

THE INDUSTRIAL PHYSICIST

PUBLISHER

Charles Harris

EDITOR/ASSOCIATE PUBLISHER

Kenneth J. McNaughton

ART DIRECTOR

Steven R. Black

CONTRIBUTING EDITORS

Mike May,
Jennifer Ouellette

COPY EDITOR

Randall Frey

EDITORIAL ASSISTANTS

Carol Lucas
Monica Oliver

ADVISORY COMMITTEE

Adam C. Daire, Robert F. Kwasnick,
Charlotte Lowe-Ma, John M. Rowell,
T. Venkatesan, Thomas R. Steele

ADVERTISING MANAGER

Abby Klar

PRODUCTION MANAGER

Marcia Schlissel

EDITORIAL OFFICES

One Physics Ellipse
College Park, MD 20740-3843
Tel: 301-209-3051
Fax: 301-209-0842
e-mail: tip@aip.org

ADVERTISING OFFICES

500 Sunnyside Boulevard
Woodbury, NY 11797-2999
Tel: 516-576-2440
800-247-2242
e-mail: advtsg@aip.org

WORLD WIDE WEB

<http://www.aip.org/tip/tip.html>

**AMERICAN
INSTITUTE
OF PHYSICS**

EXECUTIVE DIRECTOR AND CEO

Marc H. Brodsky

MEMBER SOCIETIES

The American Physical Society
Optical Society of America
Acoustical Society of America
The Society of Rheology
American Association of Physics Teachers
American Crystallographic Association
American Astronomical Society
American Association of Physicists in Medicine
American Vacuum Society
American Geophysical Union

OTHER MEMBER ORGANIZATIONS

Corporate Associates
Sigma Pi Sigma Physics Honor Society
Society of Physics Students

EDITORIAL

Endless Frontier, Limited Resources

Of all the writings about the state of R&D in the United States, the April 1996 report "Endless frontier, limited resources: U.S. R&D policy for competitiveness" by the Council on Competitiveness is the most lucid. "The U.S. research and development enterprise finds itself in a wrenching period of change with the end of the Cold War, the globalization of the world economy, and the drive to eliminate the federal deficit," it begins. "The coincidence of these forces marks the end of a post-1945 era during which the United States dominated the process of global innovation through the sheer weight of its resources and know-how."

Consequently, "The U.S. R&D establishment has now entered a pivotal phase of transition—one that will determine our nation's long-term capacity to make and exploit discoveries and innovations in critical areas, while providing world-class institutions, facilities, and education in science, mathematics, and engineering. As a practical matter, future U.S. economic competitiveness hangs in the balance."

The Council's central finding is that R&D partnerships hold the key to meeting the challenge of transition that our nation now faces. Partnerships are defined here as cooperative arrangements engaging companies, universities, and government agencies and laboratories in varying combinations to pool resources in pursuit of a shared R&D objective. Some of the findings include: industry is increasingly relying on partnerships with universities; prospective cuts in federal fund-

ing are pushing research institutions to seek closer ties to industry; company-to-company R&D alliances are on the upswing, not only among domestic competitors but with suppliers and foreign rivals; concern over intellectual property (and capturing its revenues, in particular) has become an increasingly contentious factor in many industry-government-university arrangements.

The report provides in-depth analyses of six key sectors that help drive U.S. competitiveness—aircraft, automotive, chemicals, electronics, information technologies, and pharmaceuticals. It also provides policy guidelines for the nation, for industry, for government and for academia. This historic document and call to arms was ably helmed by Council Chairman Paul Allaire, chairman and chief executive officer, Xerox Corporation, and Council Vice Chairmen Jack Sheinkman, chairman of the board at Amalgamated Bank of New York, and Thomas E. Everhart, president of the California Institute of Technology. You can download the report from the Website http://nii.nist.gov/coc_rd/temp_title_page.html.

When it comes to leadership, there never has been a substitute for having intelligent people work hard, think clearly, and present their conclusions efficiently. This report is a good start in the race to keep America competitive in the global marketplace of the 21st century.

Ken McNaughton
Associate Publisher

THE INDUSTRIAL PHYSICIST (ISSN 1082-1848; CODEN INPHFA), volume 2, number 2, is published by the American Institute of Physics, 500 Sunnyside Boulevard, Woodbury, NY 11797. **Subscriptions.** *The Industrial Physicist* is available on a free subscription basis to qualified parties who fill in, sign, and mail the enclosed form. Nonqualified parties may subscribe at the following annual rates: members of affiliated societies, \$18; non-member individuals, \$24; institutions, \$48. Please add \$15 for foreign delivery via surface mail (including Canada and Mexico) and \$30 for international delivery by expedited air freight. Single copies are available for \$20 (postage paid). Contact the editorial office. **Other information.** For change of address and other subscription information contact *The Industrial Physicist*, P.O. Box 96000, Collingswood NJ 08108-9944; tel. 609-488-1881; fax. 609-488-6188. **Copyright © 1996, American Institute of Physics.** Copies of articles may be made upon payment of a copying fee of \$10 per copy through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.