

Recommendations of the 1995 Trilateral Materials Workshop Promote Economic Growth in MS&E

As an outcome of the North American Free Trade Agreement (NAFTA), the National Science Foundation in the United States, National Council for Science and Technology (CONACYT) in México, and Natural Sciences and Engineering Research Council (NSERC) in Canada sponsored the Trilateral Materials Workshop in May 1995. The workshop, held in México, concentrated on the engineered materials which have played a crucial role in recent technological advancements in areas such as electronics, automotive materials, biomaterials, metals, and telecommunications. Beyond technical discussions, the purposes of the workshop were to provide opportunities for educators and scientists in all three countries to establish joint programs among the three countries, discuss and plan for electronic information linkages and databases, and discuss participation and usage of "central" facilities.

The participants found that they had little knowledge of the scope of research, the scientists involved, or the facilities available among these countries. They recommended that a U.S. Materials Network be established to serve as an electronic link among scientists in U.S. universities, industry, scientific organizations, and government laboratories. The Network is to be used for research collaborations, educational programs, and research publications, and is later to expand to North and South American countries, and eventually to other parts of the world. The participants also recommended future trilateral workshops to exchange scientific information and latest research progress; foster new and enhance existing collaborations; encourage new research areas; facilitate training, education, and exchange of undergraduate and graduate students; and generate specific plans of action.

Scientists in México have few collaborations with scientists in Canada and the United States. As a resolution, participants of the workshop recommended increasing the number of Mexican students who

receive graduate training in the United States or Canada and who then return to México, and to pursue the participation of U.S. corporations which have established factories in México. The participants also recommended funding for NAFTA personnel exchanges among postdoctoral fellows, and visiting scientists or visiting professors, and an increase in support for cooperative projects. They recommended that a specific NAFTA travel grant be established to allow scientists to do short-term work at a large federally funded facility, plan joint research proposals, or attend NAFTA workshops.

The Workshop concluded that a Virtual Institute should be set up to organize and coordinate programs and services such as maintaining and making available databases of information vital to this NAFTA initiative; organizing, coordinating, and publicizing workshops which promote cooperation and collaboration among researchers in the academic and industrial communities of the NAFTA countries; establishing and maintaining the U.S. Materials Network, and encouraging the development of similar networks in the NAFTA

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countries and elsewhere; providing advice and counsel on funding opportunities and proposal preparation; and act as a central clearinghouse for proposal applications, either forwarding proposals to the appropriate agency or providing funding from federal NAFTA initiative funds.

NSF Releases Study on Asian High-Tech Competitors

The National Science Foundation put out an SRS (Science Resources Studies) Special Report in 1995, *Asia's New High-Tech Competitors* (NSF 95-309), which delineates challenges and benefits to the United States posed by Asia's economic advances due to its rise in technology development. The economic areas studied include Japan, Hong Kong, Singapore, South Korea, Taiwan, China, India, Indonesia, and Malaysia. The report said the United States can expect to compete with these Asian areas to retain top scientists. However, science and technology research opportunities are opening for the United States as collaborations between Asian and U.S. researchers expand. The report focuses on activities in the Asian areas under study in order to provide a guide for U.S. policymakers who need to identify and track the progress of new competitors. To obtain a copy of the publication, contact NSF Forms and Publications Unit, 4201 Wilson Boulevard, Room P-15, Arlington, VA 22230; 703-644-4278; TDD 703-306-0090; fax 703-644-4278; e-mail pubs@nsf.gov.

SBIR Conference to be Held in Spring

The National Science Foundation, Department of Defense, and eight other federal agencies will sponsor a National SBIR (Small Business Innovation Research) Conference at the Dallas Airport Hyatt Regency in Dallas, Texas on April 29-May 1. At the conference, small businesses will be able to meet individually with the federal SBIR and Small Business Technology Transfer (STTR) program managers, and with representatives from large U.S. companies seeking partnerships with small companies.

The conference will feature seminars on topics ranging from starting and financing a small technology company to SBIR/STTR proposal preparation and federal procurement procedures. For more information, contact the Registration Office, PO Box 210065, West Palm Beach, FL 33421-0065; 407-791-0720; fax 407-791-0098.

NRC Recommends Application and Nontarget-Driven R&D Strategy for Sensor Materials

The National Research Council (NRC) study on sensor materials determined that multidisciplinary work is needed to identify the state of the art in sensor application areas, to examine the role and needs of sensors, and to describe opportunities for materials development. Research and development of sensors have been largely driven by specific, or targeted, applications. The NRC report, *Expanding the Vision of Sensor Materials* (National Academy Press, Washington, DC, 1995), supports the practice that the "best" sensor material can be identified for a specific application, but that fundamental, nontarget-driven R&D is necessary toward the creation of new products.

For the purpose of illustrating the motivation behind the development and incorporation of new sensor technologies, the report details two case studies involving sensor applications and two representing sensor technology. The members of the NRC committee recommend that sensor materials R&D be pursued in three main areas: the development of processing techniques for existing sensor materials; the assessment and development of sensing capabilities in existing materials that have properties not yet exploited for sensor applications; and the fundamental investigation of novel sensing approaches.

Copies of the report can be obtained from the National Academy Press, 2101 Constitution Avenue, NW, Box 285, Washington, DC 20055; 800-624-6242; 202-334-3313. □

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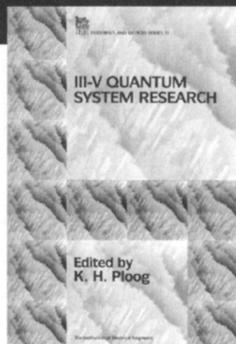
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