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# MS&T'11<sup>®</sup>

**Materials Science & Technology  
2011 Conference & Exhibition**

OCTOBER 16–20, 2011 | COLUMBUS, OHIO USA

## Call For Papers!

Abstract Deadline: March 15, 2011

*The leading forum  
addressing structure,  
properties, process-  
ing and performance  
across the materials  
community.*

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*MS&T annual conferences are hosted by four leading materials societies: ACerS, AIST, ASM and TMS. This partnership brings together scientists, engineers, students and suppliers to discuss current research & applications, and to shape the future of materials science and technology. Since corrosion has become a very relevant topic to materials, NACE International will co-sponsor MS&T'11.*

### Abstract Submission Details

Submit a 150-word abstract by March 15, 2011. Visit [www.matscitech.org](http://www.matscitech.org) and follow the submission instructions. Conference organizers will receive electronic notification of all submitted abstracts.

### Need Assistance?

Should you have questions concerning the on-line abstract system, contact the programming administrator at (724) 776-9000, ext. 227 or at [programming@programmester.org](mailto:programming@programmester.org).

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### Biomaterials

- Emerging Frontiers in Surface Engineering of Biomaterials
- Next Generation Biomaterials
- Surface Properties of Biomaterials

### Ceramic and Glass Materials

- ACerS Sosman Award Symposium: Interface Structure and Microstructure Evolution in Ceramics
- Ceramic Matrix Composites
- Glass and Optical Materials
- Innovative Processing and Synthesis of Ceramics, Glasses and Composites
- Multifunctional Oxides
- Richard M. Fulrath Award Symposium
- Solution-based Processing for Ceramic Materials

### Electronic and Magnetic Materials

- Advances in Dielectric Materials and Electronic Devices
- Magnetoelectric Multiferroic Thin Films and Multilayers
- Pb-free Solders and Next Generation Interconnects
- Semiconductor Heterostructures: Theory, Growth, Characterization and Device Applications

### Energy Issues

- Energy Conversion/Fuel Cells
- Energy Storage: Materials, Systems, and Applications
- Materials Degradation in Alternative Energy Systems
- Materials for Nuclear Waste Disposal and Environmental Cleanup
- Materials Science Challenges for Nuclear Applications

### Fundamentals and Characterization

- Advanced Developments in Electron Microscopy
- Amorphous Materials: Common Issues within Science and Technology
- Deformation and Transitions at Grain Boundaries
- Hardness across the Multi-scales of Structure and Loading Rate
- Integrated Computational Materials Engineering: Modeling and Simulation Applied to Metals Processing
- Interfaces, Grain Boundaries and Surfaces from Atomistic and Macroscopic Approaches — Fundamental and Engineering Issues
- International Symposium on Defects, Transport and Related Phenomena
- Multi-scale Modeling of Microstructure Deformation in Material Processing
- Nano- and Atomic-scale Fracture
- New Roles for Electric and Magnetic Fields in Processing, Microstructure Evolution, and Performance of Materials in Energy and Biosciences: A memorial symposium in honor of Prof. Rustum Roy
- Phase Stability, Diffusion, Kinetics and their Applications (PSDK-VI)
- Recent Advances in Structural Characterization of Materials

### Iron and Steel

- Advances in Zinc-based Coating Technologies for Steel Sheet
- Processing, Microstructure and Properties of Cast Irons, and Cast and Forged Specialty Steels
- Recent Developments in Steel Processing
- Steel Product Metallurgy and Applications

### Materials – Environment Interactions

- Advanced Protective Coatings for Refractory Metals and Alloys
- Corrosion Protection through Metallic and Non-metallic Coatings
- Environmentally Assisted Cracking of Materials
- Green Technologies for Materials Manufacturing and Processing III
- Localized Corrosion: Measurement, Mechanisms and Mitigation

### Materials Performance

- Beyond Property Measurement: Mechanical Behavior of Multifunctional Materials Systems
- Fatigue and Microstructure: A Symposium on Recent Advances
- Materials Failure Analysis
- Measurements and Modeling of Advanced Automotive and Structural Materials at Intermediate and High Strain Rates
- Periodic Cellular Materials: Current Status and Recent Progress
- Prof. K.K. Chawla Honorary Symposium on Fibers, Foams, and Composites: Science and Engineering
- Shape Memory Alloys
- Structural Materials for Aerospace and Defense: Challenges and Prospects
- Titanium Processing and Applications

### Nanotechnology

- Advances in Nanostructured Materials and Applications (The 2011 Acta Materialia Gold Medal Symposium)
- Controlled Synthesis Processing and Applications of Structural and Functional Nanomaterials
- Nanotechnology for Energy, Healthcare and Industry
- Synthesis, Properties and Applications of Noble Metal Nanostructures

### Processing and Product Manufacturing

- Additive Manufacturing of Metals
- Advances in Manufacturing Technologies
- Characterization and Modeling of the Performance of Advanced Alloys for the Transportation Industry—Bridging the Data Gap II
- Joining and Sustaining of Superalloys
- Joining of Advanced and Specialty Materials (JASM XIII)
- Laser Applications in Materials Technology II
- Microwave Processing of Materials
- Novel Sintering Processes and News in Traditional Sintering and Grain Growth
- Particulate Composites
- Surface Protection for Enhanced Materials Performance: Science and Technology

### Special Topics

- Continuous Improvement of Academic Programs (and Satisfying ABET along the Way)
- Journal of Undergraduate Materials Research
- National Materials Advisory Board Dissemination Series



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- ACeS Arthur L. Friedberg Memorial Lecture
- ACeS Edward Orton Jr. Memorial Lecture
- ACeS Robert B. Sosman Award and Lecture
- ACeS Rustum Roy Lecture
- AIST Adolf Martens Memorial Steel Lecture
- Alpha Sigma Mu Lecture
- ASM Edward DeMille Campbell Memorial Lecture
- ASM/TMS Distinguished Lecture
- TMS Young Leaders Lecture

**DON'T MISS THESE SPECIAL LECTURES**

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