Advancement
Association
American

For the
Advancement
of
Science

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

Research Articles

Reports
843 Three-Dimensional Optical Storage Memory: D. A. Parthenopoulos and P. M. Rentzeptis

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. New combined with The Scientific Monthly® Copyright 1969 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 $1.00. 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.
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]

### 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


### Translational Blockade Imposed by Cytokine-Derived UA-Rich Sequences: V. Kruts, O. Marin, G. Shaw, J. Deschamps, G. Huez

### Osteoclastic Bone Resorption by a Polarized Vacular Proton Pump: H. C. Blair, S. L. Teitelbaum, R. Ghiselli, S. Gluck

### Role of Prostaglandins and cAMP in the Secretory Effects of Cholera Toxin: J. W. Peterson and L. G. Ochoa

### Buprenorphine Suppresses Cocaine Self-Administration by Rhesus Monkeys: N. K. Mello, J. H. Mendelson, M. P. Bree, S. E. Lukas

### Inhibition of Postsynaptic PKC or CaMKII Blocks Induction But Not Expression of LTP: R. Malinow, H. Schuman, R. W. Tsien

### 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. Staton, D. L. Alkon

### Angiotensin II: Does It Have a Direct, Obligate Role in Ovulation?: A. I. Daud, F. M. Bumpus, A. Husain; F. Naftolin et al.

### Speciation and Its Consequences, reviewed by: H. L. Caron ▪ Fractal Growth Phenomena, R. Cawley ▪ Cooling Flows in Clusters and Galaxies, E. T. Vishniac ▪ Magnetoresistance in Metals, R. Reifenberger ▪ Books Received

### 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