

NSF Postdoctoral Chemistry Fellowships Awarded

The National Science Foundation (NSF) has chosen 17 career-entry scientists from 114 applicants as 1992 Postdoctoral Research Fellows in Chemistry. Each fellow receives a \$26,000 annual stipend to complete a one- to two-year term as a postdoctoral associate in the laboratory of his or her choice. After the fellowship term, the fellow may also receive an academic starter grant of up to \$32,000, if he or she accepts a tenure-track position at a U.S. college or university. Among the winners are MRS members Robert J. Hinde and Theresa C. Kavanaugh. Their fellowships will be at Cornell University and Brown University, respectively.

The panel of scientists who advised NSF on the selections focused not only on the research proposals and their creative potential, but also on the achievements and long-range career goals of the applicants, and the likely impact of the chosen postdoctoral laboratory on the development of the applicant. The submitted proposals reflected the growing tendency of chemists to do research in areas that have direct impact on advances in the life sciences or on the creation of new materials.

The Postdoctoral Research Fellowships in Chemistry Program will continue in 1993. U.S. citizens who complete their doctoral requirements between June 1, 1992, and September 30, 1993, are eligible for next year's competition. The deadline for application is **November 1, 1992**. Applications are available from: Postdoctoral Research Fellowships in Chemistry, Chemistry Division, Room 340, National Science Foundation, Washington, DC 20550; telephone (202) 357-7503.

Report Considers U.S. Use of Nuclear Energy

A congressionally mandated report, *Nuclear Power: Technical and Institutional Options for the Future*, prepared by a committee of the National Research Council, says that nuclear power as an energy source can continue, after significant institutional changes, by pursuing technological alternatives and "only with a clearly-stated policy enunciated by the President and backed by Congress." It also said industry and government should resolve a number of issues—including management, costs, regulation and licensing of new reactors, disposal of radioactive wastes, and public acceptance—if there is to be large-scale deployment of new nuclear power plants in the United States.

"Our report advocates neither more, nor

less, nuclear power," said committee chair John Ahearne. "However, increasing concerns about fossil fuel use have generated renewed interest in nuclear power, and this report provides our best judgment of what would be necessary if the United States wants to retain nuclear power as an option for meeting U.S. electricity requirements."

Among the nuclear power plant designs evaluated by the committee, large evolutionary light water reactors were judged the most likely to be deployed next. The mid-sized light water reactors with passive safety features and the liquid metal reactors were recommended for federal development funding. Other designs were not given a high priority for development. The report also proposes closing the Department of Energy's (DOE) Hanford Fast Flux Test Facility in Washington State.

Concerning the problem of high-level waste disposal, the report says that this issue must be resolved soon, and that meanwhile a contingency plan must be developed for managing such wastes in a surface storage facility. The report also questions the workability of EPA regulations and concludes that EPA standards for the disposal of high-level waste will have to be reevaluated to ensure that they are both adequate and feasible.

For FY1992 through 1996, DOE has proposed spending about \$1.6 billion on research and development of civilian nuclear power. Near-term plans now call for support of advanced mid-sized light water reactors with passive safety features. Current long-term funding is earmarked for development of modular high-temperature gas-cooled reactors and liquid metal reactors.

The committee's report, *Nuclear Power: Technical and Institutional Options for the Future*, is available by sending \$27 plus \$3 shipping to: National Academy Press, 2101 Constitution Avenue, N.W., Washington, DC 20418.

1993 "Medal of Technology" Nominations Being Accepted

The Foundation for the National Technology Medal and the U.S. Department of Commerce are soliciting nominations for the 1993 National Medal of Technology. Applications must be submitted by **October 31, 1992**. The medal is the highest award presented to American technologists by the President of the United States. Given annually, the National Technology Medal is awarded to recognize individuals and companies for their extraordinary contribution to improving the well-being of the United

States, either through the development or commercialization of technology, or for contributions to the establishment or improvement of a technologically trained work force.

The award is given for technology transfer from public organizations, promotion of advanced manufacturing technology, embodying technology management principles, general product and process innovations, or strengthening a technologically competent work force.

Eligibility is limited to U.S. citizens and substantially U.S.-owned companies. For a nomination form or further information, contact Ann Woodward, Executive Director of the foundation, at (415) 951-3369, or Paul Braden, Manager, National Medal of Technology, U.S. Department of Commerce, (202) 377-5572.

Universities Awarded \$4.7 Million for Scientific Equipment

More than \$4.7 million was awarded to 25 colleges and universities, under the Department of Energy's (DOE) University Research Instrumentation Program, for the purchase of state-of-the-art scientific instruments for energy-related research. The awards are aimed at strengthening the ability of the schools to conduct long-range, energy-related research, and to help alleviate a shortage of research equipment in these academic institutions.

Each instrument awarded under the program costs more than \$100,000. In response to the program, DOE received 191 applications from U.S. schools. The FY1992 funds will be used to help meet the needs of schools carrying out DOE-sponsored research in the following areas: biology and the environment, chemical sciences, high-energy physics, materials science, and mechanistic plants and microbes.

The following schools received awards in the materials science category:

- University of California—Irvine, Chemistry Department: ultrahigh vacuum variable temperature scanning tunneling microscope;
- Dartmouth College, Thayer School of Engineering: NEC image furnace;
- Harvard University, Division of Applied Sciences: UHV thin-film deposition system;
- Massachusetts Institute of Technology, Materials Sciences and Engineering Center: Gatan #666-UHV3K PEELS spectrometer; and
- Polytechnic University, Physics Department: UHV cryogenic scanning tunneling microscope. □