LETTERS
Asteroid Extinction Hypothesis: D. V. Kent; G. C. Reid; R. E. Brown; L. W. Alvarez et al. .................................. 648

EDITORIAL
Usefulness of the Social Sciences: K. Prewitt ...................................................... 659

ARTICLES
Real-Time Color Graphics in Studies of Molecular Interactions: R. Langridge et al. ........................................... 661
Gene Expression in Eukaryotes: D. D. Brown ......................................................... 667
Grant Length and Budget Stability at the National Institutes of Health: J. T. Kalberer, Jr. ........................................... 675

NEWS AND COMMENT
William Perry and the Weapons Gamble ............................................................... 681
Energy, Security, and War ...................................................................................... 683
Hatch Takes Over Senate Labor Committee ......................................................... 684
Is R & D the Key to the Productivity Problem? ...................................................... 685
Space Telescope Institute at Hopkins ................................................................. 686
Briefing: Governor Brown Boosts Microelectronics; Geological Survey Chief Lost in Transition; Youth and Loyalty at OMB ................................................................. 688

RESEARCH NEWS
Jumping Genes Help Trace Inherited Diseases ...................................................... 690
There Is More to "Acid Rain" Than Rain .................................................................. 692
New Study Links Chlorination and Cancer ............................................................ 694

BOOK REVIEWS
Birth and Fortune, reviewed by R. L. Clark; Pollution, Politics, and International Law, D. S. Cheever; Nocturnal Malagasy Primates, R. J. Russell; Aquatic Oligochaete Biology, K. Fauchald; Receptors for Neurotransmitters, Hormones and Pheromones in Insects, R. J. Greenspan; Books Received ................................................................. 695
REPORTS

Observations of Solar Irradiance Variability: R. C. Willson et al. ........................................ 700
Hormesis: A Response to Low Environmental Concentrations of Petroleum Hydrocarbons: R. B. Laughlin, Jr., J. Ng, H. E. Guard .................................................. 705
Methane Production from Acetate and Associated Methane Fluxes from Anoxic Coastal Sediments: F. J. Sansone and C. S. Martens ....................................................... 707
Membrane Conductance and Action Potential of a Regenerating Axonal Tip: H. Meiri, M. E. Spira, J. Parnas .......................................................... 709
Concentration Oscillations and Efficiency: Glycolysis: P. H. Richter and J. Ross .............................. 719
Free and Forced Diving in Birds: J. W. Kanwisher, G. Gabrielsen, N. Kanwisher .............................. 717
Exposure of Newborn Rats to Pharmacologically Active Compounds May Permanently Alter Carcinogen Metabolism: R. A. Faris and T. C. Campbell ................................ 719
Sex Ratio Manipulation and Selection for Attractiveness: N. Burley ............................................ 721
Neural Correlates of a Nonjamming Electrolocation System: J. A. Matsubara ............................... 722
Interaction Between Purine and Benzodiazepine: Inosine Reverses Diazepam-Induced Stimulation of Mouse Exploratory Behavior: J. N. Crawford et al. ..................... 725
Tyrosine Administration Decreases Vulnerability to Ventricular Fibrillation in the Normal Canine Heart: N. A. Scott et al. ................................................................. 727
Cigarette Smoking in the 1970’s: The Impact of the Antismoking Campaign on Consumption: K. E. Warner .......................................................... 729


PRODUCTS AND MATERIALS

Data Plotter; Nanoliter Pump; Interactive Graphics; Spectrofluorometer; Liquid Chromatograph; Electrophoresis; Motion Analyzer; Echocardiograph; DNA Synthesizer; Protein Analyzer; Electrophoresis Cell; Freezer; Data Acquisition System; Ultraviolet-Visible Spectrophotometer; Literature ........................................ 736

COVER

View down the axis of double helical DNA photographed directly from real-time, interactive three-dimensional color display. Up to four large molecules may be displayed in color as skeletal models and/or surfaces and their stereochemical interactions studied in three dimensions. See page 661. [Robert Langridge, Computer Graphics Laboratory, University of California, San Francisco]