

Symposium 10: Thermal Management Materials and Technologies

Wednesday, January 25, 2012

Symposium 10: Poster Session

5:00 PM-7:30 PM

Room: Exhibition Hall, Ocean Center

(ICACC-S10-P114-2012) Examination of the Interconnectivity of SiC in a Si:SiC Composite System and the Effects on Thermal Properties

Andrew Marshall*, M Cubed Technologies, Inc., USA

(ICACC-S10-P115-2012) Extremely high thermal properties of Boron Nitride-epoxy composite with high orientation

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

Thursday, January 26, 2012

Characterization of Thermal Management Materials

1:30 PM-3:10 PM

Room: Coquina Salon B

Session Chair(s): Andrew Gyekenyesi

1:30 PM

(ICACC-S10-001-2012) Modeling Thermal Mechanical Properties of TPS (Thermal Protection Systems) and Porous Ceramics with a novel 3D X-ray Microscope

S. H. Lau*, Xradia, Inc., USA; Tomas H Squire,

John W Lawson, NASA Ames Research Center, USA

1:50 PM

(ICACC-S10-002-2012) Measurement of Thermal Conductivity of Graphitic Foams

Khairul Alam*, Kevin Drummond, Ohio University, USA

2:10 PM

(ICACC-S10-003-2012) Potential of Black Alumina Coatings: Effect of Thickness on Thermal behaviors

Hideki Kakisawa*, Masahiro Yamazoe, Yutaka Kagawa, The University of Tokyo, Japan

2:30 PM

(ICACC-S10-004-2012) Thermal Conductivity of Wood-Derived Graphitic Carbon and Carbon/Copper Composites

Matthew Johnson*, Katherine Faber, Northwestern University, USA; Hsin Wang, Oak Ridge National Lab, USA

2:50 PM

Break

Processing and Integration Strategies for Thermal Management Materials

3:10 PM-4:50 PM

Room: Coquina Salon B

Session Chair(s): Andrew Gyekenyesi

3:10 PM

(ICACC-S10-005-2012) Bonding Ceramic Parts for High Temperature Applications using Pre-ceramic Polymer based Adhesives

Haibiao Chen*, Triplicane A Parthasarathy, Michael K Cinibulk, Ming-Yung Chen, AFRL, USA

3:30 PM

(ICACC-S10-006-2012) Bonding High Conductivity Graphite Foams to Metals for Thermal Management Applications

Rajiv Asthana*, University of Wisconsin-Stout, USA; Mrityunjay Singh, Craig E Smith, Andrew L Gyekenyesi, Ohio Aerospace Institute, USA

3:50 PM

(ICACC-S10-007-2012) Fabrication and thermal properties of diamond-copper composite produced by the pulse plasma sintering technique (PPS)

Marcin Rosinski*, Lukasz Ciupinski, Andrzej Michalski, Krzysztof J Kurzydowski, Warsaw University of Technology, Poland

4:10 PM

(ICACC-S10-008-2012) Improving the heat transfer efficiency of synthetic oil with silica nanoparticles

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

4:30 PM

(ICACC-S10-009-2012) Using Science to Improve Upon Nature: Why Engineered Thermal Transfer and Thermal Management Media Out Perform Natural Materials

Thomas Szymanski*, Saint-Gobain NorPro, USA