

**DOE Notes**

**DOE Solicits Innovative R&D Grant Applications from Small Businesses**

Small firms are invited to submit grant applications under the Department of Energy's (DOE) 11th annual solicitation for the Small Business Innovation Research (SBIR) program. SBIR's objective is to strengthen the role of small, innovative firms in federally funded areas of research and development. Implementing the Small Business Innovation Development Act of 1982, the program is also intended for the use of federal R&D as a base for technological innovation, for meeting agency needs, and for contributing to the growth and strength of the U.S. economy.

Grant applications will be reviewed competitively. Approximately 160 award-ees will receive up to \$75,000 to explore the feasibility of their ideas, with up to \$500,000 available in a second phase for those ideas with the highest potential to meet the SBIR program objectives. Firms with strong research capabilities in science and engineer-

ing in any of 37 technical topics are encouraged to participate. Two materials-related topics are Design and Applications of Novel Materials and Materials Sciences Instrumentation.

The closing date for receipt of grant applications is **March 8, 1993**. For a copy of the solicitation, small businesses (500 employees or less) should contact: SBIR Program Manager (ER-16), U.S. Department of Energy, Washington, DC; telephone (301) 903-5707.

**Contracts for Management of National Laboratories Signed**

Negotiations have been completed with the University of California on the terms for managing and operating Lawrence Livermore, Lawrence Berkeley, and Los Alamos National Laboratories, whose new contracts are to last five years. Some new features of the contracts are:

- A new university central oversight capability to oversee laboratory functions.
- Abandonment of "mutuality" of decision terms in the contract that had produced management impasses.

■ More specific departmental safety orders applied without further university negotiations.

■ Performance-based management incentives for senior lab officials.

■ Inclusion of standard dispute and audit clauses.

■ Addition of a new mechanism for prompt, informal resolution of disputes to avoid impasses.

■ Explicit recognition of new categories of unallowable costs, including costs incurred contrary to a direction of the Contracting Officer and costs made unallowable by the Major Fraud Act of 1988.

**Commission on the Future of the National Science Foundation Issues Recommendations**

The Commission on the Future of the National Science Foundation was asked by the National Science Board and the Director of NSF to examine long-range strategies for NSF. This request came in the wake of changing expectations for science and en-

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gineering research, growing global competition, shifts from defense to civilian concerns, diminishing corporate long-term research, and questions on the connection of science to economic success. In late November, after three months of work, three public meetings, and an influx of hundreds of letters from scientists and institutions\*, the Commission, chaired by William H. Danforth, Washington University, and Robert Galvin, Motorola, Inc., released its report, "A Foundation for the 21st Century: A Progressive Framework for the National Science Foundation."

The report says the recommendations "are made in the spirit of continual improvement of a fine existing system." NSF has a dual mission to be responsive to intellectual priorities initiated by the scientist or engineer and to be responsive to national needs voiced by society—goals that should be congruent, not contradictory, the report says. Boundaries between disciplines, between the public and private sectors, and between research and applications need not be obstacles, but instead can serve to broaden opportunities.

The report anticipates that the United

States will have a "stronger and more coherent policy wherein science and engineering can contribute more fully to America's strength." Then NSF, which controls only 3% of the federal R&D budget, should be given a niche within that framework.

The report outlines new challenges, evolving research fields, interdisciplinary opportunities, increasing dependencies among stages in technology development, grant size, student support, improved science education, knowledge diffusion, and facility needs, but it points out that NSF will find it difficult to respond to these new challenges without an increase in resources.

Following are some recommendations provided by the report:

■ **General recommendations:** A more coherent U.S. policy concerning science and technology, integration of societal needs with researcher judgment when allocating resources, initiation of proposals by investigators and selection of those to be funded by merit review, exploration of fields not covered by traditional disciplines, and a higher involvement of the private sector

concerning allocations for research.

■ **Research recommendations:** Reaffirmation of NSF's key support role for science and engineering, encouragement of interdisciplinary work and cooperation among sectors, encouragement of cross-disciplinary collaboration, effective dissemination of new knowledge within the scientific community, plus better public communications, active industrial support, closer international cooperation, provision of graduate fellow- and traineeships, and maintenance of adequate facilities.

■ **Education recommendations:** Promotion of leading-edge curricula, teaching, and training methodologies, encouragement of joint-discipline education programs, and improvement of K-12 and undergraduate education.

■ **Structural recommendations:** Improvement of the quality of operations through common sense measurement, and sharing of facilities among institutions. □

\*See "Commission Meets on Future of NSF: MRS Submits Comments to Commission," MRS Bulletin, November 1992, p. 34.

## Technical Japanese for Materials Science and Related Engineering

(to include Chemical Engineering, Physics, and Mechanical Engineering)\*  
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For information, contact Susan L. Sherwood

MIT Japan Program, E38-762B, Cambridge, MA 02139

Tel: (617) 253-8095; Fax: (617) 258-7432; e-mail: sherwood@mit.edu

*\*This course is open to scientists and engineers with knowledge of the target technical fields who already possess a solid foundation in speaking and reading Japanese and who wish to be able to locate, read, analyze, and report on science and technological developments that are increasingly available only in Japanese.*

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