MS&T'12®

Materials Science & Technology
2012 Conference & Exhibition
October 07-11, 2012 | Pittsburgh, Pennsylvania

Technical Program

Register now to participate in MS&T'12, which covers these theme areas:

- Biomaterials
- Ceramic and Glass Materials
- Electronic and Magnetic Materials
- Energy Issues
- Fundamentals and Characterization
- Iron and Steel
- Materials-Environment Interactions
- Materials Performance
- Processing and Product Manufacturing

David L. Lawrence Convention Center

Organizing Societies

Register now to take part in MS&T'12 then scan the QR code to download the meeting's app. The MS&T partnership of ACerS, AIST, ASM and TMS brings together scientists, engineers, students, suppliers and more to discuss current research and technical applications, and to shape the future of materials science and technology. NACE International co-sponsors MS&T. Participate in the leading forum addressing structure, properties, processing and performance across the materials

Register Now & Plan Your Hotel Stay

Register online or download the form then visit Hotel/Travel for details on participating hotels.

Schedule Your Time at MS&T

The Personal Conference Scheduler contains detailed programming, abstracts and activities. Build your itinerary item-by-item or add an entire symposium.

Reserve Exhibit or Career Pavilion Space Today

Reserve your booth to sell to the most comprehensive group of decision makers in materials science and engineering technologies, or gain premier access to seasoned veterans, young professionals, graduate or post-doc candidates, primed for the job market in the Professional Recruitment and Career Pavilion.

Plenary Session

Challenges for Materials–Intensive Industries: Energy, Transportation, and Consumer Products presented by Terry P. Smith, PhD, 3M Corporate Research Materials Lab; Luana Iorio, PhD, GE Global Research; and Matthew J. Zaluzec, PhD, Ford Motor Company's Research & Innovation Center.

ProgramMaster

View abstract status or update your profile. Connect with colleagues from other partner societies to develop and to synergize symposium proposals.

Sign up Your Companion for a Guest Tour

MS&T is hosting two guest tours during MS&T'12. On Monday, October 8, visit the Phipps Conservatory for Flowers, Glass Plants from 10 to 3, or on Tuesday, October 9, enjoy Pittsburgh Bits & Bites Food Tour from 10 to 2.

2012 Program Coordinating Committee

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Meeting: Materials Science & Technology 2012

Symposium: Surface Properties of Biomaterials III

Session: Surface Modification II

Session Chair(s): Paul K Chu; Susmita Bose;

Date: 10/09/2012

Time: 2:00 PM - 2:40 PM

Location: David L. Lawrence Convention Ctr - Room 320

Speaker: Paul K Chu

Presentation Type: Invited

Meeting	**Materials Science & Technology 2012**
Symposium	**Surface Properties of Biomaterials III**
Presentation Title	Surface Modified Materials with Enhanced Biological and Related Properties
Author(s)	Paul K Chu
On-Site Speaker (Planned)	Paul K Chu
Abstract Scope	Development of new materials, especially biomaterials, is time-consuming and demanding due to stringent requirements by the government, industry, and consumers, and it is typically faster to improve existing materials and devices in order to satisfy increasing demands. In this respect, surface engineering and modification is very useful because selected surface properties such as morphology, hydrophilicity, cytocompatibility, antimicrobial characteristics, and so on can be enhanced while favorable bulk attributes such as strength and inertness can be preserved. In particular, plasma immersion ion implantation and deposition which combines energetic ion implantation and low-energy plasma deposition has many applications. In this invited talk, recent work conducted in the Plasma Laboratory of City University of Hong Kong is described. Examples include plasma-treated orthopedic devices, surface-modified biodegradable materials, biomedical polymers, and related applications.