



## *MicroNews*

Spring-Summer 2004 Newsletter  
of the Microbeam Analysis Society

<http://www.microbeamanalysis.org/>

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### **PRESIDENTIAL MESSAGE**

Dear MAS Members,

I hope that you are having an enjoyable year. Let me summarize MAS activities since December 2003 and preparations for the upcoming 2004 Microscopy and Microanalysis meeting in Savannah GA.

The membership has elected new MAS Council officers. Our MAS President-Elect is Inga Musselman of the University of Texas at Dallas. Inga brings a considerable level of both scientific and service experience to MAS and we are fortunate to have her as President in 2004-2005. Valerie Woodward is the new MAS Secretary, and as well Valerie brings a strong background in scientific problem solving as well as experience in both MAS and the American Chemical Society in officer positions. MAS has two new Council Directors, John Henry Scott of NIST, and Ed Vicenzi of the Smithsonian Institution. John Henry and Ed are excellent scientists and will aid MAS in our continued desire to achieve scientific excellence in our program and society functions. Please join me in welcoming our new officers when you have the opportunity.

In February, I had the pleasure of attending ACMM18, the 18<sup>th</sup> Australian Conference on Microscopy and Microanalysis, held in Geelong, Australia from February 2-6, 2004. The meeting was quite enjoyable, and I would like to thank Brendan Griffin, President of the Australian Microbeam Analysis Society, for his kind invitation to attend ACMM18. I would also like to thank Kath Smith, President of the Australian Microscopy

and Microanalysis Society, and Alex Hyatt, Convenor of ACMM18, for their wonderful hospitality during the conference. These folks did an excellent job of assembling a scientifically solid conference, with four parallel sessions and abundant opportunities for social interaction during morning and afternoon tea. The vendor exhibit areas were well set up and served as the mixing place for daytime tea breaks. Of particular interest for MAS members is that the Australian Microbeam Analysis Society and Australian Microscopy Society have formally merged. The AMAS meets both jointly and on their own in alternate years, and the groups work together to put on an excellent joint meeting, as we do with MSA in the M&M meeting format. I was impressed with the quality of science, the degree of interaction between scientists, and the level of organization that existed during the conference. I will continue to talk to our colleagues in these societies to better understand issues that they faced both before and after forming a merged society.

Following the ACMM18 conference, I visited the Center for Microscopy and Microanalysis at The University of Western Australia in Perth at the invitation of Brendan Griffin. The Center is an excellent instrumentation and educational facility, and there were a number of people present taking a training course while I was there. All in all, the scientific conference and social activities were well worth the trip over from the states, and I encourage you to attend the Australian conferences if at all possible (next year

the AMAS will meet separately). You may need to polish your skills in lawn bowling before you go—I did not.

In March, we held the MAS Winter Council meeting in Fort Worth, Texas, in conjunction with the MSA council. The two councils met separately for the majority of the weekend, but met jointly for several hours to discuss ideas about the possibility of a MAS-MSA merger. These discussions indicated that there is sufficient interest between members of both societies to begin more organized discussions about the concept and execution of a merger. After some discussions we assembled a merger committee to further discuss ideas concerning this issue. This committee will begin meeting by email and conference call in June, and we will receive feedback from them at the summer council meeting in Savannah. I invite and urge you to attend the MAS Business Meeting at 5 pm on Wednesday, August 4 at the M&M meeting in Savannah. At this meeting we will be discussing the merger, and the opinions and ideas of the membership are needed.

Later in March, the Program Production Meeting took place at the Westin Hotel and Savannah Convention Center in Savannah GA. During this weekend, we worked on aspects of the scientific program, evaluated the meeting and exhibit facilities in the convention center, and generally worked out details in anticipation of the upcoming M&M conference. Due to the excellent work of Ian Anderson as the Program Chair, we arrived in Savannah with a program that was substantially worked out, but during the weekend we repeatedly fine-tuned the sessions. I want to thank all of the program committee volunteers, session chairs, and the Rebedeau group folks for helping us finish the program in a painless fashion. The program is central to our M&M meeting, and it's only through the hard work of all these people that our meeting really comes together.

We have been working hard to make sure that the upcoming M&M meeting runs smoothly. Those of you planning to attend the meeting should be aware that all the conference hotels with the exception of the Westin are located across the Savannah river from

the convention site. Transportation between the riverfront hotels and the convention center will be handled with the water taxis that run between the Marriott and Hyatt hotels and the Convention center, as well as Gray Line busses that will run a circuit between the downtown hotels and the Convention center, with extra buses held in reserve. My advice is to leave early in the morning to go to the Convention center so that you arrive in time for the beginning of the sessions. We have arranged for both breakfast and lunch to be available for purchase at the Convention center so that you will be able to spend the entire day there with no need to return to the riverfront until the end of the day.

This year we have modified the calendar of events for our MAS activities. Our MAS social has been moved to Tuesday August 3 to allow extra time for our MAS Business Meeting which will be held on Wednesday August 4 as we normally do. Our joint MSA-MAS Presidential Reception has also been moved to Wednesday evening. Please refer to your Expo booklet for a summary of all activities during the conference.

I am proud of the accomplishments of MAS members and students and would like to take this opportunity to recognize them. This year's MAS Presidential awardees are John T. Armstrong, MAS Presidential Science Award, Joe Michael, MAS Presidential Service Award, and Tom Huber, MAS Presidential Special Award. The MAS Paper Awards for the 2003 M&M conference are P.G. Kotula, M.R. Keenan, and J.R. Michael recipients of the Birks Award; P. Goulet, N. Pieczonka, and R.F. Aroca, recipients of the Castaing Award; D.P. Adams, recipient of the Cosslet Award; and D. OHara, recipient of the Macres Award. Our MAS Distinguished Scholar student awardees are Kristin Bunker, Hendrix Demers, Paula Horny, Poh Ng, Rachael White, and Vasiliki Zorbas. The recipients of the Paper Award for the Microscopy and Microanalysis Journal are P. Kotula, M.R. Keenan, and J.R. Michael. Our society is built on the accomplishments of scientists such as these award winners. Please make sure that you congratulate them at the M&M meeting during the week that we are in Savannah.

Looking to the future, in our continuing effort to support strong scientific programs, MAS will be a sponsor of the upcoming 2005 Goldschmidt Conference to be held in Moscow, Idaho, May 20-24, 2005. MAS will be involved with as many as 5 sessions related to microanalysis topics, with at least one session dedicated to quantitative x-ray microanalysis. Greg Meeker, Ed Vicenzi, and I have committed to supporting this meeting, and we are actively seeking MAS scientists to serve as session chairs and to deliver platform presentations. The Goldschmidt conference concentrates on the topics of geochemistry, mineralogy, petrology, and many aspects of analytical chemistry, and should be a rewarding experience for MAS scientists. As you know, meetings like Goldschmidt and our topical conferences provide a focused program that many find very satisfying. More information can be found at the web site: <http://www.the-conference.com/2005/gold2005>

We are continuing to work on meeting plans with our colleagues at NIST on our successful topical conferences. This fall NIST will offer a topical conference titled "Modeling Electron Transport for Applications in Electron and X-ray Analysis and Metrology", November 8-10, 2004. This workshop will be supported by NIST, MAS, AVS, and MAMAS. We will send out more information by email for this exciting meeting.

MAS also supports the EMAS 2005 / IUMAS-3 conference in Florence, Italy during May 22-26, 2005. Inga Musselman will be MAS President in 2005, and will attend the meeting in Italy to represent MAS. I encourage those of you who can attend EMAS 2005 to do so, as the scientific program will be excellent and I am sure that Italy will provide spectacular memories.

I would like to take this opportunity to thank MAS Directors Paul Kotula and Charlie Nielsen for their time and efforts on MAS Council as they rotate off duty to return to their normal lives. I also wish to thank all MAS Council officers and those serving on committees for their continuing dedication to making MAS a better society. In particular, I would like for all MAS members to join me in celebrating the career-long dedication that Tom Huber has made to MAS as our Corporate Liason

representative. Tom is the recipient of the 2004 MAS Presidential Special Award, in recognition of his long association with MAS and special relationship between the corporate and scientific members of the society.

I hope to see you in Savannah. Please do not hesitate to contact any MAS council member to talk about any issue that you feel is important.

Sincerely,  
Paul Carpenter  
MAS President

## EDITOR'S NOTE

Many apologies for missing publication of the Spring issue of MicroNews. I had good intentions but with a "not too surprising" lack of time! We at NIST made a big move in April into brand new spaces not without numerous difficulties, some foreseen and others unanticipated. We're now back to the normal routine with plenty of new room for experiments and thought.

So I've here combined the Spring and Summer issues into one. I hope you don't mind. You will see changes in this issue that come about since MAS no longer has to pay for printing. There now is no restriction on the size of articles therefore reducing the amount of editing required. In addition, there is now room for miscellaneous articles such as the one in this issue reviewing the MSNO Spring meeting in Ohio.

Ryna Marinenko

## MEMBERSHIP SERVICES

Microscopy and Microanalysis 2004 is just around the corner. This year the meeting will be held in Savannah, GA on August 1-5. The M&M meetings offer you the chance to stay current with the latest techniques and instrumentation in your field, cutting-edge technologies and to learn about microanalytical developments in other scientific areas. It also gives you the opportunity to personally network with other researchers and technologists in your discipline, establish new professional relationships, to meet old friends and to see the newest instrumentation in the commercial exhibition. Please join us for the Presidential Happenings and other MAS sponsored events, and stop by the MAS booth to meet your society's officers.

Although the membership has stabilized, I think that if we all took a look around our workplace, we can find at least one co-worker or student who is not a member. Why not encourage them to join MAS? You, as a member, must feel it is worthwhile to support MAS. Spreading the word is the best way to attract new members. As always, we would like to hear from you regarding suggestions on maintaining the health of MAS.

Best regards,  
Lou Ross  
Membership Services

## MAS TOUR SPEAKER PROGRAM

The MAS Affiliated Regional Societies contact list is on webpage -<http://www.microbeamanalysis.org/mas/masas/masas.html> - . If you note any mistakes, please contact me. I expect a few societies have changed officers recently and may want a new MAS contact listed.

We are having a busy tour speaker year since this one began after M&M 2003. I attribute most of this to the high quality and good diversity of our tour speaker line up.

At this time, MAS has sent Tour Speakers to 9 societies. It looks like no one plans to schedule a speaker in June or July.

The societies visited, the speakers, and the dates are:

Society	Speaker	Date
<i>Finished</i>		
AIMS	Vicenzi	March 4, 2004
AREMS	Kotula	Oct. 2-3, 2003
CDMMS	Meeker	Dec. 10, 2003
CoMAS	Vicenzi	April 29, 2004
CSM&M	Ward	May 7, 2004
M <sup>3</sup> S – MdWst	McKernan	Nov. 14, 2003
MMM – MI	Kotula	April 15, 2004
MNSO	Meeker	Oct. 16, 2003
NESM	Kotula	May 7-8, 2004

Remember, MAS pays for the visit by our tour speakers (as long as you go through me) so you get a speaker for your program (once a year) at no cost to your society. But you have to initiate the request or nothing happens.

And I hope that all of the Affiliated Society contacts will plan on attending our annual luncheon meeting to pick next year's speakers. The meeting will be on Wednesday, August 4, 2004 in Salon B of the Westin, right next to the convention center. As usual, the meal will be a refreshing, cold buffet. It is not too early to start thinking about possible candidates.

Respectfully submitted,  
Paul F. Hlava

## Microscopy Society of Northeastern Ohio (MSNO) Spring Meeting – April 27<sup>th</sup>, 2004

MSNO was pleased to host Dr. Janie Dubois of the USFDA and Dr. Edgar Etz of NIST as the speakers for the MSNO Spring Symposium. Edgar is immediate past-president of MAS, and chair of the very popular Infrared and Raman Microanalysis Sessions at recent M&M meetings. Edgar was also “instrumental” in bringing in Dr. Dubois, who made a presentation at the 2002 Quebec City M&M meeting in one of Edgar's sessions. Their talks capped a “Year of Microanalysis” during the tenure of MSNO president Valerie Woodward (currently MAS secretary).

Dr. Dubois's talk was “Infrared Microscopy and Imaging in Disease Diagnosis: Because a Picture is Worth a Thousand Words...” She spoke about the to-date limited use of the IR method in disease diagnosis (because of interpretational difficulties), and how the addition of the microscope to the spectrometer has opened up the field. Now, a researcher can obtain chemical and locational information that is quite specific, rather than a bulk analysis. The molecular composition of excised tissues can provide valuable information about biological events, such as cancer, affecting the biochemistry, sometimes even before symptoms appear. In the near infrared region, critical information about hydration and blood oxygenation are readily available. This presentation provided a discussion of a broad range of successful applications of infrared microscopy and imaging in the areas of cancer diagnosis, Alzheimer's, prion diseases, dermatology and the terrorism preparedness effort.

Dr. Etz' talk was “Micro-Raman Spectroscopy for Materials Characterization at NIST.” Edgar discussed the evolution of Raman microanalysis, from the 1970's to the present, and how it is now a widely adopted methodology for obtaining molecular/structural information on the microscopic scale, with spatial resolution typically at the micrometer level. It is frequently used in conjunction with IR microspectroscopy. A variety of problems have been investigated at NIST using micro-Raman spectroscopy, and highlights were presented from recent work on the application of micro-Raman spectroscopy to the study of (i) carbons and CVD diamond, (ii) thermal-barrier zirconia ceramic coatings, and (iii) particulate samples of high-explosives taken to high temperatures. Edgar wrapped up the talk with a discussion of ongoing work toward the development of Standard Reference Materials (SRMs) for Raman spectroscopy, such as SRM 2241 and SRM 2242, which have now become available for the correction of the relative Raman intensity.

Valerie Woodward

## MEETINGS & COURSES

### Meetings

**MICROSCOPY & MICROANALYSIS 2004**, Aug. 1-5, 2004, Savannah, GA

Contact: Mary Beth Rebedeau, Chicago: Fax (708)361-6166, email: [MSA@tradeshownet.com](mailto:MSA@tradeshownet.com), or web: [msa.microscopy.com](http://msa.microscopy.com)

**SIMS Europe 2004: Workshop on Secondary Ion Mass Spectrometry**, Sept. 26-29, 2004, Muenster, Germany

Contact: [bennial@uni-muenster.de](mailto:bennial@uni-muenster.de)

**FACSS:2004**, Oct. 3-7, 2004, Portland, Oregon

Contact: [www.facss.org](http://www.facss.org)

**Modeling Electron Transport for Applications in Electron and X-ray Analysis and Metrology**, Nov. 8-10, 2004, NIST, Gaithersburg, MD 20899

Contact: [dale.newbury@nist.gov](mailto:dale.newbury@nist.gov)

**Eastern Analytical Society**, Nov 15-18, 2004, Garden State Convention Center, Somerset NJ.

Contact: [www.eas.org](http://www.eas.org)

**PITTCON 2005**, Feb. 27- Mar. 4, 2005, Orange County Convention Center, North/South Complex, Orlando, Florida

Contact: +1 412 825 3220, or [www.pittcon.org](http://www.pittcon.org)

**SCANNING 2005**, May 7-9, 2005, Monterey, CA,

Contact: [scanning@fams.org](mailto:scanning@fams.org) [www.scanning.org](http://www.scanning.org)

**Goldschmidt Conference**, May 20-26, 2005, Moscow, Idaho

Contact: [www.the-conference.com/2005/gold2005/index.php](http://www.the-conference.com/2005/gold2005/index.php)

**IUMAS 2005, Third Meeting of the International Union of Microbeam Analysis Societies**, May 22-26, 2005, Florence, Italy

Contact: [luc.vantdack@ua.ac.be](mailto:luc.vantdack@ua.ac.be), or

<http://www.emas.ac.uk/emas2005>

**MICROSCOPY & MICROANALYSIS 2005**, Aug. 1-5, 2005, Honolulu, Hawaii

Contact: Mary Beth Rebedeau, Chicago: Fax (708)361-6166, email: [MSA@tradeshownet.com](mailto:MSA@tradeshownet.com), or web: [msa.microscopy.com](http://msa.microscopy.com)

**MICROSCOPY & MICROANALYSIS 2006**, Aug. 6-10, 2006, Chicago, IL

Contact: Mary Beth Rebedeau, Chicago: Fax (708)361-6166, email: [MSA@tradeshownet.com](mailto:MSA@tradeshownet.com), or web: [msa.microscopy.com](http://msa.microscopy.com)

**ICEM XVI**, Sept. 3-8, 2006, XVI Internat. Cong. on Elect. Microsc., Sapporo, Japan

Contact: email: [xvi\\_icem@nims.go.jp](mailto:xvi_icem@nims.go.jp) or web: <http://edpex104.bcasj.or.jp/jsm/eng/icem/icemxvi/html>

**MICROSCOPY & MICROANALYSIS 2007**, Aug. 5-9, 2007, Ft. Lauderdale, FL

Contact: Mary Beth Rebedeau, Chicago: Fax (708)361-6166, email: [MSA@tradeshownet.com](mailto:MSA@tradeshownet.com), or web: [msa.microscopy.com](http://msa.microscopy.com)

**MICROSCOPY & MICROANALYSIS 2008**, Aug. 3-7, 2008, Albuquerque, NM

Contact: Mary Beth Rebedeau, Chicago: Fax (708)361-6166, email: [MSA@tradeshownet.com](mailto:MSA@tradeshownet.com), or web: [msa.microscopy.com](http://msa.microscopy.com)

### Courses

**Optical Microscopy and Imaging in the Biomedical Sciences Course**, Oct. 5-14, 2004, Marine Biological Laboratory, Woods Hole, MA

Contact: Carol Hamel: [admissions@mbi.edu](mailto:admissions@mbi.edu) [www.mbl.edu/education](http://www.mbl.edu/education)

### Affiliated Societies' Meetings

**AREMS**, visit web site for information

<http://www.uvawise.edu/arems/index.html>

**CSMMS**,

Contact: Randy Tindall, (573)882-8304 or [tindallr@missouri.edu](mailto:tindallr@missouri.edu), or Lou Ross (573)882-4777 or [rosslm@missouri.edu](mailto:rosslm@missouri.edu)

**MMMS**, visit web site for information: <http://www.msa.microscopy.com/MSALAS/MMMS/MMMSHomePage.html>

**MMS**, visit web site for information

<http://www.MNmicroscopy.org>

**MSNO**, visit web site for information

<http://www.msneo.org>

Contact: Ed Boyd, (216)447-6198, [ed.boyd@noveoninc.com](mailto:ed.boyd@noveoninc.com).

**NCSEMMA**

Contact: Peter Ingram or Ann LeFurgey; email: [p.ingram@cellbio.duke.edu](mailto:p.ingram@cellbio.duke.edu) or [a.lefurgey@cellbio.duke.edu](mailto:a.lefurgey@cellbio.duke.edu)

## NESM

Contact: Rick Rogers, Harvard School of Public Health, Boston, MA, [rogers@bioimage.harvard.edu](mailto:rogers@bioimage.harvard.edu) Tony Garratt-Reed, MIT, Cambridge, MA, [tonygr@mit.edu](mailto:tonygr@mit.edu)

## SEMS

Contact: John Shields, email: [jshields@cb.uga.edu](mailto:jshields@cb.uga.edu) or web: <http://www.biotech.ufl.edu/sems>

- Electron Energy Loss and X-ray Absorption Spectroscopies: Focus on Anisotropic Properties (Tues - Wed)
- Accessorizing the SEM (Wed)
- FIB/Dual Platform Applications and Techniques in Bio and Phys Sciences (Wed-Thurs)
- In-Situ Characterization of Dynamic Processes by VPSEM (Thurs)

## MICROSCOPY & MICROANALYSIS 2004

The Executive Program Group for Microscopy and Microanalysis (M&M) 2004 set out with the challenge of drafting a compelling scientific program for the annual meetings of the Microbeam Analysis Society (MAS) and the Microscopy Society of America (MSA) that would be equal to the excitement of organizational change being discussed by the societies. We feel that we have met the challenge, providing a diverse and balanced program that looks forward to new opportunities and presents the current state-of-the-art for microscopy and microanalysis. For the third consecutive year, the program is strengthened by the co-sponsorship of the International Metallographic Society (IMS), which is fast becoming an annual partner in the M&M meetings.

Microscopy and Microanalysis is the largest annual meeting of its kind in the world, and features an awesome commercial exhibit of equipment and accessories, with the latest commercial innovations featured and available for hands-on demonstration. At the same time, we anticipate that M&M 2004 will have an intimate feel – mirroring the legendary Southern hospitality of the area – as the Savannah Convention Center is perfectly matched to the size of our meeting. All meeting rooms are in close proximity to one another and to the Exhibition Hall, and are fully utilized throughout the five days of the meeting.

Technical symposia have been organized to cover advances in microscopy and microanalysis instrumentation and techniques as well as a variety of biological and physical sciences applications, with a deliberate emphasis on crosscutting methods that bring representatives of different communities together to exchange information that will enable particular scientific challenges to be addressed. Symposia of particular interest to MAS members include:

- Quantitative X-ray Microanalysis: Focus on Extraterrestrial and Terrestrial Specimens (Mon-Tues)
- Micro X-ray Techniques: New Compositional and Structural Characterization Tools (Mon-Tues)
- Scanned Probe Microscopy: Probing Interfaces at the Nanoscale (Mon-Tues)
- Microscopy and Microanalysis in Catalysis (Mon-Tues)

In addition, there are several special events that are organized by MAS. These include the MAS Presidential Happenings (Tuesday noon), which includes a talk by MAS Presidential Science Award Winner Dr. John Armstrong on “Advances in Electron Probe Microanalysis”. The MAS Business Meeting and Members Social will take place Tuesday evening.

For the latest information, registration forms, and housing information, go to the M&M 2004 website at [www.msa.microscopy.com/MSAmeetings.MM04/Mmhomepage.html](http://www.msa.microscopy.com/MSAmeetings.MM04/Mmhomepage.html)

We look forward to seeing you in Savannah!

**Ian Anderson**, MSA Program Chair

**Bob Price**, MSA Program Vice-Chair

**Ernie Hall**, MAS Program Co-Chair

**Elliot Clark**, IMS Program Co-Chair

**Paul Kotula** (*ex officio*)

**John Henry Scott** (*ex officio*)

## 2004 NIST-MAS-AVS WORKSHOP

### Modeling Electron Transport for Applications in Electron and X-ray Analysis and Metrology

NIST, Gaithersburg, MD 20899

November 8-10, 2004

In 1975 NIST held a Workshop on Monte Carlo electron trajectory simulation techniques for electron-probe microanalysis and scanning electron microscopy. What was then an expensive and slow computer calculation can now be carried out many thousands of times faster with much more detail on any personal computer. Monte Carlo techniques have become a practical tool to support a variety of measurement problems in microscopy, microanalysis, radiation physics, and other applications. NIST will hold a Workshop November 8-10, 2004, co-sponsored by the Microbeam Analysis Society and the American Vacuum Society, to highlight progress and determine directions for future development of electron-simulation techniques and the needs for electron-interaction data. This Workshop will bring together experts in the physical theory and data that support the simulation techniques as well as scientists and engineers who develop models and obtain results for specific applications. Applications will include x-ray microanalysis of particles, rough and layered surfaces, Auger analysis of near-surface features, testing of matrix-correction procedures for bulk analysis, metrology of sub-micrometer scale

features in SEM images, low-voltage and ultra-low-voltage microscopy simulation, radiation physics, etc. A planned poster session will include demonstrations of relevant software and databases. Authors of papers presented at the Workshop are invited to submit manuscripts for the Workshop Proceedings that will be published in a special issue of the journal *Surface and Interface Analysis*.

There is no fee for this workshop, but pre-registration is required. For registration information contact: dale.newbury@nist.gov

## **MAS and the 15<sup>th</sup> Goldschmidt Conference**

MAS will be a Sponsoring Society for the 15<sup>th</sup> annual Goldschmidt Conference in Moscow Idaho, **20 - 24 May 2005**. The Goldschmidt Conference is the premier annual meeting in geochemistry and mineralogy. This meeting in Idaho will cover the full range of geochemistry from cosmochemistry to the origin of life. It will be special because 2005 is the 50th Anniversary of the Geochemical Society. The conference also takes place during the bicentennial of the Lewis and Clark expedition - the Corps of Discovery. The 2005 conference will feature several microanalysis related sessions. Ed Vicenzi, MAS Director, is a co-organizer of the microanalysis portion of the program and Greg Meeker is the MAS representative to Goldschmidt 2005. Additional information will be passed on as it becomes available. The web site for Goldschmidt 2005 is <http://www.the-conference.com/2005/gold2005/index.php>.

## **MAS LISTSERVER**

The Microbeam Analysis Society listserver is operational with low volume and guaranteed spam free. The MAS listserver is a moderated list, which means that every message is approved by a human checker before being passed onto subscribers. This is one way of controlling unsuitable, or unwanted, messages, however it does cause a delay between the time of posting a message and the time it is sent to the readership.

The purpose of the MAS listserver is to provide a forum for the dissemination of Society business and a discussion forum for issues related to microanalysis. This includes but is not limited to electron probe microanalysis, standards, correction procedures, etc. The listserver will not accept attachments, advertisements, resumes, spam, chain letters, political statements, flame wars, anonymous submissions, and others at the discretion of the moderator/checker. The checker monitoring the inputs is a MAS member in good standing that has volunteered to take on this responsibility. There is not any digest options nor is there any searchable archive.

To participate you first must SUBSCRIBE:

Send a text only (not html) email to <majordomo@microprobe.org> in the body of the message: subscribe maslistserver

There will be a delay while your subscription is approved.

Once you are subscribed to SEND A MESSAGE to all subscribers:

Send email to <maslistserver@microprobe.org> the label <maslistserver> will automatically be appended to the subject line of every message to make filtering messages easier. You will only be allowed to send a message from the email address you subscribed as. There will be a delay before your message goes out to subscribers while it is approved.

If you have any questions or problems with the process please let us know at [webmaster@microprobe.org](mailto:webmaster@microprobe.org).

Scott Wight

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