

# 2013 YEAR-END REVIEW BY THE NUMBERS



**Orlando Auciello**  
2013 MRS President



**Todd M. Osman**  
MRS Executive Director

2013 was a momentous year for the Materials Research Society as we celebrated our 40th anniversary! And what an amazing 40 years it has been—for both the materials community and for MRS. In 1973, **Rustum Roy** and the inaugural roster of 215 members could never have imagined how quickly materials research would progress to change our history and shape our world, nor could they imagine the incredible impact the Society would have on those achievements. Today, MRS represents a diverse community of 16,600+ members from over 80 countries and is a recognized leader in the advancement of interdisciplinary materials research.

Of course, the tremendous growth and success of our Society is the result of member involvement and the energetic efforts of many MRS volunteers. They offer their precious time, their spirit, their expertise and their unique perspectives for the betterment of the materials community worldwide. To all of them—**members, volunteers, officers, headquarters staff, vendors, advertisers, exhibitors, sponsors, host cities** and the **materials community**—we express our deepest gratitude. They have, indeed, helped create the framework upon which the Society has matured and flourished.

That collaborative spirit continued in 2013, as nearly 1000 volunteers rallied together to further the MRS vision of building a dynamic, interactive, global community of materials researchers. Turn the page and you will find a remarkable array of people, projects, places, premiers and previews that defined the year—by the numbers!

In addition, MRS is pleased to acknowledge a few special achievements of the past year, highlighting the work of our outstanding volunteers, committee members and headquarters staff. For example, we are extremely grateful to **Magaly Spector** and **Dawnielle Farrar**, chairs of the Diversity and Women in Materials Science and Engineering Subcommittees, respectively, for creating the MRS Graduate Student Mentoring Program and for their efforts in advancing the professional development of students and under-represented groups through special workshops and programs. The inaugural class of 34 mentor/mentees completed its 12-month program at the end of 2013 with great success and will soon expand to include undergraduate students.

MRS University Chapters sprung up around the globe last year and now total 79. **Chapters in Ethiopia and Nigeria** were made possible by a new free membership program for students in developing countries. Launched in 2013, these memberships, and resulting Chapters, will enable our talented and enthusiastic students to network and collaborate across campuses and continents.

We celebrated collaborations in 2013 with **Sociedad Mexicana de Materiales**, the **Japan Society of Applied Physics**, **European MRS**, **Africa MRS**, and **Sociedade Brasileira de Pesquisa em Materiais**. We continue to identify opportunities to work together on projects that will serve the materials community.

The MRS publications portfolio is flourishing, and that is due in large part to the outstanding vision and leadership of **Paul McIntyre**, chair of the recently restructured Publications Committee. During his 3-year term, which came to a close in 2013, MRS advanced into a new era of publications. Working in partnership with MRS headquarters and Cambridge University Press, not only did he champion efforts to strengthen the existing portfolio, but he led the charge to develop and launch two new journals—*MRS Communications* and *MRS Energy & Sustainability—A Review Journal*—as well as initiate multiple new book projects.

Whether gathering 100 Boston-area high school students for a Hydrogen Fuel Cell Model Car Challenge during MRS Fall Meetings in the mid-2000s, to serving as 2010 MRS President, to developing and co-editing books and journals on energy and sustainability over the past several years, **Dave Ginley** brings an unbridled passion and enthusiasm to MRS. That spirit continues with Dave's current leadership as Chair of the Meetings Committee. He is forging ahead on the Board vision to better serve MRS members and the materials community through meetings—with a focus on enhanced virtual technologies, expanded education/outreach events, and increased programming related to "use-inspired" industry-relevant research.

**Xiao P. Jiang** and the MTI Corporation have been exhibiting at MRS Spring and Fall Meetings for almost 20 years. Last summer, he and the **Jiang Family Foundation** expressed a desire to give back to the materials community. Their support has enabled the Materials Research Society Foundation to create a new award honoring post-doctoral researchers, with the first award to be presented at the 2014 MRS Fall Meeting.

Capping off the year, MRS was named one of **Pittsburgh's 2013 Top Workplaces**. We were thrilled to be included in the list and are grateful to our headquarters staff who made this happen.

Taking this momentum forward, the next 40 years promise to deliver even more excitement and innovation, as new pioneers and the next-generation of volunteers continue to advance the MRS mission...to advance materials...and to improve the quality of life.

**Orlando Auciello, PhD**  
2013 MRS President

**Todd M. Osman, PhD**  
MRS Executive Director

**40 years** **MRS** **MATERIALS RESEARCH SOCIETY®**  
Advancing materials. Improving the quality of life.

# 2013 BY THE NUMBERS

Looking back to 2013, we are delighted to see all the **Materials Research Society** has accomplished. With help from our members, volunteers, exhibitors, sponsors, partners and headquarters staff, our Society has truly flourished. We are pleased to present a year-end review summary of some of our biggest achievements this past year.



- celebrated **40** years of service to the materials research community

- continued the success and growth of the Society with the help of approximately **1,000** volunteers from across the globe

- served an MRS membership of over **16,600**

- furthered our global reach by representing women and men from **80** countries around the world in our membership and meetings

- boasted **79** University Chapters worldwide

- announced the first **3** Materials Research Society Foundation grants and **6** University Chapter Special Project Awards at the 2013 MRS Spring Meeting

- advanced **1** mission—to promote communication for the advancement of interdisciplinary materials research to improve the quality of life

- offered **108** technical symposia at the 2013 MRS Spring and Fall Meetings, bringing in **11,699** total on-site attendees

- sold out the 2013 MRS Fall Meeting exhibit with a record-breaking **324** exhibitor booths

- accommodated **657** job seekers at the Fall and Spring Meeting Career Centers

- achieved record attendance of **1,411** at the XXII International Materials Research Congress (IMRC), held in partnership with the Sociedad Mexicana de Materiales (SMM)

- jointly sponsored **23** symposia as part of the 74<sup>th</sup> Japan Society of Applied Physics Autumn Meeting, garnering **1,063** participants

- managed three events through the MRS Conference Services Program, yielding a cumulative attendance of **1,323**



- garnered **3.4 million** page views on the MRS website

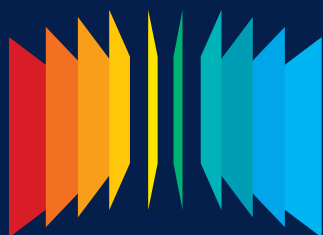
- strengthened MRS presence on social media, generating a viral reach of **527,980** on Facebook alone

- reported the latest breakthroughs in materials science through the MRS news site, *Materials360 Online*, yielding over **243,500** annual page views

- added **800** presentations to the MRS OnDemand<sup>®</sup> library, allowing **3,895** people in **56** countries access to both live and recorded talks from MRS Meetings



- honored **85** MRS members through the MRS Awards Program
- announced a new MRS Award honoring excellence in materials science for the **6<sup>th</sup>** consecutive year



- increased combined downloads across all MRS publications, hosted on Cambridge Journals Online (CJO), to a total of over **745,500**
- ranked in the top **10** percent of materials science journals with *MRS Bulletin*, which had an Impact Factor of **5.024** for 2013

- received *MRS Communications'* **1<sup>st</sup>** Impact Factor in its **1<sup>st</sup>** year of eligibility based on just **1** issue
- published **6** special focus issues of *Journal of Materials Research (JMR)*
- named **3** prominent field leaders as Editors-In-Chief of the new *MRS Energy & Sustainability—A Review Journal*
- offered libraries and members online access to over **100,000** proceedings papers in the *MRS Online Proceedings Library (OPL)*
- achieved a readership of over **73,000** for the *Materials360<sup>®</sup>* e-newsletter

- continued to bring materials research to the public with the **11<sup>th</sup>** year of the traveling exhibit, Strange Matter, reaching over **3.5 million** exhibition attendees to date
- sent **3,245** letters to Congress through Materials Voice
- guided a coalition of over **20** organizations that culminated in legislation ensuring access to helium for scientists
- introduced the MRS Graduate Student Mentoring Program, where **34** mentor/mentee pairs were matched and participated in a 12-month program to provide valuable insight into a future STEM career



## 2013 MRS Officers

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The Boeing Company

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**Todd M. Osman**  
*Executive Director*  
Materials Research Society

## 2013 MRS Board of Directors

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## 2013 Committee Chairs

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**Aditi Risbud**  
University of Utah

PUBLICATIONS COMMITTEE  
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Stanford University

# 10 THINGS YOU SHOULD KNOW

## about the Materials Research Society Foundation

- 1 The Foundation **advances the MRS mission** to “promote communication for the advancement of interdisciplinary materials research to improve the quality of life.”
- 2 The Foundation funds all MRS core programs in **education, outreach and peer recognition**.
- 3 In January 2013, the Foundation announced **six MRS University Chapter Special Project Awards**—where dedicated funding supported projects proposed by our University Chapters.
- 4 In its first year, and from 30+ grassroots, member proposals received, **three were funded by the Foundation for an approximate total of \$30,000**. All three were outreach projects geared to bring the excitement of scientific literacy and awareness to underrepresented minority students and teachers.
- 5 The Foundation supports **all efforts of the MRS Awards Program**, honoring those whose work has already had a major impact in materials research, as well as those whose work shows great promise for future leadership. In 2013, a new award recognizing excellence in post-doctoral research was announced.
- 6 Strange Matter—a popular and long-running traveling interactive science museum exhibition—**expanded outside of North America in 2013**, reaching the United Arab Emirates.
- 7 Through the Foundation, MRS now offers **free electronic memberships for students studying in developing countries**. These memberships enable students to connect with colleagues from around the world—from forming MRS University Chapters to participating in live-streamed events via MRS OnDemand®.
- 8 MRS partnered with the National Science Foundation to bring 16 undergraduate students from 10 different minority-serving institutions to the 2013 MRS Fall Meeting. These students, from the **Partnership for Research and Education in Materials (PREM)** Program, participated in professional and leadership development and networking opportunities throughout the week.
- 9 In addition to hundreds of individual donors and program sponsors, **four Corporate Partners** supported the Foundation in 2013—Platinum Partner, **Aldrich Materials Science**; Silver Partners, **Lake Shore Crytronics** and **CRC Press—Taylor & Francis Group**; and Bronze Partner, **GE Global Research**.
- 10 Learn how you can help make a difference or apply for project funding at **[www.mrs.org/foundation](http://www.mrs.org/foundation)**.



**MRS** MATERIALS RESEARCH SOCIETY®  
*Advancing materials. Improving the quality of life.*

**MISSION:** An organization of materials researchers from academia, industry and government that promotes communication for the advancement of interdisciplinary materials research to improve the quality of life.

**VISION:** Will build a dynamic, interactive, global community of materials researchers to advance technical excellence by providing a framework in which the materials disciplines can convene, collaborate, integrate and advocate.

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# CALL FOR PAPERS

[www.mrs.org/fall2014](http://www.mrs.org/fall2014)



## 2014 MRS® FALL MEETING & EXHIBIT

November 30 - December 5, 2014 | Boston, Massachusetts

**Abstract Submission Deadline June 19, 2014**

**Abstract Submission Opens May 19, 2014**

### BIOMATERIALS AND SOFT MATERIALS

- A Organic Bioelectronics
- B Multifunctional Polymeric and Hybrid Materials
- C Medical Applications of Noble Metal Nanoparticles (NMNPs)
- D Materials and Concepts for Biomedical Sensing
- E Hard-Soft Interfaces in Biological and Bioinspired Materials—Bridging the Gap between Theory and Experiment
- F Reverse Engineering of Bioinspired Nanomaterials
- G Plasma Processing and Diagnostics for Life Sciences
- H Micro/Nano Engineering and Devices for Molecular and Cellular Manipulation, Stimulation and Analysis
- I Emerging 1D and 2D Nanomaterials in Health Care

### ELECTRONICS AND PHOTONICS

- J Emerging Non-Graphene 2D Atomic Layers and van der Waals Solids
- K Graphene and Graphene Nanocomposites
- L Optical Metamaterials and Novel Optical Phenomena Based on Nanofabricated Structures
- M Materials and Technology for Nonvolatile Memories
- N Frontiers in Complex Oxides
- O Oxide Semiconductors
- P Hybrid Oxide/Organic Interfaces in Organic Electronics
- Q Fundamentals of Organic Semiconductors—Synthesis, Morphology, Devices and Theory
- R Diamond Electronics and Biotechnology—Fundamentals to Applications

### ENERGY AND SUSTAINABILITY

- S Advances in Materials Science, Processing and Engineering for Fuel Cells and Electrolyzers
- T Wide-Bandgap Materials for Solid-State Lighting and Power Electronics
- U Organic Photovoltaics—Fundamentals, Materials and Devices
- V Sustainable Solar-Energy Conversion Using Earth-Abundant Materials
- W Perovskite-Based and Related Novel Material Solar Cells
- Y Technologies for Grid-Scale Energy Storage
- Z Materials Challenges for Energy Storage across Multiple Scales
- AA Synthesis, Processing and Mechanical Properties of Functional Hexagonal Materials for Energy Applications
- BB Molecular, Polymer and Hybrid Materials for Thermoelectrics
- CC Advanced Materials and Devices for Thermoelectric Energy Conversion
- DD Materials for Advanced Nuclear Technologies
- EE Scientific Basis for Nuclear Waste Management XXXVIII
- FF Materials as Tools for Sustainability

### NANOMATERIALS AND SYNTHESIS

- GG Nanomaterials for Harsh Environment Sensors and Related Electronic and Structural Components—Design, Synthesis, Characterization and Utilization
- HH Flame and High-Temperature Synthesis of Functional Nanomaterials—Fundamentals and Applications
- II Semiconductor Nanocrystals, Plasmonic Metal Nanoparticles, and Metal-Hybrid Structures
- JJ 3D Mesoscale Architectures—Synthesis, Assembly, Properties and Applications
- KK Directed Self-Assembly for Nanopatterning
- LL Semiconductor Nanowires—Growth, Physics, Devices, and Applications
- MM Carbon Nanotubes—Synthesis, Properties, Functionalization and Applications

### THEORY, CHARACTERIZATION AND MODELING

- NN Mathematical and Computational Aspects of Materials Science
- OO *In Situ* Characterization of Dynamic Processes during Materials Synthesis and Transformation
- PP Advances in Scanning Probe Microscopy for Multimodal Imaging at the Nanoscale
- QQ Advances in Nanoscale Subsurface, Chemical and Time-Resolved Studies of Soft Matter
- RR Scaling Effects in Plasticity—Synergy between Simulations and Experiments
- SS Informatics and Genomics for Materials Development
- TT Advanced Materials Exploration with Neutrons and X-Rays—The State-of-the-Art in the International Year of Crystallography

### GENERAL

- UU Structure-Property Relations in Amorphous Solids
- VV Reactive Materials—Past, Present and Future
- WW Defects and Radiation Effects in Advanced Materials
- XX Bridging Scales in Heterogeneous Materials
- YY Advanced Structural and Functional Intermetallic-Based Alloys
- ZZ Hierarchical, High-Rate, Hybrid and Roll-to-Roll Manufacturing
- AAA Undergraduate Research in Materials Science—Impacts and Benefits

### Meeting Chairs

- Husam N. Alshareef** King Abdullah University of Science and Technology
- Amit Goyal** Oak Ridge National Laboratory
- Gerardo Morell** University of Puerto Rico
- José A. Varela** University of São Paulo State - UNESP
- In Kyeong Yoo** Samsung Advanced Institute of Technology

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### Don't Miss This Future MRS Meeting!

**2015 MRS Spring Meeting & Exhibit**  
April 6-10, 2015

Moscone West & San Francisco Marriott Marquis  
San Francisco, California