# This Week in Science

## Editorial

585 Science, Journalism, and Whistle-Blowing

## Letters


## News & Comment

593 Tight Times for Materials R&D
595 Growth of Information Management by Government Pilloried in Report South Africa Blocks AAAS Visit
596 *Briefing*: Britain Agrees to Spend $470 Million on New European Space Program ■ Animal Day ■ Heterosexual AIDS: Setting the Odds ■ Supreme Court Denies Plea of Alcoholic Vets
598 The Big Problem of Brittle Books ■ Rare Treatment for Rare Items
601 *Briefing*: Industrial, Government Cooperation Urged ■ Commission to Assess Science and Government ■ Acid Rain Said to Threaten Bay

## Research News

602 Genome Projects Ready to Go
603 Chance and Repetition
604 Advances in Measurement Science
606 Indoor Radon: The Deadliest Pollutant

## Articles

611 The Science of Patterns: L. A. STEIN
617 Microemulsions: M. KAHLWEIT
622 Apolipoprotein E: Cholesterol Transport Protein with Expanding Role in Cell Biology: R. W. MAHLEY

## Reports


---

**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. 46446) paid at Washington, DC, and at an additional entry. Copyright © 1988 by the American Association for the Advancement of Science. The title SCIENCE is a registered trademark of the AAAS. Domestically individual membership and subscription (51 Issues): $65. Domestic institutional subscription (51 Issues): $98. Foreign postage extra: Canada $32, other (surface mail) $27, air-surface via Amsterdam $66. First class, air-mail, school-year, and student rates on request. Single copies $3.00 ($3.50 by mail); back issues $4.50 ($5.00 by mail); Biotechnology issue, $5.50 ($6 by mail); classroom rates on request; Guide to Biotechnology Products and Instruments $16 ($17 by mail). Change of address: allow 6 weeks, giving old and new addresses and seven-digit account number. 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 page plus $0.10 per page is paid directly to CCC, 21 Congress Street, Salem, Massachusetts 01970. The identification code for Science is 0036-8075/83 $1 + .10. Postmaster: Send Form 3579 to Science, 1333 H Street, NW, Washington, DC 20005. 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 power of the methods of science in human progress.
cover  St. Kevin Gulch, a mountain stream near Leadville, Colorado, which receives acidic, metal-enriched drainage from an abandoned mine. Hydrous iron oxides impart the bright orange color to the stream; photoreduction of these oxides and dissolved ferric iron causes large increases in dissolved ferrous iron, Fe²⁺, during the day. See page 637. [Kenneth E. Bencala, U.S. Geological Survey, Menlo Park, CA]

634 Stratospheric Response to Trace Gas Perturbations: Changes in Ozone and Temperature Distributions: G. BRASSEUR and M. H. HITCHMAN
637 Iron Photoreduction and Oxidation in an Acidic Mountain Stream: D. M. McKNIGHT, B. A. KIMBALL, K. E. BENCALA
640 Toxic DNA Damage by Hydrogen Peroxide Through the Fenton Reaction in Vitro and in Vivo: J. A. IMLAY, S. M. CHIN, S. LINN
646 Dextran Sulfate Suppression of Viruses in the HIV Family: Inhibition of Virion Binding to CD4⁺ Cells: H. MITSUYA, D. J. LOONEY, S. KUNO, R. UEINO, F. WONG-SYAL, S. BRODER
649 Sustained Dendritic Gradients of Ca²⁺ Induced by Excitatory Amino Acids in CA1 Hippocampal Neurons: J. A. CONNOR, W. J. WADMAN, P. E. HOCKBERGER, R. K. S. WONG
653 Highly Cooperative Opening of Calcium Channels by Inositol 1,4,5-Trisphosphate: T. MEYER, D. HOLOWSKA, L. STRYER
662 Aggregation of Lysine-Containing Zeins into Protein Bodies in Xenopus Oocytes: J. C. WALLACE, G. GALILI, E. E. KAWATA, R. E. CUELLAR, M. A. SHOTWELL, B. A. LARKINS

Book Reviews

666 Technology, the Economy, and Society, reviewed by D. MONTGOMERY ■ The Evolution of Reef Communities, J. E. SORAUF ■ Arthropod Brain, R. R. HOY ■ Structure and Dynamics of Elliptical Galaxies, R. H. MILLER ■ Books Received