



2018 MRS Spring Meeting features materials developments across disciplines

www.mrs.org/spring2018

The Materials Research Society (MRS) held its Spring Meeting in Phoenix, Ariz., on April 2–6, attracting an interdisciplinary and international audience. The Meeting Chairs, **Edward Botchwey** (Georgia Institute of Technology/Emory University); **Catherine Dubourdieu** (Helmholtz-Zentrum Berlin/Freie Universität Berlin); **Quanxi Jia** (University at Buffalo, The State University of New York); **Shane Kennett** (Exponent Failure Analysis Associates); and **Cheolmin Park** (Yonsei University) organized 63 symposia, grouped into seven topic clusters, which comprised the technical core of the Meeting: Characterization, Modeling, and Theory; Electronic and Photonic Materials; Energy Materials and Technologies; Late News–Hot Topics; Manufacturing; Nanomaterials; and Soft Materials and Biomaterials.

MRS Awards

Several MRS awards were presented. **David G. Cahill** (University of Illinois at Urbana-Champaign) received the Innovation in Materials Characterization Award; **David Mooney** (Harvard University) received the Mid-Career Researcher Award; **William Chueh** (Stanford

University) and **Vanessa Wood** (ETH Zürich) received the Outstanding Young Investigator Awards; **Michael Falk** (Johns Hopkins University) received the MRS Impact Award; **Arnab Banerjee** (Oak Ridge National Laboratory) and **Jie Xu** (Stanford University) received the MRS Postdoctoral Awards; and **Arvind R. Kalidindi** and **Christopher A. Schuh** (Massachusetts Institute of Technology) won the 2017 *Journal of Materials Research* Paper of the Year Award for their article, “Phase transitions in stable nanocrystalline alloys.”

Ramamoorthy Ramesh of the Lawrence Berkeley National Laboratory and the University of California, Berkeley, delivered the plenary talk as the recipient of The Fred Kavli Distinguished Lectureship in Materials Science. He presented an overview of research into ultralow-energy electric-field manipulation of magnetism as the backbone for the next generation of electronics. **Clara Santato**, Polytechnique Montréal, was selected for the 2018 *MRS Communications* Lecture and presented “The Wonderful World of Melanins.”

The MRS Awards Program strives to acknowledge outstanding contributors to the progress of materials research and to recognize their accomplishments.

Nominate a colleague for one of the many MRS Awards to be presented at the 2019 MRS Spring Meeting. The deadline is August 1, and additional information can be found online at www.mrs.org/awards.

Meeting features

Special sessions and “hot topics” symposia have proven to be well-attended events at recent MRS meetings. Following an extremely successful special session on Quantum Materials at the 2017 MRS Fall Meeting in Boston, where it was standing-room only, the 2018 MRS Spring Meeting featured a special symposium on Materials Science to Empower Quantum Information Technologies. Another hot topic session was the Artificial Intelligence [AI] for Materials Development Forum, which introduced concepts and terminology of AI and machine learning as they apply to materials research. An even larger symposium is anticipated at the 2018 MRS Fall Meeting on Machine Learning and Data-Driven Materials Development and Design (Symposium GI01).

The MRS Career Fair, held at the Spring and Fall Meetings, provides opportunities for attendees and employers to discuss career planning through recruiters and on-site interviews. It also offers





career development, resume critiques and mock interviews, and job seeker and employer networking. Whether you are looking for a new job or planning the next step in your career path, the MRS Career Fair is a valuable resource and is free of charge to MRS members.

Research Funding Opportunities sessions provide interaction between government agency presenters and MRS membership. Invited talks typically consist of a 20-minute introduction centered on the overall focus of the agency's materials science research efforts, programmatic descriptions of how to collaborate or apply, and other general details. These talks are followed by roundtable Q&A sessions with the individual program managers.

Ways to get involved

Many volunteers are needed to ensure that MRS meetings run smoothly, and symposium assistants play a valuable role. They deliver essential meeting materials to the technical session rooms, monitor audiovisual equipment and room lighting, and track and record attendance. Students who assist in a minimum of four half-day sessions earn a complimentary student registration, a one-year MRS student membership, and a stipend to help defray expenses. The application process will begin for the 2018 MRS Fall Meeting on October 1.

One of the guest bloggers for MRS' Meeting Scene, **Matthew A. Diasio**, offers some valuable meeting advice for students and other attendees:

- **If you can, go to the MRS chapter mixer.** Mixers are a great chance to



meet other students, discuss your work, and make long-lasting contacts.

- **Go to sessions beyond your own symposium.** MRS is interdisciplinary, so it's worth it to see what other people are doing in the broad materials community. Get inspired about potential applications of your own materials, or just broaden your knowledge.
- **Check out the exhibitors, even if you're not looking for new equipment or supplies.** Exhibitors will gladly talk to you about their products and ones you are interested in and answer questions, so you may learn more about how to solve an experimental problem. At the meeting, I talked to a company that makes instruments to characterize particles. I mentioned we had an older version of the one they were displaying, and they asked how our lab's instrument was doing. When I said I didn't use it much and mentioned that I was going to need to train

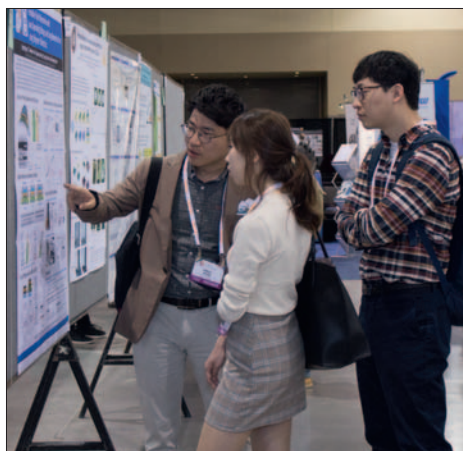
myself because no one currently in the lab has used it before, they offered to send me tutorial materials.

- **Bring some business cards!** They're a great way to share contact information with other attendees and exhibitors. If you're looking for a job, bring your resume, and visit the Career Fair.
- **Don't be afraid to talk to senior researchers.** If there's someone you really want to talk to after a session, go for it. People are generally enthusiastic about sharing their work and enjoy getting to talk more if you have questions.

Volunteer opportunities

MRS recognizes the critical role volunteers play for the Society. The tremendous growth and success of MRS is due to the energy, enthusiasm, and vision of many member volunteers. If you have an interest in participating but are not sure where to start, here are some suggestions:

- Interested in government affairs, public outreach, or other MRS activities? **Join an MRS Operating Committee**, including ones in areas such as member engagement or academic affairs: www.mrs.org/committees.
- **Submit a proposal for a MRS symposium or workshop.** Meeting chairs empower their symposium organizers, and these groups each drive the content and feel of the Meeting: www.mrs.org/meetings-events.
- **Publish a paper or article.** Publishing venues for MRS members are many and varied and include *MRS Bulletin*, *Journal of Materials Research (JMR)*, *MRS Communications*, *MRS Energy*





& Sustainability, and MRS Advances. MRS membership includes FREE online access to all MRS publications: www.mrs.org/publications-news.

- **Join a MRS University Chapter.** University chapters are a vital part of MRS and provide an opportunity for students and faculty to meet and promote student interest in materials science: www.mrs.org/university-chapters.
- **Join the Women in MS&E Community.** Women in Materials Science and Engineering (MS&E) is the subject of a special breakfast held at both the MRS Spring and Fall Meetings and features a timely discussion of issues facing today's women in the materials research and engineering professions. If you plan to attend one of our meetings, we urge you to join us for this interactive and informative breakfast event: www.mrs.org/women.
- **Get involved in Strange Matter.** MRS has created a traveling museum exhibit on materials research called Strange Matter, where visitors enter the world of materials science through approximately 50 hands-on experiences. Many of the museum venues welcome participation of local scientists when Strange Matter comes to their town: www.mrs.org/strange-matter.
- **Get involved in Strange Matter Green Earth.** This is a new pioneering educational venture to create an international traveling materials science exhibition that will enable millions of people across the globe to explore ways in which advances in materials can lead to a more sustainable future. The subcommittee is seeking funds to create these globally relevant exhibitions.
- **Get involved in Impact of Materials on Society.** This introductory-level course teaches all students that engineering shapes and is shaped by social and cultural variables. Implementation workshops are offered at MRS Fall and Spring Meetings. Future plans include developing middle- and high school resources, translating the curriculum into other languages, and developing a new Impact of Chemistry on Society course: www.mrs.org/impact-of-materials-on-society.
- **Get involved in Focus on Sustainability.** Focus on Sustainability is a MRS initiative

designed to raise awareness of the nexus between materials, materials research, and sustainable practice. MRS is helping its members discover the valued role of sustainable materials practices to a sustainable world: www.mrs.org/sustainability.

- **Send a message to Capitol Hill.** Tell your US legislators why support of the physical sciences and science education is necessary—for national security, quality of life, and

a strong economy. With Materials Voice, you can create personalized letters addressed to your US representatives on Capitol Hill, which you can then customize and send via email: www.mrs.org/materials-voice#.

Many presentations from the 2018 MRS Spring Meeting (www.mrs.org/spring2018) are available through news coverage of the Meeting on MRS TV (www.mrs.org/mrs-tv) and *Meeting Scene*[®] (www.materials.typepad.com).

2018 MRS Spring Meeting Symposium Support

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