

MeetingReport

Microscopy & Microanalysis 2013



Teresa Ruiz, Program Chair

Department of Molecular Physiology and Biophysics, University of Vermont, Burlington, VT 05405

teresa.ruiz@uvm.edu

Last year's Microscopy & Microanalysis meeting (M&M 2013) was held in Indianapolis, Indiana, August 4–8 2013. The meeting comprised the annual meetings of the Microscopy Society of America (MSA), the Microanalysis Society, and the International Metallographic Society. The conference had a strong program with more than 1,000 scientific papers and a total attendance of 2,727 people, a 3-percent increase over 2012. The attendees represented 43 different countries from 5 continents. The exhibition showcased 107 instrument and service companies from 10 countries, occupying 351 booths over more than 35,100 square feet of floor space.

The plenary session opened the meeting with a captivating presentation by Prof. Harald Rose of the University of Ulm (Figure 1). In his lecture titled “The long-lasting struggle to achieve atomic-resolution microscopy by correcting the aberrations of electron lenses,” Prof. Rose took us on a journey through the arduous path of technological developments over the last few decades that culminated in atomic-level image resolution.

The awards ceremony honored Dr. David DeRosier (Brandeis University) and Dr. C. Barry Carter (University of Connecticut) with the Distinguished Scientist awards for excellence in biological and physical sciences, respectively. Six of our colleagues (Nigel Browning, Hamish Fraser, David Muller, Michael Radermacher, David Smith, and Eric Stach) were installed as new MSA Fellows. The M&M meeting also gave a nod to the future of microscopy as more than 30 students and post-doctoral fellows received travel awards. Later in the meeting more than 20 students received recognition for their outstanding poster presentations.

Prof. Joris Dik of the Technical University of Delft (Figure 2) closed the plenary session with a talk titled “Looking through paintings.” In his riveting presentation, Prof. Dik showed us how

modern instrumentation can uncover art historical mysteries and how the desire for understanding of art in this framework can drive instrumental developments.

M&M in 2013 excelled again in bringing attendees the latest and most innovative applications and instrumental developments in the life and physical science research areas that use microscopy and microanalysis techniques. The symposium named for Gertrude Rempfer on “Advances in Electron Optics and Aberration Corrected Electron Microscopy” honored her long scientific career in electron optics and electron microscopy, in both industry and academia. More than two dozen contributions celebrated her efforts that led to the development of the world's first ultra-high-vacuum photo-emission electron microscope. The physical science symposium “Structure and Composition Analysis of Nanoparticulate Systems” was very well received and attracted more than 100 papers with more than 60 poster presentations (Figure 3). This symposium provided a forum to discuss progress in the understanding of the properties of individual nanoparticles and nanoparticulate systems. This work also highlighted the latest techniques and explored current limitations. A highlight in the biological sciences sessions, was the symposium “Structural Biology and Cell Ultrastructure,” which explored new information about 3D structure, ultrastructure and cellular function, microorganisms, and macromolecular assemblies resulting from recent developments in EM techniques and hybrid methodologies. The M&M 2013 conference had many additional symposia, including practical programming for microanalysis, advances in data processing in optical and electron microscopy, and applications of micro-CT in life and material sciences. As always, the technical program included the best work from our core disciplines, with symposia on such



Figure 1: Plenary speaker Harald Rose discussed aberration-corrected electron lenses. Photo: King Shots, LLC, Indianapolis, IN



Figure 2: Plenary speaker Joris Dik discussed applications of microscopy in the authentication of paintings. Photo: King Shots, LLC, Indianapolis, IN

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Figure 3: The M&M Megabooth provided information about all aspects of the Microscopy Society of America. Photo: King Shots, LLC, Indianapolis, IN

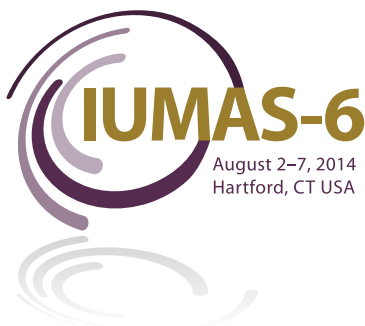
topics as pathology, pharmacology, failure analysis, atom probe microscopy, focused ion beam microscopy, three-dimensional electron microscopy (3DEM) in life and material science, and microanalysis and microstructural characterization of metals, which this year celebrated the 150th anniversary of Henry Clifton Sorby's original work.

The city of Indianapolis, Indiana, provided a magnificent and vibrant setting for Microscopy & Microanalysis 2013. After this great success, it is now time to look toward M&M 2014. We hope to see you in Hartford, Connecticut, August 3–7, 2014.

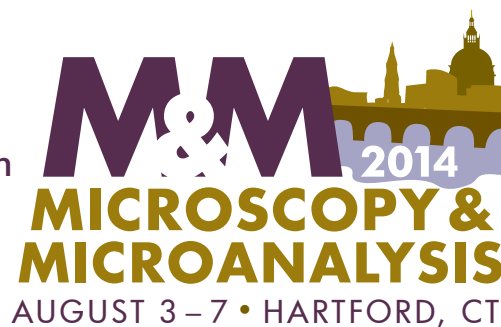
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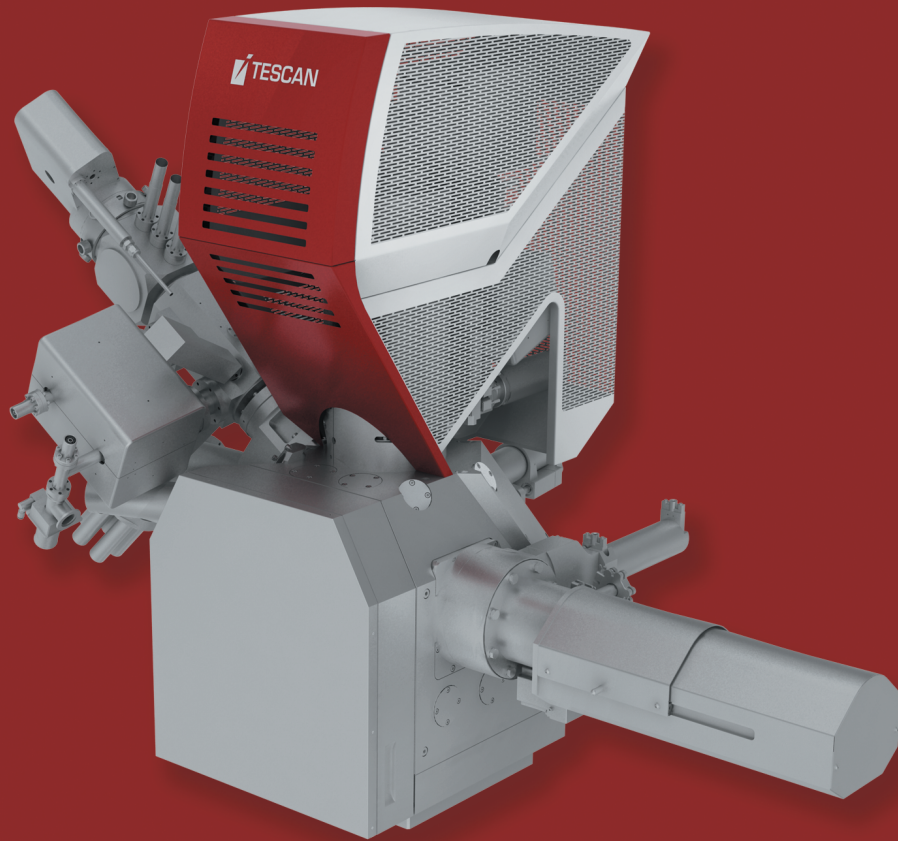
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