

1543 This Week in *Science*

Editorial

1549 An Overview of Overhead

Letters

1546 An Analysis of Citation Analysis: R. C. VON BORSTEL ■ Clean Air Act Amendments: W. G. ROSENBERG ■ Evaluating Teaching: J. M. PASACHOFF; W. DEBLER; T. D. JOHNSTON

ScienceScope

1551 Vacuum vs. magnet engineers at LEP; managers *vs.* physicists at the SSC; etc.

News & Comment

1552 NIH Finds Fraud in *Cell* Paper ■ Warm Praise for a Whistle-Blower ■ The Report's Principal Conclusions
1554 Who Found AZT Works for AIDS?
1555 OTA Challenges Dogma on Research Funding
1556 Slimmer Station Wins White House Approval
1557 Suitable Creative Thinker for Rent
1558 Better Data Needed on Sensitivity Syndrome

Research News

1559 Ranking the Rain Forests
1561 Déjà Vu All Over Again: Can Chimpanzees Talk?
1562 Rising Chemical "Stars" Could Play Many Roles
1564 "Spiral Forest" May Hold Clue to Thin-Film Superconductivity
1566 *Briefings*: Brain Food? ■ A Physical Paradox ■ Psychological Risk Assessment ■ Selling the SSC to the Next Generation ■ Getting Around the Cosmic Censor ■ Environmental Prize ■ Searching for Words ■ Correction

Articles

1568 America's Soaring Prison Population: P. A. LANGAN
1574 Chemical and Biological Microstructures as Probed by Dynamic Processes: J. M. DRAKE, J. KLAFTER, P. LEVITZ
1580 Cocaine Addiction: Psychology and Neurophysiology: F. H. GAWIN

Reports

1587 Growth Mechanism of Sputtered Films of $\text{YBa}_2\text{Cu}_3\text{O}_7$ Studied by Scanning Tunneling Microscopy: M. HAWLEY, I. D. RAISTRICK, J. G. BEERY, R. J. HOULTON
1590 Self-Arrangement of Molybdenum Particles into Cubes: A. S. EDELSTEIN, G. M. CHOW, E. I. ALTMAN, R. J. COLTON, D. M. HWANG

- **SCIENCE (ISSN 0036-8075) is published weekly on Friday, except the last week in December, 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 additional mailing offices. Copyright © 1991 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): \$82 (\$50 allocated to subscription). Domestic institutional subscription (51 issues): \$150. Foreign postage extra: Canada \$46, other (surface mail) \$46, air freight \$90. First class, airmail, school-year, and student rates on request. Canadian GST Number: 125488122. **Change of address:** allow 6 weeks, giving old and new addresses and 11-digit account number. **Postmaster:** Send change of address to *Science*, P.O. Box 1723, Riverton, NJ 08077. **Single copy sales:** \$6.00 per issue prepaid includes surface postage; Guide to Biotechnology Products and Instruments, \$20. 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. *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 Scanning tunneling microscope image of a high-transition temperature film of sputtered $\text{YBa}_2\text{Cu}_3\text{O}_7$ on MgO showing spiral grains with step heights of about one unit cell (12 Å). The perspective-shaded plot was generated with a computer program called SCOPE; colors represent increasing altitude from blue to red-violet. See page 1587. [Image by Melvin L. Prueitt, computer graphics group, and data by Marilyn Hawley, MST-7, Los Alamos National Laboratory]

- 1592 San Andreas Fault Zone Head Waves Near Parkfield, California: Y. BEN-ZION AND P. MALIN
- 1594 Microtektites, Microkrystites, and Spinels from a Late Pliocene Asteroid Impact in the Southern Ocean: S. V. MARGOLIS, P. CLAEYS, F. T. KYTE
- 1597 Characterization of a Human TAR RNA-Binding Protein That Activates the HIV-1 LTR: A. GATIGNOL, A. BUCKLER-WHITE, B. BERKHOUT, K.-T. JEANG
- 1600 In Vitro and in Vivo Consequences of VLA-2 Expression on Rhabdomyosarcoma Cells: B. M. C. CHAN, N. MATSUURA, Y. TAKADA, B. R. ZETTER, M. E. HEMLER
- 1603 An Immunogenic *Onchocerca volvulus* Antigen: A Specific and Early Marker of Infection: E. LOBOS, N. WEISS, M. KARAM, H. R. TAYLOR, E. A. OTTESEN, T. B. NUTMAN
- 1605 A Multisubunit Ribozyme That Is a Catalyst of and Template for Complementary Strand RNA Synthesis: J. A. DOUDNA, S. COUTURE, J. W. SZOSTAK
- 1608 Adrenergic Excitation of Cutaneous Pain Receptors Induced by Peripheral Nerve Injury: J. SATO AND E. R. PERL
- 1611 Regulation of Adhesion to ICAM-1 by the Cytoplasmic Domain of LFA-1 Integrin β Subunit: M. L. HIBBS, H. XU, S. A. STACKER, T. A. SPRINGER
- 1613 Permeation of Calcium Ions Through Non-NMDA Glutamate Channels in Retinal Bipolar Cells: T. A. GILBERTSON, R. SCOBAY, M. WILSON
- 1616 Control of Embryonic Motoneuron Survival in Vivo by Ciliary Neurotrophic Factor: R. W. OPPENHEIM, D. PREVETTE, Y. QIN-WEI, F. COLLINS, J. MACDONALD

Technical Comment

- 1619 Carbamate Formation and the Neurotoxicity of L- α Amino Acids: P. B. NUNN, A. J. DAVIS, P. O'BRIEN; J. W. OLNEY, C. ZORUMSKI, M. T. PRICE, J. LABRUYERE

Book Reviews

- 1621 Gunnar Myrdal and America's Conscience, reviewed by K. O'S. SEE ■ History of CERN, L. HODDESON ■ Some Other Books of Interest ■ Books Received
- Author Index to Volume 251 is found on pages I-X*

Board of Directors

Donald N. Langenberg
*Retiring President,
Chairman*

Leon M. Lederman
President

F. Sherwood Rowland
President-elect

Mary Ellen Avery
Francisco J. Ayala
Eugene H. Cota-Robles
Robert A. Frosch
Joseph G. Gavin, Jr.
Florence P. Haseltine
Jean'ne M. Shreeve
Warren M. Washington

William T. Golden
Treasurer

Richard S. Nicholson
Executive Officer

Editorial Board

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

Board of Reviewing Editors

John Abelson
Frederick W. Alt
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

Douglas T. Fearon
Harry A. Fozzard
Theodore H. Geballe
Roger I. M. Glass
Stephen P. Goff
Corey S. Goodman
Stephen J. Gould
Eric F. Johnson
Stephen M. Kosslyn
Konrad B. Krauskopf
Charles S. Levings III
Richard Losick
John C. McGiff
Anthony R. Means
Mortimer Mishkin
Roger A. Nicoll
William H. Orme-Johnson III
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
Keith Yamamoto

Science

251 (5001)

Science **251** (5001), 1543-1624.

ARTICLE TOOLS

<http://science.sciencemag.org/content/251/5001>

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.