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 .................................................. 688
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
On the Sources of Summertime Haze in the Eastern United States: G. T. Wolff; N. A. Kelly, M. A. Ferman 703
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, I. Parnas 709
Gap Junctional Conductance Is a Simple and Sensitive Function of Intracellular pH: D. C. Spray, A. L. Harris, M. V. L. Bennett 712
Concentration Oscillations and Efficiency: Glycolysis: P. H. Richter and J. Ross 716
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. Crawley 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]
Editor's Summary