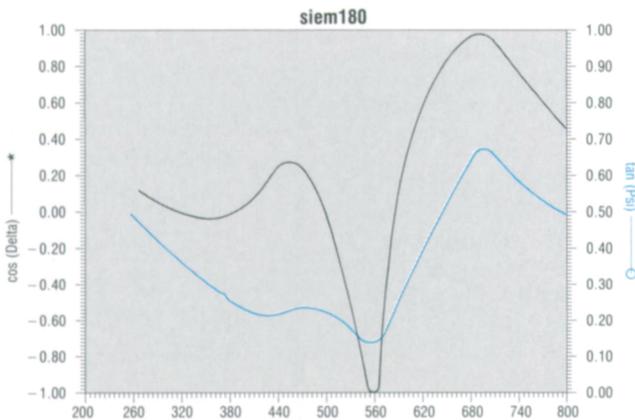




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1992 Defense Authorization Act Earmarks Funds for Advanced Materials Partnerships, Mandates Critical Technologies "Roadmaps"

The Senate Armed Services Committee's FY 1992 Defense Authorization Act, S. 1507, earmarks new funds for Advanced Materials Partnerships—\$10 million for the Department of Energy and \$15 million for the Department of Defense. The partnerships would be federal government and industry consortia, each providing about 50% of the funding and would be primarily aimed at materials of interest to the federal agency and industry.

S.1507 also includes a provision mandating that the President—through the Federal Coordinating Council on Science, Engineering, and Technology—draw up multi-year "strategic roadmaps" for the 22 critical technologies identified by the White House-chaired National Critical Technologies Panel in April (See the June *MRS Bulletin*, p.14). Industry would be given a strong role in providing input into the interagency technology policymaking process.

These provisions and other principal features in Title 8 of the 1992 Defense Authorization Act came from the Critical Technologies Act of 1991 (S.1327) and the Advanced Manufacturing Technology Act of 1991 (S.1328) introduced earlier this year by Senators Jeff Bingaman (D-New Mexico), Sam Nunn (D-Georgia), Fritz Hollings (D-South Carolina), and Albert Gore (D-Tennessee). Bingaman, a member of the Senate Armed Services Committee, is chair of its Subcommittee on Defense Industry and Technology.

"Our goal is to put in place a process through which the federal technology agencies can much more effectively coordinate their activities with one another and with industry," said Bingaman. "What we have done for high-performance computing, we need to repeat for advanced materials, manufacturing technology, biotechnology, and the other critical technologies," he said.

Besides supporting the development of precompetitive, generic technologies and the establishment of technology applications centers, the authorization bill now under consideration also emphasizes manufacturing. S. 1507 could fund advanced manufacturing research, education, and industrial extension programs. Another key provision would strengthen DOD's foreign technology monitoring activities.

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Please visit Booth No. 115 at the MRS Show in Boston, December 3-5, 1991.

Text of the Letter Sent by MRS President J.B. Roberto to the Office of Government Ethics

The Materials Research Society (MRS) is a 10,400-member nonprofit scientific organization which promotes interdisciplinary, goal-oriented research in technologically relevant materials. The Society integrates the work of industrial, university, and government scientists on an international scale through facilitating the communication of scientific information. The vehicles for this communication are primarily technical meetings, publications, and educational activities. This communication serves the scientific community by focusing attention on important scientific issues, providing a forum for the rapid dissemination of research results, eliminating duplication, and setting high standards for quality. Successful communication demands that all scientists participate.

The MRS notes that the language contained in section 2635 806, Participation in Professional Associations, may inadvertently prohibit Executive Branch scientists from participating in technical society leadership roles. As an example, world-renowned working-level scientists at the National Institute of Standards and Technology,

Naval Research Laboratory, and other government laboratories would fall under this proposed rule. In many professional fields, Executive Branch employees represent a substantial fraction of the practitioners. To prevent these professionals from participating in technical society leadership roles will limit their effectiveness as scientists and engineers, damage their careers, artificially skew the leadership base of the societies, and hurt U.S. science and technology. An effective national policy in science and technology requires full participation from all sectors of the research community including Executive Branch scientists and engineers.

The MRS and other scientific societies call upon their most capable member scientists to serve as society officers and committee chairs. Depending upon the particular position or office, the time required to fulfill the responsibilities of office may be more than just occasional during the year in office. Likewise, officers may need to use official time to participate in occasional committee meetings. Seeking the authorization of one's supervisor to use official time for professional society

activities is usual for individuals in the private sector. The requirement that government employees be authorized by executive order, statute, or regulation for similar professional involvement appears excessive.

The MRS notes a discrepancy, perhaps inadvertent, between the intent of the first paragraph of 2635 806 in which "employees are encouraged to participate in the activities of professional associations" and the actual effect of the regulations in limiting participation in subsequent paragraphs, particularly (b).

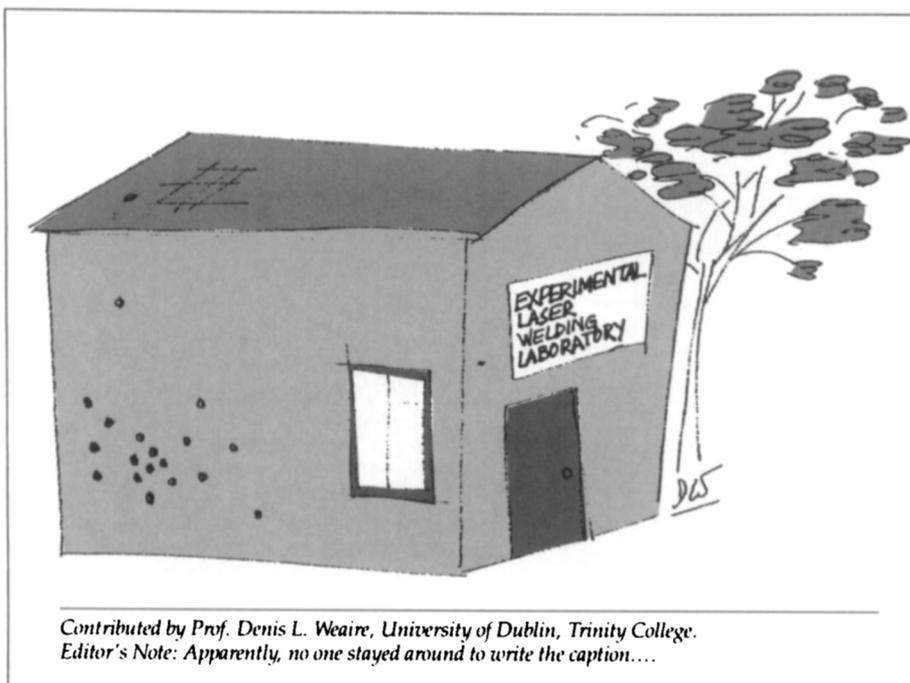
The MRS recommends that Executive Branch employees who are working scientists, engineers, and technical managers, and who are not directly involved in funding decisions be exempted from the restrictions contained in the proposed rule which limits their official participation in technical societies. While the MRS speaks from the view of a scientific society, we expect associations representing other professionals would likewise find this part of the proposed rule to be not in the best interest of their profession and the nation.

Proposed Ethics Regulations Would Affect Federal Employees' Participation in Societies

Revised regulations being proposed by the White House Office of Government Ethics would limit involvement by federal employees, including many scientists, in the affairs of professional societies. This has caused some concern among a number of societies, which have responded to the Office of Government Ethics.

If implemented, the regulations will prohibit federal employees from using official time or government property to administer internal society affairs or business unless specifically authorized by a statute, regulation, or executive order. And, while the regulations encourage participation in professional associations, federal employees would be allowed to participate only in "substantive programs," and only if a supervisor determines that program's content relates to performance of the employee's official duties and that the participation is in the government's interest.

Comments on the regulations, pub-



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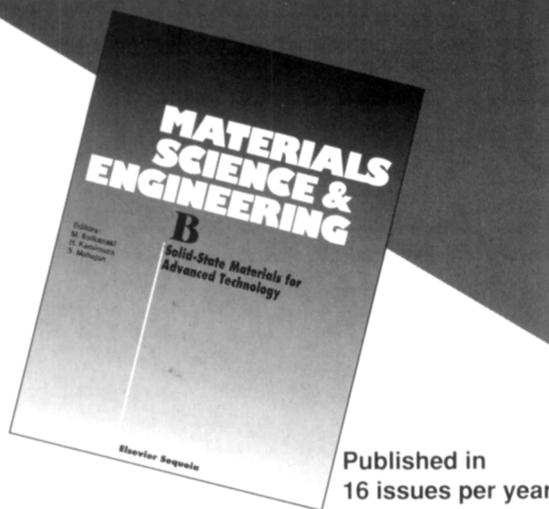
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lished in the July 23 *Federal Register* on pages 33778 through 33815, were due September 20. MRS President James B. Roberto sent the comments reprinted on p. 21 in addition to another letter requesting an extension of the public comment period to November 30, 1991. The extension was not granted, but comments on the proposed ethics regulations can still be sent to: Ms. Leslie Wilcox, Office of Government Ethics, Suite 500, 1201 New York Avenue NW, Washington, DC 20005-3917.

DOE Notes

Fusion Energy Advisory Committee Named

A new 10-member Fusion Advisory Committee will provide the DOE with periodic assessments and recommendations on both magnetic and inertial fusion energy programs, as well as continuing advice on the merits of technical options, long-range plans, priorities and strategies, and funding and balance among the elements of the fusion program. Robert Conn, director of the Institute of Plasma and Fusion Research at the University of California at Los Angeles, will chair the committee.

NSF Notes

Assistant Directors Named for Computer and Information Science and for Engineering

A. Nico Haberman, who has been dean of Carnegie Mellon University's School of Computer Science since 1988, became NSF's assistant director for Computer and Information Science and Engineering (CISE), effective October 1, 1991. Haberman is responsible for 25 programs organized into six divisions representing the following areas: computers and computation research, information robotics and intelligent systems, advanced scientific computing, microelectronic information processing systems, networking and communications research and infrastructure, and crossdisciplinary activities. Haberman will also oversee the CISE portfolio of NSF-supported research, which totaled \$186 million in FY 1991.

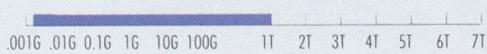
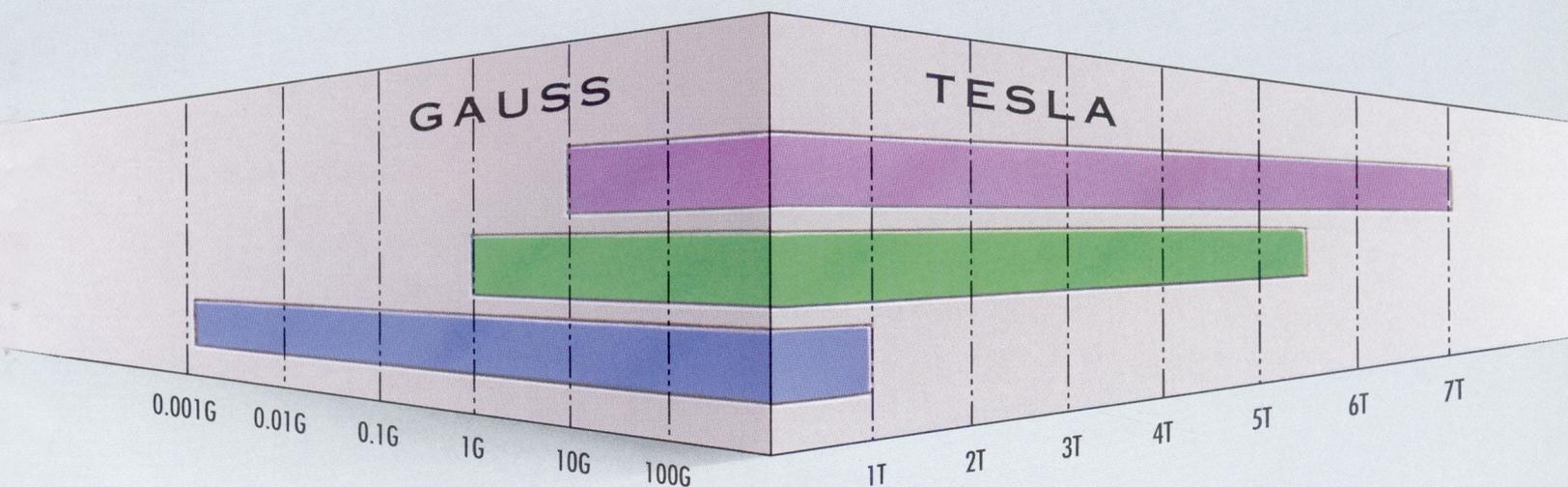
Joseph Bordogna, dean of the School of Engineering and Applied Science at the University of Pennsylvania during the past decade, was named NSF assistant director for Engineering, effective September 1, 1991. Bordogna will oversee 23 programs organized into seven divisions representing the following research areas: electrical and communications systems, chemical and thermal systems, mechanical and structural systems, engineering infrastructure development, engineering centers, design and manufacturing systems, and biological and critical systems. He will also oversee the engineering portfolio of NSF-supported research which was \$215 million in FY 1991.

Please visit Booth No. 309-310 at the MRS Show in Boston, December 3-5, 1991.

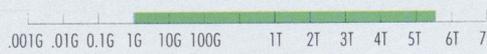
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	Bulk	NO	NO	YES	NO	NO	SOME	
	Quantitative	SOME	YES	YES	SOME	YES	SOME	
	Qualitative	YES	YES	YES	YES	YES	YES	
	Sample Type	Liquid	NO	SOME	YES	NO	NO	YES
		Solid	YES	YES	YES	YES	YES	YES
Organics		SOME	SOME	YES	SOME	SOME	YES	
Inorganics		YES	SOME	SOME	SOME	SOME	YES	
Thin		YES	YES	YES	YES	YES	YES	
Thick		NO	YES	YES	YES	YES	YES	
Insulators		YES	NO*	YES	SOME	SOME	YES	
Metals		YES	YES	NO	YES	YES	YES	
Resolution		Minimum Image	0.15 nm	3 nm	0.5 μ m	—	0.5 μ m	0.1 μ m
		Minimum Analytical	10 nm	5 μ m	5 μ m	150 μ m	1 μ m	—
Sample Environment		High Vacuum	High Vacuum	Ambient	High Vacuum	High Vacuum	Ambient	
Sample Degradation		SOME	SOME	NO	SOME	SOME	NO	
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