

791 This Week in *Science*

## Editorial

793 New Technology for Cleaner Air

## Perspective

794 GTP-GDP Exchange Proteins: A. LEVITZKI

## Letters

795 NIH Director: Recommendations: M. F. SINGER ■ Asbestos, Carcinogenicity, and Public Policy: A. R. BRODY; S. W. SAMUELS; W. J. NICHOLSON, E. M. JOHNSON, J. S. HARINGTON, J. MELIUS, P. J. LANDRIGAN; K. S. CRUMP; B. T. MOSSMAN, J. BIGNON, M. CORN, A. SEATON, J. B. L. GEE ■ Cooling Towers, Not "Smokestacks": W. H. WHITE

## News & Comment

803 Grants Squeeze Stirs Up Lobbyists

804 Genome Backlash Going Full Force

805 The Genetic Map Is Back on Track After Delays

806 Astronomers Want New Optical Telescopes, but . . .

807 Census Adjustment Battle Heats Up

809 The Case of the Altered Notebooks: Part IV

810 *Briefings*: Uncle Sam Needs Indiana Jones ■ The Rise of the Ninja Chipmunk ■ New Investigator Awards at NSF ■ Laser Cut-Up ■ HUGO Gets \$1 Million from Hughes ■ Welch Award ■ The PHS's Animal Offensive ■ Budding Biologist Says No to Frog Lab

## Research News

812 Insights from Broken Brains ■ The Damasio's Research Web

815 Dinosaurs' Death Blow in the Caribbean Sea?

816 Savoring Chemistry in the Land of the Cod: A Safer Way to Make Plastics ■ Shrink-Wrapped Transplants for Parkinson's ■ Purging Cancer from the Bone Marrow ■ Bittersweet Findings

## Articles

823 The Need to Reform Personal Injury Law Leaving Scientific Disputes to Scientists: S. D. SUGARMAN

828 Gamma-Ray Measurements of a Soviet Cruise-Missile Warhead: S. FETTER, T. B. COCHRAN, L. GRODZINS, H. L. LYNCH, M. S. ZUCKER

## Reports

835 Evidence for Magnetospheric Effects on the Sodium Atmosphere of Mercury: A. E. POTTER AND T. H. MORGAN

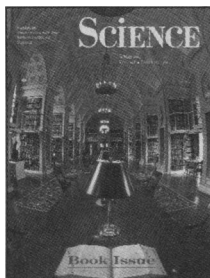
838 Identification of the Products from the Reaction of Chlorine with the Silicon(111)-(7×7) Surface: J. J. BOLAND AND J. S. VILLARRUBIA

840 Electro-Optical Evidence for the Chelate Effect at Semiconductor Surfaces: G. C. LISENSKY, R. L. PENN, C. J. MURPHY, A. B. ELLIS

843 Proximal Cretaceous-Tertiary Boundary Impact Deposits in the Caribbean: A. R. HILDEBRAND AND W. V. BOYNTON

■ **SCIENCE** is published weekly on Friday, except the last week in December, and with a supplement in March by the American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC 20005. Second-class Non-profit postage (publication No. 484460) paid at Washington, DC, and at an additional entry. Copyright © 1990 by the American Association for the Advancement of Science. The title **SCIENCE** is a registered trademark of the AAAS. Domestic individual membership and subscription (51 issues): \$75. Domestic institutional subscription (51 issues): \$120. Foreign postage extra: Canada \$46, other (surface mail) \$46, air mail via Amsterdam \$85. First class, airmail, school-year, and student rates on request. **Single copy sales**: Current issue, \$3.50; back issues, \$5.00; Biotechnology issue, \$6.00 (for postage and handling, add per copy \$0.50 U.S., \$1.00 all foreign); Guide to Biotechnology Products and Instruments, \$20 (for postage and handling add per copy \$1.00 U.S., \$1.50 Canada, \$2.00 other foreign). Bulk rates on request. **Authorization to photocopy** material for internal or personal use under circumstances not falling within the fair use provisions of the Copyright Act is granted by AAAS to libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$1 per copy plus \$0.10 per page is paid directly to CCC, 27 Congress Street, Salem, Massachusetts 01970. The identification code for *Science* is 0036-8075/83 \$1 + .10. **Change of address**: allow 6 weeks, giving old and new addresses and 11-digit account number. **Postmaster**: Send Form 3579 to *Science*, P.O. Box 1723, Riverton, NJ 08077. *Science* is indexed in the *Reader's Guide to Periodical Literature* and in several specialized indexes.

■ The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objectives are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, to advance education in science, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.



COVER Reading room, Boston Athenaeum. Housed in a building that has been described as combining "the best elements of the Bodleian, Monticello, the frigate *Constitution*, a greenhouse, and an old New England sitting room," the Athenaeum 183 after its founding "remains a retreat for those who would enjoy the humanity of books." See page 870. [Photograph by B. Metta/Uniphoto]

- 847 Structural Motif of the GCN4 DNA Binding Domain Characterized by Affinity Cleaving: M. G. OAKLEY AND P. B. DERVAN
- 850 Interaction of Hsp 70 with Newly Synthesized Proteins: Implications for Protein Folding and Assembly: R. P. BECKMANN, L. A. MIZZEN, W. J. WELCH
- 854 Relation of Neuronal APP-751/APP-695 mRNA Ratio and Neuritic Plaque Density in Alzheimer's Disease: S. A. JOHNSON, T. MCNEILL, B. CORDELL, C. E. FINCH
- 857 Genetic Suppression of Mutations in the *Drosophila abl* Proto-Oncogene Homolog: F. B. GERTLER, J. S. DOCTOR, F. M. HOFFMANN
- 860 No Specific Recognition of Leader Peptide by SecB, a Chaperone Involved in Protein Export: L. L. RANDALL, T. B. TOPPING, S. J. S. HARDY
- 863 Inhibition of FKBP Rotamase Activity by Immunosuppressant FK506: Twisted Amide Surrogate: M. K. ROSEN, R. F. STANDAERT, A. GALAT, M. NAKATSUKA, S. L. SCHREIBER
- 866 Enhancement of the GDP-GTP Exchange of RAS Proteins by the Carboxyl-Terminal Domain of SCD25: J.-B. CRÉCHET, P. POULLET, M.-Y. MISTOU, A. PARMEGGIANI, J. CAMONIS, E. BOY-MARCOTTE, F. DAMAK, M. JACQUET

## Book Reviews

- 870 Allegiances Under Question: S. W. LESLIE; other review by K. HUFBAUER
- 872 Transformations in Physics: R. W. SEIDEL; other review by D. PESTRE
- 875 Kelvin in His Times: S. G. BRUSH; other reviews by I. HACKING, D. CAHAN, C. GLYMOUR
- 880 Physics, Mathematics, and Minds: W. H. ZUREK
- 881 Russians on the Psyche: S. FITZPATRICK; other reviews by W. MONTGOMERY, L. ZENDERLAND, G. E. MARCUS
- 887 The Productivity Question: L. E. DAVIS; other reviews by T. K. McCRAW, W. P. BRIDGES
- 892 A Cooperative Innovation: J. K. SMITH; other reviews by H. PETROSKI, R. FRIEDEL
- 895 Policy Shortfalls: S. JASANOFF; other review by J. A. HEITMANN
- 897 Considering the Ants: N. R. FRANKS; other reviews by C. F. E. ROPER, L. KRISHTALKA, S. D. WEBB, R. E. LENSKI, R. T. HOLMES
- 902 Foundations of Planktology: W. H. BERGER; other reviews by C. WUNSCH, Tj. H. VAN ANDEL
- 905 The San Historicized: P. PETERS; other reviews by E. S. HALL, R. L. SCHUYLER

## Products & Materials

- 912 Lab Software for the Macintosh ■ Column Recycling in DNA Synthesis ■ ESI System for High Mass Analysis ■ Molecular Modeling Software ■ Soluble Copolymer for Gel Electrophoresis ■ Automated DNA Analysis System ■ DNA Purification Kit ■ Literature

### Board of Directors

Richard C. Atkinson  
*Retiring President,  
Chairman*

Donald N. Langenberg  
*President*

Leon M. Lederman  
*President-elect*

Mary Ellen Avery  
Francisco J. Ayala  
Eugene H. Cota-Robles  
Robert A. Frosch  
Joseph G. Gavin, Jr.  
John H. Gibbons  
Beatrix A. Hamburg  
Florence P. Haseltine  
William T. Golden  
*Treasurer*

Richard S. Nicholson  
*Executive Officer*

### Editorial Board

Elizabeth E. Bailey  
David Baltimore  
William F. Brinkman  
E. Margaret Burbidge  
Pierre-Gilles de Gennes  
Joseph L. Goldstein  
Mary L. Good  
F. Clark Howell  
James D. Idol, Jr.  
Leon Knopoff  
Oliver E. Nelson  
Yasutomi Nishizuka  
Helen M. Ranney  
David M. Raup  
Howard A. Schneiderman  
Larry L. Smarr  
Robert M. Solow  
James D. Watson

### Board of Reviewing Editors

John Abelson  
Don L. Anderson  
Stephen J. Benkovic  
Gunter K-J Blobel  
Floyd E. Bloom  
Henry R. Bourne  
James J. Bull  
Kathryn Calame  
Charles R. Cantor  
Ralph J. Cicerone  
John M. Coffin  
Robert Dorfman  
Bruce F. Eldridge  
Paul T. Englund  
Fredric S. Fay  
Harry A. Fozzard

Theodore H. Geballe  
Roger I. M. Glass  
Stephen P. Goff  
Corey S. Goodman  
Stephen J. Gould  
Eric F. Johnson  
Stephen M. Kosslyp  
Konrad B. Krauskopf  
Charles S. Levings III  
Richard Losick  
Joseph B. Martin  
John C. McGiff  
Anthony R. Means  
Mortimer Mishkin  
Roger A. Nicoll  
William H. Orme-Johnson III  
Carl O. Pabo  
Yeshayau Pocker

Dennis A. Powers  
Erkki Ruoslahti  
Thomas W. Schoener  
Ronald H. Schwartz  
Terrence J. Sejnowski  
Robert T. N. Tjian  
Virginia Trimble  
Emil R. Unanue  
Geerat J. Vermeij  
Bert Vogelstein  
Harold Weintraub  
Irving L. Weissman  
Zena Werb  
George M. Whitesides  
Owen N. Witte  
William B. Wood

# Science

**248 (4957)**

*Science* **248** (4957), 791-912.

ARTICLE TOOLS <http://science.sciencemag.org/content/248/4957>

PERMISSIONS <http://www.sciencemag.org/help/reprints-and-permissions>

Use of this article is subject to the [Terms of Service](#)

---

*Science* (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. 2017 © The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works. The title *Science* is a registered trademark of AAAS.