042-2012) Facile Synthesis and Electrochemical Characterization of Oxide Nanostructures for Energy Storage Applications (Invited Speaker)

Do Kyung Kim*, KAIST (Korea Advanced Institute of Science and Technology), Korea

2:20 PM

(ICC-043-2012) Microstructure Changes of Electrodes during Operation of Solid Oxide Fuel Cells (Invited Speaker)

Koichi Eguchi*, Hiroki Muroyama, Toshiaki Matsui, Kyoto University, Japan

3:00 PM

(ICC-044-2012) Processing of Particulate Films for Solid Oxide Fuel Cell Application (Invited Speaker)

Rajendra N. Basu*, CSIR - Central Glass & Ceramic Research Institute, India

Wednesday, July 18, 2012

Environment, Energy and Transportation IV

10:00 AM-12:00 PM

Room: Chicago Ballroom 8 (Level 4)

10:00 AM

(ICC-045-2012) Micro and Mesoporous Ceramic Membranes for Energy Efficient Gas Separation, Pervaporation and Nanofiltration (Invited Speaker)

Louis Winnubst*, University of Twente, Netherlands

10:40 AM

(ICC-046-2012) New Generation Ceramic Hot Gas Filters for Simultaneous Removal of Particulate Matter, SO_x and NO_x (Invited Speaker)

Manfred Salinger*, Pall GmbH, Germany

11:20 AM

(ICC-047-2012) Precursors-derived Porous Ceramic-based Membranes for Gas Separation (Invited Speaker)

Yuji Iwamoto*, Nagoya Institute of Technology, Japan

Related Presentation: Lionel Lemay, *Innovations that Enhance the Sustainable Attributes of Concrete-based Materials, Infrastructure I, Wednesday, 11:20 AM*

Wednesday, July 18, 2012

Environment, Energy and Transportation V

2:30 PM-4:30 PM

Room: Chicago Ballroom 8 (Level 4)

2:30 PM

(ICC-048-2012) The Role of SiC Ceramics and Composites in Nuclear Energy for the Post-Fukushima Era (Invited Speaker)

Yutai Katoh*, Lance L Snead, Oak Ridge National Lab, USA

3:10 PM

(ICC-049-2012) From Radiation Waste to Resource, a New Transmutation Strategy (Invited Speaker)

Masaki Ozawa*, Tokyo Institute of Technology, Japan

3:50 PM

(ICC-050-2012) Designed Materials for Solar Thermochemical Redox Cycling (Invited Speaker)

Alan W Weimer*, Univ Colorado, USA

Related Presentation: [Liaurent Barcelo, Belite, Calcium Sulfoaluminate and Calcium Aluminoferrite Based Clinkers, a New Way to Address the Sustainability Challenges of the Cement Industry, Infrastructure II, Wednesday, 2:30 PM](#)

Related Presentation: [Zhong Lin Wang, Nanoceramics for New Energy and Piezotronics, Nanostructured Ceramics IV, Wednesday, 2:30 PM](#)

Related Presentation: [Andreas Tselebidis Belite, Sustainable Concrete, Infrastructure II, Wednesday, 3:10 PM](#)

Thursday, July 19, 2012

Environment, Energy and Transportation VI

8:00 AM-9:20 AM

Room: Michigan A & B (Level 2)

8:00 AM

(ICC-051-2012) The Critical Role of Ceramics in Automotive Exhaust Particulate Emission Control (Invited Speaker)

George Gabriel Muntean*, Mark Stewart, Maruthi Devarakonda, PNNL, USA

8:40 AM

(ICC-052-2012) Micron-Scale Tunable Acicular Mullite Ceramics for Filtration Applications (Invited Speaker)

Jim O'Brien*, Michael Malanga, Paul Vosejпка, Clifford Todd, Ashish Kotnis, The Dow Chemical Company, USA

Thursday, July 19, 2012
Environment, Energy and Transportation VII

8:00 AM-9:20 AM

Room: Superior A & B (Level 2)

8:00 AM

(ICC-053-2012) Thin Films and Nanostructures for Thermochromic Smart Window: State of the Art and Outlook (Invited Speaker)

Minoru Kanehira*, Hongjie Luo, Yanfeng Gao, Shanghai Institute of Ceramics, China

8:40 AM

(ICC-054-2012) THz Ceramics for Novel Applications (Invited Speaker)

S. K Sundaram*, Alfred University, USA

Wednesday, July 18, 2012

Infrastructure I

10:00 AM-12:00 PM

Room: Chicago Ballroom 9 (Level 4)

10:00 AM

(ICC-055-2012) Models and Measurements with Implications to Understanding Mechanisms

(Invited Speaker)

Hamlin Jennings*, Massachusetts Institute of Technology, USA

10:40 AM

(ICC-056-2012) Cellulose Nanomaterials an Opportunity for Cements? (Invited Speaker)

Robert Moon*, U.S. Forest Service, USA; J. Weiss, J. Youngblood, P. D Zavattieri, Purdue University, USA

11:20 AM

(ICC-057-2012) Innovations that Enhance the Sustainable Attributes of Concrete-based Materials

(Invited Speaker)

Lionel Lemay*, National Ready Mixed Concrete Association, USA

Infrastructure II

2:30 PM-4:30 PM

Room: Chicago Ballroom 9 (Level 4)

2:30 PM

(ICC-058-2012) Belite, Calcium Sulfoaluminate and Calcium Aluminoferrite Based Clinkers, a New Way to Address the Sustainability Challenges of the Cement Industry (Invited Speaker)

Laurent Barcelo*, John Kline, Lafarge Canada Inc, Canada; Gunther Walenta, Ellis Gartner, Lafarge Research Center, France

3:10 PM

(ICC-059-2012) Sustainable Concrete (Invited Speaker)

Andreas Tselebidis*, BASF CORP, USA

3:50 PM

(ICC-060-2012) Materials Research at the U.S. Army Engineer Research and Development Center

(Invited Speaker)

Todd S Rushing*, U.S. Army ERDC, USA

Thursday, July 19, 2012

Infrastructure III

8:00 AM-9:20 AM

Room: Chicago Ballroom 9 (Level 4)

8:00 AM

(ICC-061-2012) Making Super-hydrophobic Building Materials: Static and Dynamic Behaviour of Nanostructured Surfaces (Invited Speaker)

Mariarosa Raimondo*, CNR ISTECC, Italy

8:40 AM

(ICC-062-2012) Superabsorbent Polymers in Portland Cement-based Composites (Invited Speaker)

Wilasa Vichit-Vadakkan*, Jirawan Siramanont, Siam Research and Innovation Co. Ltd., Thailand

Monday, July 16, 2012
Nanostructured Ceramics I

1:40 PM-3:40 PM

Room: Superior A & B (Level 2)

1:40 PM

(ICC-063-2012) Nanotechnology Research at NIOSH: Supporting Safe Development of the Business (Invited Speaker)

Charles L. Geraci*, NIOSH, USA

2:20 PM

(ICC-064-2012) Nanotoxicology and Nanomedicine: Risk Assessment and Therapy (Invited Speaker)

Lang Tran*, Institute of Occupational Medicine, United Kingdom

3:00 PM

(ICC-065-2012) Mesoporous Silica Nanoparticles and the Quest to Deliver Biomedical Benefits (Invited Speaker)

Kathleen Eggleston*, University of Notre Dame, USA

Tuesday, July 17, 2012
Nanostructured Ceramics II

10:00 AM-12:00 PM

Room: Superior A & B (Level 2)

10:00 AM

(ICC-066-2012) International Standardization Efforts in NanoEHS (Invited Speaker)

Angela Hight Walker*, National Institute of Standards and Technology, USA

10:40 AM

(ICC-067-2012) Environmental, Health, and Safety Assessment of Engineered Nanomaterials (Invited Speaker)

Debra Lee Kaiser*, NIST, USA

11:20 AM

(ICC-068-2012) Carbon Nanotubes, and the Importance of Material Characterization for NanoEHS Measurements (Invited Speaker)

Jeffrey Fagan*, National Institute of Standards and Technology, USA

Tuesday, July 17, 2012
Nanostructured Ceramics III

1:40 PM-3:40 PM

Room: Superior A & B (Level 2)

1:40 PM

(ICC-069-2012) Nano-OEHS Insights & AssuredNano® Accreditation (Invited Speaker)

Donald Ewert*, nanoTox, Inc., USA

2:20 PM

(ICC-070-2012) Evaluating Toxicity of Graphene Oxides (Invited Speaker)

Sudipta Seal*, S. Das, L. Zhai, S. Khondekar, J. Dowding, D. Jong, W. Self, University Of Central Florida, USA

3:00 PM

(ICC-071-2012) Priorities for Nanoscale Ceramics (Invited Speaker)

Lynnette D Madsen*, National Science Foundation, USA

Related Presentation: Robert Moon, *Cellulose Nanomaterials an Opportunity for Cements?*, Infracstructure I, Wednesday, 10:40 AM

Wednesday, July 18, 2012
Nanostructured Ceramics IV

2:30 PM-4:30 PM

Room: Michigan A & B (Level 2)

2:30 PM

(ICC-072-2012) Nanoceramics for New Energy and Piezotronics (Invited Speaker)

Zhong Lin Wang*, Georgia Institute of Technology, USA

3:10 PM

(ICC-073-2012) Materials Development: Paving the Way to New Innovation (Invited Speaker)

Anne Hardy*, Compagnie de Saint Gobain, France

3:50 PM

(ICC-074-2012) Nanostructured Ceramics and Hybrid Materials in Toyota Central R&D Labs (Invited Speaker)

Masaya Kawasumi*, TOYOTA Central R&D Labs. Inc., Japan

Related Presentation: Mariatosa Raimondo, *Making Super-hydrophobic Building Materials: Static and Dynamic Behaviour of Nanostructured Surfaces*, Infracstructure III, Thursday, 8:00 AM

Wednesday, July 18, 2012
Security and Strategic Materials I

10:00 AM-12:00 PM
Room: Superior A & B (Level 2)

10:00 AM

(ICC-097-2012) New Functionalities in Abundant Element Oxides: Ubiquitous Element Strategy (Invited Speaker)

Hideo Hosono*, Tokyo Institute of Technology, Japan

10:40 AM

(ICC-094-2012) Securing Rare Earth Elements and Strategic Minerals: Assessing Supply Risks and the Role of Government (Invited Speaker)

Marc Humphries*, Congressional Research Service, USA

10:40 AM

(ICC-093-2012) The Role of a Transformed National Defense Stockpile in Securing the U.S. Supply of Strategic and Critical Materials (Invited Speaker)

Richard A. Lowden*, Oak Ridge National Laboratory, USA

Security and Strategic Materials II

2:30 PM-4:30 PM
Room: Superior A & B (Level 2)

2:30 PM

(ICC-095-2012) Advanced Materials Research for Extreme Loading (Invited Speaker)

Stanley C. Woodson*, U.S. Army Engineer Research and Development Center, USA

3:10 PM

(ICC-096-2012) Ceramics and Ceramic Matrix Composites for National Security Applications (Invited Speaker)

Douglas Freitag*, United States Advanced Ceramic Association; Bayside Materials Technology, USA

Monday, July 16, 2012

Workforce Development I - Global Challenges

1:40 PM-3:40 PM

Room: Erie (Level 2)

1:45 PM

(ICC-075-2012) What is the Role of Entrepreneurship in Workforce Development? (Invited Speaker)

Angus Kingon*, Brown University, USA

2:20 PM

(ICC-076-2012) Integrated Computational Materials Science and Engineering (Invited Speaker)

Umesh V. Waghmare*, J Nehru Centre for Advanced Scientific Research, India

3:00 PM

(ICC-077-2012) Foresight in Materials: the European Materials Science and Engineering Expert Committee (Invited Speaker)

Patrick Bressler*, Fraunhofer Gesellschaft, Belgium

3:20 PM

(ICC-078-2012) Materials Science in the Developing World: Challenges and Perspectives (Invited Speaker)

Federico Rosei*, INRS, Canada

Tuesday, July 17, 2012

Workforce Development II - Creating an Effective, Competitive Workforce

1:40 PM-3:40 PM

Room: Erie (Level 2)

1:45 PM

(ICC-079-2012) Why So Few? Women in Science, Technology, Engineering, and Mathematics (Invited Speaker)

Catherine Hill, Christianne Corbett*, Adresse St. Rose, American Association of University Women, USA

2:20 PM

(ICC-080-2012) Diversity and Degree Production in Materials Science and Engineering (Invited Speaker)

Keith J. Bowman*, Illinois Institute of Technology, USA

Tuesday, July 17, 2012
Workforce Development II (Continued)

2:40 PM

(ICC-081-2012) Involving Undergraduates in Research (Invited Speaker)

Mario Affatigato*, Coe College, USA

3:00 PM

(ICC-082-2012) Career Opportunities in Glass: The Random Network Model (Invited Speaker)

Louis Mattos*, The Coca-Cola Company, USA

Wednesday, July 18, 2012
Workforce Development III - International Challenges and
Opportunities

10:00 AM-11:40 AM

Room: Erie (Level 2)

10:05 AM

(ICC-083-2012) Dual Doctoral Programs in the Field of Glasses and Ceramics Between France and USA or China (Invited Speaker)

Jean-Luc Adam, Xiang-Hua Zhang*, Université de Rennes / CNRS, France

10:20 AM

(ICC-084-2012) Programs to Support Young Post-doctoral researchers in Japan (Invited Speaker)

Fumiyo Kaneko*, Japan Society for the Promotion of Science, USA

10:40 AM

(ICC-085-2012) Programs for Foreign Scientists from Chinese Academy of Sciences (CAS) (Invited Speaker)

Hongjie Luo*, Shanghai Institute of Ceramics, Chinese Academy of Sciences, China

11:00 AM

(ICC-086-2012) Mentoring of Postdoctoral Scholars (Invited Speaker)

Judith A Todd*, Penn State University, USA

11:20 AM

(ICC-087-2012) Strategies to Encourage International Cooperation (Invited Speaker)

Mary Lynn Realff*, Georgia Institute of Technology, USA

Monday, July 16, 2012
Interactive Technology Forum I
Sponsored by Samsung Electro-Mechanics

3:45 PM-6:30 PM

Room: River Exhibition Hall B (Level 1)

Interactive Presentations

(ICC-P097-2012) Assessing Damage in Ceramic Matrix Composites For Jet Engine Applications after Impact

Christopher Richard Baker*, Gregory N Morscher, University of Akron, USA

(ICC-P098-2012) Ultra-High Temperature Ceramics for Thermal Management and Protection in Hypersonic Aviation Applications: Tailoring Thermal Transport Properties of ZrB₂

Gregory John Kenneth Harrington*, Matthew J Thompson, Greg E Hilmas, William G Fahrenholtz, Missouri University of Science and Technology, USA

(ICC-P099-2012) Study on Al₂O₃ coating deposited onto carbon fiber reinforced polymer matrix substrate

Guanhong Sun*, Xiaodong He, Jiuxing Jiang, Yue Sun, Harbin Institute of Technology, China

(ICC-P100-2012) Processing, Microstructure, Mechanical and Thermal Properties of Porous Ti₂AlC with Controlled Porosity and Pore Size

Liangfa Hu*, Rogelio Benitez, Sandip Basu, Ibrahim Karaman, Miladin Radovic, Texas A&M University, USA

(ICC-P101-2012) Oxidation Behavior of Zirconium Diboride with Transition Metal Additions

Maryam Kazemzadeh Dehdashti*, William G Fahrenholtz, Gregory E Hilmas, Missouri University of Science and Technology, USA

(ICC-P102-2012) GdBr₃(Ce) Glass-Ceramic Scintillators for Gamma-ray Spectroscopy

Brooke Barta*, Georgia Institute of Technology, USA; Jason H Nadler, Zhitao Kang, Brent Wagner, Bernd Kahn, Georgia Tech Research Institute, USA

(ICC-P103-2012) Analysis of the sintering stresses and shape distortion produced in co-firing of CGO-LSM/CGO bi-layer porous structures

De Wei Ni*, Vincenzo Esposito, Cristine G Schmidt, Tesfaye T Molla, Severine Ramousse, Technical University of Denmark, Denmark

(ICC-P104-2012) Characterisation of Bi/Gd-doped BaTiO₃ ceramics

Giorgio Schileo*, Antonio Feteira, Sheffield Hallam University, United Kingdom; Klaus Reichmann, Institute for Chemistry and Technology of Materials, Graz University of Technology, Austria

ICC4 Interactive Presentations - Monday

(ICC-P105-2012) Preparation and properties of translucent YAG:Ce ceramics obtained by solid state reaction sintering

Malgorzata Sopicka-Lizer*, Daniel Michalik, Tomasz Pawlik, Silesian University of Technology, Poland

(ICC-P106-2012) Gelcasting of Large and Complex Submicron-Grained Bodies

Martin Trunec*, Karel Maca, Brno University of Technology, Czech Republic

(ICC-P107-2012) Powder Injection Molding of translucent ceramic parts

Anne Mannschatz, Axel Müller, Matthias Ahlhelm*, Tassilo Moritz, Alexander Michaelis, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany

(ICC-P108-2012) Bottom-electrode Assisted Sintering in PLZT Thin Films

Sheng Tong*, University of Cincinnati, USA; Beihai Ma, Manoj Narayanan, Shanshan Liu, Uthamalingam Balachandran, Argonne National Laboratory, USA; Donglu Shi, University of Cincinnati, USA

(ICC-P109-2012) High Temperature Piezoelectric Ceramics based on $(1-x)[\text{BiScO}_3 + \text{Bi}(\text{Ni}_{1/2}\text{Ti}_{1/2})\text{O}_3] - x\text{PbTiO}_3$

Troy Ansell*, Oregon State University, USA

(ICC-P110-2012) Processing of IR transparent ZnS bulk materials

Yiquan Wu, Shi Chen*, Alfred University, USA

(ICC-P111-2012) Induced Piezoelectricity in Tunable $\text{Ba}_{1-x}\text{Sr}_x\text{TiO}_3$ Thin Film Dielectrics

Lauren Garten*, Susan Trolrier-McKinstry, Pennsylvania State University, USA; Jon-Paul Maria, North Carolina State University, USA

(ICC-P112-2012) Two-Stage Master Sintering Curve as a Robust Grey-Box Tool for Setting Sintering Strategies

Karel Maca*, Vaclav Pouchly, Brno University of Technology, Czech Republic; Zhijian J Shen, Stockholm University, Sweden

(ICC-P113-2012) Freeze foaming - A direct foaming technique achieving cellular structures for versatile applications

Matthias Ahlhelm*, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany; Erwin Gorjup, Hagen von Briesen, Fraunhofer Institute for Biomedical Engineering (IBMT), Germany; Tassilo Moritz, Alexander Michaelis, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany

ICC4 Interactive Presentations - Monday

(ICC-P114-2012) Processing Ceramic Porous Structures by Emulsion Templating

Omer Van der Biest*, Bram Neirinck, Jan Fransaer, Jef Vleugels, K. U. Leuven, Belgium

(ICC-P115-2012) Synthesis of Homogeneous Plate-like Ceria Particles and Their Multifunction as Cosmetic Materials

Shu Yin*, Yoshihiro Minamidate, Shunsuke Tonouchi, Tsugio Sato, Tohoku University, Japan

(ICC-P116-2012) Utilizing Pressure-Induced Transformations for Toughening of Ceramics

Subramanian Ramalingam*, Ivar E Reimanis, Colorado School of Mines, USA

(ICC-P117-2012) Novel surface-coating technique of a morphology controlled zinc oxide

Takehiro Goto*, Shu Yin, Tsugio Sato, Tohoku University, Japan; Takumi Tanaka, Daito Kasei Kogyo CO., LTD., Japan

Monday, July 16, 2012
Interactive Technology Forum I

Sponsored by Samsung Electro-Mechanics

3:45 PM-6:30 PM

Room: River Exhibition Hall B (Level 1)

Poster Presentations

(ICC-P001-2012) High strength porous YSZ ceramics reinforced by YSZ fibers

Chang-An Wang*, Jun Zhou, Yanhao Dong, Ying Lang, Yong Huang, Tsinghua University, China

(ICC-P002-2012) Microstructure/property changes in TZP and TZP/Lanthanum zirconate composites by two-step firing schedules

Elsa Antunes*, Innovnano, S.A., Portugal; Teresa Carvalho, Ceramics Dep. University of Aveiro, Portugal; João Calado, Innovnano, S.A., Portugal; Filipe Figueiredo, Ceramics Dep. University of Aveiro, Portugal; Dachamir Hotza, Dep. Chem. Eng., UFSC,, Brazil; Jorge Frade, Sónia Rosa, Ceramics Dep. University of Aveiro, Portugal

(ICC-P003-2012) Spark Plasma Sintering (SPS) of SiC - Magnesium Alloy Composites

Eric J. Faierson*, James W Sears, Quad City Manufacturing Lab - Western Illinois University, USA

(ICC-P004-2012) Functionally Graded Ultra-High Temperature Ceramics Based on "Ridge-Effect" Phenomenon

Igor Logan Shabalin*, Yu Wang, University of Salford, United Kingdom; Lingfei Zhang, EDF R&D Matériaux et Mécanique des Composants, France

(ICC-P005-2012) Fabrication and Properties of Nano-Porous SiO₂ Insulation Materials by Modified Freeze-Drying Method

Jie Tang, Yufeng Chen*, Maoqiang Li, Liming Hu, China Building Materials Academy, China

(ICC-P006-2012) The Effect of Cure Period on the Mechanical Properties of Silica/Phenolic Composites Prepared via Compression Molding Method

Onder Guney*, Erdem Demirkesen, Istanbul Technical University, Turkey

(ICC-P007-2012) Evaluation of impact bending strength of ceramic composites at ultra-high temperatures from 1800-2200 K in air

Wan Detian*, Bao Yiwang, Liu Xiaogen, Qiu Yan, China Building Materials Academy, China

(ICC-P008-2012) The Influence of t' Phase on Mechanical Properties in 8 wt% YSZ Thermal Barrier Coatings

Xiaorui Ren*, Wei Pan, Tsinghua University, China

ICC4 Poster Presentations - Monday

(ICC-P009-2012) Sol-gels as Image Plates

Christian Foerster*, Jacqueline Johnson, University of Tennessee Space Institute, USA

(ICC-P010-2012) Nanopowders of dental zirconia obtained by different synthesis routes

Federica Bondioli*, Università di Modena e Reggio Emilia, Italy; Claudia Volpato, Federal University of Santa Catarina, Brazil; Davide Sighinolfi, Expert System Solution srl, Italy; Marcio Fredel, Federal University of Santa Catarina, Brazil

(ICC-P011-2012) Preparation of novel calcium silicate ceramics with interlayers for biomaterial applications

Hiroataka Maeda*, Tomoyuki Tamura, Akiko Obata, Toshihiro Kasuga, Nagoya Institute of Technology, Japan

(ICC-P012-2012) Modified calcium phosphate materials for medical applications

Vita Zalite*, Janis Locs, Liga Berzina-Cimdina, Dagnija Loca, Daina Vempere, Riga Technical University, Latvia

(ICC-P013-2012) The Effect of Alkaline Treatment on Biomimetic Apatite Formation and Adhesive Strength

Kambiz Fatehi*, Fathollah Moztarzadeh, Tehran Polytechnic Univ, Islamic Republic of Iran

(ICC-P014-2012) Biofabrication of glass scaffolds by 3D printing

Liliana S O Pires, Maria H V Fernandes, Jose M M Oliveira*, University of Aveiro, Portugal

(ICC-P015-2012) Influence of defect concentration on dielectric and polarization property in Hydroxyapatite

Naohiro Horiuchi*, Kosuke Nozaki, Miho Nakamura, Akiko Nagai, Kimihiro Yamashita, Tokyo Medical and Dental University, Japan

(ICC-P016-2012) Radical Annihilation Performance of Ceria Nanosols Produced by Photochemical Reaction

Naoko Fujita*, Koji Horiguchi, Yuji Hamasaki, Kai Kamada, Nagasaki University, Japan

(ICC-P017-2012) Fabrication of Wollastonite Glass-Ceramic Scaffolds by New Method

Parvin Alizadeh*, Davud Abadkar, Tarbiat Modares University, Islamic Republic of Iran

ICC4 Poster Presentations - Monday

(ICC-P018-2012) Enhancement of handling and mechanical property of chelate-setting α -calcium phosphate cement by addition of citric acid and chitosan to mixing solution and its *in vitro/vivo* evaluations.

Toshiisa Konishi*, Minori Mizumoto, Honda Mihiyo, Kanagawa Academy of Science and Technology (KAST), Japan; Yasuhiro Takeuchi, Hiroshi Nagashima, Mamoru Aizawa, Meiji University, Japan

(ICC-P019-2012) Dielectric and non-linear characteristics of La-doped BaTiO₃ ceramics

Adelina Ianculescu*, University Politehnica of Bucharest, Romania; Zina Mocanu, Lavinia Curecheriu, Liliana Mitoseriu, "Alexandru Ioan Cuza" University, Romania; Catalina Vasilescu, University Politehnica of Bucharest, Romania; Roxana Trusca, S.C. METAV - Research & Development, Romania

(ICC-P020-2012) Fabrication and Transport Study of Atomically Thin MoS₂ Field Effect Transistors

Alex C Freedman*, Bin Liu, Dattatray J Late, Northwestern University, USA; C. Rao, Jawaharlal Nehru Centre for Advanced Scientific Research, India; Vinayak P Dravid, Northwestern University, USA

(ICC-P021-2012) Crystal structure and dielectric properties of Bi_{0.8}Ba_{0.2}Fe_{0.95}Nb_{0.05}O₃ multiferroic

Ashish Agarwal*, Reetu Dahiya, Sujata Sanghi, Ashima Hooda, Guru Jambheshwar University of Science and Technology, India

(ICC-P022-2012) The effect of different rare earth oxides on optical property of hot pressed α/β SiAlON ceramics

Bhupendra Joshi*, Sun Moon University, Korea; Hao Wang, Zhengyi Fu, Department of Metallurgy and Material Engineering, Sunmoon University, Korea. 2State Key Lab of Advanced Technology for Material Synthesis and Processing, Wuhan University of Technology, China; Soo W Lee, Sun Moon University, Korea

(ICC-P023-2012) Influences of Multiple Doping on Spark Plasma Sintered Transparent Alumina

Burcu Apak*, Halide E Kanbur, Istanbul Technical University, Turkey; Esra O Zayim, Istanbul Technical University, Turkey; Gültekin Göller, Onuralp Yücel, Filiz C Sahin, Istanbul Technical University, Turkey

(ICC-P024-2012) Study of nanostructured Ba(Ti,Zr)O₃ ceramics produced by spark plasma sintering

Catalina Vasilescu*, Adelina Ianculescu, University Politehnica of Bucharest, Romania; Lavinia Curecheriu, Cristina Ciomaga, Liliana Mitoseriu, "Alexandru I. Cuza" University, Romania; Daniela Berger, University Politehnica of Bucharest, Romania; Gilbert Fantozzi, Guillaume Bonnefont, University of Lyon, France

ICC4 Poster Presentations - Monday

(ICC-P025-2012) Synthesis of lanthanum silicate oxyapatite ceramic powder as a solid oxide fuel cell electrolyte by a new modified sol gel method

D. R Elias, Nuclear and Energy Research Institute, Brazil; Sabrina L Lira, University of Sao Paulo, Brazil; Mayara Paiva, Centro Universitario Sao Camilo, Brazil; Agatha Misso, Faculdades Oswaldo Cruz, Brazil; Chieko Yamagata*, University of Sao Paulo, Brazil

(ICC-P026-2012) Dielectric Properties of Complex Barium Neodymium Titanates in Microwave Regime

Dalveer Kaur Dhanjal*, Punjab Technical University, India

(ICC-P027-2012) Fabrication and characterization of Yb:LuAG transparent laser ceramics

Dewei Luo*, Jian Zhang, Changwen Xu, Hao Yang, Hui Lin, Haiyong Zhu, Dingyuan Tang, Jan Ma, NTU, Singapore

(ICC-P028-2012) Influence of Nd₂O₃ and Y₂O₃ on the Synthesis of Ba₂Ti₉O₂₀ Microwave Dielectric Ceramic Bodies

Doaa Abdel Aziz*, National Research Centre, Egypt

(ICC-P029-2012) Processing & Characterization of Textured Barium Ferrite Ceramics

Eda Aydogan*, Arcan F Dericioglu, Muharrem Timucin, Middle East Technical University, Turkey

(ICC-P030-2012) Mechanochemical Synthesis of Multiferroic BiMnO₃ and YMnO₃ Powders

Goran Brankovic*, Zorica Brankovic, Zorica Marinkovic Stanojevic, Milica Pocuca, Institute for multidisciplinary research - University of Belgrade, Serbia; Zvonko Jaglicic, Institute of Mathematics, Physics and Mechanics, Slovenia; Lidija Mancic, Institute of Technical Sciences SASA, Serbia; Slavko Bernik, Jozef Stefan Institute, Slovenia; Marcio De Sousa Goes, Instituto de Quimica, UNESP, Brazil

(ICC-P031-2012) Transparent AlON Ceramics Fabricated by Reactive Spark Plasma Sintering

Halide Esra Kanbur*, Burcu Apak, Gultekin Goller, Onuralp Yucel, Filiz Cinar Sahin, ITU, Turkey

(ICC-P032-2012) Rapid synthesis of rare-earth doped LNT (Li-Nb-Ti-O system) phosphors by millimeter-wave heating

Hiromi Nakano*, Keita Ozono, Toyohashi University of Technology, Japan; Tasaburo Saji, Shoji Miyake, MSP Corp., Japan

(ICC-P033-2012) NKLNT Ceramics for Multi-Layer Piezoelectric Actuator

Jae-Sung Song*, Min-Soo Kim, In-Sung Kim, Soon-Jong Jeong, Korea Electrotechnology Research Institute, Korea

(ICC-P034-2012) Fabrication of Tm:YAG ceramics for mid-infrared solid state laser applications

Jian Zhang*, Nanyang Technological University, Singapore

ICC4 Poster Presentations - Monday

(ICC-P035-2012) Deterioration Behavior Analysis of Dysprosium and Thulium co-doped Barium Titanate ceramics for Multilayer Ceramic Capacitors

Jinseong Kim*, Dowan Kim, Taimin Noh, Seol Jeon, Heesoo Lee, Pusan national university, Korea

(ICC-P036-2012) Laser Sintering of Ceramic YAG Fiber

Jonathan Goldstein*, Geoff Fair, Air Force Research Lab, USA; Heedong Lee, Hyun Jun Kim, UES, Inc., USA

(ICC-P037-2012) Luminescence properties of Eu²⁺ doped M-silicate (M=Ca, Ba, Sr) phosphors for application possibility to white LEDs

Jong Wong Chung*, Yeqing Chen, Sung Wook Park, Byung Kee Moon, Byung Chun Choi, Jung Hyun Jeong, Pukyong National University, Korea; Kiwan Jang, Changwon National University, Korea; Soung Soo Yi, Silla University, Korea

(ICC-P038-2012) Luminescence of pulsed laser deposited NaY(MoO₄)₂:Eu³⁺ thin film red phosphors on sapphire substrates

Sung Wook Park*, Jong Won Chung, Byung Kee Moon, Byung Chun Choi, Jung Hyun Jeong, Pukyong National University, Korea

(ICC-P039-2012) Modification of h-BN filler and the several properties in composite material with epoxy resin

Kenji Miyata*, Toshitaka Yamagata, Denki Kagaku Kogyo Kabushiki Kaisha, Japan; Tadafumi Adschiri, Tohoku university, Japan

(ICC-P040-2012) Impedance spectroscopy analysis of p-type Li-doped ZnO thin film effect

Kuo Chuang Chiu*, Industrial Technology Research Institute, Taiwan

(ICC-P041-2012) Dielectric Study of Ferroelectric Ceramics of Calcium Doped Barium Titanate Ba_{1-x}Ca_xTiO₃: BCT

Lhoussain Kadir*, CPR, Morocco; Abdelilah Elmesbahi, FST, Morocco; Salahedine Sayouri, FSTM, Morocco

(ICC-P042-2012) Development of low cost method of synthesis for microwave dielectric applications

Manisha Yogesh Khaladkar*, Namrata S Saraf, College of Engineering Pune, India

(ICC-P043-2012) Texture and Anisotropy in Novel Lead-Free Piezoelectrics

Matthias Ehmke, Christopher Fancher, John E Blendell, Purdue University, USA; Keith J Bowman*, Illinois Institute of Technology, USA

ICC4 Poster Presentations - Monday

(ICC-P044-2012) Structural and functional properties of multiferroic B-site substituted BiFeO₃-based solid solutions

Mihai Calugaru*, Felicia Gheorghiu, Adelina Ianculescu, University Politehnica of Bucharest, Romania; Petronel Postolache, "Alexandru I. Cuza" University, Romania; Ovidiu Oprea, University Politehnica of Bucharest, Romania; Liliana Mitoseriu, "Alexandru I. Cuza" University, Romania

(ICC-P045-2012) Hydrothermal synthesis of BiFeO₃ fine particles

Miyabi Kobayashi*, Nobuhiro Kumada, Akira Miura, Yoshinori Yonesaki, Takahiro Takei, Ichiro Fujii, Satoshi Wada, University of Yamanashi, Japan

(ICC-P046-2012) Preparation and dielectric property of (Li_{0.12}Na_{0.88})NbO₃-based solid solutions

Naoko Ito*, Nobuhiro Kumada, Akira Miura, Yoshinori Yonesaki, Takahiro Takei, Satoshi Wada, University of Yamanashi, Japan

(ICC-P047-2012) The Benefits of Polyalkylene Carbonate Binders (QPAC®) for Low Temperature Glass Frit or Powdered Glass in Low Temperature Processed Thick Film Applications

Peter Ferraro*, Empower Materials, USA

(ICC-P048-2012) Effect of sol ageing on dielectric properties of nanocrystalline CaCu₃Ti₄O₁₂ ceramic

Ranjit Kumar*, T. D Senguttuvan, National Physical Laboratory, India; M. Zulfequar, Jamia Millia Islamia, India

(ICC-P049-2012) The observation of high Seebeck coefficient in BiFeO₃ Bulk Ceramics

Rempei Imura*, Takeshi Yokota, Nagoya Institute of Technology, Japan; Andres Osvet, Miloslaw Batentschuk, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany; Manabu Gomi, Nagoya Institute of Technology, Japan; Christoph J Brabec, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

(ICC-P050-2012) Electric properties and crystal structure of CaWO₄ ceramics prepared from powders synthesized by two processes: a traditional solid reaction method and a refined hydrothermal method

Rie Shimanouchi*, Noriyuki Kobayashi, Hitoshi Nishizawa, Kochi University, Japan

(ICC-P051-2012) Negative Permittivity and Negative Permeability of ceramic-metal composites

Run-hua Fan*, Shandong University, China

(ICC-P052-2012) Electrical functionality via metallisation of glass by Laser Ablation Backwriting

Ruth Lahoz*, Luis A Angurel, Center of Chemistry and Materials of Aragon, Spain; Jose M Pedra, Maruxa Peiro, Juan B Carda, University Jaume I, Spain; German F de la Fuente, Center of Chemistry and Materials of Aragon, Spain

ICC4 Poster Presentations - Monday

(ICC-P053-2012) Ni-based films by electrophoretic deposition of Nickel hydroxide nanoflowers and nanoflakes

Sandra Cabanas-Polo, Antonio Javier Sanchez-Herencia*, Begoña Ferrari, Instituto de Ceramica y Vidrio (CSIC), Spain

(ICC-P054-2012) Microstructure and electrical properties of LaNiO₃ thin films formed by RF sputtering for the growth of PLZT on silicon and nickel substrates

Shanshan Liu*, Beihai Ma, Manoj Narayanan, Sheng Tong, Uthamalingam Balachandran, Argonne National Laboratory, USA

(ICC-P055-2012) Effect of oxygen vacancy on the dielectric relaxation of BaTiO₃ thin films in a quenched state

Shenghong Yao*, CNRS-G2E lab, France; JinKai Yuan, CNRS-Lab MSSMAT, France; Alain Sylvestre, CNRS-G2E lab, France; Patrice Gonon, CNRS-LTM, UJF, France; Jinbo Bai, CNRS-Lab MSSMAT, France

(ICC-P056-2012) Electrical characterization of sol-gel derived Na_{0.5}Bi_{0.5}TiO₃-NaTaO₃ thin films

Spela Kunej*, Asja Veber, Danilo Suvorov, Jozef Stefan Institute, Slovenia

(ICC-P057-2012) Phase formation and characteristics of La-doped BaTiO₃ powders prepared via sol-gel route

Stefania Stoleriu*, Adelina Ianculescu, Catalina Vasilescu, University Politehnica of Bucharest, Romania; Maria Crisan, Malina Raileanu, Dorel Crisan, Nicolae Dragan, Institute of Physical Chemistry Ilie Murgulescu, Romanian Academy, Romania; Bogdan Vasile, University Politehnica of Bucharest, Romania

(ICC-P058-2012) Rietveld analysis, dielectric and magnetic properties of La/Ti co-doped BiFeO₃ ceramic

Sujata Sanghi*, Ashish Agarwal, Reetu Dahiya, Ashima Hooda, Guru Jambheshwar University of Science & Technology, India

(ICC-P059-2012) Synthesis and Luminescence of Eu-doped Condensed Lanthanum-Calcium Phosphates

Takehiro Funamoto*, Hiroaki Onoda, Kyoto Prefectural University, Japan

(ICC-P060-2012) Electric field induced resistance changes in CaFeO_{3-x} thin film

Takeshi Yokota*, Rempei Imurqa, Koji Ichikawa, Manabu Gomi, Graduate school of Engineering, Nagoya Institute of Technology, Japan

ICC4 Poster Presentations - Monday

(ICC-P061-2012) Preceramic Polymer Route to Macroporous Monoliths Based on Oxygen-Deficient Titanium Oxide

Tatsuya Sato*, George Hasegawa, Kazuyoshi Kanamori, Kazuki Nakanishi, Kyoto University, Japan

(ICC-P062-2012) Piezoelectric Metrology at High Temperature

Tim Stevenson*, Tim Comyn, University of Leeds, United Kingdom

(ICC-P063-2012) Studies of Sputter Deposited ZnO Films

Tom N Oder*, Michael McMaster, Andrew Smith, Joshua Petrus, Nagaraju Velpukonda, Youngstown State University, USA

(ICC-P064-2012) Preparation and patterning characteristics of organic-inorganic hybrid film containing latent pigments by using microwave and photo acid generator

Tomoji Ohishi*, Shibaura Institute of Technology, Japan

(ICC-P065-2012) Effects of Transition-Metal Species on Single-Phase Formation of (Pb,M)Sr₂(Y,Ca)Cu₂O_z (M: Fe, Co, Ni, Cu or Zn)

Toshihiko Maeda*, Tairiku Tashiro, Toshiya Takahashi, Shinpei Yabe, Yasutomo Takahashi, Masakazu Haruta, Shigeru Horii, Kochi University of Technology, Japan

(ICC-P066-2012) Low Temperature Optical Thermometry through Fluorescence Intensity Ratio in Er³⁺, Sm³⁺-co doped-Yttria Stabilized Zirconia

Yang Shen*, Tsinghua University, China; Xing Wang, Hongcai He, University of Electronic Science and Technology China, China; Yuanhua Lin, Ce-Wen Nan, Tsinghua University, China

(ICC-P067-2012) Synthesis of Monolithic Macroporous Iron Oxide via Sol-Gel Process from Ionic Precursors

Yasuki Kido*, Kazuki Nakanishi, Akira Miyasaka, Kazuyoshi Kanamori, Kyoto University, Japan

(ICC-P068-2012) Upconversion and Photostimulated Luminescence in afterglow ceramics Tb, Sr co-doped Lu₂O₃

Shi Chen, Yiquan Wu*, Alfred University, USA

(ICC-P069-2012) Effect of Additives on Electrical Resistivity of Silicon Carbide Ceramics

Young-Wook Kim*, Kwang-Young Lim, Jung-Hye Eom, University of Seoul, Korea; Kwang Joo Kim, Konkuk University, Korea

(ICC-P070-2012) Control on the doping site in BaTiO₃ with a water-soluble precursor

Yuta Matsushima*, Katsuhiko Iwase, Shinnosuke Kasuga, Takahiro Kawai, Yamagata University, Japan

ICC4 Poster Presentations - Monday

(ICC-P071-2012) Hydrothermal Synthesis of the Multiferroic YMn_2O_5 Nanopowders

Zorica Brankovic*, Goran Brankovic, Zorica Marinkovic Stanojevic, Milica Pocuca-Nesic, Institute for Multidisciplinary Research-University of Belgrade, Serbia; Maria Aparecida Zaghete, Jose Arana Varela, Instituto de Quimica-UNESP, Brazil

(ICC-P072-2012) Getting the substrate material based on silicon carbide for nitride LEDs

Zulkhair Mansurov*, Institute of Combustion Problems, Kazakhstan; Alex Ignatiev, University of Houston, USA; Serekbol Tokmoldin, Physical Technical Institute, Kazakhstan; Renat Beissenov, al-Farabi Kazakh National University, Kazakhstan

(ICC-P073-2012) Effects of Fe_2O_3 on properties of novel heat insulation materials synthesized by molten salt method

Chengji Deng*, Jun Ding, Wenjie Yuan, Jun Li, Hongxi Zhu, Wuhan University of Science and Technology, China

(ICC-P074-2012) Improving of WC Based Hard Materials by Spark Plasma Sintering

Emrah Arslankara*, Ahmet Turan, Gultekin Goller, Onuralp Yucel, Filiz Cinar Sahin, Istanbul Technical University, Turkey

(ICC-P075-2012) Mechanism of the carbothermal synthesis of MgAl_2O_4 -SiC refractory composite powders

Hongxi Zhu*, Hongjuan Duan, Wenjie Yuan, Chengji Deng, Wuhan University of Science and Technology, China

(ICC-P076-2012) Cellulose Ether Binders as Plasticization Aid for the Extrusion of Ceramic Catalysts or Diesel Particulate Filters - Status and New Developments

Roland Bayer*, Dow Wolff Cellulosics GmbH, Germany

(ICC-P077-2012) Preparation of MgO-SiC composite powders and its effect on the properties of low-carbon MgO-SiC-C refractories

Wenjie Yuan*, Zhijiang Lv, Hongxi Zhu, Chengji Deng, Wuhan University of Science and Technology, China

(ICC-P078-2012) Description of titanium carbides sintering process using Kuczynski and Frenkel sintering models

Agnieszka Gubernat*, AGH - University of Science and Technology, Poland

(ICC-P079-2012) The Production and Characterization of Boron Carbide-Titanium Diboride Composites by Reactive Spark Plasma Sintering

Asli Ustunova*, Gultekin Goller, Onuralp Yucel, Filiz Cinar Sahin, Istanbul Technical University, Turkey

ICC4 Poster Presentations - Monday

(ICC-P080-2012) Influence of nitrogen pressure on SHS synthesis of γ -AlON

Dariusz Zientara*, Jakub Domagala, Mirosław M Bucko, AGH University of Science and Technology, Poland

(ICC-P081-2012) High toughness TiB₂-40%TiC ceramic composite prepared by two-step pressureless sintering

Yujin Wang*, Haixia Li, Songjie Wang, Zhiyi Hu, Yu Zhou, Harbin Institute of Technology, China

(ICC-P082-2012) Densification of Ti6Al4V Bio-Material Alloy by Spark Plasma Sintering

Mehmet Kemal Coskun, Burcu Apak, Gultekin Goller, Onuralp Yucel, Filiz Cinar Sahin*, Istanbul Technical University, Turkey

(ICC-P083-2012) Different Ceramic Fibers Under Thermal Shock

Henry A Colorado*, UCLA, USA

(ICC-P084-2012) Development of thermochromic ceramic powder by controlling structural phase transition and thermal expansion

Ikuo Yanase*, Seitarou Ooshima, Tatsunari Mizuno, Kouki Oomori, Hideohiko Kobayashi, Saitama University, Japan

(ICC-P085-2012) Carbon Nanotube Addition to Zirconium Carbide-Silicon Carbide Composites

Sumbule Sagdic, Ipek Akin, Filiz Sahin, Onuralp Yucel, Gultekin Goller*, Istanbul Technical University, Turkey

(ICC-P086-2012) Ceramics in Colombia

Jairo Arturo Escobar*, Mariana Morales, David Carvajal, University of Los Andes, Colombia

(ICC-P087-2012) Physical properties of Latvian clays

Inga Dusenkova, Valentina Stepanova, Janis Locs*, Juris Malers, Liga Berzina-Cimdina, Riga Technical University, Latvia

(ICC-P088-2012) Study on Thermal Properties of Aluminium Nitride/Polymer Composites for Thermal Interface Material Application

Janqkang Chen*, Liyueh Chen, Yihao Lin, CSIST, Taiwan; Mannfu Rau, AG Materials Inc., Taiwan

(ICC-P089-2012) Comparative study on microstructures and densification of SiO₂-Si₃N₄ ceramic compounds sintered by direct hot pressing and conventional hot pressing

Jong-Won Shin*, Christian Frei, Umicore Thin Film Products AG, Liechtenstein

ICC4 Poster Presentations - Monday

(ICC-P090-2012) Synthesis of high-density AlN by direct nitridation of molten Al with Mg vapor supply

Kohei Mizuno*, Hiroaki Matsubara, Yukihisa Takeuchi, Shunta Harada, Toru Ujihara, Nagoya University, Japan; Yuuichi Aoki, Kimio Kohara, DENSO CORP., Japan

(ICC-P091-2012) Effect of NH₄F on synthesis mullite porous ceramic from kaolinite

Lei Yuan*, Tao Liu, Chun Wang, Jingkun Yu, Northeastern university, China

(ICC-P092-2012) High Alumina Refractory Lining Performance In a Caustic Incinerator

Manabendra Maity*, Eissa Al-Zahrani, Jitendra Lohit, SABIC Technology Center, Saudi Arabia

(ICC-P093-2012) Sandblasting of 3Y-TZP: influence on roughness, damage and strength

RaviKiran Chintapalli, Fernando M Garcia, Marc Anglada*, Universitat Politècnica de Catalunya, Spain

(ICC-P094-2012) Development of Tabular Yttria for Melting and Casting of High Purity Titanium

Wenbin Dai*, Xinli Wang, Northeastern University, China; Dexuan Sun, Jiangchun Ye, Dongfang Electric Machinery Co. Ltd, China; Dexin Zhang, Northern Engineering and Technology Co. Ltd., China; Jingkun Yu, Northeastern University, China

(ICC-P095-2012) Direct Solid Sampling Chemical Analysis of High Purity Advanced Ceramics

Deborah Dunn*, Mary Halstead, DeAnn Barnhart, Glyn Churchill, Xinwei Wang, Karol Putyera, Evans Analytical Group, USA

(ICC-P096-2012) Dense Alumina/Vanadium Carbide Composite

Zbigniew Pedzich*, AGH-University of Science & Technology, Poland

(ICC-P182-2012) Simultaneous effect of transformation toughening and nanotubes on the 3Y-TZP/ CNTs fracture toughness

Mahdiar Taheri, Iran University of Science and Technology, Islamic Republic of Iran; Mehdi Mazaheri*, Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland; Farhad Golestani-fard, Iran University of Science and Technology, Islamic Republic of Iran

Tuesday, July 17, 2012
Interactive Technology Forum II

Sponsored by Samsung Electro-Mechanics

3:45 PM-6:30 PM

Room: River Exhibition Hall B (Level 1)

Interactive Presentations

(ICC-P208-2012) Diffusion and Adsorption Limited Simulation of Copper Electrodeposition in a High-Aspect Ratio Channel

Amanda E Sall*, Northwestern University, USA

(ICC-P209-2012) Grain Size Contributions to Lithium Ionic Conductivity in Lithium Containing Garnet Ceramics ($\text{Li}_5\text{La}_3\text{Ta}_2\text{O}_{12}$)

Brian Ray*, University of Kentucky, USA

(ICC-P210-2012) The near infrared absorption properties of tungsten bronzes

Chongshen Guo*, Shu Yin, Tsugio Sato, Tohoku University, Japan

(ICC-P211-2012) Photocatalytic property of $\text{CaAl}_2\text{O}_4:(\text{Eu},\text{Nd})/(\text{Ta},\text{N})$ -doped $\text{TiO}_2/\text{Fe}_2\text{O}_3$ for persistent NO decomposition

Huihui Li*, Shu Yin, Tsugio Sato, Tohoku University, Japan

(ICC-P212-2012) Thermal Measurements of 2-, 3- and 4-Phase Ceramic Composites using OOF2 Analyses

Jesse P Angle*, Martha L Mecartney, University of California, Irvine, USA

(ICC-P213-2012) Thermal Conductivity of Wood-Derived Graphitic Carbon and Carbon/Copper Composites

Matthew Johnson*, Katherine Faber, Northwestern University, USA

(ICC-P214-2012) Improvement of glass making refractories

Rolf Weigand*, Heiko Hessenkemper, Anne-Katrin Rössel, TU Bergakademie Freiberg, Germany

(ICC-P215-2012) Three-dimensional microstructural evolution of lithium-ion battery cathodes on cycling

Zhao Liu*, James R Wilson, J. S Cronin, Kyle J Yakal-Kremski, Katherine T Faber, Scott A Barnett, Northwestern University, USA

(ICC-P216-2012) Processing of Single Solid Oxide Fuel Cells

Jonathan Torres*, Yan Chen, Andres Correa, Anthony Terracciano, Nina Orlovskaya, University of Central Florida, USA

ICC4 Interactive Presentations - Tuesday

(ICC-P217-2012) Thermomechanical Response of Sintering SOFC Materials

H. Lee, E. R Kupp, Gary Messing*, Penn State University, USA

(ICC-P218-2012) Characterization of crack healing in porous ceramics due to thermal cycling

Amit Pandey, Amit Shyam, Thomas R Watkins, Edgar Lara-Curzio*, ORNL, USA

(ICC-P219-2012) Facile synthesis of flexible macroporous monolith from tri- and di-functional organoalkoxysilanes: controlling pore and surface properties for applications

Gen Hayase*, Kazuyoshi Kanamori, Kazuki Nakanishi, Kyoto Univ/Grad Schl Sci, Japan

(ICC-P220-2012) New Concept of Low Cost Ceramics made from Traditional Ceramic Fillers and Synthesized at Room Temperature

Henry A Colorado*, UCLA, USA

(ICC-P221-2012) Development of New Body Formulations in Ceramic Tile Production for Zero Carbon Dioxide Emission

Ozgur Cengiz*, Alpogut Kara, Anadolu University, Turkey

(ICC-P222-2012) Green fabrication of complex-shaped ceramic components by room-temperature injection molding of ceramic suspension gels

Valerie L Wiesner*, Jeffrey Youngblood, Rodney Trice, Purdue University, USA

(ICC-P223-2012) Tapping the potential of Carbon Nano Tubes implanted in Ceramic Pore Channels for Oily Water Treatment

Xinwei Chen*, Liang Hong, National University of Singapore, Singapore

(ICC-P224-2012) Relevance of surface chemistry of inorganic colloids in liquid-phase processing under an Electric Field

Begoña Ferrari*, Maria Verde, Sandra Cabanas-Polo, Juan Antonio Escribano, Isabel Gonzalo-Juan, Amador C. Caballero, Antonio Javier Sanchez-Herencia, Instituto de Ceramica y Vidrio (CSIC), Spain

(ICC-P225-2012) De-Sintering of Tin Dioxide under Two-Step Sintering Conditions

Chi Hsiu Chang*, Ricardo Castro, University of California, Davis, USA

(ICC-P226-2012) Nanoionic enhancement of $\text{BaCe}_{0.7}\text{Zr}_{0.1}\text{Y}_{0.1}\text{Yb}_{0.1}\text{O}_{3-6}$ using reduced nickel

Daniel Clark*, Jianhua Tong, Amy Morrissey, Ivar Riemanis, Ryan O'Hayre, Colorado School of Mines, USA

(ICC-P227-2012) Synthesis of metal oxides by means of non-hydrolytic sol-gel reaction

Davide Morselli*, Nicola Florini, Federica Bondioli, University of Modena and Reggio Emilia, Italy

ICC4 Interactive Presentations – Tuesday

(ICC-P228-2012) Processing of nanostructured ceramics

Jon Binner*, Bala Vaidhyanathan, Loughborough University, United Kingdom

(ICC-P229-2012) Electric field effects on the sintering of high κ magnesium aluminate nanoparticles

Jorgen Rufner*, Cecile Bonifacio, Klaus van Benthem, Ricardo Castro, University of California, Davis, USA

(ICC-P230-2012) Mechanical properties of carbon nanotube/ alumina nanocomposites: From room to high temperatures

Mehdi Mazaheri*, Daniele Mari, Robert Schaller, EPFL: Swiss Federal Institute of Technology in Lausanne, Switzerland; Guillaume Bonnefont, Gilbert Fantozzi, INSA - Lyon: Institut National des Sciences Appliquées de Lyon, France

(ICC-P231-2012) Estimation of microstructure development of CNTs/alumina composites by electrical conductivity measurement

Naoki Ueda*, Tomohiko Yamakami, Tomohiro Yamaguchi, Morinobu Endo, Shinshu University, Japan; Naoto Saito, Shinshu University School of Health Sciences, Japan; Seiichi Taruta, Shinshu University, Japan

(ICC-P232-2012) In-situ synthesis of oxide-oxide $[\text{Y}_3\text{Al}_5\text{O}_{12}]_{0.5}[\text{Al}_2\text{O}_3]_{0.5}$ and $[\text{Y}_3\text{Al}_5\text{O}_{12}]_{0.09}[\text{MgAl}_2\text{O}_4]_{0.91}$ nanocomposites

Nathan Taylor*, Richard M Laine, University of Michigan, USA

(ICC-P233-2012) Dispersion of ceramic particles into metallic matrix by colloidal control of powders in water

Antonio Javier Sanchez-Herencia*, Instituto de Ceramica y Vidrio (CSIC), Spain; Elena Gordo, Roberto García das Neves, University Carlos III of Madrid,, Spain; Juan Antonio Escribano, Begoña Ferrari, Instituto de Ceramica y Vidrio (CSIC), Spain

Tuesday, July 17, 2012
Interactive Technology Forum II
Sponsored by Samsung Electro-Mechanics

3:45 PM-6:30 PM

Room: River Exhibition Hall B (Level 1)

Poster Presentations

(ICC-P118-2012) VO_x /TiO₂ anode catalyst for oxidation of CH₄ containing 5000 ppm H₂S in SOFC cells

Alfonso Andres Garcia Rojas*, Adrien Vincent, Jing-Li Luo, Karl Chuang, Alan Sanger, University of Alberta, Canada

(ICC-P119-2012) Electrochemical Characterization of Spinel LiMn₂O₄ Particles as a Cathode Material for Lithium-Ion Batteries Prepared by Ultrasonic Spray Pyrolysis

Burçak Ebin*, Gürmen Sebahattin, Istanbul Technical University, Turkey

(ICC-P120-2012) Pressureless Sintering of Ti₃SiC₂: Microstructure and Mechanical Properties

Eduardo V Rodrigues, Celio A Costa*, COPPE/POLI/UFRJ, Brazil; Edgar Lara-Curzio, Oak Ridge National Laboratory, USA

(ICC-P121-2012) Preparation of Copper Ferrite Ceramics

Christian Kaps*, Alexander Tasch, Manuel Heidenreich, Bauhaus-Universität Weimar, Germany

(ICC-P122-2012) Using epitaxial growth to stabilize δ -Bi₂O₃ on single crystal oxide substrates

Danielle Proffit*, Northwestern University, USA; Matthew Highland, Seong Keun Kim, Guo-Ren Bai, Peter Baldo, Paul Fuoss, Argonne National Laboratory, USA; Thomas O Mason, Northwestern University, USA; Dillon Fong, Jeffrey Eastman, Argonne National Laboratory, USA

(ICC-P123-2012) Mechanical characterization of multicrystalline silicon wafers

Elena Maria Tejado*, Technical University of Madrid - CISDEM, Spain; Teresa Orellana Pérez, Fraunhofer Institute for Solar Energy Systems, Germany; José Y Pastor, Technical University of Madrid - CISDEM, Spain; Claudia Funke, Wolfgang Fütterer, Institute for Experimental Physics, Germany

(ICC-P124-2012) Joining Thin Silicon Carbide Substrates by Silicides Compounds

Elodie Jacques*, Yann Le Petitcorps, Laurence Maillé, Eric Martin, LCTS, France; Christophe Lorrette, Cédric Sauder, CEA, France; Etienne Savary, Sylvain Marinel, CRISMAT, France

ICC4 Poster Presentations - Tuesday

(ICC-P125-2012) Porosity dependence of thermal conductivity of oxide and silicate ceramics up to 1000 °C

Eva Gregorova*, Willi Pabst, Zdenek Sofer, Ivona Sedlarova, Institute of Chemical Technology, Prague (ICT Prague), Czech Republic

(ICC-P126-2012) The effect of calcium-magnesium-aluminosilicate deposits on stress states and lifetimes of ytterbium silicate environmental barrier coatings

Fabian Stolzenburg*, Northwestern University, USA; Jonathan Almer, Argonne National Lab, USA; Kang N Lee, Rolls Royce Corp, USA; Katherine T Faber, Northwestern University, USA

(ICC-P127-2012) Improvement of boron carbide mechanical properties in B-C-Ti-Zr system

Gulnazi Tabatadze, Georgian Technical University, Georgia; Urgan G Heinrich, Technical University of Clausthal, Germany; Zviad Kovziridze*, Zviad Mestvirishvili, Georgian Technical University, Georgia

(ICC-P128-2012) Impact of impurities on the mechanical behavior of multicrystalline silicon for solar cells

José Ygnacio Pastor, Elena M Tejado*, Technical University of Madrid-CISDEM, Spain; Teresa Orellana Pérez, Fraunhofer Institute for Solar Energy Systems, Germany; Claudia Funke, Wolfgang Fütterer, Institute for Experimental Physics, Germany

(ICC-P129-2012) Effect of nano SiO₂ on the polymer Ni-MH battery based on PVA/PEG-composite microporous alkaline polymer electrolyte

Liquan Li*, Yunfeng Zhu, Renxiang Wu, Nanjing University of Technology, China

(ICC-P130-2012) Surface Effects In Beta-Alumina Synthesis And Sintering For Electronic Applications

Lorena Batista Caliman*, Douglas Gouvêa, Universidade de São Paulo - USP, Brazil

(ICC-P131-2012) Effect of Freezing Gradients on Pore Network Characteristics for Freeze-Cast Alumina

Sarah M Miller*, Katherine T Faber, Northwestern University, USA

(ICC-P132-2012) Oxide nanosheet composites for solar energy harvesting

Scott Mixture*, Alfred University, USA

(ICC-P133-2012) Composite Ceramic Materials for SOFC Components.

Sergey Somov*, Solid Cell Inc., USA; Sam Ghosh, RocCera LLC, USA; Michael Alberga, James P Kelly, Olivia A Graeve, Alfred University, USA

ICC4 Poster Presentations - Tuesday

(ICC-P134-2012) Elaboration and electrochemical study of LSCF / 10ScSZ symmetrical cells for SOFC applications

Sophie Beaudet Savignat*, Julien Vulliet, Max Groisil, Thierry Piquero, CEA Le Ripault, France

(ICC-P135-2012) Double Perovskite $\text{Sr}_2\text{Fe}_{2-x}\text{Mo}_x\text{O}_{6-\delta}$ as anode material for solid oxide fuel cells

Arun Kumar Dorai, Sun-Dong Kim, Doo-Won Seo, In-sub Han, Ji-Haeng Yu, Se-Young Kim, Sang-Kuk Woo*, Korea Institute of Energy Research, Korea

(ICC-P136-2012) Synthesis and characterization of perovskite-type cathode

$\text{La}_{0.8}\text{Sr}_{0.2}\text{Mn}_{1-x}\text{Cu}_x\text{O}_{3-\delta}$ ($0 \leq x \leq 0.3$) for intermediate-temperature solid oxide fuel cells

Taimin Noh*, Jiseung Jiseung, Jinseong Kim, Heesoo Lee, Pusan National University, Korea

(ICC-P137-2012) Characterization of $\text{Sr}_{0.9}\text{Ho}_{0.1}\text{CoO}_{3-\delta}$ as a potential cathode material for intermediate-temperature solid oxide fuel cells

Tao Liu*, Northeastern University, China; Lin Li, Shenyang Aerospace University, China; John B Goodenough, The University of Texas at Austin, USA; Jingkun Yu, Northeastern University, China

(ICC-P138-2012) Elastic constants and anelastic effects of oxide and silicate ceramics and composites at elevated temperature

Willi Pabst*, Eva Gregorova, Jakub Cerny, Institute of Chemical Technology, Prague (ICT Prague), Czech Republic

(ICC-P139-2012) Adsorption of rare earth metals from aqueous solution on sepiolite-based composite sheets

Akira Miura*, Taiyo Furuya, Ayaka Sogo, Takahiro Takei, Nobuhiro Kumada, University of Yamanashi, Japan

(ICC-P140-2012) The Effect of Yttria and Alumina Powder on the Transformation Behavior of Polydimethylsiloxane Derived Ceramics

Celio A Costa, Marysilvia F Costa*, Marilia S Beltrao, COPPE/POLI/UFRJ, Brazil

(ICC-P141-2012) Investigation of geopolymer binder formation through infrared spectroscopy

Elodie Prud'homme*, Alexandre Autef, Fabrice Gouny, Philippe Michaud, GEMH, France; Emmanuel Joussein, GRESE, France; Fazia Fouchal, Sylvie Rossignol, GEMH, France

(ICC-P142-2012) Effect of different sintering processes on mullite -zirconia ceramics development

Gaida Maruta Sedmale*, Riga Technical University, Latvia; Ints Steins, Riga Technical University, Latvia; Ingunda Sperberga, Riga Technical University, Latvia; Aloizis Patmalnieks, Latvian University, Latvia

ICC4 Poster Presentations - Tuesday

(ICC-P143-2012) Thermokinetic analysis of the CO₂ Chemisorption on Li₂ZrO₃. Effect of the Oxygen Addition

Lorena Martinez-dlcruz, Heriberto Pfeiffer*, Universidad Nacional Autonoma de Mexico, Mexico

(ICC-P144-2012) Removal of phosphorus with corbicula shells from resemble waste water and powder properties of by-products

Hiroaki Onoda*, Ryuta Matsumoto, Kyoto Prefectural University, Japan; Masamoto Tafu, Toyama National College of Technology, Japan

(ICC-P145-2012) Synthesis and characterization of materials obtained from alkali activated illite-based clays

Ingunda Sperberga*, Andris Cimmers, Gaida Sedmale, Dainida Ulme, Riga Technical University, Latvia; Ilze Vircava, University of Latvia, Latvia

(ICC-P146-2012) Effect of Y₂O₃ on the sintering of natural magnesia

Jingkun Yu*, Lei Yuan, Xiaoying Wang, Wenbin Dai, Pengcheng Ma, Northeastern University, China

(ICC-P147-2012) Photo-activated Enzymatic Reaction of Peroxidase Immobilized on Semiconductors

Kai Kamada*, Ayano Moriyasu, Takuya Nakamura, Suguru Tsukahara, Nagasaki University, Japan

(ICC-P148-2012) Removal of fluoride ion in waste water by using reaction of calcium phosphate

Masamoto Tafu*, Miki Nakai, Toyama National College of Technology, Japan; Takuya Okazaki, University of Toyama, Japan; Takeshi Toshima, Tetsuji Chohji, Toyama National College of Technology, Japan

(ICC-P149-2012) Honeycomb reactor washcoated with spinel catalysts for the reduction of NO_x by C₂H₄

Md. Hasan Zahir*, King Fahd University of Petroleum & Minerals, Saudi Arabia

(ICC-P150-2012) Synthesis and characterization of cement clinker containing funnel glass from cathode ray tube

Nirut Lairaksa*, Natt Makul, Phranakhon Rajabhat University, Thailand

(ICC-P151-2012) Fabrication of Porous Ceramics by employing food additives and ceramic slurries

Shuk-Man A Kwok, University of Melbourne, Australia; Paola Parente, Instituto de Ceramica y Vidrio (CSIC), Spain; Carolina Tallón, George V Franks, University of Melbourne, Australia; Antonio Javier Sanchez Herencia*, Instituto de Ceramica y Vidrio (CSIC), Spain

ICC4 Poster Presentations - Tuesday

(ICC-P152-2012) Adsorption of Rare Earth Elements by Inorganic Compounds for Futural Recovery from Wastes

Takahiro Takei*, Ayuka Sogo, Akira Miura, Nobuhiro Kumada, University of Yamanashi, Japan

(ICC-P153-2012) Ceramic microbeads with high specific surface area as adsorbents for purification technologies: Antibacterial doping with Copper

Tanja Yvonne Klein*, Laura Treccani, Kurosch Rezwani, University of Bremen, Germany

(ICC-P154-2012) Characterisation of Lead Free Piezoelectrics for Commercial Applications

Tim Comyn*, Tim Stevenson, Andrew Bell, University of Leeds, United Kingdom

(ICC-P155-2012) Wear properties of silicon nitride ceramics prepared by pressureless densification

Tomasz Pawlik*, Malgorzata Sopicka-Lizer, Daniel Michalik, Grzegorz Moskal, Jakub Wieczorek, Silesian University of Technology, Poland

(ICC-P156-2012) Solvothermal Synthesis and Oxygen Storage Capacity of Ce and Zr-based Mixed Oxide Nanoparticles

Tsugio Sato*, Qiang Dong, Shu Yin, Tohoku University, Japan

(ICC-P157-2012) Improvement in Water Resistance and Compressive Strength of the Waste-based Gypsum Mix

Wantanee Buggakupta*, Pinsiri Umponpanarat, Faculty of Science, Chulalongkorn University, Thailand; Withaya Panpa, Faculty of Industrial Technology, Thepsatri Rajabhat University, Thailand

(ICC-P158-2012) Research on Pressureless Sintering of α -Sialon-AlN-BN Powder Synthesized from Boron-rich Slag-based Mixture

Wu Junbin*, Xue Xiang Xing, Jiang Tao, Northeastern University, China

(ICC-P159-2012) Study on Rheological Properties of Suspension with α -Sialon Powder for Gel Casting

Wu Junbin*, Xue Xiang Xing, Jiang Tao, Zhang Qing, Northeastern University, China

(ICC-P160-2012) Geopolymer synthesis by the choice of mix compositions

Xiaoxiao Gao*, Philippe Michaud, GEMH, France; Emmanuel Joussein, GRESE, France; Sylvie Rossignol, GEMH, France

(ICC-P161-2012) Evaluation of removal efficiency of calcium phosphate with fluoride and heavy metal ions

Yuki Hirano*, Masamoto Tafu, Takaaki Masutani, Tetsuji Chohji, Toyama National College of Technology, Japan

ICC4 Poster Presentations - Tuesday

(ICC-P162-2012) Study of Raw and Thermally Treated Wolastonite - Based Ceramics: XRD and FTIR Studies

Ertugrul Izci*, Cem E Ozbilgin, Zeynep Murat, Anadolu University, Turkey

(ICC-P163-2012) XRD and FTIR Spectral Investigations of Raw and thermally treated Pyrophyllite from the Poturge Area, Malatya, Turkey

Ertugrul Izci*, Zeynep Murat, Cem E Ozbilgin, Anadolu University, Turkey

(ICC-P164-2012) Self-compacting Mortar Incorporating Rice Husk Ash Waste subjected to Elevated Temperatures

Gritsada Sua-iam*, Natt Makul, Phranakhon Rajabhat University, Thailand

(ICC-P165-2012) Microstructure and mechanical characteristics of microwave-assisted heating brick made from combined coal-biomass ash-limestone

Natt Makul, Apichit Krajangyao*, Phranakhon Rajabhat University, Thailand

(ICC-P166-2012) Processing of alumina-rich spinel nanopowders by liquid-feed flame spray pyrolysis (LF-FSP) to fine-grained ceramic composites.

Andrew Pottebaum*, Nathan Taylor, Richard Laine, University of Michigan, USA

(ICC-P167-2012) Synthesis nano bio ceramic powder pyro calcium phosphate via sol gel method

Behzad Mehdikhani*, standard research institute, Islamic Republic of Iran; Bahman Mirhadi, Imam khomeini international university, Islamic Republic of Iran

(ICC-P168-2012) Development of low thermal conductivity ZrO₂ ceramics by La₂O₃ addition

Byung-Koog Jang*, Yoshio Sakka, Hideyuki Murakami, National Institute for Materials Science, Japan; Seongwon Kim, Yoon-Suk Oh, Hyung-Tae Kim, Korea Institute of Ceramic Engineering and Technology, Korea

(ICC-P169-2012) Nanostructured Ceramic Oxides and Composites for High Performance Chemical Sensing

Daniel Charles*, Yi-Kai Huang, Shan-Wei Fang, Arvind Srivastava, Jiaying Huang, Vinayak P Dravid, Northwestern University, USA

(ICC-P170-2012) Effect of sintering temperature on the properties and structure of SiCNO ceramics

Dechang Jia*, Zhenlin Sun, Yu Zhou, Xiaoming Duan, Qian Zhang, Dan Ye, Harbin Institute of Technology, China

(ICC-P171-2012) Effect of Mg²⁺ ion as a dopant on the stability of amorphous phase transition of gamma-alumina

Deise Cristina Carvalho do Rosário*, Douglas Gouvea, University of São Paulo, Brazil

ICC4 Poster Presentations - Tuesday

(ICC-P172-2012) Synthesis of Alumina-Matrix Composites Reinforced with Nanometric Titanium and Titanium Nitride Dispersions

Enrique Rocha-Rangel*, Jose A Rodríguez-García, Universidad Politécnica de Victoria, Mexico; Elizabeth Refugio-García, Universidad Autónoma Metropolitana, Mexico

(ICC-P173-2012) Fabrication of SiC/carbon nanofiber composites by gel-casting and their properties

Guosheng Xu*, Tomohiro Yamaguchi, Morinobu Endo, Seiichi Taruta, Isao Kubo, Shinshu University, Japan

(ICC-P174-2012) Diameter-Dependent Photocatalytic Activity of Electrospun TiO₂ Nanofiber

Heping Li*, Wei Zhang, Wei Pan, Tsinghua University, China

(ICC-P175-2012) Spark plasma sintering of Si₃N₄-based nanopowders

Ilmars Zalite*, Ints Steins, Natalja Zilinska, Janis Krastins, RTU Institute of Inorganic Chemistry, Latvia

(ICC-P176-2012) Plasma synthesis of nanosize powders of refractory compounds

Ilmars Zalite*, Janis Grabis, RTU Institute of Inorganic Chemistry, Latvia; Eriks Palcevskis, Plasma & Ceramic Technologies, Latvia

(ICC-P177-2012) Comparison of crystallographic and electrical properties of ZnO films fabricated by dry and wet processes

JeongSoo Hong*, Hajime Wagata, Ken-ichi Katsumata, Tokyo Institute of Technology, Japan; Naoki Ohashi, National Institute for Materials Science, Japan; KyungHwan Kim, Gachon University, Korea; Kiyoshi Okada, Nobuhiro Matsushita, Tokyo Institute of Technology, Japan

(ICC-P178-2012) An AFM study of nanoparticle arrangement with deposition time

Juan Antonio Escribano, Isabel Gonzalo-Juan, Antonio Javier Sanchez-Herencia*, Begoña Ferrari, Instituto de Ceramica y Vidrio (CSIC), Spain

(ICC-P179-2012) Preparation of polymethylsilsesquioxane xerogel spheres by suspension polymerization

Kazuyoshi Kanamori*, Hiroki Shigeno, Takahiro Tanaka, Kazuki Nakanishi, Kyoto University, Japan

(ICC-P180-2012) Synthesis of Rutile Nanotubes by Solvothermal Method

Yukihiro Komatsubara, Ken-ichi Katsumata, Nobuhiro Matsushita, Kiyoshi Okada*, Tokyo Institute of Technology, Japan

(ICC-P181-2012) Influence of Precursors Stoichiometry on SHS Synthesis of Ti₂AlC Powders

Leszek Chlubny*, Jerzy Lis, AGH-University of Science and Technology, Poland

ICC4 Poster Presentations - Tuesday

(ICC-P183-2012) Assembling and Packing of Nanoparticles under an Electric Field

Maria Verde, Isabel Gonzalo-Juan, Marina Villegas, Amador C. Caballero, Begoña Ferrari*, Instituto de Ceramica y Vidrio (CSIC), Spain

(ICC-P184-2012) Experimental Investigation of Fracture Toughness in AL356-SiCp Aluminium Matrix Composite

Mohammad M Ranjbaran*, Shahid Rajaei Teacher Training university, Islamic Republic of Iran

(ICC-P185-2012) Zircon-Zirconia ($ZrSiO_4$ - ZrO_2) dense ceramic composites by Spark Plasma Sintering

Nicolas Maximiliano Rendtorff*, CETMIC, Centro de Tecnologia de Recursos Minerales y Ceramica, Argentina; Salvatore Grasso, Chunfeng Hu, Fine Particle Processing Group, Nano Ceramics Center, National Institute for Materials Science (NIMS), Japan; Gustavo Suárez, Esteban Aglietti, CETMIC, Centro de Tecnologia de Recursos Minerales y Ceramica, Argentina; Yoshio Sakka, Fine Particle Processing Group, Nano Ceramics Center, National Institute for Materials Science (NIMS), Japan

(ICC-P186-2012) Preparation of M_3O_4 ($M=Fe, Co$) Particles by Using Iron and Cobalt Naphthenate by Hydrothermal Reaction

Nobuhiro Kumada*, University of Yamanashi, Japan; Qiang Dong, Tohoku University, Japan; Akira Miura, Takahiro Takei, University of Yamanashi, Japan

(ICC-P187-2012) Influence of PECS Temperature Variation on the Properties of the Compacted Hybrid Coreshell Powders

Norsuria Mahmed*, Juha Larismaa, Aalto University School of Chemical Technology, Finland; Oleg Heczko, Academy of Science Czech Republic, Czech Republic; Simo-Pekka Hannula, Aalto University School of Chemical Technology, Finland

(ICC-P188-2012) New route synthesis of zinc oxide nanostructured particles and their characterization

Ecaterina Andronescu*, Cristina Ghitulica, Otilia Ruxandra Vasile, Bogdan S Vasile, University Politehnica from Bucharest, Romania; Eugeniu Vasile, Roxana Trusca, METAV Research and Development, Romania

(ICC-P189-2012) Nanostructured SHS-Ceramic on Basic of Mechanoactivated Mixtures Quartz-Calcite

Renat Beissenov*, Al-Farabi Kazakh national University, Kazakhstan; Zulkahir Mansurov, Nina Mofa, Sestager Aknazarov, Bakhtiyar Sadykov, Institute of Combustion Problems, Kazakhstan

(ICC-P190-2012) The bottom up approach to processing ceramics is not always the best solution

Richard M. Laine*, Nathan Taylor, Andrew Pottebaum, University of Michigan, USA

ICC4 Poster Presentations - Tuesday

(ICC-P191-2012) Self-Propagating High Temperature Synthesis of Ceramic Composites Based on Silicon Carbide

Roza Abdulkarimova*, Zulkhair Mansurov, Al-Farabi Kazakh National University, Kazakhstan

(ICC-P192-2012) Synthesis and Reactive Sintering of ZrB₂-Based Ceramics

Ruixing Li*, Yanshan Jiang, Bin Zhao, Beihang University, China

(ICC-P194-2012) Influence of Ag₂O addition on crystallization process and microstructure of transparent mica glass-ceramics

Seiichi Taruta*, Aya Mizoguchi, Tomohiko Yamakami, Tomohiro Yamaguchi, Shinshu University, Japan; Kiyoshi Okada, Tokyo Institute of Technology, Japan

(ICC-P195-2012) Influence of oxygen non stoichiometry on the dielectric properties of BaTiO₃- δ nanoceramics

Sophie Guillemet-Fritsch, Christophe Voisin*, Pascal Dufour, Christophe Tenailleau, CIRIMAT/CNRS, France

(ICC-P196-2012) Layered Iron-titanate as a Physicochemically Stable Support for Hydrolase

Takaharu Ikeda*, Suguru Tsukahara, Nagasaki University, Japan; Nobuaki Soh, Saga University, Japan; Kai Kamada, Nagasaki University, Japan

(ICC-P197-2012) Preparation of calcium carbonate spherical hollow particles by spray drying and their properties

Tomoya Kawamata*, Koushiro Koizumi, Yasuhiro Umemura, Takeshi Toyama, Nihon University, Japan

(ICC-P198-2012) Spark Plasma Sintering of SiC-Carbon Nanotube Composite - Simulations Versus Experiments

Thomas Carlson*, J. Allen, ERDC-CERL, USA; B. Devine, ERDC-ITL, USA; C. P Marsh, ERDC-CERL, USA; W. M Kriven, UIUC, USA; C. R Welch, ERDC-ITL, USA

(ICC-P199-2012) Introduction of Silver Nanoparticles into High-porosity Hierarchically Porous Silica Monolith

Yang Zhu*, Takanori Detani, Kazuki Nakanishi, Kazuyoshi Kanamori, Kyoto University, Japan

(ICC-P200-2012) Study of superhydrophilic TiO₂ thin films prepared by reactive sputtering

Yu Sup Jung*, Gachon University, Korea; Jeong Soo Hong, Tokyo Institute of Technology, Japan; Kyung Hwan Kim, Gachon University, Korea

(ICC-P201-2012) Preparation of Zirconium Diboride Powder by Sol - gel Method

Zhengguo Yan*, Wenbin Dai, Tao Liu, Jingkun Yu, Northeastern University, China

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(ICC-P202-2012) Study of preparation and effect of Si₂ON₂ phase on the properties of SiC composite

Zviad Kovziridze*, Georgian Technical University, Georgia; Jurgen G Heinrich, Technical University of Clausthal, Germany; Natela Nizharadze, Georgian Technical University, Georgia

(ICC-P203-2012) Heat Transfer Nanofluids by Design: Copper Decorated Graphene Suspensions

Elena Timofeeva, Michael Moravek, Dileep Singh*, Argonne National Laboratory, USA

(ICC-P204-2012) Aqueous tape casting processing on the level of transparency of ceramics

Felipe Orgaz Orgaz*, Instituto de Ceramica y Vidrio, Spain; Maria Teresa Gomez del Rio, Universidad Rey Juan Carlos, Spain; Rosa Moronta, instituto de Ceramica y Vidrio, Spain; Jesus Rodriguez, Pedro Poza, Universidad Rey Juan Carlos, Spain

(ICC-P205-2012) Investigation of MoS₂ and BN nanolubricants and their effect on tribological behavior of combustion engine parts

Elena Timofeeva*, Nicholaos Demas, Jules Routbort, George Fenske, Argonne National Laboratory, USA

(ICC-P206-2012) Investigation of deformation and demolding behaviors for precision glass molding

Hiroshi Ikeda*, Haruya Kasa, Hiroyuki Mayama, Hiroaki Hishiyama, Junji Nishii, Hokkaido University, Japan

(ICC-P207-2012) Laser Synthesis of Rare Earth Aluminate Coatings

Isabel de Francisco, V. V Lennikov, Instituto de Ciencia de Materiales de Aragón (CSIC-University Zaragoza), Spain; J. A Bea, Aragon Institute of Engineering Research (I3A), University of Zaragoza, Spain; A. Vegas, Instituto de Química-Física Rocasolano, CSIC, Spain; J. B Carda, Universitat Jaume I, Spain; German F de la Fuente*, Instituto de Ciencia de Materiales de Aragón (CSIC-University Zaragoza), Spain