

# XX International Materials Research Congress (IMRC) 2011

August 14-18, 2011 • Cancun, Mexico

A joint meeting of the **Sociedad Mexicana de Materiales** and the **Materials Research Society**

[www.mrs.org/IMRC2011](http://www.mrs.org/IMRC2011)



## CALL FOR PAPERS

**Abstract Deadline—May 1, 2011**

### TECHNICAL SYMPOSIA

1. Nanostructured Materials and Nanotechnology
2. Advances in Computational Materials Science
3. Structural and Chemical Characterization of Metal Alloys and Compounds
4. Advanced Structural Materials
5. Advances in Semiconducting Materials
6. New Catalytic Materials
7. NACE: Corrosion and Metallurgy
8. Cultural Heritage and Archeological Issues in Materials Science
9. Photovoltaics, Solar Energy Materials and Technologies
10. Renewable Energy and Sustainable Development
11. Biomaterials for Medical Applications
12. Strategies for Academy-Industry Relations
13. Advances in Ion-Beam Techniques\*
14. Fundamentals and Applications of Functional Oxide Materials in Energy, Information and Sensing\*
15. Bioinspired Materials and Systems\*
16. Smart Materials, Devices, and Related Technology\*
17. Diamond Devices—Detectors, Sensors, and Photonics\*
18. Micro- and Nanomechanical Testing of Materials and Devices\*
19. Advanced Electron Microscopy and Nanospectroscopy\*
20. Polymer and Polymer-Based Nanocomposite Materials for Energy\*
21. Materials Research for Mining and Mineral Processing\*
22. Materials Welding and Joining Technologies\*

\*Symposia sponsored jointly by MRS and MRS-Mexico



## MEETING CHAIRS

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## Preview: 2011 Materials Research Society Spring Meeting & Exhibit

Moscone West and  
San Francisco Marriott Marquis,  
San Francisco, California

**Meeting:** April 25–29

**Exhibit:** April 26–28

[www.mrs.org/S11](http://www.mrs.org/S11)

2011  SPRING MEETING • Meeting Chairs



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Chemical Physics



**Chang-Beom Eom**  
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**Samuel S. Mao**  
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**Ryan O'Hayre**  
Colorado School  
of Mines

The 2011 Materials Research Society Spring Meeting will be held April 25–29, 2011 in San Francisco, Calif. The MRS Spring Meeting has grown considerably in recent years, and the 2011 Spring Meeting looks to be the largest yet. The Meeting will feature 50 symposia involving the categories of Electronic and Photonic Materials, Materials for Energy and Sustainability, Nanomaterials and Nanotechnology, Organic and Biomaterials, and General Materials Science. To complement the scientific sessions, tutorials will provide detailed introductions to particularly exciting areas of research, while the exhibit will showcase products of interest to the materials community. The technical meeting and exhibits will be located at the Moscone West Convention Center and San Francisco Marriott Marquis.

The scientific sessions will include many new and developing areas of materials research as well as some well-established and popular topics.

**Electronic and Photonic Materials** includes symposia with focus on electronic materials and devices, plasmonics, sensing, semiconductor processing, nuclear detectors, phase-change materials, and memory devices.

**Materials for Energy and Sustainability** will focus on photovoltaics, energy conversion and storage, solid-state ionics and complex oxides, thermoelectrics, and electrochromics.

**Nanomaterials and Nanotechnology** contains the production and characterization of nanomaterials with additional symposia devoted to nano-

fluidics, nano-electromechanics, interfaces, and catalysis.

**Organic and Biomaterials** features a strong emphasis in biomimetic materials and hybrid devices, biosensors, and bioelectronics, with additional focus on biofilms, polymers, and stem cells.

**General Materials Science** rounds out the Meeting with symposia on computation, metal organic frameworks, superconductivity, materials interactions and defects, multiferroics, and a forum on materials education.

Symposium X: Frontiers of Materials Research will feature topics of general interest at the forefront of materials science and engineering. Among the speakers will be Kazunari Domen of the University of Tokyo whose presentation is “Non-oxide Materials for Photocatalytic Water Splitting under Visible Light.”

A special forum will be held on Monday, *Acta Materialia* Gold Medal Forum: Frontiers in Thin Film Epitaxy and Nanostructured Materials, chaired by Amit Goyal (Oak Ridge National Laboratory), Bill Appleton (University of Florida), Sungho Jin (University of California—San Diego), and Justin Schwartz (North Carolina State University). This forum is dedicated to seminal research contributions of Jagdish (Jay) Narayan (recipient of the 2011 *Acta Materialia* Gold Medal) in the field of materials science and engineering and to his leadership in materials science worldwide through professional societies and the National Science Foundation. Narayan is the John C.C. Fan Family Distinguished Chair Professor in the Department of Materials Science and Engineering in the College of Engineering at North Carolina State University. He also has the Distinguished Visiting Scientist appoint-

MRS

### 2011 MRS Spring Meeting Registration Rates

	Pre-Registration Before 5:00 p.m. E.S.T., April 8, 2011	On-Site Registration After 5:00 p.m. E.S.T., April 8, 2011
Member	\$495	\$595
Student Member	\$110	\$140
Nonmember	\$595	\$695
Student Nonmember	\$135	\$165
Unemployed/Retired	\$135	\$165

## Hotels in San Francisco

The 2011 MRS Spring Meeting will be held at the Moscone West and San Francisco Marriott Marquis in San Francisco. For your convenience, special room rates have been arranged at the hotels listed below. Your patronage of the official hotels enables MRS to secure the meeting space at a greatly reduced cost. Rates and online reservations, as well as the latest information on the Meeting, will be available at [www.mrs.org/S11](http://www.mrs.org/S11).

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ment at Oak Ridge National Laboratory.

An awards ceremony will be held at which this year's Outstanding Young Investigator and recipient of the Innovations in Materials Characterization Award will both be recognized, MRS Fellows will be honored, and Gold and Silver Graduate Student Awards will be presented to graduate students for symposium papers that exemplify significant and timely research.

Poster sessions will be held in the Moscone West on Tuesday from 5:00 p.m. to 8:00 p.m. and in the Marriott on Wednesday and Thursday from 8:00 p.m. to 11:00 p.m. The meeting chairs will sponsor a Best Poster Award competition, selecting recipients each night on the basis of the posters' technical content, appearance, graphic excellence, and presentation quality.

The popular Science as Art competition will be held again at this Meeting. The competition is open to all registered meeting attendees, with entries to be on display in the Exhibit Hall at Moscone West. Multiple first-place and second-place awards of \$400 and \$200, respectively, will be presented at the Meeting. The deadline for entries is February 28, 2011. Guidelines are available on the 2011 MRS Spring Meeting Web site, under "Special Events."

MRS will host a Career Center; services offered to attendees include access to current job postings, a resume file for prospective employers, and on-site interview opportunities.

Graduate students and members of MRS University Chapters are invited to attend the student mixer reception. Also, chapter officers and faculty advisors are invited to attend a meeting of MRS University Chapter representatives to compare notes on recent activities and brainstorm on new projects and issues of common concern. Those interested in starting new chapters are welcome.

The deadline to pre-register for the Spring Meeting is **April 8, 2011**. International travelers are reminded to begin the visa process early. For additional information on the Spring Meeting, contact MRS Member Services, Materials Research Society, 506 Keystone Drive, Warrendale, PA 15086-7573, USA; e-mail [info@mrs.org](mailto:info@mrs.org), tel. 724-779-3003, and fax 724-779-8313.

Details of various events and activities will be published in the *Program & Exhibit Guide* available on site. The MRS Web site can be accessed for updated information on confirmed talks and details on special events, for more information on obtaining a visa, and pre-registration at [www.mrs.org/S11](http://www.mrs.org/S11).

# TUTORIALS

Monday, April 25, 2011  
 Moscone West



2011 MRS SPRING MEETING

**TUTORIAL A: Thin-Film Silicon Materials and Devices for Large-Area and Flexible Solar Cells and Electronics**  
 9:00 am–5:00 pm  
 Room 2002

**TUTORIAL C/D: Solar Photovoltaics—Materials, Devices Fundamentals, and Manufacturing Considerations**  
 8:00 am–5:00 pm  
 Room 2003

**TUTORIAL Q: Fundamentals of Emerging New Nonvolatile Memories**  
 9:00 am–5:00 pm  
 Room 2004

**TUTORIAL R: Overview of Phase-Change Materials, Their Physics and Applications**  
 9:00 am–5:00 pm  
 Room 2005

**TUTORIAL S: Plasma Deposition Tools—Fundamentals and Selection Criteria**  
 8:30 am–5:00 pm  
 Room 2006

**TUTORIAL Z: Piezoresponse Force Microscopy and its Applications in Energy Materials and Biological Systems**  
 8:30 am–4:30 pm  
 Room 2007

**TUTORIAL KK: Imaging Biofilms and Quantifying Structures**  
 1:30–5:00 pm  
 Room 2008

**TUTORIAL SS: Developing Materials Science Activities for Everyone**  
 1:30–5:00 pm  
 Room 2009



# 2011 MRS SPRING MEETING



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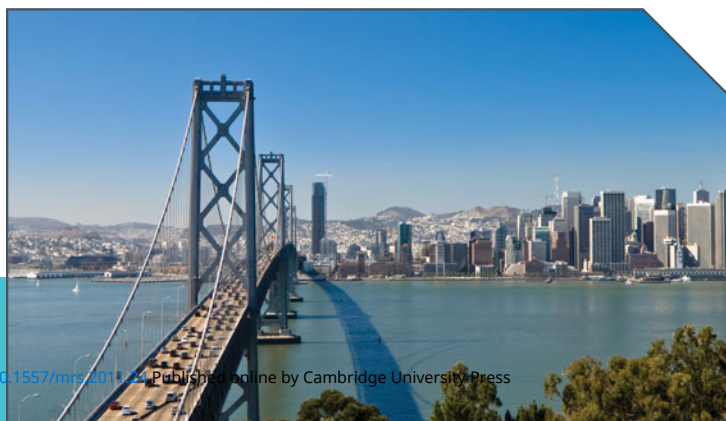
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## Moscone West Level 1

Tuesday, April 26  
 11:00 am – 2:00 pm  
 4:30 pm – 8:30 pm  
 Wednesday, April 27  
 11:00 am – 5:00 pm  
 Thursday, April 28  
 10:00 am – 1:30 pm

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