



Preview: 2014 Materials Research Society Spring Meeting & Exhibit

Moscone West Convention Center,
San Francisco Marriott Marquis, and
Westin San Francisco Market Street,
San Francisco, California

Meeting: April 21–25

Exhibit: April 22–23 www.mrs.org/spring2014

broad range of materials systems ranging from oxides and actinides to superconductors. Novel areas will include chemomechanics of energy materials and smart sensor materials, among others.

Soft Materials and Biomaterials will cover a wide range of topics including bioelectronics, self-assembly and hybrid materials, bionanotechnology and multifunctional biomaterials. Several symposia will explore the critical issues involved in interfacing biological systems with synthetic materials for regeneration, imaging, cancer therapies, and sensing. Other areas covered in this cluster will include cell-instructive materials, cellular microenvironments and drug delivery, and the biofunctionalization of organic and inorganic materials.

The group of symposia in **Electronic and Photonic Materials** will focus on emergent and traditional materials for electronics and photonics as well as advanced concepts for devices and technology. The symposia will cover technology challenges of traditional materials like Si and also novel materials for end-of-roadmap devices. Emergent research areas like organic electronics, transparent electrodes, inorganic semiconductor nanostructures, or phase-change materials will also be included. Several symposia in this cluster will cover research areas related to nonlinear optics, optical metamaterials, and plasmonics, among others.

Nanomaterials will include sessions on the synthesis, characterization, and properties of nanomaterials, with additional symposia devoted to new trends in one- and two-dimensional nanomaterials, ultrasmall clusters, piezotronic

The 2014 Materials Research Society Spring Meeting will be held April 21–25, 2014, in San Francisco, Calif. The spring meetings have grown considerably in recent years, and this year's meeting looks to be the largest yet. The scientific sessions will include many new and developing areas of materials research as well as some well-established and popular topics. 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, San Francisco Marriott Marquis, and Westin San Francisco Market Street.

Making up the core of the Meeting are the five topical clusters of the technical program, encompassing 57 symposia. **Materials for Energy** will include symposia with a focus on photovoltaic and photocatalytic materials, materials for carbon capture and sequestration, energy conversion and storage, as well as a

2014 MRS SPRING MEETING & EXHIBIT

Meeting Chairs



Jose A. Garrido
Technische
Universität München



Sergei V. Kalinin
Oak Ridge National
Laboratory



Edson R. Leite
Federal University
of São Carlos



David Parrillo
The Dow Chemical
Company



Molly Stevens
Imperial College
London

2014 MRS Spring Meeting Registration Rates

	Pre-Registration Valid before 5:00 p.m. ET on April 4, 2014	On-Site Registration Valid after 5:00 p.m. ET on April 4, 2014
Member	\$495	\$595
Student Member	\$110	\$140
Nonmember	\$595	\$695
Student Nonmember	\$135	\$165
Retired/Unemployed	\$135	\$165



Hotels in San Francisco

MRS receives meeting space at a greatly discounted rate as a result of contracting a large block of sleeping rooms at the official meeting hotels. In order to keep meeting costs as low as possible, we encourage you to utilize official MRS housing while you are attending an MRS meeting. Hotels offering discounted rates for the 2014 MRS Spring Meeting are listed below.

■ **San Francisco Marriott Marquis**

55 Fourth Street
San Francisco, California 94103
877-622-3056 OR 617-236-5800
Group Rate: TBA

■ **The Westin San Francisco Market Street**

50 Third Street
San Francisco, California 94103
415-974-6400
\$184/single & double + applicable taxes. Rates are based on single or double occupancy. Each additional person will be charged \$25 per day. Rate valid until March 24, 2014.



and magnetic nanostructures, and metal oxides. Besides the traditional symposia, there is also a novelty symposium dedicated to explore the fundamental areas of nonclassical crystallization.

The cluster on **General Materials Science, Theory and Characterization** will round out the meeting with symposia on recent advances in high-resolution structural and functional imaging by electron and scanning probe microscopy and scattering techniques, as well as *in situ* and *in operando* imag-

ing. Novel areas will include application of “big data” for materials science and materials in extreme environments.

Symposium X on Frontiers of Materials Research will feature presentations for the broad materials community on topics at the forefront of research on materials science and engineering.

The seventh **Technology Innovation Forum** will focus on “Commercializing Your Materials Research.” Presenters will discuss the “how” of taking a promising materials technology and bringing

it to market. The Forum is intended for researchers and entrepreneurs wishing to begin a start-up company or seeking to license their technology to a company, and in particular encourages students to attend.

Various aspects of the topic that will be addressed include how to transition the technology from the laboratory to a start-up company, how to partner with others to succeed, how to access funding, and how to foster “intra-preneurial” thinking within the company.

An award ceremony will be held to honor this year’s Outstanding Young Investigator and MRS Fellows as well as the recipients of the Innovation in Materials Characterization Award—endowed by Toh-Ming Lu and Gwo-Ching Wang—the Mid-Career Researcher Award—endowed by Aldrich Materials Science, and the Gold and Silver Graduate Student Awards.

The meeting will include a plenary address by **John J. Tracy**, Chief Technology Officer of The Boeing Company. There will also be a presentation by the recipient of the Kavli Lectureship in Nanoscience, yet to be announced.

Poster sessions will be held at the San Francisco Marriott Marquis on Tuesday, 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.



This Spring Meeting, look for **live-streamed events and electronic capture** of rich materials science content. MRS OnDemand, the always-on, online community, provides an interactive experience, benefiting on-site and remote attendees both during, and after, the Meeting.

Select presentations from the following categories will be captured and made available for viewing, complete with presentation materials, from the comfort of your home or office, or on the go—it’s **Your MRS, Your Way!**

- Award and Plenary Talks
- Featured Events
- Technical Sessions
- Tutorial Sessions
- Poster Sessions

www.mrs.org/on-demand

The popular Science as Art competition will again be held at this Meeting. The competition is open to all registered meeting attendees, with entries to be on display in the Exhibit Hall in the Moscone West Convention Center. Multiple first-place and second-place awards of \$400 and \$200, respectively, will be presented at the Meeting. Guidelines and the deadline for entries will be available on the 2014 MRS Spring Meeting website.

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 Government Agency Forum, which includes presentations on funding opportunities from US and non-US agencies, and various events for professional development and public outreach are also planned. Public outreach activities include a symposium on educating and mentoring young materials scientists for career development, hands-on activities during coffee breaks; *NanoDays* demonstrations, and information at the Public Outreach Center about the Society's outreach programs and in-

formation seminars, including opportunities for MRS members to participate.

The deadline to pre-register for the Spring Meeting is **April 4, 2014** (5:00 p.m. ET). 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; email 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 website 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/spring2014.

TUTORIALS

The 2014 MRS Spring Meeting will feature 10 tutorials covering a variety of topics to complement the scientific sessions. The tutorials are free of charge to all meeting attendees.

Tutorial notes, now available in color, are priced at \$35 during the preregistration period, which ends at 5:00 pm (ET) on April 4, 2014. An option to purchase tutorial notes at the preregistration price will be available on the registration form (available on the website in late February). After the preregistration period ends, notes will be priced at \$45 and will be available at the Publications Desk on-site at the meeting. The following tutorials will be offered at this meeting:

TUTORIAL A

Thin-Film Silicon and Related Materials for Solar Cells and Displays
Moscone West, Room 2002

TUTORIAL E/H

Defect Prediction and Measurement Techniques for Solar Energy Materials
Moscone West, Room 2003

TUTORIAL N/O

Interfacial Reactions in Lithium-air Batteries and on Lithium Metal Surfaces
Moscone West, Room 2006

TUTORIAL BB

Device Materials for End-of-Roadmap Devices in Logic and Memory
Moscone West, Room 2001

TUTORIAL HH

Phase-Change Materials—From Basic Properties to Applications
Moscone West, Room 2004

TUTORIAL RR

Fundamentals, State of the Art, and Recent Trends of Chemical Solution Deposition of Functional Oxide Thin Films
Moscone West, Room 2011

TUTORIAL SS

Fundamentals of Nonclassical Crystallization
Moscone West, Room 2009

TUTORIAL YY

Recognizing and Addressing "Big Data" Problems
Moscone West, Room 2005

TUTORIAL AAA

Application of *In-situ* X-ray Absorption, Emission and Powder Diffraction Studies in Nanomaterials Research—From the Design of an *In-situ* Experiment to Data Analysis
Moscone West, Room 2010

TUTORIAL FFF

Safety First—Enhancing Safety in Academic Research Laboratories
Moscone West, Room 2012



2014 MRS SPRING MEETING & EXHIBIT

ACS Publications
AdValue Technology, LLC
Advanced Research Systems, Inc.
AIP Publishing
AIXTRON SE
Aldrich Materials Science
American Physical Society *
Angstrom Scientific Inc.
Annealsys
Arradiance, Inc.
Asahi Spectra Co., Ltd.
Asylum Research, an Oxford
Instruments Company
Barnett Technical Services
Bio-Logic USA, LLC
Blue Wave Semiconductors, Inc.
Brookhaven Instruments Corporation
Bruker
Cambridge University Press
Carl Zeiss X-Ray Microscopy, Inc.
CellScale Biomaterials Testing
CRAIC Technologies, Inc.
CRC Press
CrystalMaker Software Ltd.
CVD Equipment Corporation
Duniway Stockroom Corporation

Ecopia Corp.
EDP Sciences
Effucell
Electron Microscopy Sciences/Diatome
Fischione Instruments
FUJIFILM Dimatix, Inc.
Gamry Instruments
Gatan, Inc.
Gencoa Ltd.
Hummingbird Scientific
Hysitron Inc.
ICE Publishing
International Centre for Diffraction
Data (ICDD)
IOP Publishing
Japan Society of Applied Physics
JASCO
JEOL USA, Inc.
KP Technology Ltd.
Kurt J. Lesker Company
Lake Shore Cryotronics, Inc.
Mantis Deposition Ltd.
Materials Analysis Technology Inc.
Mettler-Toledo, LLC
Micro Photonics Inc.
Millifluidica
Moxtek, Inc.
MTI Corporation
MVSystems, Inc.
Nanomechanics, Inc.
National Electrostatics Corp. *
National Institute for Nanotechnology
Neocera, LLC

Netzsch Instruments N.A., LLC
NIST
Nor-Cal Products, Inc.
NT-MDT Co.
OriginLab Corporation
Oxford Instruments
Physical Electronics
Plasmaterials, Inc.
Protochips, Inc.
PVD Products, Inc.
Quantachrome Instruments
Quantum Design, Inc.
R.D. Mathis Company
Radiant Technologies, Inc.
Renishaw Inc.
RHK Technology, Inc.
Rigaku Americas Corporation *
scia Systems GmbH
Scribner Associates, Inc.
Simpleware Ltd.
SonoPlot, Inc.
SPI Supplies/Structure Probe, Inc.
Springer
STAIB Instruments, Inc.
Strem Chemicals, Inc.
Ted Pella, Inc.
Tescan USA Inc.
Thermo Scientific
THINKY USA, Inc.
United Mineral & Chemical Corporation
Verder Scientific, Inc.
Vigor Gas Purification Technologies Inc.
Zahner-elektrik GmbH & Co. KG

***See Ad in This Issue**

Moscone West Level 1

Tuesday, April 22
9:30 am – 6:00 pm

Wednesday, April 23
9:30 am – 6:00 pm

Join us for a Wine & Cheese
Happy Hour Reception
on Tuesday from
5:00 to 6:00 pm

www.mrs.org/spring-2014-exhibit-sponsorship