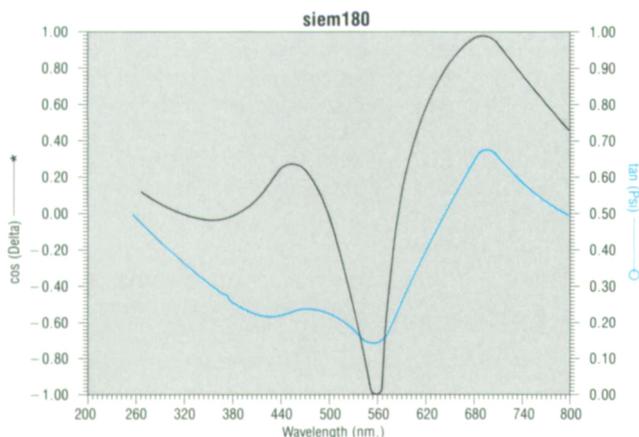




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Administration R&D Budget Proposed to Grow by 13%

The Bush administration requested \$75.6 billion for U.S. R&D in fiscal 1992 as part of its February 4 budget submission, a substantial increase of 13% over the 1991 amount. This comes at a time when the administration is proposing cutbacks in other programs and the overall requested increase is a meager 2%.

Materials R&D is spread throughout national programs as part of the overall R&D figure, and the administration did not issue a specific breakout for materials. The administration did say that over \$1.3 billion was included for advanced manufacturing and materials, with more than \$1 billion of that for advanced manufacturing.

The emphasis in materials R&D has been on the science, administration officials have said, but they acknowledged the need to include additional work in fundamental research on the synthesis and processing of materials. To that effect, the administration did announce a major new initiative in materials R&D within the National Science Foundation (NSF), and requested \$84 million to strengthen the position of the United States in next-generation materials synthesis and processing.

Objectives of the new initiative are to forge partnerships with other federal agencies and explore advanced materials, according to NSF. Two potential "high payoff" areas already identified by the administration as part of the initiative include electronic and photonic materials, and biomaterials.

Overall, some \$136,580,000 was requested for fiscal 1992 for materials research at NSF within the Mathematical and Physical Sciences directorate, the only directorate with a breakout for materials research. That includes \$80,230,000 for materials research project support, \$37,800,000 for Materials Research Laboratories and Groups, and \$18,550,000 for national facilities and instrumentation.

The NSF budget also included \$31 million to stimulate efforts in high-temperature superconductivity, including a continuation of funds for the Illinois superconductivity science and technology center, which includes the University of Chicago, Northwestern University, the University of Illinois at Urbana-Champaign, and Argonne National Laboratory. Funds also are included in the advanced manufacturing program to better design high temperature superconducting wires.

The overall NSF budget request for fiscal 1992 is \$2.72 billion, a 17.5% increase and a

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FROM WASHINGTON

continuation of administration efforts to double the NSF budget between 1988 and 1994.

Other specific proposals impacting the materials community include:

- A 21% increase to \$2.1 billion in the NASA budget for the space sciences programs, including astronomy, life sciences, planetary exploration, Earth science, and materials research.
- A doubling—to \$24 million—over cur-

rent year expenditures of proposed funds for magnetically levitated trains and high speed rail. Funds go to the Departments of Transportation and Energy and the Army Corps of Engineers.

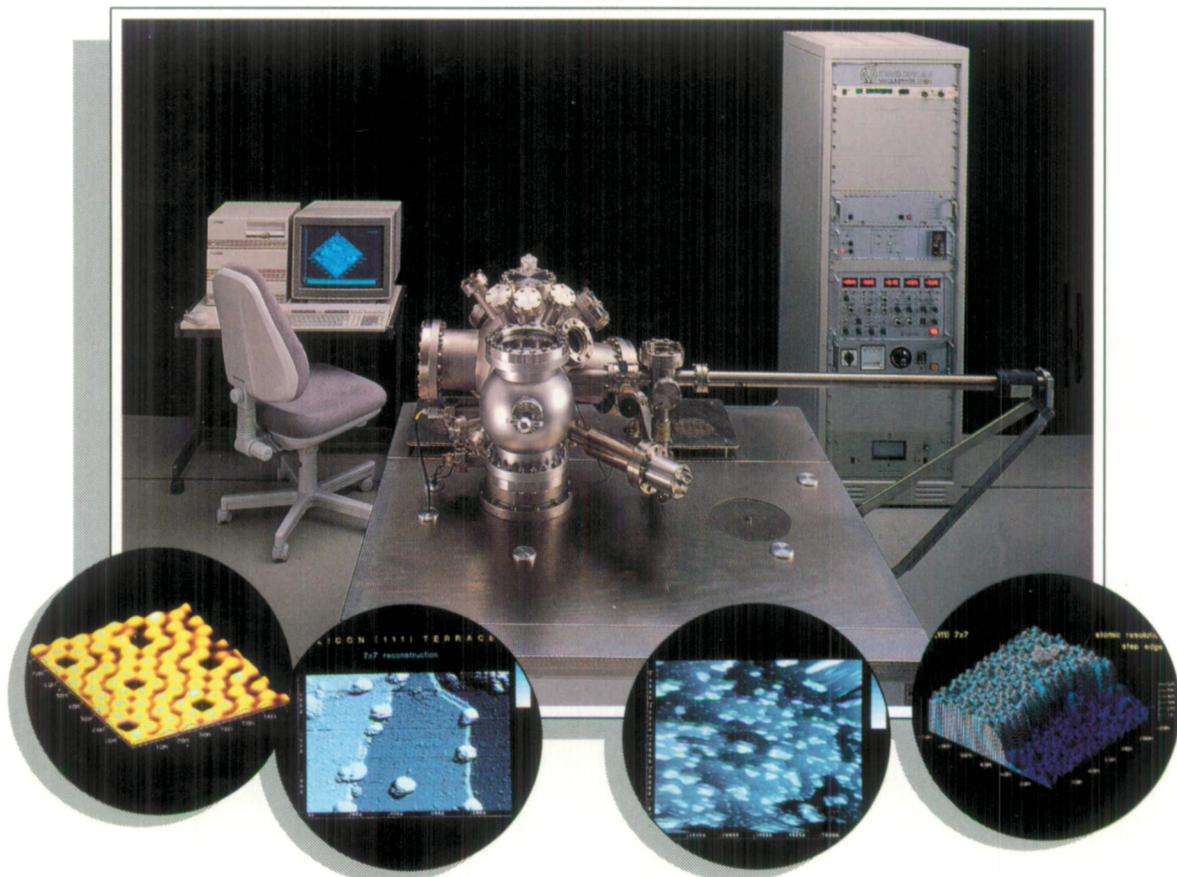
- An increase from \$10 million to \$36 million for the National Institute of Standards and Technology's Advanced Technology Program. Advanced materials are considered an important topic. Key members of Congress have stated they would like to in-

crease ATP funding further.

- A \$50 million initiative to improve the research infrastructure by providing state-of-the-art instrumentation to university researchers.
- Funding for the Superconducting Super Collider, which is included in the category of R&D facilities rather than basic research, at \$534 million for FY 1992.
- An increase of 30%—to \$638 million—for an interagency effort designed to extend

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- An increase of 34%—to about \$900 million—in R&D initiatives related to the National Energy Strategy being developed by the Department of Energy. Areas of emphasis include displacing oil in the transportation sector, improving energy efficiency in buildings and industry, and advanced electricity regeneration and end-use technology.

- A 15% increase—to a total of \$248 million—to expand NIST's ability to perform generic applied research and technology development, and to address a rapidly growing number of important standards and measurement issues.

- \$543 million for aeronautics research and development in NASA, an increase of 13%. The program will address, among other items, high-temperature engines, issues associated with supersonic flight, and the aging of today's aircraft.

- \$4.1 billion to support biotechnology R&D. Over 80% of this amount is in the National Institutes of Health budget,

largely in the form of basic research, but 11 other agencies also support programs directly or indirectly related to biotechnology.

- \$5.2 billion for the Strategic Defense Initiative, including as a first priority the development of technologies associated with a defensive system capable of providing Global Protection Against Limited Strikes (GPALS).

- \$350 million (split evenly between the Defense Department and NASA) to continue advanced rocket engine development and to initiate a program that will culminate in the development of a new space launch system.

- An increase by over 13%, to about \$1.94 billion, for federal spending on science and mathematics education as part of an integrated interagency effort in this area. Pre-college education would receive the largest increase—\$146 million, or 28%.

During his presentation of the administration's 1992 budget request, D. Allan Bromley, assistant to the President for science and technology and director of the

Office of Science and Technology Policy, described how other federal organizations will contribute to implementing the administration's science agenda.

The National Critical Materials Council is currently working on the 1990 report on a superconductivity action plan, a critical materials report, and an advanced materials program plan as requested by the Congress.

Under the Committee on International Science, Engineering, and Technology, a Subcommittee on International Cooperation with the European Community has been developing principles to govern the new opportunities that will accompany the unification of European markets in 1992. Bromley will chair three senior-level joint commission meetings—with the European Community, with the Soviet Union, and with Japan—to review bilateral agreements in science and technology and to identify areas of mutual interest and new challenges to international cooperation. □

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