

7 This Week in *Science*

Editorial

9 Analytical Instrumentation and Measurements

Letters

10 Economic Forecasting: B. LIEBERMAN; M. E. CLARK ■ Indirect Costs: P. E. GRAY
■ Correction: E. P. Reddy

News & Comment

19 AIDS Drug Trials Enter New Age ■ A New Antiviral Drug: Promising or Problematic?
21 AZT Reverses AIDS Dementia in Children ■ AIDS Drugs Remain Unavailable for Kids
23 Hope for AIDS Vaccines
24 DOE Calls in the Labs for Defense Waste Cleanup
26 Decision Time on African Ivory Trade
27 NRC Unveils Agriculture R&D Plan
Abortion: Litmus Test for NIH Director

Research News

28 European Prehistory Gets Even Older ■ When Is a Rock an Artifact?
30 Rifkin Tries to Stop Galileo Launch
31 Japanese Researchers Push Electron Holography
32 Protein Chemists Gain a New Analytical Tool ■ Mass Specs Move in on Protein Sequencers
34 *Briefings*: Biomedical Dollars and Body Counts ■ Shroud Resurrected ■ A View That Can Take Your Breath Away ■ Harvard Synthesizes Palytoxin Molecule ■ Federal Academic R&D Support Lags

Articles

Analytical Instrumentation

51 Recent Developments in Analytical Chromatography: M. V. NOVOTNY
57 Microcolumn Separations and the Analysis of Single Cells: R. T. KENNEDY, M. D. OATES, B. R. COOPER, B. NICKERSON, J. W. JORGENSEN
64 Electrospray Ionization for Mass Spectrometry of Large Biomolecules: J. B. FENN, M. MANN, C. K. MENG, S. F. WONG, C. M. WHITEHOUSE
71 Some Developments in Nuclear Magnetic Resonance of Solids: B. F. CHMELKA, AND A. PINES

Reports

99 Scanning Tunneling Microscopy and Nanolithography on Conducting Oxide, $Rb_{0.3}MoO_3$: E. GARFUNKEL, G. RUDD, D. NOVAK, S. WANG, G. EBERT, M. GREENBLATT, T. GUSTAFSSON, S. H. GAROFALINI

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COVER Motions involved in double rotation, a means to obtain sharp nuclear magnetic resonance (NMR) spectra for quadrupolar nuclei in solid materials. The sample is contained in the inner (orange) cylinder, which rotates ~7000 times per second around an axis inclined at 30.6° to the axis of the outer (blue) cylinder. The outer cylinder, which has a diameter of ~1 centimeter, rotates ~1000 times per second around an axis inclined at 54.7° to the magnetic field. See page 71. [Computer-generated image courtesy of Lawrence Berkeley Laboratory]

- 101 Amazon River Discharge and Climate Variability: J. E. RICHEY, C. NOBRE, C. DESER
- 103 Flood Basalts and Hot-Spot Tracks: Plume Heads and Tails: M. A. RICHARDS, R. A. DUNCAN, V. E. COURTILLOT
- 107 Giant Radiation-Induced Color Halos in Quartz: Solution to a Riddle: A. L. ODOM AND W. J. RINK
- 109 Hormonal and Genetic Control of Behavioral Integration in Honey Bee Colonies: G. E. ROBINSON, R. E. PAGE, JR., C. STRAMBI, A. STRAMBI
- 112 Dispersed Polaron Simulations of Electron Transfer in Photosynthetic Reaction Centers: A. WARSHEL, Z. T. CHU, W. W. PARSON
- 116 Symbiotic Marine Bacteria Chemically Defend Crustacean Embryos from a Pathogenic Fungus: M. S. GIL-TURNES, M. E. HAY, W. FENICAL
- 118 A Single Amino Acid Interchange Yields Reciprocal CTL Specificities for HIV-1 gp 160: H. TAKAHASHI, S. MERLI, S. D. PUTNEY, R. HOUGHTEN, B. MOSS, R. N. GERMAIN, J. A. BERZOFKY
- 121 Fibroblasts Transformed with *v-src* Show Enhanced Formation of an Inositol Tetrakisphosphate: R. M. JOHNSON, W. J. WASILENKO, R. R. MATTINGLY, M. J. WEBER, J. C. GARRISON

Inside AAAS

- 130 The Centennial Annual Meeting, Starring Harry Truman and Civil Liberties: D. WOLFE ■ Arms Control Colloquium Set ■ AAAS Council: M. WHITE

Book Reviews

- 132 Outer Space: Politics and Law; American Space Law: International and Domestic; Outer Space: Problems of Law and Policy, reviewed by E. GORDON ■ From Cardinals to Chaos, R. E. RIDER ■ The Little Ice Age, J. T. OVERPECK ■ Books Received

Software Reviews

- 138 Stimulation Software for the Macintosh: D. K. BOGEN

Products & Materials

- 143 Benchtop Safety Shields ■ Reagent-Grade Water System ■ Universal Joystick ■ Cell Growth Matrix ■ DNA Fingerprinting Kit ■ Large Volume Protein Immunoblotting ■ Literature

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