

3rd Global Young
Investigator Forum
Monday, January 27, 2014

GYIF-I

1:30 PM-3:20 PM

Room: Coquina Salon H

Session Chair(s): Trilok Singh, Thomas Fischer

1:30 PM

(ICACC-GYIF-001-2014) Ln³⁺-Doped Gd₂O₃ Nanostructures for NIR-NIR Bioimaging (Invited Speaker)

Eva Hemmer*, INRS-EMT, Canada; Tomoyoshi Yamano, Hidehiro Kishimoto, Tokyo University of Science, Japan; Fiorenzo Vetrone, François Légaré, INRS-EMT, Canada; Kohei Soga, Tokyo University of Science, Japan

2:00 PM

(ICACC-GYIF-002-2014) Three-dimensional printing of dense and porous materials for bio ceramics

Satoko Tasaki*, University of Cologne, Germany

2:20 PM

(ICACC-GYIF-003-2014) Modification of TiO₂ nanotubes for various applications

Sanjay Mathur, Yakup Gönüllü*, University of Cologne, Germany; Bilge Saruhan, German Aerospace Centre (DLR), Germany

2:40 PM

(ICACC-GYIF-004-2014) Direct integration of metal oxide nanowires on sensor platforms

Thomas Fischer*, Sanjay Mathur, University of Cologne, Germany

3:00 PM

Break

GYIF-II

3:20 PM-6:00 PM

Room: Coquina Salon H

Session Chair(s): Yakup Gönüllü, Satoko Tasaki

3:20 PM

(ICACC-GYIF-005-2014) ALD of transparent and conducting doped ZnO thin films for TCO and Memristive applications

Trilok Singh*, Shuangzhou Wang, Alexander Sasinska, Tessa Leuning, Sanjay Mathur, Institute of Inorganic and Materials Chemistry, Germany

3:40 PM

(ICACC-GYIF-006-2014) Luminous complex point-defect structure in cerium-doped cubic boron nitride

Ryo Ishikawa*, ORNL, USA; Naoya Shibata, University of Tokyo, Japan; Fumiyasu Oba, Kyoto University, Japan; Takashi Taniguchi, NIMS, Japan; Scott D Findlay, Monash University, Australia; Isao Tanaka, Kyoto University, Japan; Yuichi Ikuhara, University of Tokyo, Japan

4:00 PM

(ICACC-GYIF-007-2014) Properties of Yttria-Stabilized-Zirconia as Thermal Barrier Coating

Clayton Gergel*, Ohio State University, USA; Louis Ghosn, NASA Glenn Research Center, USA

4:20 PM

(ICACC-GYIF-008-2014) Study on thermal conductivity of epoxy resin/silicon nitride composites

Akihiro Shimamura*, Hideki Hyuga, Yuji Hotta, Kiyoshi Hirao, National Institute of Advanced Industrial Science and Technology (AIST), Japan

4:40 PM

(ICACC-GYIF-009-2014) Fabrication and Properties of RE₄Si₂O₇N₂ (RE=Y, Lu) Ceramics A Systematic Theoretical-Experimental Study

Luchao Sun*, Jingyang Wang, Institute of Metal Research, China

5:00 PM

(ICACC-GYIF-010-2014) Novel polymer/metal oxide nanocomposites for high-efficiency energy harvesting and transmission

Riccardo Raccis*, Laura Wortmann, Shaista Ilyas, Ali Kaouk, Sanjay Mathur, University of Cologne, Germany

Tuesday, January 28, 2014

GYIF III

9:00 AM-10:00 AM

Room: Coquina Salon H

Session Chair(s): Annika Leifert, Craig Smith

9:00 AM

(ICACC-GYIF-011-2014) Superplasticity in yttria-stabilized zirconia ceramics

Mahmood Shirooyeh*, University of Southern California, USA

9:20 AM

(ICACC-GYIF-012-2014) Fabrication of Anode-Supported Micro-Tubular Solid Oxide Fuel Cells by Dip Coating

Hugo Joaquín Avila-Paredes*, Ricardo De la Torre García, Universidad Autónoma Metropolitana Unidad Iztapalapa, Mexico

9:40 AM

Break

GYIF IV

10:00 AM-12:00 PM

Room: Coquina Salon H

Session Chair(s): Thomas Fischer, Hugo Avila-Paredes

10:00 AM

(ICACC-GYIF-013-2014) Processing and microstructure of Si₃N₄ based nanocomposites for highly wear-resistant application

Chinghuan Alex Lee*, National Cheng Kung University, Taiwan; Horng-Hwa Lu, National Chin-Yi University of Technology, Taiwan; Takashi Goto,

Tohoku University, Japan; Hua-Tay Lin, Oak Ridge National Laboratory, USA; Rong Tu, Wuhan University and Technology, China; Pramoda K Nayak, National Tsinghua University, Taiwan; Ching-Yu Chen, National Cheng Kung University, Taiwan; Jow-Lay Huang, National University of Kaohsiung, Taiwan

10:20 AM

(ICACC-GYIF-014-2014) The Importance of Tribofilms on the Tribological Behavior of Layered Nanolaminates (MAX Phases)

Surojit Gupta*, University of North Dakota, USA

10:40 AM

(ICACC-GYIF-015-2014) Mechanical Reinforcement of Copper Films with Ceramic Nanoparticles

Annika Leifert*, Benjamin Schumm, Nasser Mohamed-Noriega, Andreas Meier, TU Dresden, Germany; Christian Nowka, Leibniz Institute for Solid State and Materials Research Dresden, Germany; Giovanni Mondin, Susanne Doerfler, TU Dresden, Germany; Silke Hampel, Leibniz Institute for Solid State and Materials Research Dresden, Germany; Enrique M Lopez Cuellar, Universidad Autonoma de Nuevo Leon, Mexico; Stefan Kaskel, TU Dresden, Germany

11:00 AM

(ICACC-GYIF-016-2014) Matrix cracking in 3D fiber-reinforced SiC/SiC

Craig Smith*, Ramakrishna Bhatt, Ohio Aerospace Institute, USA

11:20 AM

(ICACC-GYIF-017-2014) Characterization of Matrix Materials for Additive Manufacturing of Silicon Carbide-Based Composites

Shirley X Zhu*, The Ohio State University, USA; Michael C Halbig, NASA Glenn Research Center, USA; Mrityunjay Singh, Ohio Aerospace Institute, USA

11:40 AM

(ICACC-GYIF-018-2014) Damage Characterization of EBC Coated SiC/SiC Ceramic Matrix Composites

Under Imposed Thermal Gradient Testing

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