

MeetingReport

Microscopy & Microanalysis 2012



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Microscopy & Microanalysis (M&M) 2012 celebrated the first 70 years of the Microscopy Society of America and energized attendees about present and future directions in our field. This joint meeting of the Microscopy Society of America, the Microanalysis Society, and the International Metallographic Society was held in Phoenix, Arizona, July 29–August 2, 2012. The conference had a robust technical program with 996 technical papers, 1,586 scientific attendees, and a total attendance of 2,648. Thirty-six different countries were represented among the attendees. The exhibition showcased 120 companies spread over 363 booths occupying 36,300 square feet of floor space.

The plenary session opened the meeting with a wonderful representation of the past, present, and future of microscopy. Prof. Archibald Howie (University of Cambridge) presented a lecture titled “Learning from Past Epiphanies, Successes, and Disappointments to Assess Future Progress in Microscopy.” Prof. Howie gave a fascinating tour through the history of imaging and spectroscopy physics over the past several decades, which highlighted personal and public “epiphanies” that have driven new discoveries and technologies. Prof. Mildred Dresselhaus (MIT) presented a plenary lecture titled “Probing the Nanostructures of Carbon.” Prof. Dresselhaus used this talk to weave her own personal fascination with carbon-based materials into the story of the development of the carbon physics field as we know it today. In the process, she gave us insight into her own scientific process and challenged our students in their scientific endeavors. The awards ceremony highlighted M&M’s commitment to the future of the field, as more than two dozen students received MSA and MAS awards.



Exhibition floor at M&M 2012 in Phoenix, Arizona.

Each year, M&M provides the premier forum for sharing the latest microscopy and microanalysis results in key technical areas and applications, and 2012 was no exception! The named symposium for M&M 2012 was the “R.J. Gray Symposium on Metallographic Preparation of Reactive and Radioactive Materials,” which addressed the most recent work on the metallographic preparation of reactive and radioactive materials including nuclear fuels, metal hydrides, battery materials, and explosives. A special symposium, “Hybrid (soft-hard) Materials and Interfaces,” provided an opportunity for presentation of results about the application of microscopy and microanalysis at the junction between the biological and physical sciences. This symposium, organized by V. Dravid, R. Leapman, and D. Joester, attracted 36 papers with 15 posters: a great start for a truly cross-disciplinary area. Microanalysis was highlighted across a number of symposia including “High Resolution Microscopy and Microanalysis of Meteorites, Minerals, and Aerosols” and “Quantification from the Micro- to Sub-nano-scales: Pushing the Limits.” A number of emerging techniques had successful symposia at M&M 2012 including helium ion microscopy, ultrafast/dynamic electron microscopy, correlative microscopy and microanalysis, and electron and ion channeling. As always, the technical program included the best work from our core disciplines with symposia on topics such as biofilms, pharmaceuticals, nanostructures, joining of materials, failure analysis, focused ion beam microscopy, and microanalysis.

We continued to emphasize and build our poster sessions at the meeting. The technical posters at M&M provide an ideal forum for in-depth discussion about the latest technical results in a range of topics that mirror and reinforce the platform sessions. We again had a specific poster session each day of the meeting, and student poster awards were presented at the end of each poster session. New for 2012 were invited posters. These poster presentations increased the technical excellence of our poster session by showing some of the best technical work at the meeting. In 2011 we accepted 382 posters plus 44 non-published, late-breaking posters. In 2012 we accepted 406 contributed and invited posters plus 40 late-breaking, non-published posters.

Microscopy and Microanalysis 2012 was a great technical meeting in a terrific venue, Phoenix, Arizona. The weather was a pleasant, and relatively cool, 92 degrees on opening day. We hope to see you next year in Indianapolis, Indiana, August 4–8, 2013.

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