

803 This Week in *Science*

Editorial

805 Solar Power and Priorities

Letters

806 AAUP on Congressional Investigations: J. KNIGHT ■ The 1957 Soviet Nuclear Accident: J. R. TRABALKA, S. I. AUERBACH, L. D. EYMAN

News & Comment

807 U.S., Soviets Share Seismic Posts

808 Hipparcos: In the Low-Orbit Blues

809 Lab Report Puts SSC Magnets in Limbo

810 Shiseido Grant: More Than Skin Deep

811 Wider Use of AIDS Drug Advocated

812 NIMH Assigns Blame for Tainted Studies

Research News

813 Cancer Vaccines Show Promise at Last

815 Math Team Vaults Over Prime Record ■ Is It Prime?

816 European Deep Drilling Leaves Americans Behind

818 *Briefings*: Will Cajun Cuisine Include Super Pork? ■ Irvine Center to Assess Toxicity ■ Grant Lockout Looms for ARCO Solar ■ New Global Climate Study Centers ■ Chinese Pigs to Boost U.S. Litters

Articles

819 Management Accounting for Advanced Technological Environments: R. S. KAPLAN

824 Gravitational Lens Optics: R. D. BLANDFORD, C. S. KOCHANEK, I. KOVNER, R. NARAYAN

Research Articles

831 Molecular Genetics of Human Blue Cone Monochromacy: J. NATHANS, C. M. DAVENPORT, I. H. MAUMENEE, R. A. LEWIS, J. F. HEJTMANCIK, M. LITT, E. LOVRIEN, R. WELEBER, B. BACHYNSKI *et al.*

Reports

839 Spatially Resolved Observation of Supercurrents Across Grain Boundaries in YBaCuO Films: J. MANNHART, R. GROSS, K. HIPLER, R. P. HUEBENER, C. C. TSUEI, D. DIMOS, P. CHAUDHARI

841 Prediction of New Low Compressibility Solids: A. Y. LIU AND M. L. COHEN

843 Three-Dimensional Optical Storage Memory: D. A. PARTHENOPOULOS AND P. M. RENTZEPIS

- SCIENCE is published weekly on Friday, except the last week in December, and with an extra issue in February by the American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC 20005. Second-class postage (publication No. 484460) paid at Washington, DC, and at an additional entry. Now combined with *The Scientific Monthly*® Copyright © 1989 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, \$18 (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 1722, 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 objects 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, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.



COVER An aggregation of crown-of-thorns starfish (*Acanthaster planci*) on a staghorn *Acropora* coral, Great Barrier Reef, Australia. The starfish feed on the coral polyps, leaving behind a bleached skeleton. The white branches were recently eaten; the overgrown basal branches have been dead for several months or more. In recent years, *A. planci* outbreaks have caused extensive damage to a large section of the Great Barrier Reef. See page 847. [Photograph by Len Zell; courtesy of The Great Barrier Reef Marine Park Authority, Townsville, Queensland, Australia]

- 845 Orthogonal Self-Assembled Monolayers: Alkanethiols on Gold and Alkane Carboxylic Acids on Alumina: P. E. LAIBINIS, J. J. HICKMAN, M. S. WRIGHTON, G. M. WHITESIDES
- 847 Evidence from Sediments of Long-Term *Acanthaster planci* Predation on Corals of the Great Barrier Reef: P. D. WALBRAN, R. A. HENDERSON, A. J. T. JULL, M. J. HEAD
- 850 Nutritional Importance of Pytrolequinoline Quinone: J. KILLGORE, C. SMIDT, L. DUICH, N. ROMERO-CHAPMAN, D. TINKER, K. REISER, M. MELKO, D. HYDE, R. B. RUCKER
- 852 Translational Blockade Imposed by Cytokine-Derived UA-Rich Sequences: V. KRUYIS, O. MARINX, G. SHAW, J. DESCHAMPS, G. HUEZ
- 855 Osteoclastic Bone Resorption by a Polarized Vacuolar Proton Pump: H. C. BLAIR, S. L. TEITELBAUM, R. GHISELLI, S. GLUCK
- 857 Role of Prostaglandins and cAMP in the Secretory Effects of Cholera Toxin: J. W. PETERSON AND L. G. OCHOA
- 859 Buprenorphine Suppresses Cocaine Self-Administration by Rhesus Monkeys: N. K. MELLO, J. H. MENDELSON, M. P. BREE, S. E. LUKAS
- 862 Inhibition of Postsynaptic PKC or CaMKII Blocks Induction But Not Expression of LTP: R. MALINOW, H. SCHULMAN, R. W. TSIEN
- 866 Imaging of Memory-Specific Changes in the Distribution of Protein Kinase C in the Hippocampus: J. L. OLDS, M. L. ANDERSON, D. L. MCPHIE, L. D. STATEN, D. L. ALKON

Technical Comments

- 870 Angiotensin II: Does It Have a Direct, Obligate Role in Ovulation?: A. I. DAUD, F. M. BUMPUS, A. HUSAIN; F. NAFTOLIN *et al.*

Book Reviews

- 872 Speciation and Its Consequences, *reviewed by*: H. L. CARSON ■ Fractal Growth Phenomena, R. CAWLEY ■ Cooling Flows in Clusters and Galaxies, E. T. VISHNIAC ■ Magnetoresistance in Metals, R. REIFENBERGER ■ Books Received

Products & Materials

- 876 Research Test to Detect HIV ■ Complete Blotting and Hybridization System ■ Antibodies ■ Endotoxin Removal from Biological Fluids ■ Skin-Protecting Mousse ■ Vacuum Pump Improves Nucleic Acid Transfer ■ Hand-Held Rechargeable Homogenizer ■ Spectrophotometer for HPLC ■ New Circuitry for Motion Analyzer ■ Literature

Board of Directors

Walter E. Massey
Retiring President,
Chairman

Richard C. Atkinson
President

Donald N. Langenberg
President-elect

Mary Ellen Avery
Francisco J. Ayala
Floyd E. Bloom
Mary E. Clutter
Eugene H. Cota-Robles
Joseph G. Gavin, Jr.
John H. Gibbons
Beatrix A. Hamburg
William T. Golden
Treasurer
Richard S. Nicholson
Executive Officer

Editorial Board

Elizabeth E. Bailey
David Baltimore
William F. Brinkman
E. Margaret Burbidge
Philip E. Converse
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
Qais Al-Awqati
Don L. Anderson
Stephen J. Benkovic
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
Theodore H. Geballe

Roger I. M. Glass
Stephen P. Goff
Robert B. Goldberg
Corey S. Goodman
Jack Gorski
Stephen J. Gould
Richard M. Held
Gloria Heppner
Eric F. Johnson
Konrad B. Krauskopf
Charles S. Levings III
Richard Losick
Karl L. Magleby
Philippa Marrack
Joseph B. Martin
John C. McGiff
Mortimer Mishkin
Carl O. Pabo

Yeshayau Pocker
Michael I. Posner
Dennis A. Powers
Russell Ross
James E. Rothman
Erkki Ruoslahti
Ronald H. Schwartz
Vernon L. Smith
Robert T. N. Tjian
Virginia Trimble
Emil R. Unanue
Geerat J. Vermeij
Bert Vogelstein
Harold Weintraub
Irving L. Weissman
George M. Whitesides
Owen N. Witte
William B. Wood

Science

245 (4920)

Science **245** (4920), 803-876.

ARTICLE TOOLS

<http://science.sciencemag.org/content/245/4920>

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. The title *Science* is a registered trademark of AAAS.

Copyright © 1989 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.