

SYMPOSIA ORGANIZERS

SPECIAL TOPICS

Honorary Symposium: Materials and Mechanics—The Profound Influence of Tony Evans on Engineering Use of Structural Materials
Organizer: Arthur E. Heuer, Case Western Reserve University

Industry Track 2007

Organizer: Richard Schorr, MetaMateria Partners LLC

Journal of Undergraduate Materials Research

Organizer: Ben Poquette, Virginia Polytechnic Institute and State University

Co-organizers: Marie Paretti, Maura Borrego, Diane Folz, Navin Manjooran, Davis Eichelberger, Jean Kampe and Gary Pickrell; Virginia Polytechnic Institute and State University

AUTOMOTIVE

Advanced High-Strength and Other Specialty Sheet Steel Products for the Automotive Industry

Organizer: James Fekete, General Motors Corporation
Co-organizers: Isaac Garcia, University of Pittsburgh, John Speer, Colorado School of Mines, Matt Walp, DCX Engineering Department

Automotive and Ground Vehicles: Applications of Materials to Vehicle Designs

Organizers: Nick Gianaris, General Dynamics Land Systems, John McDonald, General Motors Corporation

Automotive and Ground Vehicles: Materials and Processes for Vehicles

Organizers: Paul Krajewski, General Motors Corporation, Arianna Morales, General Motors R&D, Dale Wetzel, DaimlerChrysler

Automotive Light Metal Castings: Technology and Applications

Organizer: Mei Li, Ford Motor Company
Co-organizers: Qigui Wang, GM – Powertrain, Thomas Prucha, Metal Morphosis, LLC, Douglas Matson, Tufts University

High-Density Hydrogen Storage for Automotive Applications: Materials and Methods

Organizers: Donald Siegel, Ford Motor Company and Lennie Klebanoff, Sandia National Laboratories
Co-organizers: Chris Wolverton, Ford Motor Company; Winnie Wong-Ng, National Institute of Standards & Technology; Scott Jorgensen, General Motors Corporation; Ji-Cheng Zhao, General Electric Company

Zinc Coated Steel Sheets

Organizer: Frank E. Goodwin, International Lead Zinc Research Org.
Co-organizer: Todd M. Osman, The Minerals, Metals & Materials Society

ELECTRONIC & MAGNETIC PROPERTIES

Basic and Applied Needs for Superconductivity

Organizer: Mariappan P. Paranthaman, Oak Ridge National Laboratory;
Co-organizers: Winnie Wong-Ng, National Institute of Standards & Technology, Thomas Kodenkandath, American Superconductor Corporation, Amit Goyal, Oak Ridge National Laboratory, Kaname Matsumoto, Kyoto University

Ferroelectrics and Multiferroics

Organizers: Shashank Priya, The University of Texas Arlington, Paul Clem, Sandia National Laboratories, Xiaoli Tan, Iowa State University, Dwight Viehland, Virginia Tech, Chonglin Chen, University of Texas at San Antonio

General Topics in Electroceramics

Organizer: Robert W. Schwartz, University of Missouri-Rolla

International Symposium on Dielectric Materials: Design, Preparation and Applications

Organizer: R. Guo, The Pennsylvania State University
Co-organizers: K.M. Nair, E.I. duPont de Nemours & Company Inc., D. Suvorov, Jozef Stefan Institute, S.M. Mukhopadhyay, Wright State University, R.W. Schwartz, University of Missouri-Rolla, A.S. Bhalla, The Pennsylvania State University, S-I. Hirano, Nagoya University

Perovskite Material Engineering

Organizer: Steven C. Tidrow, U.S. Army Research Laboratory
Co-organizers: Daniel M. Potrepka, U.S. Army Research Laboratory, Xiaoxing Xi, The Pennsylvania State University, Christine Klemenz, University of Central Florida

Spintronic Materials and Devices

Organizer: Siu-Wai Chan, Columbia University
Co-organizers: Sean Li, University of New South Wales, Arunava Gupta, University of Alabama, Shan X. Wang, Stanford University

Structure-Property Relationships of Multifunctional Oxide Thin Films and Interfaces

Organizers: Xiaoqing Pan, University of Michigan, Siu-Wai Chan, Columbia University, Chonglin Chen, University of Texas at San Antonio, Quanxi Jia, Los Alamos National Laboratory, R. Ramesh, University of California at Berkeley, Isao Tanaka, University of Kyoto, Japan

ENERGY

Degradation of Materials for Application in Nuclear Power and Waste Management Systems

Organizer: Xihua He, Southwest Research Institute
Co-organizers: James Noël, University of Western Ontario, Vijay Jain, Washington Group International

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Encapsulation and Immobilization of Hazardous and Nuclear Wastes Using Ceramics, Glass and Other Materials

Organizer: Allen Applett, Oklahoma State University

Energy Materials

Organizer: Fatih Dogan, University of Missouri-Rolla

Co-organizers: Masanobu Awano, National Institute of Advanced Industrial Science and Technology; Dileep Singh, Argonne National Laboratory; Bruce Tuttle, Sandia National Laboratories

Fuel Cells: Materials, Processing, Manufacturing and Power Management Technologies

Organizer: Prabhakar Singh, Pacific Northwest National Laboratory

Co-organizers: Abdul-Majeed Azad, University of Toledo; Donald C. Collins, U.S. Department of Energy; Prashant N. Kumta, Carnegie Mellon University; Colleen Legzdins, Ballard Power Systems; Arumugam Manthiram, The University of Texas at Austin; Ayyakkannu Manivannan, U.S. Department of Energy; S.K. Sundaram, Pacific Northwest National Laboratory; Zhenguo Gary Yang, Pacific Northwest National Laboratory

FUNDAMENTALS AND CHARACTERIZATION

Characterization and Modeling of the Mechanical Performance of Advanced Alloys—Bridging the Data Gap

Organizer: Mark R. Stoudt, National Institute of Standards & Technology

Co-organizers: Edmund Chu, Alcoa Technical Center; Manish Mehta, National Center for Manufacturing Sciences; Stephen W. Banovic, National Institute of Standards & Technology

Discovery and Optimization of Materials through Computational Design

Organizers: Edwin Garcia, Purdue University; Katsuyo Thornton, University of Michigan

Frontiers in Materials Science: Materials for Sports and Medicine

Organizer: James Earthman, University of California

Co-organizer: Srinath Viswanathan, University of Alabama

Fundamentals of Brittle Fracture

Organizers: Jack Mecholsky, University of Florida; Stephen W. Freiman, National Institute of Standards & Technology

High Temperature Material Systems – Fatigue Mechanisms and Prognosis

Organizer: Joseph D. Rigney, GE Aviation

Co-organizers: Mike Winstone, Defense Science & Technology Laboratory; Tim Gabb, NASA Glenn Research Center; Yong-Ho Sohn, University of Central Florida

International Symposium on Defects, Transport and Related Phenomena

Organizer: Rüdiger Dieckmann, Cornell University

Co-organizers: Manfred Martin, RWTH Aachen University; Thomas O. Mason, Northwestern University

Developments in Web-Based Materials Property Databases, Knowledge Management of Materials Information, and Materials Informatics for Accelerated Materials Discovery

Organizers: Terry Wong, Pratt & Whitney Rocketdyne; Ursula R. Kattner, National Institute of Standards & Technology; Loni Peurrung, Pacific Northwest National Laboratory

Co-organizers: Corbett C. Battaile, Sandia National Laboratories; J. Gilbert Kaufman, Kaufman Associates Limited; Toni Marechaux, Strategic Analysis Inc.

Numerical, Mathematical and Physical Modeling Tools for Materials Processes

Organizer: Patricio F. Mendez, Colorado School of Mines

Co-organizer: Ben Q. Li, University of Michigan

Phase Stability, Diffusion and Their Applications

Organizer: John Morral, The Ohio State University

Co-organizers: Zi-Kui Liu, The Pennsylvania State University; Raymundo Arroyave, Texas A&M University; Steven A. Attanasio, Knolls Atomic Power Laboratory; Nils Sandberg, Royal Institute of Technology, Stockholm; Yongho Sohn, University of Central Florida

What We Can Learn from Failure Analysis

Organizer: Ron Parrington, IMR Test Labs Inc.

Co-organizers: Brett Miller, IMR Test Labs Inc.; Daniel P. Dennies, Boeing Company

MATERIALS AND SYSTEMS

Coatings as an Enabler of System Performance

Organizer: Rodney Trice, Purdue University; rtrice@purdue.edu

Co-organizers: Dongming Zhu, NASA Glenn Research Center; H.T. Lin, Oak Ridge National Laboratory; Daniel Mumm, University of California at Irvine; Pravansu S. Mohanty, University of Michigan; Yutaka Kagawa, University of Tokyo

SYMPOSIA ORGANIZERS

Commonality of Phenomena in Composite Materials

Organizer: Nikhilesh Chawla, Arizona State University
Co-organizers: E. Lara-Curzio, Oak Ridge National Laboratory; K.K. Chawla; University of Alabama-Birmingham, Carl J. Boehlert, Michigan State University

Copper and Copper Alloys for Emerging Technologies

Organizer: William D. Spiegelberg, Brush Wellman Inc.

Glass and Optical Materials

Organizer: John Ballato, Clemson University

International Symposium on Ceramic Matrix Composites

Organizer: Narottam P. Bansal, NASA Glenn Research Center
Co-organizers: Jitendra P. Singh, Air Force Office of Scientific Research; Sung R. Choi, Naval Air Systems Command; Aldo R. Boccaccini, Imperial College of Science, Technology & Medicine

Iron-Based Amorphous Metals: An Important Family of High-Performance Corrosion-Resistant Materials

Organizer: Joseph C. Farmer, Lawrence Livermore National Laboratory
Co-organizers: Patrice E.A. Turchi, Lawrence Livermore National Laboratory; John H. Perepezko, University of Wisconsin

Next Generation Biomaterials: Advanced Processing, Characterization and Modeling of Materials for Medical Devices

Organizer: John A. Nychka, University of Kentucky
Co-organizers: Elizabeth Marie Perepezko, Biomet Inc.; Carl J. Boehlert, Michigan State University; Roger J. Narayan, University of North Carolina

Thermal Shock Resistant Materials

Organizer: Dinesh Agrawal, The Pennsylvania State University

NANOTECHNOLOGY

Innovative 3D Nanoparticulate Material Processing

Organizer: Kathy Lu, Virginia Polytechnic Institute and State University
Co-organizers: Alex Aning, Virginia Polytechnic Institute and State University; Ming-Jen Pan, Naval Research Laboratory

Materials Characterization at the Nanoscale: Instrumentation and Applications

Organizer: Lawrence P. Cook, National Institute of Standards & Technology
Co-organizer: Bryan D. Huey, University of Connecticut

Mechanics of Nanomaterials and Micro/Nanodevices – Experimental and Modeling

Organizer: Xiaodong Li, University of South Carolina
Co-organizers: Brad Boyce, Sandia National Laboratories; Scott X. Mao, University of Pittsburgh; Ken Gall, Georgia Institute of Technology; Dehua Yang, Hysitron Inc.; Jun Lou, Rice University

Nanomaterials for Electronic Applications

Organizer: Sharmila M. Mukhopadhyay, Wright State University
Co-organizers: Raj N. Singh, University of Cincinnati; K.M. Nair, E.I. duPont de Nemours & Co. Inc.; Bor Z. Jang, Wright State University

Nano-Processing - Property Enhancement by Quantum Confinement and Other Effects in Reduced Dimensions

Organizer: Bipradas Dutta, Catholic University of America

Nanostructured Ceramic Materials: Science and Technology

Organizer: James S. Vartuli, GE Global Research
Co-organizers: Sanjay Mathur, Leibniz-Institut für Neue Materialien; Michael Z. Hu, Oak Ridge National Laboratory; Richard M. Laine, University of Michigan; Olga B. Koper, NanoScale Materials Inc.

PROCESSING AND PRODUCT MANUFACTURING

Advances in Cement-Based Materials: Manufacturing, Hydration, Admixture Interaction, Properties/Characterization, Modeling and Degradation/Durability

Organizer: Joseph J. Biernacki, Tennessee Technological University

Environmental Degradation of Nonmetallic Materials and Sensors

Organizer: Raul B. Rebak, Lawrence Livermore National Laboratory
Co-organizers: James Earthman, University of California; Robert J. Hanrahan, National Nuclear Security Administration

Environmental Issues in the Material Science and Technology Industries

Organizer: Allen Apblett, Oklahoma State University

Innovative Processing and Synthesis of Ceramics, Glasses and Composites

Organizer: Jitendra P. Singh, Air Force Office of Scientific Research
Co-organizers: Narottam P. Bansal, NASA Glenn Research Center; Antonio R. de Arellano López, Universidad de Sevilla; Takashi Goto, Tohoku University; Jinho Joo, Sungkyunkwan University



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Joining of Advanced and Specialty Materials IX

Organizer: Viola L. Acoff, University of Alabama

Co-organizers: Patrick W. Hochanadel, Los Alamos National Laboratory; Judy Schneider, Mississippi State University; James F. Quinn, General Motors Corporation; Thomas J. Lienert, Los Alamos National Laboratory; Leijun Li, Utah State University; Y. (Norman) Zhou, University of Waterloo

Lead-Free Solders: Emerging Issues in Manufacturing, Performance and Reliability

Organizer: Carol A. Handwerker, Purdue University

Co-organizers: Iver E. Anderson, Iowa State University; Jeng-Gong Duh, National Tsing Hua University

Surface Engineering Using Hybrid Plasma Assisted PVD and CVD Technologies

Organizer: Vladimir Gorokhovskiy, Arcomac Surface Engineering LLC

Co-organizers: Richard J. Smith, Montana State University; Erich Bergmann, Geneva School of Engineering UAS

STEEL

4th International Symposium on Railroad Tank Cars

Organizer: Murali Manohar, Mittal ArcelorSteel

Future of Alloying in Steel

Organizer: Chris Schade, Hoeganaes Corporation

Recent Developments in Steel Processing

Organizer: Matthew J. Merwin, US Steel

Steel Product Metallurgy and Applications

Organizer: Brian D. Nelson, Dofasco Inc.