

Symposium 1: Mechanical Behavior and Performance of Ceramics & Composites

Monday, January 28, 2013

Mechanics and Characterizations

1:30 PM-5:50 PM

Room: Coquina Salon D

Session Chair: TBA

1:30 PM

(ICACC-S1-001-2013) Measuring and understanding the fracture toughness in ceramics at the microstructural scale using microcantilever beams

Andrew D Norton*, Richard I Todd, University of Oxford, United Kingdom

1:50 PM

(ICACC-S1-002-2013) Mesoscale Brittle Mechanical Testing Using Theta Specimens

Brian Babcox*, Mary Frecker, George A Lesieutre, James H Adair, Pennsylvania State University, USA

2:10 PM

(ICACC-S1-003-2013) Torsion tests on brittle and tough joining materials

Monica Ferraris*, Milena Salvo, Andrea Ventrella, Politecnico di Torino, Italy

2:30 PM

(ICACC-S1-004-2013) Role of Circumferential Cracking in Fracture from Cylindrical Inclusions in: LTCC-Gold via System

Rajan Tandon*, Sandia National Lab, USA

2:50 PM

(ICACC-S1-005-2013) Grain boundary fracture toughness of Si_3N_4 ceramics using very small specimens

Junichi Tatami*, Masaki Katayama, Katsutoshi Komeya, Toru Wakihara, Yokohama National University, Japan; Tsukahara Yahagi, Kanagawa Academy of Science and Technology, Japan; Takahiro Horiuchi, Masahiro Yokouchi, Kanagawa Industrial Technology Center, Japan; Kouichi Yasuda, Tokyo Institute of Technology, Japan

3:10 PM

Break

3:30 PM

(ICACC-S1-006-2013) Edge Chip Fracture Resistance of Ceramic and Composite Materials

George Quinn*, Anthony Giuseppetti, Kathleen Hoffman, Janet Quinn, American Dental Association Foundation, USA

3:50 PM

(ICACC-S1-007-2013) Heat diffusivity measurements on ceramic foams and fibers with a laser spot and an IR camera

Gerard L. Vignoles*, University Bordeaux, France; Christophe Lorrette, CEA, France; Grégory Bresson, Rénal Backov, University Bordeaux, France

4:10 PM

(ICACC-S1-008-2013) Effect of Calcium-Magnesium-Alumina-Silicate on Strain within the TGO Layer of Thermal Barrier Coatings

Sagarnil Das*, Sanna Siddiqui, Steven Scott, Morgan Ewen, Kevin Knipe, Albert Manero, University of Central Florida, USA; John Okasinski, Jonathan Almer, Argonne National Laboratory, USA; Li Li, Albert Feuerstein, Praxair Surface Technologies, USA; Seetha Raghavan, University of Central Florida, USA

4:30 PM

(ICACC-S1-009-2013) Phase Transformations in YTaO_4 and the Effect of Zr-ion Doping

Pankaj Sarin*, Zlatomir D Apostolov, Daniel R Lowry, Waltraud M. Kriven, University of Illinois at Urbana-Champaign, USA; Samuel Shian, David R Clarke, Harvard University, USA

4:50 PM

(ICACC-S1-010-2013) Neutron Scattering of Ferroelastic Mixed Ionic Electronic Conducting LaCoO₃ based Perovskite Under In-Situ Uniaxial Compression

Nina Orlovskaya*, Yan Chen, University of Central Florida, USA; Dong Ma, Alexandru Stoica, Ke An, Oak Ridge National Laboratory, USA

5:10 PM

(ICACC-S1-011-2013) Characterization of structural behavior under re-entry type transformations in Ln₆WO₁₂ (Ln= Y, Ho, Er, Yb)

Zlatomir Apostolov*, Pankaj Sarin, Waltraud M Kriven, University of Illinois at Urbana-Champaign, USA

5:30 PM

(ICACC-S1-012-2013) Acquisition Techniques for Synchrotron X-Ray Strain Measurements in Tubular TBC Specimens for Thermal Gradient Mechanical Testing

Kevin Knipe*, Albert Manero, Sagarnil Das, Sanna Siddiqui, Steven Scott, Morgan Ewen, University of Central Florida, USA; Carla Meid, Janine Schneider, DLR Aerospace, Germany; John Okasinski, Jonathan Almer, Argonne National Laboratory, USA; Marion Bartsch, DLR Aerospace, Germany; Seetha Raghavan, University of Central Florida, USA

Tuesday, January 29, 2013
Processing, Microstructure and Mechanical Properties Correlation I

8:00 AM-11:40 AM

Room: Coquina Salon D

Session Chair: TBA

8:00 AM

(ICACC-S1-013-2013) The effect of the addition of ceria stabilised zirconia on the creep of mullite

Daniel Glymond*, Finn Giuliani, Imperial College London, United Kingdom; Mike Vick, Ming-Jen Pan, Naval Research Laboratory, USA; Luc Jean

Vandeperre, Imperial College London, United Kingdom

8:20 AM

(ICACC-S1-014-2013) Characterizations of ZrO₂-stabilized YTaO₄: Thermal conductivity and in-situ Raman micro-analysis

Samuel Shian*, Mary Gurak, Harvard University, USA; Pankaj Sarin, Waltraud M Kriven, University of Illinois at Urbana-Champaign, USA; David R Clarke, Harvard University, USA

8:40 AM

(ICACC-S1-015-2013) Doping as a way to control microstructure and mechanical properties of Al₂O₃-ZrO₂ composites

Laurent Gremillard*, Katia Biotteau-Deheuvelds, Jerome Chevalier, INSA, France

9:00 AM

(ICACC-S1-016-2013) High-Temperature Creep Behavior of SiOC Polymer-Derived Ceramic Nanocomposites: Microstructural and Phase Composition Effects

Emanuel Ionescu*, Hans-Joachim Kleebe, Ralf Riedel, Technische Universitaet Darmstadt, Germany

9:20 AM

(ICACC-S1-017-2013) Processing, microstructure and creep behaviour of alumina-SiC micro-nanocomposites

Helen Reveron*, Mira Jaafar, Claude Esnouf, Gilbert Fantozzi, MATEIS Laboratory - Insa de Lyon, France

9:40 AM

Break

10:00 AM

(ICACC-S1-018-2013) Pressure-Induced Transformation Toughening in 10 mol% Yttria Stabilized Zirconia- β -eucryptite Composites

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

10:20 AM

(ICACC-S1-019-2013) Investigation into the effect of common ceramic core additives on the crystallisation and sintering of amorphous silica

Ben Taylor*, Birmingham University, United Kingdom; Stewart Welch, Rolls Royce PLC, United Kingdom; Stuart Blackburn, Birmingham University, United Kingdom

10:40 AM

(ICACC-S1-020-2013) Crack Propagation in Tooth Enamel is Regulated by Enamel Apatite Crystallographic Dimensions

Faleh Tamimi*, Elnaz Ghadimi, Hazem Eimar, Benedetto Marelli, Showan Nazhat, Hojatollah Vali, McGill University, Canada

11:00 AM

(ICACC-S1-021-2013) Processing and Mechanical Characterization of ZnO/Polyester Woven Carbon Fiber Composites

Hyung Wook Park*, Kyungil Kong, Ulsan National Institute of Science and Technology, Republic of Korea; HeeJune Kim, LG Hausys R&D Center, Republic of Korea

11:20 AM

(ICACC-S1-022-2013) Solid-solution of nitrogen-containing rare earth aluminates R_2AlO_3N

Yong Jiang*, Laner Wu, Yuhong Chen, Wenzhou Sun, Zhenkun Huang, Beifang University of Nationalities, China

Processing, Microstructure and Mechanical Properties Correlation II

1:30 PM-5:30 PM

Room: Coquina Salon D

Session Chair: TBA

1:30 PM

(ICACC-S1-023-2013) High Fracture Toughness-High Strength Ceramics for Welding Applications

Vladimir D. Krstic*, Queen's University, Canada

1:50 PM

(ICACC-S1-024-2013) Scientific Fundamentals and Industrial Applications of Superhard Nanocomposite Coatings

Stan Veprek*, Technical University Munich, Germany

2:10 PM

(ICACC-S1-025-2013) Fabrication of cBN reinforced $Y-\alpha-SiAlON$ composites through the SPS technique

Jethro Christopher Garrett*, Iakovos Sigalas, Mathias Herrmann, University of the Witwatersrand, South Africa

2:30 PM

(ICACC-S1-026-2013) Processing, structure and mechanical behavior of (Si)-B-C ceramics

Francis Teyssandier*, Camille Pallier, Georges Chollon, Weisbecker Patrick, Jean-Marc Leyssale, CNRS-LCTS, France; Christelle Gervais, LCMCP Paris 6 Collège de France, France; Henry Fischer, Fausto Sirroti, Synchrotron SOLEIL, France

2:50 PM

(ICACC-S1-027-2013) Non-Reactive Processing Methods for Producing Biomimetic Graphite/Copper Composites

Amanda E Sall*, Katherine T Faber, Northwestern University, USA

3:10 PM

Break

3:30 PM

(ICACC-S1-028-2013) Towards a Multiscale Model of Thermally-Induced Microcracking in Porous Ceramics

Ray S Fertig*, University of Wyoming, USA; Seth Nickerson, Corning Incorporated, USA

3:50 PM

(ICACC-S1-029-2013) Investigation on reliability of high alumina refractories

Wenjie Yuan*, Qingyou Zhu, Chengji Deng, Hongxi Zhu, Wuhan University of Science and Technology,

China

4:10 PM

(ICACC-S1-030-2013) Porous oxide ceramic matrix composites produced by the lamination of thermoplastic prepregs

Paula Oliveira Guglielmi*, Technische Universität Hamburg-Harburg, Germany; Diego Blaese, Murilo P Hablitzel, Daniel P Goulart, Márcio C Fredel, Dachamir Hotza, Universidade Federal de Santa Catarina, Brazil; Rolf Janssen, Technische Universität Hamburg-Harburg, Germany

4:30 PM

(ICACC-S1-031-2013) Thermal behaviour and characteristics of fired metakaolinite-based geopolymers

Antoine Elimbi*, Herve K Tchakoute, Joseph M Dika, Marcel Kondo, University of Yaounde 1, Cameroon

4:50 PM

(ICACC-S1-032-2013) Microstructure and Mechanical properties of In-situ processed B4C-HfB2 Composites

Sairam Kannan, T.S.R.Chandra Murthy*, J.k Sonber, C. Subramanian, Rajendra Chennaveer Hubli, Ashok Kumar Suri, Bhabha Atomic Research Centre, India

5:10 PM

(ICACC-S1-033-2013) Densification of SiC with AlN-Nd₂O₃ sintering additives

Laner Wu*, Yong Jiang, Wenzhou Sun, Yuhong Chen, Zhenkun Huang, Beifang University of Nationalities, China

Wednesday, January 30, 2013

Fiber, Matrices, and Interfaces

8:00 AM-12:00 PM

Room: Coquina Salon D

Session Chair: TBA

8:00 AM

(ICACC-S1-034-2013) Effect of Matrix Microstructure on Composite Properties

Thomas Key*, Kristin Keller, AFRL/RXCC & UES, USA

8:20 AM

(ICACC-S1-035-2013) Processing and properties of silicon alloy infiltrated SiC fiber / SiC matrix composites

Toshio Ogasawara*, Takuya Aoki, JAXA, Japan; Katsumi Yoshida, Yosuke Okubo, Toyohiko Yano, Tokyo, Japan

8:40 AM

(ICACC-S1-036-2013) Processing and mechanical properties of melt infiltrated C/SiC composites

Takuya Aoki*, Toshio Ogasawara, Japan Aerospace Exploration Agency, Japan; Takeki Hara, Masashi Ishikawa, Yasuo Kogo, Tokyo University of Science, Japan; Yutaka Iwahori, Japan Aerospace Exploration Agency, Japan

9:00 AM

(ICACC-S1-037-2013) Tensile Properties of 2D and 3D SiC Tyranno SA 3 fiber-reinforced SiC composites, known as EU Reference Material

Darina T Blagoeva*, Johannes B Hegeman, Monica Jong, Theo Bakker, Peter Pierick, Henk Nolles, NRG, Netherlands

9:20 AM

(ICACC-S1-038-2013) Strength degradation in fatigue for Hi Nicalon filaments at elevated temperature

Jacques Luc Lamon*, Mohamed R'Mili, CNRS, France

9:40 AM

Break

10:00 AM

(ICACC-S1-039-2013) Effect of Stress and Steam on Oxidation Rates of Hi-Nicalon-S SiC Fiber

Randall Hay*, Geoff Fair, Marina Ruggles-Wrenn, Benjamin Steffens, Air Force Reserach Laboratory, USA; Mark Cridge, Wright State University, USA;

Olivia Anhofer, University of Dayton, USA Minor
Outlying Islands

10:20 AM

(ICACC-S1-040-2013) Tensile Behavior and Damage Monitoring of SiC fiber reinforced SiC matrix Single Tow MiniComposites

Sivakumar Ramasamy*, Amjad Almansour, Gregory N Morscher, The University of Akron, USA

10:40 AM

(ICACC-S1-041-2013) Microstructural Evolution during Creep Testing of Nextel 610 and Nextel 720 in Air and Steam

Randall Hay*, Geoff Fair, Marina Ruggles-Wrenn, Clint Armani, Air Force Research Laboratory, USA; Mark Cridge, Wright State University, USA; Olivia Anhofer, University of Dayton, USA

11:00 AM

(ICACC-S1-042-2013) Fabrication and Testing of γ -RE₂Si₂O₇ Matrix Composites

Emmanuel E Boakye*, Kristin Keller, Pavel Mogilevsky, Triplicane Parthasarathy, UES Inc., USA; Michael K Cinibulk, Randall S Hay, AFRL, USA; Mark Ahrens, Mark Cridge, Wright State University, USA

11:20 AM

(ICACC-S1-043-2013) Different Ceramic Fibers Exposed to High Temperature

Henry A Colorado*, Jenn Ming Yang, UCLA, USA; Clem Hiel, Composite Support and Solutions Inc., USA

11:40 AM

(ICACC-S1-044-2013) Study on strength prediction model for unidirectional composites

Hongjian Zhang*, Weidong Wen, Haitao Cui, Jianfeng Xiao, Nanjing University of Aeronautics & Astronautics, China

Mechanical Behaviors of CMCs

1:30 PM-4:50 PM

Room: Coquina Salon D

Session Chair: TBA

1:30 PM

(ICACC-S1-045-2013) Evaluation of Interfacial Fracture Toughness from Single-Fiber Push-Out Tests applied to Ceramic Matrix Composite Samples

Wolfgang M Mueller*, Judith Moosburger-Will, Markus G Sause, Siegfried Horn, University of Augsburg, Germany

1:50 PM

(ICACC-S1-046-2013) Characterization of SiC/SiCN ceramic matrix composites with monazite fiber coating

Enrico Klatt*, Klemens Kelm, Martin Friess, Dietmar Koch, Heinz Voggenreiter, German Aerospace Center (DLR), Germany

2:10 PM

(ICACC-S1-047-2013) Effects of Non-Uniform Strains on Tensile Fracture of Ceramic Composites

Varun Rajan*, Frank W Zok, University of California Santa Barbara, USA

2:30 PM

(ICACC-S1-048-2013) Damage Accumulation Behavior of Silicon Carbide Matrix Composites by Inter-Laminar Tensile Mode

Takashi Nozawa*, Kazumi Ozawa, Toshiya Nakata, Hiroyasu Tanigawa, Japan Atomic Energy Agency, Japan

2:50 PM

(ICACC-S1-049-2013) Thermally-driven delamination in ceramic matrix composites

John H Shaw*, Frank W Zok, UC Santa Barbara, USA

3:10 PM

Break

3:30 PM

(ICACC-S1-050-2013) Characterization of Defects in Textile Composites using 3-D Digital Image Correlation

Michael Nicholas Rossol*, Frank W Zok, UC Santa Barbara, USA

3:50 PM

(ICACC-S1-051-2013) Delamination in multilayered thin film oxide superconductor composite tapes

Venkat Selvamanickam*, Ibrahim Kesgin, Goran Majkic, Eduard Galtsyan, University of Houston, USA; Changhui Lei, SuperPower, USA

4:10 PM

(ICACC-S1-052-2013) Cooling performance tests of a CMC nozzle with annular sector cascade rig

Nita Kozo*, Okita Yoji, Nakamata Chiyuki, IHI Corporation, Japan

4:30 PM

(ICACC-S1-053-2013) Thermomechanical Properties of Shape Memory Alloy (NiTi) and MAX (Ti₃SiC₂) Phase Interpenetrating Composites

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

Manocha, Guddu Prasad, Sardar Patel University, India

8:20 AM

(ICACC-S1-055-2013) Tribological Properties of Alumina/Zirconia Composites With and Without h-BN Phases

Liang Xue*, Timken, USA; Gary L Doll, University of Akron, USA

8:40 AM

(ICACC-S1-056-2013) The Sliding Wear Behaviour of TiC-316L Stainless Steel Composites

Chukwuma C Onuoha*, Zoheir N Farhat, Georges J Kipouros, Kevin Paul Plucknett, Dalhousie University, Canada

9:00 AM

(ICACC-S1-057-2013) Tribological profile of binderless niobium carbide

Marcos Stuart, CBMM Companhia Brasileira de Metalurgia e Mineração, Brazil; Kardy Mohrbacher, Niobelcon BV, Belgium; Mathias Woydt*, BAM Federal Institute for Materials Research and Testing, Germany

9:20 AM

(ICACC-S1-058-2013) Comprehensive ablation characteristics of ceramic fibers impregnated rubber composites

Nadeem Iqbal*, Mohammad Bilal Khan, Sadia Sagar, Asghjari Maqsood, National University of Sciences and Technology (NUST), Pakistan

9:40 AM

Break

10:00 AM

(ICACC-S1-059-2013) Use of NDE and Health Monitoring Techniques to Assess High-Velocity Impact Performance of Various SiC/SiC Composites

Christopher Richard Baker*, Gregory N Morscher, University of Akron, USA; Andrew L Gyekenyesi, Ohio Aerospace Institute, USA; Calvin Faucett, Sung R Choi, Naval Air Systems Command, USA

Thursday, January 31, 2013

Tribological Performance and Impact Testing of Ceramics and Composites

8:00 AM-10:40 AM

Room: Coquina Salon D

Session Chair: TBA

8:00 AM

(ICACC-S1-054-2013) Tribological Performance of Carbon-Ceramics Composite Materials

Ajayi Oyelayo*, Cinta Lorenzo-Martin, Sol Torrel, Dileep Singh, Argonne National Lab, USA; L.

10:20 AM

(ICACC-S1-060-2013) Multilayer Ceramic Composite Armor Design and Impact Tests
Faruk Elaldi*, University of Baskent, Turkey

Environmental Effects on Mechanical Performance of CMCs

1:30 PM-5:50 PM
Room: Coquina Salon D
Session Chair: TBA

1:30 PM

(ICACC-S1-061-2013) Modeling of Oxidation Effects on Mechanical and Thermal Behavior of ZrB₂-20vol%SiC Ceramic at High Temperature
Lokeswarappa R. Dharani*, Jun Wei, K. Chandrashekhara, Greg Hilmas, William G. Fahrenholtz, Missouri University of Science and Technology, USA

1:50 PM

(ICACC-S1-062-2013) Fatigue of Hi Nicalon filaments at elevated temperature: size and stress effects on rupture times
Jacques Luc Lamon*, CNRS, France; Mohamed R'Mili, University of Lyon, France

2:10 PM

(ICACC-S1-063-2013) Creep Behavior of Hi-Nicalon S Fiber Tows at Elevated Temperatures in Air and in Steam
Marina Ruggles-Wrenn*, Benjamin Steffens, Theodore Shillig, Air Force Institute of Technology, USA; Geoff Fair, Randall Hay, Air Force Research Laboratory, USA

2:30 PM

(ICACC-S1-064-2013) Creep Behavior in Interlaminar Shear of a Hi-NiCALON/SiC Ceramic Matrix Composite at 1200° C in Air and in Steam
Matthew T Pope, Marina Ruggles-Wrenn*, Air Force Institute of Technology, USA

2:50 PM

(ICACC-S1-065-2013) Mechanical properties degradation of the YSZ (plasma sprayed coatings) under humidity atmosphere
Gaelle Leclercq*, Sebastien Lambert, Huchet Guillaume, CEA, France; Chevalier Jerome, Olagnon Christian, INSA, France; Tallaron Christophe, CEA, France

3:10 PM

Break

3:30 PM

(ICACC-S1-066-2013) Influence of oxidation on the mechanical properties of oxide fibre-reinforced ceramic composites with precursor-derived mullite-SiOC matrix
Kamen Tushtev*, Eike Volkmann, Leandro Evangelista Lima, Thomas Schumacher, University of Bremen, Germany; Dietmar Koch, German Aerospace Center, Germany; Christian Wilhelmi, EADS, Germany; Kurosch Rezwan, University of Bremen, Germany

3:50 PM

(ICACC-S1-067-2013) CMAS Exposure Effects in Ceramic Matrix Composites at Elevated Temperatures
D. Calvin Faucett*, Charles Lei, Sung R Choi, Naval Air Systems Command, USA

4:10 PM

(ICACC-S1-068-2013) Hydration of ZrW₂O₈
Mohammad Imteyaz Ahmad*, Mufit Akinc, Iowa State University, USA

4:30 PM

(ICACC-S1-069-2013) Subcritical Crack Growth in Low Temperature Co-fired Ceramics: effect of humidity and temperature on the biaxial strength
Raul Bermejo*, Montanuniversitaet Leoben, Austria; Clemens Krautgasser, Materials Center Leoben Forschung GmbH, Austria; Peter Supancic, Robert Danzer, Montanuniversitaet Leoben, Austria

4:50 PM

(ICACC-S1-070-2013) Slow crack growth in silicon carbide

Luc Jean Vandeperre*, Nasrin Al Nasiri, Finn Giuliani, Eduardo Saiz, Imperial College London, United Kingdom

5:10 PM

(ICACC-S1-071-2013) Application of SiC/SiC composite to thruster for upper stage liquid fuel engine.

Rumi Kitazawa*, Ken Goto, Japan Aerospace Exploration Agency, Japan; Yuichi Yoshida, Mitsubishi Heavy Industries, Japan; Toshiharu Fukunaga, Kyoto University, Japan; Shinichiroh Tokudome, Tsuyoshi Yagishita, Japan Aerospace Exploration Agency, Japan

Tuesday, January 29, 2013

S1 Poster Session

5:30 PM-8:00 PM

Room: Ocean Center

(ICACC-S1-P001-2013) Influence of alumina cement on the refractory behavior of leached clay

Ben O. Adewuyi, Davies O Folorunso*, Joseph O Borode, Federal University of Technology, Akure, Nigeria

(ICACC-S1-P002-2013) Rapid fabrication process for C/SiC composites with dispersed SiC slurry infiltration method

Takeki Hara*, Yasuo Kogo, Masashi Ishikawa, Tokyo University of Science, Japan; Takuya Aoki, Toshio Ogasawara, Japan Aerospace Exploration Agency (JAXA), Japan

(ICACC-S1-P003-2013) The Study on the sinterability of SiC powders prepared from solarcell wafer sludge

Youngseok Kim, Dongil Chun*, Inocera inc., Republic of Korea

(ICACC-S1-P004-2013) Dielectric and electric

modulus studies on sol-gel derived fine Grain PZT/CeO₂ nanocomposites

Puja Goel*, Ashok Biradar, National Physical Laboratory, India

(ICACC-S1-P005-2013) A finite element study on the bending behavior of sandwich structured Si-SiC ceramics

Claudio D'Angelo*, Alberto Ortona, SUPSI, Switzerland

(ICACC-S1-P006-2013) Microstructure and Properties of Reaction Bonded Metal Modified Ceramics.

Sam Salamone*, Michael Aghajanian, M Cubed Technologies Inc., USA; Suzanne Horner, James Zheng, Program Executive Office-Soldier, US Army, USA

(ICACC-S1-P007-2013) Pressureless Infiltration of TiB₂ based Composites by Silicon and Silicides

Mehmet Akbas*, Matthew Iassogna, William Vance, Daniel Mastrobattisto, Micheal Aghajanian, Micheal Aghajanian, M Cubed Technologies, USA

(ICACC-S1-P008-2013) Weave and Fiber Volume Effects on Durability of Ceramic Matrix Composites

Greg Ojard*, Rajiv Naik, Erica Prevost, Pratt & Whitney, USA; Unni Santhosh, Structural Analytistics, Inc., USA; David Jarmon, United Technologies Research Center, USA

(ICACC-S1-P009-2013) Fiber, Porosity and Weave Effects on Properties of Ceramic Matrix Composites

Greg Ojard*, Pratt & Whitney, USA; Jacques Cuneo, Southern Research Institute, USA; Imelda Smyth, Erica Prevost, Pratt & Whitney, USA; Yasser Gowayed, Auburn University, USA; Unni Santhosh, Structural Analytistics, Inc., USA; Anthony Calomino, NASA - Langley Research Center, USA

(ICACC-S1-P010-2013) Aqueous Corrosion of Ti(C,N)/Ni₃Al Cermets

Melanie B Holmes, Georges J Kipouros, Zoheir N Farhat, Kevin Paul Plucknett*, Dalhousie University,

Canada

(ICACC-S1-P011-2013) Structural, dielectric and ferroelectric properties of Sr doped BZTN-BCT ceramics

Jyoti Rani*, K. L Yadav, S. Prakash, Indian Institute of Technology Roorkee, India

(ICACC-S1-P012-2013) High-K Dielectric Ceramics

Piyush Kumar Patel*, K. L Yadav, Indian Institute of Technology Roorkee, India

(ICACC-S1-P013-2013) Advanced Ceramics Property Measurements

Jonathan Salem, NASA GRC, USA; John D. Helfinstine*, Corning Inc, USA; George Quinn, NIST, USA; Stephen Gonczy, Gateway Materials Technology, Inc, USA

(ICACC-S1-P014-2013) Acoustic Emission and Electrical Resistivity Monitoring of SiC/SiC Composite Cyclic Behavior

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

(ICACC-S1-P015-2013) Acoustic Emission and Electrical Resistivity During Tensile Testing of Different Volume Fraction SiC/SiC Composites

Amjad Almansour*, Sivakumar Ramasamy, Gregory N Morscher, The University of Akron, USA

(ICACC-S1-P016-2013) Structural, dielectric and magnetoelectric studies of $\text{Ni}_{0.75}\text{Zn}_{0.25}\text{Fe}_2\text{O}_4\text{-BiFeO}_3$ multiferroic composites

Nidhi Adhlakha*, K. L Yadav, Indian Institute of technology Roorkee, India

(ICACC-S1-P017-2013) The effect of thermo-mechanical loading and environmental exposure on creep resistance of EBC/CMC systems

Matthew Paul Appleby*, Gregory N Morscher, University of Akron, USA; Dongming Zhu, NASA Glenn Research Center, USA

(ICACC-S1-P018-2013) Effect of a compatibilizing agent on particles of yttrium-doped BaTiO₃ on the

dielectric behavior of silicone rubber composites

Myriam Paredes Olguín*, Carlos Gómez Yáñez, Fermín P Espino Cortés, National Polytechnic Institute, Mexico

(ICACC-S1-P019-2013) Local Damage and Heterogeneous Structure in Discontinuous Carbon Fiber Dispersed SiC Matrix Composites under Stress Concentration Source

Ryo Inoue*, Hideki Kakisawa, Yutaka Kagawa, University of Tokyo, Japan

(ICACC-S1-P020-2013) Oxidation behavior and mechanical properties degradation of hot-pressed Al₂O₃/ZrB₂/ZrO₂ ceramic composites

Ali Goodarzi*, Hailey Taylor, Harvard University, USA; Mustafa Arslan, Ataturk University, Turkey

(ICACC-S1-P021-2013) Effect of fiber type on mechanical properties of short carbon fiber reinforced B₄C composites

Ali Goodarzi*, Hailey Taylor, Harvard University, USA; Mustafa Arslan, Ataturk University, Turkey

(ICACC-S1-P022-2013) Low temperature Diffusion bonding of Alumina-Alumina ceramics by Hydride inter-layer nano powders mixtures

Navid Hosseinabadi*, Rasoul Sarraf MAmoory, TMU, Islamic Republic of Iran

(ICACC-S1-P023-2013) Electrodeposition and tribological properties of Cu-Si₃N₄ composite coatings

Maryam Eslami*, Farhad Golestanifard, Hassan Saghafian, Iran university of science and technology, Islamic Republic of Iran

(ICACC-S1-P024-2013) Compression failure analysis of graphite foam core based sandwich composite constructions

Hooman Hosseini*, Seyyed Reza Ghaffarian, Amirkabir University of Technology (Tehran Polytechnic), Islamic Republic of Iran; Mohammad Teymouri, Ali reza Moeini, National Iranian Oil Company, Research Institute of Petroleum Industry, Islamic Republic of Iran

(ICACC-S1-P025-2013) Evolution of grain boundary structure during initial stage sintering in yttria stabilized cubic zirconia

Maya Kini K*, Atul H Chokshi, Indian Institute of Science, India

(ICACC-S1-P026-2013) Ultra High Temperature Oxidation of ZrB₂-SiC-ZrC ceramics up to 1700 °C

Yutaro Arai*, Yasuo Kogo, Masashi Ishikawa, Tokyo University of Science, Japan; Shu-qi Guo, National Institute for Material Science (NIMS), Japan; Ken Goto, Japan Aerospace Exploration Agency (JAXA), Japan; Takuya Yasuno, Iwaki Meisei University, Japan

(ICACC-S1-P027-2013) The Effect of Heat Treatment on the Microstructure and Creep Properties of Erbium Oxide containing SiAlON Ceramics

Dilek Turan*, Y. Deniz, S. Kayhan, A. Ulindag, Anadolu University, Turkey