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Letter from the President

Dear Colleagues and Friends,

2010 has been a very good year for the Microscopy Society of America. Membership continues to increase, and is currently up more than 7% over last year at this time. Of course, membership, at least in part, follows the success of our annual meeting, Microscopy & Microanalysis, and by any measure, M&M2010 in Portland was a success! With our co-sponsoring society partners, the Microbeam Analysis Society, the International Metallographic Society, and the Microscopical Society of Canada/Société de Microscopie du Canada, we welcomed 1761 scientific registrants and over 1000 exhibitors, making it the largest M&M since Chicago in 2006. As President, I was pretty busy at the meeting, but the scientific excitement in the sessions I attended was great to see.

While the meeting is the focal point of MSA for many members, our most important role as a scholarly society is the publication of a peer-reviewed journal, *Microscopy and Microanalysis*. Edited by Bob Price and published for MSA by Cambridge University Press, the Journal has continued to improve in its impact and influence, and is now the highest rated microscopy journal (with an Impact Factor of 3.035). The success of the Journal has attracted more submissions, which leads to two problems, 1) we must now reject many borderline papers that might have previously been accepted, and 2) we must pay to publish more pages to keep up with the accepted papers. These are both good problems to have, and the society is in sufficiently good financial shape that we are able to meet these challenges without sacrificing other programs. I offer my congratulations and sincere thanks to Bob and the entire Editorial Board for a job well done!

With all the good news, it is easy to lose track of the work we still have to do for MSA to flourish in the long run. Student and post-doctoral researcher participation at the meeting, and in the society, lag behind most of our peer societies. To help address this, the MSA council moved to reduce student registration for the meeting to \$50, and to increase the number of student and post-doctoral travel fellowship available for meeting attendees. Hopefully, these initiatives will have immediate and lasting impacts on the demographics of the meeting attendance and society membership. Another concern is the scientific balance of the society. As the use of microscopy has exploded in biological research, MSA has not always provided the natural home for workers in those fields. The success of *Microscopy and Microanalysis* in attracting top-flight biological papers (one main reason for the Journal's increased impact factor) shows the interest in microscopy from these investigators, but few are members of MSA, and even fewer are regular attendees of M&M. A lot of biological research is done with optical and probe microscopies, which are outside the historical focus of MSA. The program committee has done an outstanding job over the years at providing symposia in these areas, but we still have not consistently drawn as many new attendees and members from those fields as we should be able to. I hope that the entire society will help us reach out to all microscopists and welcome them into our community in every way possible.

I have enjoyed the last year serving as your President. I hope that the council and I have left the society a little bit better than we found it. I know that we are in great hands for next year with Nestor Zaluzec as President, and I will look forward to greeting all of you here in Nashville, TN for M&M2011. With sincere thanks to all of you for your efforts and support of MSA

A handwritten signature in black ink, appearing to read 'David W. Piston'.

David Piston, 2010 MSA President



Meeting in Review, Microscopy and Microanalysis 2010

On August 1-5 2010, the annual Microscopy & Microanalysis Meeting was held in Portland, Oregon. This meeting is sponsored by the Microscopy Society of America and the Microbeam Analysis Society and serves as the annual meeting for the International Metallographic Society. International flavor was added to this year's meeting as the Microscopy Society of Canada was welcomed as a sponsoring society. The conference attracted a total of 2768 attendees from 34 countries (1,761 total scientific attendees), making the meeting the largest since the 2006 meeting in Chicago and the third largest M&M meeting ever in terms of attendance. The exhibition, always a key element of any M&M meeting, was a great success with 1007 exhibitor attendees from 108 companies occupying 333 exhibit booths.

2011 M&M Annual Meeting Website Now Online

The M&M conference is the premier meeting, spanning the physical, life and analytical sciences, which brings together delegates from around the globe who report on the latest work and advances in microscopy and microanalysis. Our Program Committee has once again put together a compelling suite of over 30 symposia reflecting the current state-of-the-art, as well as the innovative and emerging fields of research. Visit <https://www.microscopy.org/MandM/2011/index.cfm> to stay up to date on the latest announcements concerning the conference.

M&M Annual Meeting Website

The M&M meeting always features a Sunday evening reception prior to the beginning of the meeting to allow attendees to reconnect with their colleagues and look forward to the week's activities. For 2010, the opening reception returned to the Portland Zoo (this was also the site of the opening reception in 1999), a perfect location since it was just a short tram ride from the convention center and hotels. The excellent weather allowed conferees the chance to relax and mingle, and take in a variety of exhibits at the zoo.

The meeting focused on the latest developments in microscopy and microanalysis and their application in both the biological and materials sciences. Over 1000 oral and poster presentations were presented. This year saw a renewed focus on scanning probe microscopy, the microanalysis of surfaces, and a symposium celebrating the achievements of Nobel Laureate George Palade, who received a Nobel Prize for his work in determining the structural and functional organization of cells.

The opening day of the meeting featured a morning dedicated to plenary lectures, announcement of the 2010 class of MSA Fellows, and presentation of named awards by the joining societies. The first plenary speaker, sponsored by MSA, was Professor Mark Welland, head of the Nanoscience Centre at the University of Cambridge, who firmly established the interdisciplinary flavor of the meeting with his lecture entitled "What microscopy can tell us about Alzheimer's and related diseases". Professor Welland treated attendees to a fascinating description of his group's scanned-probe microscopy and nanomechanical analysis of fibrils that are major features of neurological diseases such as Alzheimer's. Welland, although a physicist by training, has expanded his research activities into a number of areas that cross into the biosciences. His presentation laid the foundation for continued focus on SPM and Alzheimer's in subsequent symposia throughout the week.

New MSA Fellows for 2010 included Ralph Albrecht, Lawrence Allard, Kenneth Downing, Joseph Goldstein, Michael Isaacson, Michael Miller, George Pappas, Stephen Pennycook, John Petrali, Zhong Wang and David Williams. Major Society award winners included Distinguished Physical Scientist - Michael Isaacson, Distinguished Biological Scientist - George Pappas, Burton Medal - Sergei V Kalinin, Outstanding Biological Technologist - E. Ann Ellis, and the Mort Maser Award - Pamela Lloyd.

Winners of the 2010 MSA Micrograph Competition included "PETN Pagodaville" (1st Place) by Barry Ritchey of Sandia National Laboratory, and "Trichonympha Triptych" (2nd Place) by Kevin Carpenter of Lawrence Livermore National Laboratory.

John Mansfield

Microscopy in Rio: A summary of IMC17

The International Microscopy Congress (IMC) is held every four years under the auspices of the International Federation of Societies for Microscopy (IFSM). The 17th International Microscopy Congress (IMC17) was held in the beautiful city of Rio de Janeiro, Brazil, during the week of September 19-24, 2010. This is the main international meeting of microscopists, and like our Microscopy and Microanalysis meeting, IMC-17 covered the frontiers of research and recent applications in the materials and life sciences under the rubric: "Revealing the Nanoworld in Life and Materials Sciences". Our hosts, the Brazilian Society for Microscopy and Microanalysis provided an outstanding venue and scientific program for IMC17. Although it was the end of the Brazilian winter, the weather was nonetheless fantastic and allowed for extended scientific and social discussions along the beach promenade or under the trees. Despite such compelling outdoor attractions, the sessions were filled with cutting edge presentations and all were very well attended.

One highlight of the meeting was the daily plenary symposia, which were given by Sumio Iijima (40 Years of High Resolution Conventional Transmission Electron Microscopy of Materials Science), Wolfgang Baumeister (Electron Cryomicroscopy: From Molecules to Systems), Knut W. Urban (Picometer Transmission Electron Microscopy), and Colin Humphreys (How Electron Microscopy and Atom Probe Tomography Can Help to Solve Some of the World's Energy Problems). It was a treat to see such international leaders all in one place. The Presidential symposium on Friday was also a star-studded affair, with Ahmed Zewail (Electron Microscopy and Spectroscopy in Four-Dimensions), Stefan Hell (Far-Field Optical Nanoscopy), Catherine Bréchnac (Growth and Ageing of Nanomorphologies), and Akira Tonomura (Electron Phase Microscopy Using a Field-Emission Electron Beam).

The major portion of the program consisted of 61 symposia, which were made up of a combination of invited and contributed talks organized in the general areas of Materials Science and Nanotechnology, Life Sciences, and Instrumentation and Techniques (these areas should sound familiar to anyone who has attended any of our recent M&M meetings!). The poster sessions were aligned with the symposia, and they were a big hit with large crowds in attendance every day. As usual, the poster boards also served as a useful meeting spot for extended discussions.

The materials symposia spanned many different fields, with special attention being directed towards energy and the environment, and developments in nanomaterials and nanotechnology. Many of the biological sessions focused on light microscopy, and these sessions each had 100-200 attendees, which shows the interest in this important area of microscopy. Other focus areas were parasitology, bacteriology, and virology. These fields are of primary importance in the tropics, and the breadth and depth of presentations was impressive in these sessions. In particular, the parasitology poster session had over 50 student posters, and was one of the most dynamic sessions. Instrumentation sessions covered the realm of microscopy, but one particular session that stood out was the "Crewe Memorial Symposium: Forty Years after First EM Images



of Single Atoms"; which proved to be an interesting preview to a similar symposium scheduled for the M&M2011 meeting that will be organized by Mike Isaacson and Ondrej Krivanek.

IFSM also held their General Assembly during the IMC meeting. The first order of business was to choose the site for the next IMC. The assembly voted to hold the 18th International Microscopy Congress in Prague, Czech Republic. IMC2014 will be entitled, "Microscopy for Global Challenges: touching atoms, molecules, nanostructures and cells by multidimensional microscopy"; and will be held September 7-12, 2014. It may be a bit early to mark your calendars, but we would encourage you to keep this meeting in mind. The IFSM general assembly also elected new officials. MSA continues to be well represented among the IFSM leadership as our own C. Barry Carter was elected IFSM President – congratulations, Barry! Brendan Griffin (also an MSA member) was elected General Secretary, and Christian Colliex will serve as the vice president. On the IFSM Executive Committee, MSA member Paul Fischione was elected to represent the corporate partners. Peter Ingram will continue his term for the next four years, as will Ueli Aebi. Newly elected members of the Executive Committee are: José L Carrascosa, Alan Craven, Kazuo Furuya, Joachim Mayer, Eva Olsson, Guillermo Solorzano, and Pavel Hozak (as the representative for IMC18 - Prague). One important bit of business was the approval of the revised consolidated Constitution for IFSM, which should allow the federation to operate more smoothly.

All in all, the scientific level and international camaraderie at the meeting was superb, and it was especially exciting to see the quality and enthusiasm of the student participants.

Review of MSA Award Winners Honored at M&M 2010 Annual Meeting

The Microscopy Society of America is proud to announce the recipients of the 2010 Major Society awards. All of the following individuals were presented with their awards at the annual meeting in Portland, Oregon.

Distinguished Physical Scientist – Michael Isaacson, *left*

Distinguished Biological Scientist – George Pappas, *right*



The Distinguished Scientist Awards recognize preeminent senior scientists from both the Biological and Physical disciplines who have a long-standing record of achievement during

their career in the field of microscopy or microanalysis.

Burton Medal – Sergei V Kalinin



The Burton Medal was initiated to honor the distinguished contributions to the field of microscopy and microanalysis of a scientist who is less than 40 years of age as of January 1st of the award year.

Outstanding Biological Technologist – E. Ann Ellis



The Outstanding Technologist Awards honor technologists from both the Biological and Physical Sciences who have made significant contributions, such as the development of new techniques which have contributed to the advancement of microscopy and microanalysis.

Mort Maser Award – Pamela Lloyd



This Award was initiated to recognize outstanding volunteer service to the Society as exemplified by Mort Maser, who served the Society for many years with great dedication. This award is made to honor an MSA member who has provided significant volunteer service to the Society over a period of years.

Other significant awards and scholarships were presented during the meeting, including the following memorial scholarships:

Eric Samuels Scholarship:

Monica Mendes – Characterization of Iron Ore via Combining Optical and EBSD Technic

Applicants for the Eric Samuels scholarship, sponsored by Oxford Instruments, were expected to submit abstracts that demonstrate some innovative approach to nanoanalysis, with an emphasis on obtaining analytical information. For example, this could have been the development of a new analytical technique or a sample preparation method that enables new applications or novel materials to be tackled.

Raleigh and Clara Miller Student Scholarship:

Paul Kempen – Utilizing Scanning Transmission Electron Microscopy to Locate and Image Raman Active Gold Core Nanoparticles in Mouse Tissue

This scholarship fund is provided by the family in honor of the parents of Dr. Sara Miller, past president of MSA. Both Raleigh and Clara Miller were keenly aware of the importance of education and strongly supported student activities.

Robert P. Apkarian Memorial Scholarship:

Mike Reichelt – Nuclear Sequestration of Virion Capsids in PML, Cages is a Cellular Defense against a Neurotropic Herpesvirus

Aaron Sakulich – Microanalysis of Autogenous Healing Products in Engineered Cementitious Composites (ECC)

The Robert P. Apkarian Memorial Scholarship provides support for a post-doctoral student to attend the annual Microscopy and Microanalysis Meeting. There are two awards per year.

Time to Renew Your MSA Membership!

The MSA renewal season is upon us. Members expiring on December 31st must renew either online (www.microscopy.org), via fax, phone or mail. We are happy to report that there has been no increase in fees again this year! A renewal mailing was sent to all members on or before November 15th.

If you are unsure of your membership status, or have questions, please call your MSA Association Office at (703) 234-4115.

MSA Undergraduate Research Scholarship Program

Several MSA Sustaining members have generously agreed to provide matching funds for the MSA Undergraduate Research Scholarship Program. These funds enable us to support an increased number of student projects for 2011.

The deadline for applications is December 31, 2010. To request an application, contact MSA Headquarters at (703) 234-4115 or associationmanagement@microscopy.org, or visit www.microscopy.org.

M&M Call for Papers Deadline is February 15

The M&M 2010 Annual Meeting Call for Papers was mailed to you in your Nov/Dec 2010 issue of *Microscopy Today*.

You can also find it online with FULL program details at: www.microscopy.org/MandM/2011/callforpapers.

Listed on the site are all Symposia & a Full Topic List, abstract submission requirements, the Paper Submission Portal, all Awards information and criteria, and details regarding Tutorials, Short Courses, and Intensive Workshops. Don't miss the deadline...submit your abstract today!

Conference at George Washington University, Announcement and Call for Posters

The Chesapeake Society for Microscopy, Center for Microscopy and Image Analysis (CMIA), George Washington University and American Society for Cell Biology are hosting a meeting and poster session on Monday, February 21st at George Washington University in Washington, DC. This annual event is an occasion for microscopists in the Washington, DC, Maryland and Virginia area to get together with other microscopists to discuss and show off their work.

Registration is available in advance on the Chesapeake Society for Microscopy website (www.csmicro.org) or on-site at the event. To present a poster, please submit an abstract on the Chesapeake Society for Microscopy website (www.csmicro.org). The submitted abstract will be reviewed and, if appropriate, accepted. You may also upload a digital image to the following website: <http://www.cellimagelibrary.org/pages/contribute>.

Prizes will be awarded for best poster and best digital image. Please contact Tommi White, CSM President (whitetommi@gmail.com) with questions.

Thank You to Outgoing MSA Leadership

The Society would cease to function if it were not for the help of dedicated volunteers. An even smaller group of volunteers will eventually rise in the ranks of leadership and help to steer MSA policy and the very future of the Society. At this time, we wish to take a moment to thank a select group of outgoing Council members and committee Chairs, who served honorably and were formally honored at the 2010 M&M Annual Meeting in Portland this past August.

Michael Bode – Sustaining Members Committee
Paul Fischione – Marketing and Communications Committee
JoAn Hudson – Council Member
Andree Kraker – Sustaining Members Committee
John M. MacKenzie – Education Committee
John Mansfield – 2010 M&M Annual Meeting Program Committee
Caroline Miller – Council Member
John Petrali – Certification Board
Phillip Russell – Council Member
David J. Smith – Council Member and President, 2008-2009

UPCOMING MEETINGS

Histochemistry 2011
Immunohistochemistry and Microscopy of Modified Forms of Protein
The Histochemical Society Annual Meeting
April 1-3, 2011
Marine Biological Laboratory, Woods Hole, MA
www.histochemistry2011.org

Immunohistochemistry and Microscopy
The Histochemical Society 2011 Short Course
March 27-April 1, 2011
Marine Biological Laboratory, Woods Hole, MA
<http://immunohistochem.com/>