

# MS&T'12<sup>®</sup>

**Materials Science & Technology  
2012 Conference & Exhibition**

OCTOBER 7–11, 2012  
DAVID L. LAWRENCE CONVENTION CENTER  
PITTSBURGH, PENNSYLVANIA, USA

*The leading forum addressing  
structure, properties,  
processing and  
performance across  
the materials  
community.*

## Call for Papers

**Abstract Deadline:  
March 15, 2012**

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# MS&T'12<sup>®</sup>

## Materials Science & Technology 2012 Conference & Exhibition

*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 remains a very relevant topic to materials, NACE International will co-sponsor MS&T'12.*

### Abstract Submission Details

Submit a 150-word abstract by March 15, 2012. 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 online 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

- Bioinspired Materials Engineering
- Nanomaterials and Nanodevices
- Next Generation Biomaterials
- Recent Advances in Laser Fabrication and Characterization Methods: Laser Processing of Biomedical Materials
- Surface Properties of Biomaterials III

### Ceramics and Glass Materials

- Ceramic Matrix Composites
- Glass and Optical Materials
- Innovative Processing and Synthesis of Ceramics, Glasses and Composites
- International Symposium on Defects, Transport and Related Phenomena
- Multifunctional Oxides
- Novel Sintering Processes and News in Conventional Sintering and Grain Growth
- Richard M. Fulrath Award Session
- Sosman Award Symposium: Local Phenomena at Surfaces and Interfaces

### Electronic and Magnetic Materials

- Advances in Dielectric Materials and Electronic Devices
- Controlled Synthesis, Processing, and Applications of Structural and Functional Nanomaterials
- 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 – Photovoltaic, Concentrating Solar Power and Thermoelectric
- Energy Storage: Materials, Systems and Applications
- Materials Development for Nuclear Applications and Extreme Environments
- Materials Issues in Nuclear Waste Management in the 21st Century
- Nanotechnology for Energy, Environment, Healthcare and Industry



## Fundamentals and Characterization

- Failure Analysis and Prevention
- Frontiers of Materials Science: Fundamentals of Porous Materials from Development to Applications
- Fundamental Understanding of High-Entropy Alloy Formation and their Properties
- In-situ Characterization of Phase Transformations in Materials
- Integrated Computational Materials Engineering: The Customer's Point of View
- Microstructure Based Property Prediction and Small Scale Experimental Validation
- Multi Scale Modeling of Microstructure Deformation in Material Processing
- Phase Stability, Diffusion, Kinetics and their Applications (PSDK-VII)
- Quantification of Texture and Microstructure Gradients in Polycrystalline Materials

## Iron and Steel

- Advances in Zinc-Based Coating Technologies for Steel Sheet
- Recent Developments in High Strength Steels for Energy Applications
- Recent Developments in Steel Processing
- Steel Product Metallurgy and Applications

## Materials - Environment Interactions

- Advanced Understanding of the Atmospheric Corrosion of Materials
- Coatings for Corrosion and Wear Resistance Applications
- Corrosion Protection of Aging Infrastructure
- Development of Advanced Alloys and Coating Systems for Demanding Oil and Gas Applications
- Surface Protection for Enhanced Materials Performance: Science, Technology and Applications

## Materials Performance

- Beyond Nickel-Base Superalloys II
- Functional and Innovative Composites
- Materials, Structures and System Design for Extreme Environments in Aerospace and Energy Applications
- Multifunctional Materials for Aerospace and Defense: Challenges and Prospects
- Novel Methods for Deformation Testing of Metals and Materials
- Recent Advances in Phase Transformations and Structural Evolution in Titanium and its Alloys
- Symposium on the Fatigue of Materials II: Advances and Emergences in Understanding
- Titanium Alloys for Demanding Applications

## Processing and Product Manufacturing

- Additive Manufacturing of Metals
- Advanced Materials, Processes and Applications for Additive Manufacturing
- Advances in Metal Casting Technologies
- Design of Forming Processes and Tooling in Transforming Materials
- Green Technologies for Materials Manufacturing and Processing IV
- Joining of Advanced and Specialty Materials (JASM XIV)
- Powder Metallurgy Processing and Products

## Special Topics

- Continuous Improvement of Academic Programs (and Satisfying ABET along the Way)—Elizabeth Judson Memorial Symposium
- Perspectives for Emerging Materials Professionals
- Raymond W. Buckman Jr. Memorial Symposium for Refractory Metals and Alloys
- Solidification, Crystal Growth and Microstructural Correlation with Properties of Materials to celebrate 75th Birthday of Prof. Martin E. Glicksman
- Student Career Development
- The National Materials and Manufacturing Board Dissemination Series

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The American Ceramic Society  
600 N. Cleveland Ave., Suite 210  
Westerville, Ohio 43082 USA

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

**DON'T MISS THESE SPECIAL LECTURES**

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