## 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. MAHLLEY

## 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. 484465) 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. Domestic 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, airmail, school-year, and student rates on request. Single copies $3.00 ($6.50 by mail); back issues $4.50 ($5.00 by mail); Biotechnology issue, $5.50 ($8 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 bases fee of $1 per copy 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 promise of the methods of science in human progress.
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; photooxidation 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 Vivo and in Vitro: 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. UENO, F. WONG-STAAL, 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 Inositols 1,4,5-Trisphosphate: T. MEYER, D. HOLOWKA, 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

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

Board of Directors
Sheila E. Widnall
Rafael President, Chairman
Watson E. Mealey
President
Richard C. Atkinson
President-elect

Floyd E. Bloom
Mary E. Clutter
Eugene H. Cota-Robles
Mildred G. Dresselhaus
Beatris A. Hamburg
Donald N. Langenberg
William T. Golden
Treasurer
Alvin W. Trivelpiece
Executive Officer

Editorial Board
Elizabeth E. Bailey
David Baltimore
William F. Brinkman
E. Margaret Burbidge
Philip E. Converse
Joseph L. Goldstein
F. Clark Howat
James D. Idol, Jr.
Leon Knopoff
Oliver E. Nelson
Helen M. Ranney
David M. Raup
Howard A. Schneiderman
Larry L. Smarr
Robert M. Solow
James D. Watson

Board of Reviewing Editors
John Abeloff
Gaet Al-Awqati
Don L. Anderson
Stephen J. Bankovic
Floyd E. Bloom
James J. Bull
Charles R. Cantor
Ralph J. Cabrera
John M. Coffin
Bruce F. Eldridge
Paul T. Englund
Theodore H. Geballe
Roger I. M. Glass
Stephen P. Gold
Robert B. Goldberg

Corey S. Goodman
Jack Gershal
Stephen J. Gould
Richard M. Held
Gloria Happner
Eric F. Johnson
Konrad B. Krauskopf
Charles S. Lavinge III
Richard Locks
Karl L. Magelby
Philippa Merrick
Joseph B. Martin
John C. McClintic
Mortimer Mishkin
Jiri Novotny
Gordon H. Orians
Carl O. Pabo

John S. Pearse
Yoshayu Pocker
Jean Paul Revel
Russell Reza
James E. Rothman
Daniel V. San
t Thomas C. Schelling
Ronald H. Schwartz
Oto T. Sloborg
Robert T. N. Tien
Virginia Trimble
Gerard J. Vermeij
Harold Weintraub
Irving L. Weissman
George M. Whitesides
Owen N. Witte
William B. Wood