STEM professionals utilize established routes of science advocacy in United States

The seemingly rapid politicization of science within the US Congress and the Trump administration’s significant changes and proposed deep budget cuts across the science agencies (see MRS Bulletin, August 2017) have jolted many science, technology, engineering, and mathematics (STEM) professionals off the sidelines and onto the frontlines of science advocacy. Many have joined grassroots movements such as the March for Science (see MRS Bulletin, July 2017), and the number of scientists participating in established advocacy efforts in the United States has steadily been on the rise.

A number of scientific societies and institutions have long played an active role in science advocacy. “Through consistent and persistent contact, you lay the groundwork to be the first to come to mind when a relevant issue comes up,” says Damon Dozier, Government Affairs Director of MRS. This has led to the building of relationships with policymakers as well as the establishment of a number of different advocacy methods that are now readily available to STEM professionals.

Through an effort called Materials Voice, MRS developed a method that allows its US-based members to find contact information for their elected officials as well as use an online platform to directly write to their legislators. In addition, the Grassroots Subcommittee of the MRS Government Affairs Committee (GAC) follows current issues that impact the materials community and drafts letters that address these issues. At each MRS Meeting, GAC hosts a booth where members can sign and send these letters on key issues and/or draft and send their own letters.

At the recent 2017 MRS Spring Meeting held in Phoenix, Ariz., 1025 letters were sent from members to their elected representatives. These letters addressed two current issues—sustained funding for scientific research and long-term support for federal energy and manufacturing programs. “I am a strong proponent for our letter-writing campaigns because it is perhaps the most impactful way that we can bundle collective sentiment among our membership on important R&D [research and development] and materials issues and deliver a cohesive message to elected officials as concerned citizens and constituents,” says Brent Carey, chair of the MRS Grassroots Subcommittee.

The letters were especially timely because they reached legislators’ offices during the period when Congress was working on appropriations legislation for the remainder of 2017. The president’s proposed budget would have scaled back significant funding for most of the federal science agencies, but the omnibus Appropriations bill enacted by Congress included an overall increase (~5%) in these budgets.

A second well-established avenue of advocacy is meeting with legislators or their staff members. With advanced notice, most congressional offices will schedule a meeting with their constituents or work to accommodate drop-in meetings as staffing allows. Many scientific societies and institutions have also established Congressional Visits Days (CVD), where members can schedule meetings with their elected officials to discuss the importance of science in their lives and the impacts that they see in their local districts and states.

Bill Hammetter, the chair of the MRS CVD Subcommittee, says that he initially attended CVD because he believes that “science does not speak for itself.”

The latest MRS CVD was held in May 2017 and participants focused on the importance of strong support for continued federal research funding in fiscal year 2018. Howard Katz, professor of materials science and engineering at Johns Hopkins University, has frequently participated in CVD over the years but says he feels “a much greater sense of urgency now about educating legislators who may not sufficiently appreciate the value of science and technology to their districts and the nation as a whole, and to provide resources to those legislators who are already appreciative so they can help educate their colleagues.”

Laura Lewis, Cabot Professor at Northeastern University, agrees with Katz, saying, “I could not think of a more important time to participate in this activity.” Lewis adds, “The most important message we tried to share was that materials underlie everything—there is no advanced society without materials, and the answers to all the important societal questions in some way involve materials.”

Often, the more tailored and personal the message is, the more impact it will have in an office. David Larbalestier, Francis Eppes Professor at Florida State University, says it is important to remember “the locality of politics and the importance, especially, of lobbying your local representatives with your concerns.”

Kevin Jones, distinguished professor of materials science and engineering at the University of Florida, gives an example of using a message tailored to his district saying that he spoke about how many of the federally funded basic science agencies “recognize the need for global thinking engineers and for educating the general population on the role of science and engineering in society,” which led to the creation of a class at the University of Florida on the impact of materials on society (see MRS Bulletin, August 2017). “The legislators were surprised that supporting basic research funding could have such positive effects on improving the social literacy of future scientists and engineers as well as improving the technical literacy of non-engineers,” Jones says.

A third established route of advocacy is through serving in a fellowship position either on Capitol Hill or in the executive branch offices. Fellowships typically take the form of a one-year assignment, and while each fellowship has different qualification requirements, many opportunities are available for STEM professionals from every career stage. For some fellows, the fellowship is a sabbatical with opportunities to learn about the interface between
Materials Voice  
www.mrs.org/materials-voice#  
Jefferson Science Fellowship Program  
http://sites.nationalacademies.org/PGA/Jefferson  
Franklin Fellows Program  
https://careers.state.gov/work/fellowships/franklin-fellows  
MRS Congressional Fellowships  
www.mrs.org/congressional-fellows  
AAAS Executive Branch Fellowships  
www.aaas.org/story-topics/executive-branch-fellowship  
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www.mrs.org/advocacy  

Established routes for science advocacy