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M&M 2016

MICROSCOPY & MICROANALYSIS

July 24-28, 2016 • Columbus, Ohio

Microscopy & Microanalysis 2016 in Columbus, Ohio

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The Microscopy Society of America (MSA), the Microanalysis Society (MAS), and the International Metallographic Society (IMS) invite you to Microscopy & Microanalysis 2016 in Columbus, Ohio, July 24 through July 28, 2016. This is the first time that our conference has visited this city, and we are sure to have a great meeting.

For M&M 2016 the Program Committee asked the membership to suggest symposia for the meeting, and many of these have been incorporated into M&M 2016. Once again, attendees can be assured that the latest in applications of and instrumentation for microscopy, in both the physical and biological sciences, will be presented during the technical sessions. The M&M 2016 meeting will feature two plenary speakers, 35+ symposia covering a broad range of topics, and numerous educational opportunities in the form of courses, tutorials, pre-meeting events, and two pre-meeting congresses.

We are excited to have two plenary lecturers from overseas. Drew Berry is a biomedical animator at the Walter and Eliza Hall Institute of Medical Research, Victoria, Australia. Drew has exhibited animations at the Guggenheim Museum, MoMA, the Royal Institute of Great Britain, and the University of Geneva. In 2010 he received a MacArthur Fellowship "Genius Grant." Drew creates scientifically accurate and aesthetically pleasing visualizations that reveal cellular and molecular processes. Our other plenary speaker this year is Dr. Mark Miodownik from University College London, where he is a Professor of Materials and Society. Mark has spent much of his career championing materials research that links the arts and humanities to medicine, engineering, and materials science. His programs on BBC TV have reached millions of viewers in 200 countries. He is the author of *Stuff Matters*, which won the 2014 Royal Society Winton Prize for Science Books. This should be an interesting and entertaining opening session.

Plenary speaker Drew Berry from the Walter and Eliza Hall Institute of Medical Research

Prof. Mark Miodownik from University College London

This year we have a symposium that honors the memory of a true leader in the use of microscopy in materials science research. The "Dr. Gareth Thomas Symposium: Materials Solutions through Microscopy" will recognize the many contributions of the late Dr. Gareth Thomas for his work in materials and electron microscopy. This symposium dovetails nicely with many of the other symposia that investigate the limits and applications of microscopy.

Instrumentation and techniques symposia relate to both physical and life sciences. Examples include the always popular Vendor Symposium, where instrument developers and builders showcase new developments and improved products, as well as topics like focused ion beam, transmission electron microscopy phase plate imaging, X-ray imaging, advanced analytical electron microscopy, surface and subsurface microscopies, qualitative analysis, scanning diffraction techniques, scanning microscopy developments, high-resolution microscopies, *in-situ* electron microscopy, and atom probe tomography.

Physical science symposia at M&M 2016 will focus on analysis of various materials. Topics include but are not limited to the following: microscopy of electrochemical power systems, combining materials simulations and experiments, nuclear and irradiated materials, microscopy of thin films,

magnetic materials analysis, failure analysis, additive manufacturing, ceramics, metals, and out-of-this-world planet forming materials. Forensic science presentations will span the range of forensics for biology to forensics of materials.

Life science symposia will cover a range of interesting topics from the use of nanostructured scaffolds for bone regeneration to new techniques for digital pathology. Specific symposia will cover super-resolution visualization of cellular processes, morphogenesis, pathology, pharmaceuticals, 3D structures, and diagnosis of diseases in humans, plants, and animals.

There also will be excellent offerings from the Tech Forum. Symposia will be offered related to real data analysis, artifact recognition, practical approaches to current software solutions, and a roundtable discussion of sample artifacts. These sessions are always popular and are excellent opportunities to learn.

The M&M 2016 conference will present many additional opportunities to brush up on your knowledge or introduce you to new techniques and applications. Consider these day-long pre-meeting short courses, which are taught by recognized experts, on various topics: cryo-preparation for biological electron microscopy, electron cryotomography and image processing, imaging and analysis with variable-pressure scanning electron microscopy or environmental scanning electron microscope, image analysis using ImageJ, and focused ion beam. The meeting will provide educational opportunities for broader audiences in Project MICRO, Microscopy in the Classroom, and "It's a Family Affair."

In addition to the Sunday courses, there will be two pre-meeting congresses this year. "Exploring the Diffractive Properties of Electrons for Solving Materials Problems" will provide attendees an opportunity to hear about and discuss some of the latest work in electron diffraction. The other pre-meeting congress will be a workshop on atom probe tomography techniques and its applications.

As we have come to expect, M&M 2016 will have the largest instrument and vendor exhibition in the world. Attendees will have the opportunity to see the latest equipment and services from over 100 companies.

Social activities will include the opening reception and daily refreshments served during our popular poster sessions. Prize-winning posters will be announced each day at the end of the session.

For a complete description of the technical program and educational opportunities please refer to the Call for Papers (distributed with the November issue of *Microscopy Today*) or go to http://www.microscopy.org/MandM/2016.

The Executive Program Committee, in cooperation with all the symposium organizers, have created an excellent and compelling program for Microscopy & Microanalysis 2016. On behalf of MSA, MAS, and IMS we invite you to participate in M&M 2016. See you in Columbus in July!

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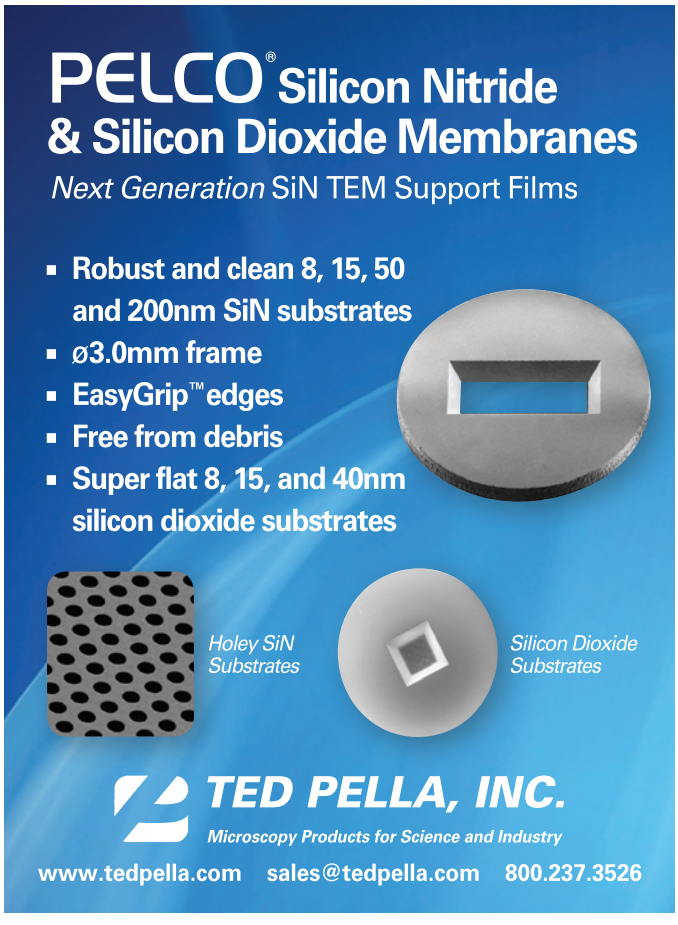

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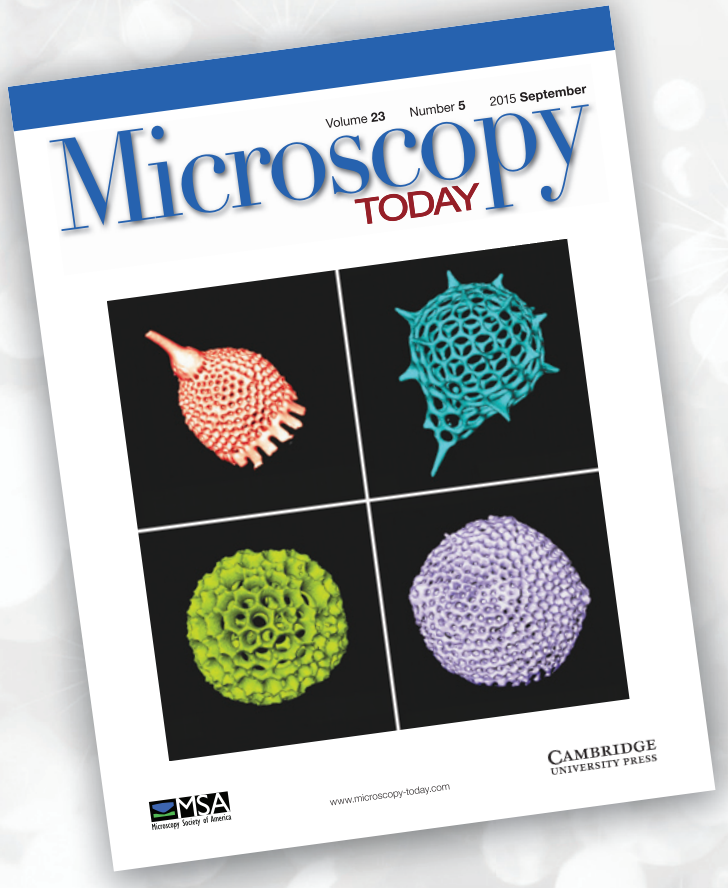

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