MRS
INTERSECTIONS
Materials Research & Science Policy
News and information from the MRS Government Affairs Committee
Advancing materials. Improving the quality of life.

Welcome to our 2nd Issue! Things have been very exciting for the US Government and for the MRS Government Affairs Committee. We have plenty to share this quarter and hope that this letter piques your interest, helps you learn more about government affairs and stimulates you to become involved with advocacy. Enjoy the newsletter!

Change in Government Affairs Committee Leadership

Upon his election to the MRS Board of Directors where he is now chairing the Board's Planning Committee, Duane Dimos has stepped down as the chair of the MRS Government Affairs Committee after serving in that role for three years. Under his leadership, Duane solidified government advocacy as an MRS core competency. Despite its relatively small size, MRS is now known as a major player in science advocacy thanks to Duane's dedication.

Taking up the leadership of this committee is Alan Hurd from the Los Alamos National Laboratory. Alan's experience with government affairs leadership started with the chairing of the Public Outreach Subcommittee of the MRS Public Affairs Committee, 1998-2001 (in the years before the MRS Public Affairs Committee formally split into the Government Affairs and Public Outreach Committees), in order to foster the success of the Strange Matter traveling museum exhibit(s), the first major public outreach investment by MRS. A founding "Materials Microworld" (now Strange Matter) task force member, Alan promoted public appreciation of science as an impetus for government research funding. New opportunities soon arose when, in answer to the rooting of the American Competitiveness Initiative with fertilization from the National Academy of Science's Gathering Storm Report in 2005, Alan argued successfully for a major MRS push in government advocacy as his vice presidential initiative, with a goal of sustained Societal investment starting in 2007, his presidential year.

A Message from Our New Government Affairs Committee Chair

Alan J. Hurd

Greetings, MRS members! I am pleased and humbled to chair your Government Affairs Committee in this historic time. Writing shortly after the State of the Union Address on January 25, 2011, I am pleased to have heard what is arguably the strongest comments yet by a US president about the essential agenda the MRS has advocated through GAC activities since 2005: Innovation and creativity through research are the best ways--perhaps the only ways--to meet challenges in both the global economy and energy technology. Whether you reside in the US or elsewhere, this message is getting greater attention in centers of government. The Government Affairs Committee mission is to provide a conduit for this message to reach policy makers. Please help us help you by participating in advocacy at all levels. Check out the Advocacy Web site at www.mrs.org/advocacy/ to see the many ways you can become involved.

What's Happening in Washington

The mid-term elections have caused a dramatic change in the 112th Congress. Republicans now control the majority in the House of Representatives (242-193), and this creates a divided government for the next two years with the Senate still under Democratic control (53-47). A total of 94 new members have been elected to the House and 15 new members to the Senate. Many of these new members of Congress have come to Washington to reduce the size of the federal government and overall spending. Discussion and legislation that are focused on reduced appropriations present a substantial challenge for MRS as we focus our advocacy messages on the importance of funding for research as a critical long-term investment which positively impacts our economy and our national defense.

Congress has now finalized all of the assignments for leadership and committee membership. The House Science & Technology Committee is being renamed to the Science, Space, and Technology Committee reflecting the interests of both new Chairman, Ralph Hall (R-TX), and new ranking minority member Eddie Bernice Johnson (D-TX). The House Appropriations Committee will be led by Chairman Hal Rogers (R-KY) and the subcommittee chairs for Energy & Water, and Commerce, Justice, and Science will be Rodney Frelinghuysen (R-NJ) and Frank Wolf (R-VA), respectively.

At the end of 2010, Congress came back after the elections during a "lame-duck" session and passed a number of bills in the final weeks. One of the bills which passed was the Reauthorization of America COMPETES. The legislation, HR 5116, was signed by President Obama on January 4. This bill has been a top legislative priority for MRS. Congratulations to everyone who has helped with Congressional visits, letter writing campaigns, op-eds in local newspapers, as well as personal visits and phone calls to staff.

The original America COMPETES Act of 2007 was a bipartisan legislative response to the recommendations of the National Academy of Science report "Rising Above the Gathering Storm" that included proposed doubling of the budgets for the National Science Foundation, the Department of Energy's Office of Science, and the National Institute of Standards and Technology. Maintaining this commitment to sustained funding increases in research over a ten year period is important in setting the stage for year-to-year appropriations. The reauthorized bill also continues support for many education initiatives designed to positively impact our global competitiveness. As was the case with the original legislation, the reauthorization bill, HR 5116, will be reconsidered again after a three-year period.

Unfortunately, the current year FY2011 federal budget has still not been approved by Congress at this writing, 30% through the fiscal year. There is a continuing resolution in place which keeps federal funding at the FY2010 levels until early March of this year. We expect to see some final decisions on both the FY2011 and FY2012 budgets as this year proceeds forward. Substantial budget reductions are currently being proposed that will dramatically impact many areas of science even in FY2011. Throughout the appropriations process we plan to insert MRS members' views on the importance of basic research. If you live in the US, please continue to watch for opportunities to write to your members of Congress (your Representative and your two Senators) via **Materials Voice** from the Advocacy Section of the MRS website at http://www.mrs.org/materials-voice/.

On February 14 President Obama submitted to Congress his proposed budget for the next fiscal year, FY2012. In his State of the Union Address, President Obama cited his emphasis on innovation and creativity through science, technology, energy research, and education. The specific details of the proposed FY2012 budget call for increased spending in the physical sciences and attention to our global competitive position. These budget priority decisions have been made while other programs are being reduced. The outcome of the President's proposed spending plan will be debated in the same environment in Congress evaluating this year's budget. At the moment, there is no clear consensus between the two parties.

Congressional Visits Day

For two days on April 6 and 7, 2011, delegations including several MRS members will visit the lawmakers that set funding and other policies that have a direct effect on the advancement of science in the United States. Material drawn from studies such as those presented in the booklet "Advanced Materials for our Energy Future" (highlighted in Issue 1of INTERSECTIONS) and the findings of "Rising Above the Gathering Storm" are used to educate our representatives on the importance of science and technology as cornerstones of our nation's future. This year, delegates from a wide range of scientific minded societies, including MRS, will be delivering the core message that "Effective competitiveness and innovation policies will sustain US technological leadership; encourage development of a skilled, creative and competitive workforce; and lead to robust job growth across the country."

The participating societies are affiliated through SETWG, the Science-Engineering-Technology Working Group, a collection of over 30 organizations whose collective mission is to advocate for "the future vitality of the US science, mathematics, and engineering enterprise." On April 7, they meet with staff and members of the House and Senate. Participation in congressional visits day is voluntary, and a brief but thorough training session is provided by the organizing committee for the event. The MRS member and Congressional Visits Day Subcommittee Chair who focuses on this particular event is Bart Sheinberg. More information and information on possible participation in future congressional visit day events is provided on the MRS advocacy webpage www.mrs.org/advocacy/.

Congressional Fellows Corner

Our current MRS/OSA Congressional Science and Engineering Fellow, Dr. Ashley White, is establishing herself in the office of Sen. Al Franken and we look forward to bringing you an update on her progress in a future issue. As she begins making her mark as a scientist in Washington, we thought we would check in on a former MRS Congressional Fellow to let her describe the experience and share with you the activities associated with the fellowship awarded yearly.

For this edition of Congressional Fellows Corner, we spoke with 2004-2005 MRS/OSA Congressional Science and Engineering Fellow, Dr. Karin Ezbiansky Pavese. A 2000 doctoral graduate in inorganic chemistry from the University of Pennsylvania, Dr. Pavese moved on from her position at General Electric to accept the fellowship appointment.

Upon joining the office of Sen. Lieberman as a Science and Technology Legislative Assistant, Karin found, as she expected when applying, that there was "a steep learning curve… broadening my work scope even further than the numerous projects [I] was responsible for at General Electric." That great breadth of new experience is evident when Dr. Pavese's proudest accomplishment from her tenure is observed. She played a key role in developing legislation that was meant to address American competitiveness and innovation in science and technology. In 2007, that legislation was finally passed into law, becoming the America COMPETES Act that has been supported by MRS (and many other science minded societies) since that time.

Certain things had definitely changed in her freedom to truly delve into projects the way she did working on spin-on-dielectric films or as a Six-Sigma Black Belt rolling out product for General Electric. "What I did not expect, was how little time I would have to learn anything beyond the surface. You really relied on outside experts to provide you with good information. Given the many tasks and projects you were asked to own, it was nearly impossible to learn anything in any depth. This, I think, is a challenge for any person with scientific training." Regardless of the challenges, the experience as Congressional Fellow certainly seems to have "100% changed the direction of [her] career" for good. Dr. Pavese currently does very similar work to her Congressional Fellow duties in a different arena. She is now in New York City as the Vice President of Innovation and Sustainability at a non-profit, the New York Academy of Sciences.

Branching out from the original federal level work (though still in touch with her Washington, DC network), Dr. Pavese has now led collaborations with New York City, Mexico City, New York State, Malaysia and Russia. Her recent accomplishments are as diverse as external audits of national science and technology policies to review and inventory of clean technology research and development assets to advise local government on investment. Since being awarded the MRS/OSA Congressional Science and Engineering Fellowship, she has presented to foreign heads of state and provided testimony to several state and local governments. As you might expect she speaks glowingly of the opportunity. Though she speaks fondly of time spent in graduate school and the private sector, when speaking of her time on Capitol Hill, she says "I absolutely loved it…I felt that I had found my calling."

Information about the MRS Congressional Science and Engineering Fellowship program and application process can be found at www.mrs.org/congressional-fellows/.

Government Affairs at the 2010 MRS Fall Meeting

Materials Voice – Your Voice Resonating on Capitol Hill

Another successful session of the Materials Voice booth (which utilizes pre-written letters to email Congress about important public policy issues related to materials research) was conducted in Boston at the 2010 MRS Fall Meeting. A comment received often by the booth operators from our more knowledgeable participants was concern that a vote on any of the issues we were advocating for was unlikely so as to make the letter writing an unfortunately wasted effort. As we know now, the "Lame Duck" period of the 111th congress was surprisingly active and that enough time was spent on the House floor to vote on America COMPETES, the MRS Government Affairs Committee's major focus for 2010. Though we know we can't take full credit, we believe that our amplified voice through your participation helped carry the passing of the legislation we feel was so vital to a large percentage of the MRS membership.

We are pleased to announce that 261 unique MRS members participated by sending over 2700 letters that were pre-drafted by MRS committee members, and many of you took the time to write more personalized versions. For those of you who did not send letters, they are available on the MRS website at www.mrs.org/materials-voice. Please take a moment to visit the site and send a message to Congress!

Building on this proven success and momentum of advocacy for science and engineering research, we look forward to seeing you in San Francisco at the Materials Voice booth once again as we work to keep the priorities of our membership near the forefront of the governing process in Washington, DC.

In addition to organizing your letter writing campaign, the MRS Government Affairs Committee also sponsored several events at the 2010 MRS Fall Meeting, including the "Science Policy Forum - APS/MRS Energy Critical Elements Policy Study Briefing," and several individual Government Agency Presentations detailing materials research priorities and funding opportunities. Agency participants included: DARPA, DOE, NIH, NIST/TIP, and NSF.

Measuring by attendance and response, the sessions were greatly appreciated by the membership. The content, ranging from highlights of the upcoming year's key topics to tips and advice on grant proposal writing and submission, is always of substantial member interest. Many members took the opportunity to meet program managers for one-on-one conversations. While we advocate for more government support of basic science research, these sessions allow the MRS Government Affairs Committee to complete the circle by helping to ensure that government support reaches the members we represent.

Government Agency Outreach

The Government Agencies Leadership Summit in January 2010 brought together the various materials science representatives of several government funding agencies, including AFOSR, ARO, DARPA, DOE, NIST/TIP, NSF and ONR, together with the leadership of ASM, TMS and MRS in an effort to find areas where they could better help each other and their constituents through collaborative means. In addition to the primary role of the Government Agency Subcommittee, which includes arranging the Government Agency Sessions at the MRS Spring and Fall meetings (Tues/Thurs evenings), from this summit two additional initiatives were undertaken.

Beginning this past January, Joshua Caldwell, the chair of the MRS Government Agency Subcommittee along with Gopal Rao of Materials360° began soliciting invited articles from government funding agencies addressing new funding initiatives, proposal requests and/or updates and highlights of their materials related programs. Having launched this initiative in the January 15th edition, Materials360° will be publishing one such article a month. The first article, entitled "Beyond Graphene - Novel Nanosheets of 2D Crystalline Materials with Revolutionary Properties" by Pani Varanasi of the Army Research Office, highlighted a new area of funding by ARO. Subsequent articles by the Office of Naval Research (Feb Edition), the NIST Technology Innovation Program (TIP) (March Edition) and another article from ARO (April Edition) are scheduled.

In addition, MRS is soliciting objective analysis of the most exciting and highest impact presentations from the Spring and Fall meetings, sharing that along with attendance statistics with the materials program managers of the government funding agencies. The hope is that by providing this insight, the agencies may get on the leading edge of new exciting research so that seed funding can be procured to foster a fledgling area and/or reinvest in an area based on a new enabling development in a given field.

Based on the success of these initiatives and in an effort to keep the spirit of collaboration going, the second Materials Government Agencies Leadership Summit is tentatively planned for early Summer 2011. To keep these efforts going, additional assistance is needed to help with organization, scheduling and data analysis. If you are interested in volunteering, please contact Joshua Caldwell (joshua.caldwell@nrl.navy.mil) or Sandra DeVincent Wolf (swolf@mrs.org) for more information.

In the Next Issue…

Energy Critical Elements: Securing Materials for Emerging Technologies

Increasing demands for energy applications combined with the expanded use of many critical and often scarce elements – e.g. rare

earth elements, tellurium, indium, and others uniquely essential to sustainable energy technologies – have been gaining the attention of governments, private industry, academia, and global metals and mineral producers. A science policy study was commissioned to evaluate constraints on availability of energy critical elements that might inhibit the large scale deployment of new technologies for the production, transmission, efficient use, or conservation of energy, and to make recommendations that would help avoid those obstructions.

The policy study is a joint effort between the American Physical Society (APS) Panel on Public Affairs and the MRS Government Affairs Committee with assistance from members of the geological community. The policy study was released on February 18, 2011 and is available on the MRS Web Site at www.mrs.org/advocacy/ece.

Feedback

You have received this newsletter as a result of your subscription to our MRS Public Affairs Alerts or your participation in our Materials Voice letter-writing campaigns.

We welcome your feedback and invite you to submit topics for consideration in future issues of this newsletter. Please send your comments to publicaffairs@mrs.org.