

**NEWS**

How Many More After Northridge?  
French AIDS Scandal: Letters Provoke Unintended Response  
Japan’s H-II Rocket to Bolster Remote Sensing Projects  
MicroGeneSys: Peer Review Triumphs Over Lobbying  
France: Researchers Nervous About Bioethics Bill  
Another Shakeup at LBL Genome Center  
New Radon Study: No Smoking Gun  
Germany: Expected Increase Becomes a Cut  
Learning by Diffusion: Nitric Oxide May Spread Memories  
Hubble Repair and More Wins Astronomers’ Acclaim  

**SPECIAL NEWS REPORT**

Radiation: Balancing the Record  
Political Fallout: A National Bioethics Board?

**POLICY FORUM**

Ecological and Genetic Factors in Conservation: A Cautionary Tale  
T. M. Caro and M. K. Laurenson

**PERSPECTIVES**

Molecular Geometry and Nonlinear Optics  
J. L. Brédas  
α-Helical Coiled Coils: More Facts and Better Predictions  
C. Cohen and D. A. D. Parry

**ARTICLE**

Molecular Dynamics in Liquids: Spin-Lattice Relaxation of Nitroxide Spin Labels  
B. H. Robinson, D. A. Haas, C. Mailer

**DEPARTMENTS**

THIS WEEK IN SCIENCE  
EDITORIAL  
Erathquakes and Collective Action

LETTERS  
Minnesota Drug Sales: K. C. Zoon; N. Hasselmo  
Heavy Ion Drivers: B. Richter  
ApoE, Amyloid, and Alzheimer’s Disease: J. Hardy  
Academic Decision-Making: T. Shinbrot  
For the Record: S. L. Mayo, R. L. Baldwin

SCIENCESCOPE  
RANDOM SAMPLES  
Basic Researchers to Head U.K. Councils  
Digging Out a Dinosaur Embryo  
A Big Bang by No Other Name  
Silicon Valley Moguls Chip in for E.T.

BOOK REVIEWS  
The Research Foundations of Graduate Education, O. Amsterdamska  
The Photosynthetic Reaction Center, W. F. J. Vermaas  
Bacillus subtilis and Other Gram-Positive Bacteria, K. F. Bott  
Vignettes  
Books Received

INSIDE AAAS

PRODUCTS & MATERIALS

Board of Reviewing Editors

John Abelson  
Frederick W. Alt  
Don L. Anderson  
Michael Ashburner  
Stephen J. Benkovic  
David E. Bloom  
Floyd E. Bloom  
Pat Borst  
Michael S. Brown  
Henry R. Bourne  
James J. Bull  
Kathryn Calame  
C. Thomas Caskey  
Dennis W. Choi  
John M. Coffin  
Paul J. Crutzen  
Robert Desimone  
Nicole Le Douarin  
Bruce F. Eldridge  
Paul T. Englund  
Richard G. Fairbanks  
Douglas T. Fearon  
Harry A. Fozard  
K. Friedrich  
Theodore H. Geballe  
Margaret J. Geller  
John C. Gerhart  
Roger I. M. Glass  
Stephen P. Gold  
Peter N. Goodfellow  
Corey S. Goodman  
Stephen J. Gould  
Ira Herskowitz  
Eric F. Johnson  
Stephen M. Kosslyn  
Michael LaBarbera  
Charles S. Levings III  
Alexander Levkowitz  
Harvey F. Lodish  
Richard Losick  
Diane Mathis  
Anthony R. Means  
Shigetada Nakanishi  
Roger A. Nicoll  
William H. Orme-Johnson III  
Stuart L. Pimm  
Yeh-Hsien Pocker  
Alexander Powers  
Ralph S. Quatraro  
V. Ramanathan  
Douglas C. Rees  
T. M. Rice  
Erika Ruoslahti  
David C. Rubie  
Gottfried Schatz  
Jozef Schell  
Ronald H. Schwartz  
Terrence J. Seynowski  
Elen Solomon  
Thomas A. Steitz  
Michael P. Smyer  
Richard P. Thompson  
Robert T. N. Tjian  
Emil R. Ulanuwe  
Geerat J. Vermeij  
Bert Vogelstein  
Harold Weintraub  
Zena Werb  
George M. Whitesides  
Owen N. Witte  
William A. Wulf  
Keith Yamamoto
Photomicrograph of garnet in crossed polarized light. The dark layers are nearly pure andradite (calcium-iron garnet), whereas the light layers also contain varying amounts of grossular (calcium-aluminum garnet). This sample is from the metamorphic aureole of the Drammen granite in the Permian Oslo Rift. Analysis of the garnet provides information on the evolution of the hydrothermal system during metamorphism. (Field width is 3.2 mm.) See page 505. [Photomicrograph: Bjørn Jømtevit]

RESEARCH ARTICLE
Life on Land in the Precambrian
R. J. Horodyski and L. P. Knauth

REPORTS
Dynamics Affecting the Primary Charge Transfer in Photosynthesis
J. N. Gehlen, M. Marchi, D. Chandler

Decomposition of the Modulated Waves in a Rotating Couette System
Y. Takeda, W. E. Fischer, J. Sakakibara

Constraints on Transport and Kinetics in Hydrothermal Systems from Zoned Garnet Crystals
B. Jamtveit and R. L. Hervig

Glacial-Interglacial Changes in Moisture Sources for Greenland: Influences on the Ice Core Record of Climate
C. D. Charles, D. Rind, J. Jouzel, R. D. Koster, R. G. Fairbanks

Large First Hyperpolarizabilities in Push-Pull Polyenes by Tuning of the Bond Length Alternation and Aromaticity

Meiosis-Induced Double-Strand Break Sites Determined by Yeast Chromatin Structure
T.-C. Wu and M. Lichten

Effective Tumor Vaccine Generated by Fusion of Hepatoma Cells with Activated B Cells

Parallel Neuronal Mechanisms for Short-Term Memory
E. K. Miller and R. Desimone

Phospholipase D: A Downstream Effector of ARF in Granulocytes

Maspin, a Serpin with Tumor-Suppressing Activity in Human Mammary Epithelial Cells
Z. Zou, A. Anisowicz, M. J. C. Hendrix, A. Thor, M. Neveu, S. Sheng, K. Rafidi, E. Settor, R. Sager

Visualization of Quantal Synaptic Transmission by Dendritic Calcium Imaging
T. H. Murphy, J. M. Baraban, W. G. Wier, L. A. Blatter

Locally Distributed Synaptic Potentiation in the Hippocampus
E. M. Schuman and D. V. Madison

TECHNICAL COMMENTS
Experimental Support for the "Hydrophobic Zipper" Hypothesis
A. M. Gronenborn and G. M. Clore

Alzheimer’s Disease and Possible Gene Interaction

Fluid flow: rolling and rotating

AAAS Board of Directors
F. Sherwood Rowland
Retiring President, Chairman
Elise E. Clark
President
Francisco I. Ayala
President-elect
Robert A. Frosch
Councilor
Florence P. Haseltine
William A. Lester, Jr.

William T. Golden
Chairman, National Research Council

Richard S. Nicholson
Executive Officer

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. 484660) paid at Washington, DC, and additional mailing offices. Copyright © 1994 by the American Association for the Advancement of Science. All rights reserved. Reproduction of any part of the contents of this issue in any form will be prosecuted to the fullest extent permitted by law. Printed in U.S.A.

Subscription rates: Domestic individual membership and subscription (11 issues): $92 (50% allocated to subscription). Domestic institutional subscription (51 issues): $215. Foreign postage extra. Mexico, Caribbean (surface mail) $50; other countries (air assist delivery) $95. First-class, airmail, student and emeritus rates on request. Canadian rates with GST available upon request, GST #125488132. 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 20033, Marion, ON, Canada K0C 2053. 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, MA 01970. The identification code for Science is 0036-8075/83 $10. Science is indexed in the Reader’s Guide to Periodical Literature and in several specialized indexes.