

---

---

# SCIENCE

## Index to Volume 195

## January–March 1977

### Editorial Board

RICHARD E. BALZHISER  
JAMES F. CROW  
WARD GOODENOUGH  
CLIFFORD GROBSTEIN  
HERBERT S. GUTOWSKY  
N. BRUCE HANNAY  
DONALD KENNEDY  
HANS LANDSBERG

NEIL E. MILLER  
EDWARD NEY  
FRANK W. PUTNAM  
MAXINE F. SINGER  
RAYMOND H. THOMPSON  
PAUL E. WAGGONER  
F. KARL WILLENBROCK

### Editorial Staff

WILLIAM D. CAREY  
*Publisher*

HANS NUSSBAUM  
*Business Manager*

PHILIP H. ABELSON  
*Editor*

EARL J. SCHERAGO, *Advertising Director*

Published by the

American Association for the Advancement of Science

1515 Massachusetts Avenue, NW, Washington, D.C. 20005

Printed in Richmond, Virginia, by William Byrd Press

Copyright 1977 by the American Association for the Advancement of Science

---

<i>Issue No.</i>	<i>Date</i>	<i>Pages</i>	<i>Issue No.</i>	<i>Date</i>	<i>Pages</i>
4273	7 January	1-108	4279	18 February	617-716
4274	14 January	109-232	4280	25 February	717-816
4275	21 January	233-332	4281	4 March	817-916
4276	28 January	333-432	4282	11 March	917-1054
4277	4 February	433-516	4283	18 March	1055-1258
4278	11 February	517-616	4284	25 March	1259-1378

The names of authors of books reviewed are in SMALL CAPITALS.

**A**

- Abelson, P. H. (*editorials*): Learning about energy the hard way, 733; Oil spills, 137  
 — and A. L. Hammond: The electronics revolution, 1087; Electronics revolution (*editorial*), 1085  
 — and C. Karlik: Letters to *Science* (*editorial*), 9  
 — and I. Tinker: Technology transfer (*editorial*), 351  
 Activation of the nigrostriatal dopaminergic pathway by injection of cholera enterotoxin into the substantia nigra, L. F. Quenzer *et al.*, 78  
 Acute systemic effects of cocaine in man: a controlled study by intranasal and intravenous routes, R. B. Resnick *et al.*, 696  
 Adams, D. B. *See* Martin, L. D., B. M. Gilbert, D. B. Adams  
 Advice on Project Seafarer (*letter*), D. G. Yerg, 130  
 Aequorin luminescence: relation of light emission to calcium concentration—a calcium-independent component, D. G. Allen *et al.*, 996  
 Ahlquist, N. C. *See* Weiss, R. E., *et al.*  
 Albrecht, P., *et al.*: Subacute sclerosing panencephalitis: experimental infection in primates, 64  
 Albumin phylogeny for clawed frogs (*Xenopus*), C. A. Bisbee *et al.*, 785  
 Allen, D. G., *et al.*: Aequorin luminescence: relation of light emission to calcium concentration—a calcium-independent component, 996  
 Alleviating confusion (*letter*), P. A. Meyers and P. Myers, 936  
 Altered yolk structure and reduced hatchability of eggs from birds fed single doses of petroleum oils, C. R. Grau *et al.*, 779  
 Alvord, E. C., Jr. *See* Hruby, S., *et al.*  
 Ames, B. N. *See* Blum, A.  
 Amygdaloid projections to prefrontal and motor cortex, A. Llamas *et al.*, 794  
 Analysis of living tissue by phosphorus-31 magnetic resonance, C. T. Burt *et al.*, 145  
 Ananiev, E. V. *See* Georgiev, G. P., *et al.*  
 Anchel, M.: Animals and ethics (*letter*), 131  
 Andermann, F. *See* Wolfe, L. S., *et al.*  
 Anders, E. *See* Manuel, O. K., *et al.*  
 ANDERSON, R. S.: Building scientific institutions in India, *book review* of, 568  
 Angiogenesis: a marker for neoplastic transformation of mammary papillary hyperplasia, S. S. Brem *et al.*, 880  
 Animal communication by pheromones, H. H. SHOREY, *book review* by E. O. Wilson, 569  
 Animals and ethics (*letter*), M. Anchel, 131  
 Another voice, M. MILLMAN and R. M. KANTER (*Eds.*), *book review* by C. F. Epstein, 58  
 Ant larvae, G. C. WHEELER and J. WHEELER *book review* by E. O. Wilson, 975  
 Antelman, S. M., and A. R. Caggiula: Norepinephrine-dopamine interactions and behavior, 646  
 Anthropogenic CO emissions: implications for the atmospheric CO-OH-CH<sub>4</sub> cycle, N. D. Sze, 673  
 Antibody binding measurements with haptens-selective membrane electrodes, M. Meyerhoff and G. A. Rechnitz, 494  
 Antimetabolic extract from the brain of the hibernating ground squirrel *Citellus tridecemlineatus*, H. Swan and C. Schäte, 84  
 Argabright, V. *See* Lawrence, G. M., *et al.*  
 Arginyl residues: anion recognition sites in enzymes, J. F. Riordan *et al.*, 884  
 Argo Merchant oil spill, The (*letter*), J. W. Farrington *et al.*, 932  
 Argyle, E., *et al.*: Interference with radio astronomy (*letter*), 932  
 Armstrong, R. A., and M. E. Gilpin: Evolution in a time-varying environment, 591  
 Arnold, C. B. *See* Kristein, M. M., *et al.*  
 Asbury, J. G., and R. O. Mueller: Solar energy and electric utilities: should they be interfaced?, 445

- Aschenbrenner, S. E. *See* Kraft, J. C., *et al.*  
 Askonas, B. A.: *book review* of Immunobiology of the macrophage, 387  
 Assaf, G., and W. G. Deuser: Sea straits and glacial periods in the Red Sea, 90  
 Association Affairs: AAAS news, 54, 475, 864; annual meeting, 42, 477  
 Atlas, D.: The paradox of hail suppression, 139  
 Auerbach, S. I., *et al.*: The biome programs: evaluating an experiment, 902  
 Austin, D. F. *See* Enstrom, J. E.  
 Avendaño, C. *See* Llamas, A., *et al.*  
 Avian muscular dystrophy: functional and biochemical improvement with diphenylhydantoin, R. K. Entrikin *et al.*, 873  
 Avioli, L. V. *See* Lee, S. W., *et al.*  
 Axelrod, D. *See* Schlessinger, J., *et al.*  
 Azaarenes in recent marine sediments, M. Blumer *et al.*, 283

**B**

- BAES, C. F. JR., and R. E. MESMER (*Eds.*), The hydrolysis of cations, *book review* of, 1323  
 Baic, D. *See* Gans, C.  
 Baker, M. A., and L. W. Chapman: Rapid brain cooling in exercising dogs, 781  
 Baker, Margaret A. *See* Bisbee, C. A., *et al.*  
 Baker, R. R. *See* Wolfe, L. S., *et al.*  
 Baker, W. O., *et al.*: Computers and research, 1134  
 Balderston, F. E., *et al.*: Computers in banking and marketing, 1115  
 BANDEEN, W. R., and S. P. MARAN (*Eds.*), Possible relationships between solar activity and meteorological phenomena, *book review* of, 670  
 Barak, L. S. *See* Fahey, P. F., *et al.*  
 Baran, P. *See* Farber, D.  
 Bárány, M. *See* Burt, C. T., *et al.*  
 Barber, J. *See* Beauford, W., *et al.*  
 Barber, R. T. *See* Cowles, T. J., *et al.*  
 Barker, S. T. *See* Heberling, R. L., *et al.*  
 Barkley, D. S., *et al.*: Huntington's disease: delayed hypersensitivity in vitro to human central nervous system antigens, 314  
 Barnes, W. M.: Plasmid detection and sizing in single colony lysates, 393  
 BARONDES, S. H. (*Ed.*), Neuronal recognition, *book review* of, 570  
 Barringer, A. R. *See* Beauford, W., *et al.*  
 Barrio, J. R. *See* Scopes, D. I. C., *et al.*  
 Barth, C. A. *See* Lawrence, G. M., *et al.*  
 Bartholomew, G. A., and T. M. Casey: Endothermy during terrestrial activity in large beetles, 882  
 Basal ganglia cooling disables learned arm movements of monkeys in the absence of visual guidance, J. Hore *et al.*, 584  
 BASERGA, R.: Multiplication and division in mammalian cells, *book review* of, 973  
 BASSO, K. H., and H. A. SELBY (*Eds.*), Meaning in anthropology, *book review* of, 279  
 Batesian mimicry: selective advantage of color pattern, J. G. Sternburg *et al.*, 681  
 BATESON, P. P. G., and R. A. HINDE (*Eds.*), Growing points in ethology, *book review* of, 671  
 BAYNE, B. L. (*Ed.*), Marine mussels, *book review* of, 218  
 Beardsworth, E. *See* Karkheck, J., *et al.*  
 Beatty, D. D. *See* Tsin, A. T. C.  
 Beauford, W., *et al.*: Release of particles containing metals from vegetation into the atmosphere, 571  
 Beck, B. F.: *book review* of The science of speleology, 776  
 Beck, E. J. *See* Henrie, J. O., *et al.*  
 Behavioral control of workers by queens in primitively eusocial bees, M. D. Breed and G. J. Gamboa, 694  
 Bell, K. P. *See* Martinez-Hernandez, A., *et al.*  
 Beluhan, F. Z. *See* Shah, K. V., *et al.*  
 Benacerraf, B. *See* Paul, W. E.  
 Bentley, D. *See* Carlson, J. R.  
 Bergen, G. S.: Clever lawyers (*letters*), 729  
 Berger, P. J., *et al.*: Phenolic plant compounds functioning as reproductive inhibitors in *Microtus montanus*, 575  
 Berkeley, J. *See* Woodley, W. L., *et al.*  
 Bernacki, R. J., and U. Kim: Concomitant elevations in serum sialyltransferase activity and sialic acid content in rats with metastasizing mammary tumors, 577  
 Bernheimer, H. P.: Lysogeny in pneumococci freshly isolated from man, 66  
 Bernstein, R. L., *et al.*: California Current eddy formation: ship, air, and satellite results, 353  
 Biochemical interaction between plants and insects, J. W. WALLACE and R. L. MANSELL (*Eds.*), *book review* by L. E. Gilbert, 387  
 Biological consequences of the 1975 El Niño, T. J. Cowles *et al.*, 285  
 Biological control of water pollution, J. TOURBIER and R. W. PIERSOHN, JR. (*Eds.*), *book review* by R. Mitchell, 386  
 Biome programs, The (*letters*), J. H. Gibson *et al.*, 822  
 Biome programs: evaluating an experiment, The, S. I. Auerbach *et al.*, 902  
 Biondini, R. *See* Woodley, W. L., *et al.*  
 Biosphere reserve program in the United States, The, J. F. Franklin, 262  
 Birnstiel, M. *See* Telford, J., *et al.*  
 Bisbee, C. A., *et al.*: Albumin phylogeny for clawed frogs (*Xenopus*), 785  
 Biswas, G. *See* Eisenstein, B. I., *et al.*  
 Blackman, E. *See* Eisenstein, B. I., *et al.*  
 Blair, W. F. *See* Gibson, J. H., *et al.*  
 Blakemore, C. *See* Garey, L. J.  
 Blaustein, A. R. *See* Kuris, A. M., *et al.*  
 Bleyer, W. A. *See* Wood, J. H., *et al.*  
 Blinks, J. R. *See* Allen, D. G., *et al.*  
 Bloeser, B., *et al.*: Chitinozoans from the late Precambrian Chuar Group of the Grand Canyon, Arizona, 676  
 Blood corpuscles and blood hemoglobins: a possible example of coevolution, G. K. Snyder, 412  
 Blum, A., and B. N. Ames: Flame-retardant additives as possible cancer hazards, 17  
 Blumberg, B. S. *See* Wilding, G., *et al.*  
 Blumenthal, R. *See* Weinstein, J. N., *et al.*  
 Blumer, M., *et al.*: Azaarenes in recent marine sediments, 283  
 Boffey, P. M. (*News and Comment*): AAAS meeting, 964; Ford's top science policy officials leaving, 853; Guillain-Barré syndrome, 155; Jensen election as fellow and AAAS Council, 965; National Academy of Sciences and low energy growth, 380; National Science Foundation grant renewal rejected, 556; New York Academy of Sciences, 35; science adviser and Frank Press, 763; *Science* and natural gas crisis, 557; Seamans leaving Energy Research and Development Administration, 665; Teton Dam verdict, 270  
 Bondy, G. P. *See* Okey, A. B., *et al.*  
 Borders, C. L., Jr. *See* Riordan, J. F., *et al.*  
 Boseley, P. *See* Telford, J., *et al.*  
 Brady, J. P. *See* O'Brien, C. P., *et al.*  
 Branton, D. *See* Jacobsen, B. S.  
 Breed, M. D., and G. J. Gamboa: Behavioral control of workers by queens in primitively eusocial bees, 694  
 Breed, W. J. *See* Bloeser, B., *et al.*  
 BREHM, J. W. *See* WICKLUND, R. A.  
 Brem, S. S., *et al.*: Angiogenesis: a marker for neoplastic transformation of mammary papillary hyperplasia, 880  
 Brewer, C.: TVA and *The Valley So Wild* (*letter*), 726  
 Briles, W. E., *et al.*: Marek's disease: effects of B histocompatibility alloalleles in resistant and susceptible chicken lines, 193  
 Brodersen, R. W., and R. M. White: New technologies for signal processing, 1216  
 Brooks, H.: U.S. science and technology: a prescription for "health" (*letter*), 536  
 Brooks, V. B. *See* Hore, J., *et al.*  
 Bross, I. D. J.: A coming battle? (*letter*), 933  
 Brown, A. C. *See* Goodner, C. J., *et al.*  
 Brown, C. C. *See* Sporn, M. B., *et al.*

- Brown, J. *See* Mullen, Y. S., *et al.*  
 Brown, M. *See* Morgan, K. Z.  
 Brown, W. S. *See* Baker, W. O., *et al.*  
 Browne, J. K., *et al.*: Nucleotide sequences from the rabbit beta globin gene inserted into *Escherichia coli* plasmids, 389  
 Brownstein, M. J. *See* Gainer, H., *et al.*  
 Breaker, L. *See* Bernstein, R. L., *et al.*  
 Budman, D. R. *See* Klassen, L. W., *et al.*  
 Building scientific institutions in India, R.S. ANDERSON, *book review* by A. M. Moyal, 568  
 Buncher, C. R.: Health records (*letters*), 440  
 Bunney, W. E. *See* Jasinski, D. R., *et al.*  
 Burgess, R. L. *See* Auerbach, S. I., *et al.*  
 Burgett, D. M. *See* Deinzer, M. L., *et al.*  
 Burghardt, G. M., *et al.*: Social behavior in hatchling green iguanas: life at a reptile rookery, 689  
 Burnstein, T. *See* Albrecht, P., *et al.*  
 Burt, C. T., *et al.*: Analysis of living tissue by phosphorus-31 magnetic resonance, 145  
 Burt's IQ data (*letters*), L. J. Kamen *et al.*, 246  
 Byerly, T. C.: Ruminant livestock research and development, 450  
 Byrd, L. D. *See* Gonzalez, F. A.  
 BYRNES, R. F.: Soviet-American academic exchanges, 1958-1975, *book review* of, 480
- C**
- Caggiula, A. R. *See* Antelman, S. M.  
 Cain, W. S.: Differential sensitivity for smell: "noise" at the nose, 796  
 Calcium-induced displacement of membrane-associated particles upon aggregation of chromaffin granules, R. Schober *et al.*, 495  
 California Current eddy formation: ship, air, and satellite results, R. L. Bernstein *et al.*, 353  
 Campbell, B. A., and P. J. Randall: Paradoxical effects of amphetamine on pre-weanling and postweanling rats, 888  
 Campos-Ortega, J. A. *See* Strausfeld, N. J.  
 Cancer data (*letter*), R. W. Christie, 1282  
 Carey, S., and R. Diamond: From piecemeal to configurational representation of faces, 312  
 Carey, W. D. (*editorials*): New directions for AAAS, 539; Science in the Ford years: last things, 251  
 Carlson, J. R., and D. Bentley: Ecdysis: neural orchestration of a complex behavioral performance, 1006  
 Carman, J. M. *See* Balderston, F. E., *et al.*  
 Carpenter, D. O. *See* Saavedra, J. M., *et al.*  
 Carpenter, J. H. *See* Macalady, D. L., *et al.*  
 Carpenter, S. *See* Wolfe, L. S. *et al.*  
 Carter, L. J. (*News and Comment*): Carter's budget, 961; Carter environmental nominees, 852; Dow Chemical Company and Consumers Power Company, 162; environmental task force and energy, 764; pollution case in Minnesota and Schaumberg book, 468; radioactive wastes, 661; synthetic fuels, 38; West Valley and disposal of nuclear wastes, 1306  
 Carter, R., and M. M. Nijhout: Control of gamete formation (exflagellation) in malaria parasites, 407  
 Casagrande, D., and K. Siebert: Origins of sulfur in coal: importance of the ester sulfate content of peat, 675  
 Casey, T. M. *See* Bartholomew, G. A.  
 Cellulases can enhance  $\beta$ -glucan synthesis, Y.-S. Wong *et al.*, 679  
 Chapman, L. W. *See* Baker, M. A.  
 Charlson, R. J. *See* Weiss, R. E., *et al.*  
 Chau, Y. K. *See* Frost, D. V., *et al.*  
 Cheetah-like cat in the North American Pleistocene, A. L. D. Martin *et al.*, 981  
 Chemosensory tracking of scent trails by the planktonic shrimp *Acetes sibogae australis*, P. Hamner and W. M. Hamner, 886  
 Chidekel, E. W. *See* Goodner, C. J., *et al.*  
 CHISHOLM, C. D. H.: Group theoretical techniques in quantum chemistry, *book review* of, 59
- Chitinozoans from the late Precambrian Chuar Group of the Grand Canyon, Arizona, B. Bloeser *et al.*, 676  
 Chloride transport across isolated opercular epithelium of killifish: a membrane rich in chloride cells, K. J. Karnaky, Jr., *et al.*, 203  
 Chow, B. G.: The economic issues of the fast breeder reactor program, 551  
 Christie, R. W.: Cancer data (*letter*), 1282  
 Chronology of Hawaiian glaciations, S. C. Porter *et al.*, 61  
 Church, C. *See* Elliot, J. L., *et al.*  
 Circadian organization in lizards: the role of the pineal organ, H. Underwood, 587  
 Clark, E. V.: *book review* of Language and perception, 57  
 Clark, H. F. *See* Tully, J. G., *et al.*  
 Clark, W. R. *See* Mullen, Y. S., *et al.*  
 Clarke, P. *See* Browne, J. K., *et al.*  
 Clever lawyers (*letter*), G. S. P. Bergen, 729  
 Cocchia, M. A. *See* Okey, A. B., *et al.* *See also* Solomon, J., *et al.*  
 Cohen, B. L.: Radioactive wastes (*letter*), 1280  
 Cohen, S. N.: Recombinant DNA: fact and fiction, 654  
 Cole, R. K. *See* Briles, W. E., *et al.*  
 Collagenase production by rheumatoid synovial cells: stimulation by a human lymphocyte factor, J.-M. Dayer *et al.*, 181  
 Coming battle?, A (*letter*), I. D. J. Bross, 933  
 Complete reversal of experimental diabetes mellitus in rats by a single fetal pancreas, Y. S. Mullen *et al.*, 68  
 Compulsory sterilization: the change in India's population policy, K. Gulhati, 1300  
 Computer-based chemical information system, A. S. R. Heller *et al.*, 253  
 Computers and research, W. O. Baker *et al.*, 1134  
 Computers in banking and marketing, F. E. Balderston *et al.*, 1115  
 Concomitant elevations in serum sialyltransferase activity and sialic acid content in rats with metastasizing mammary tumors, R. J. Bernacki and U. Kim, 577  
 Conditioned narcotic withdrawal in humans, C. P. O'Brien *et al.*, 1000  
 Congenital anomalies induced in hamster embryos with ribavirin, L. Kilham and V. H. Ferm, 413  
 Congenital transmission of a papovavirus of the stump-tailed macaque, K. V. Shah *et al.*, 404  
 Conjugal transfer of the gonococcal penicillinase plasmid, B. I. Eisenstein *et al.*, 998  
 Conner, J. D., and D. I. A. MacLeod: Rod photoreceptors detect rapid flicker, 698  
 Control of gamete formation (exflagellation) in malaria parasites, R. Carter and M. M. Nijhout, 407  
 Control of influenza and poliomyelitis with killed virus vaccines, J. Salk and D. Salk, 834  
 Convergence of computing and telecommunications systems, The, D. Farber and P. Baran, 1166  
 Cornell, H. *See* Kuris, A. M., *et al.*  
 Coronary tone modulation: formation and actions of prostaglandins, endoperoxides, and thromboxanes, P. Needleman *et al.*, 409  
 Coscina, D. V., and H. C. Stancer: Selective blockade of hypothalamic hyperphagia and obesity in rats by serotonin-depleting midbrain lesions, 416  
 Costa, E. *See* Gale, K., *et al.*  
 Costain, C. H. *See* Argyle, E., *et al.*  
 Courant in Göttingen and New York, C. REID, *book review* by J. L. Heilbron, 775  
 Courses on ethics and values in science to be surveyed (AAAS), A. H. Livermore, 56  
 Covers: *Beggiatoa*, gliding bacteria (14 Jan.); burn of silver iodide pyrotechnics ejected from a DC-6 (25 Feb.); Corey-Pauling-Koltun molecular model of 13-cis-retinoic acid (4 Feb.); dorsal surface of *Rhinophis drummond-hayi* (25 Mar.); erythrocyte membranes (21 Jan.); horsehead nebula (11 Feb.); iguanas emerging from their nest hole (18 Feb.); large-scale integrated circuit (18 Mar.); North American cats (11 Mar.); St. Augustine volcano in eruption (4 Mar.); setting sun with halo and arc (28 Jan.); Uncompahgre National Forest, Colorado (7 Jan.)  
 Cowles, T. J., *et al.*: Biological consequences of the 1975 El Niño, 285  
 Craviso, G. L. *See* Puig, M. M., *et al.*  
 Crescitelli, F.: Ionochromic behavior of gecko visual pigments, 187  
 Crosby, D. G., and A. S. Wong: Environmental degradation of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), 1337  
 Crosby, G. A. *See* DuBois, G. E., *et al.*  
 Cruickshank, A. M.: Gordon Research Conferences, 1009  
 CULLINGFORD, C. H. D. *See* FORD, T. D.  
 Culliton, B. J. (*News and Comment*): adverse drug reactions, 159; Brown to head National Cancer Institute, 37; Carter's budget, 961; Cooper leaving Department of Health, Education, and Welfare, 376; Edelin conviction overturned, 36; Ford's farewell budget, 374; Fredrickson retained as director of National Institutes of Health, 376, 663; Harvard and Monsanto, 759; [Donald] Kennedy to head Food and Drug Administration, 1307; Legion fever investigation, 469; military medical school demise likely, 1309; national health insurance, 467; National Institutes of Health budget on the decline, 375; Tosteson to Harvard dean, 160  
 Curtis, G. H. *See* Marshall, L. G., *et al.*  
 Cutts, J. A. *See* Morrison, D., *et al.*
- D**
- Dalgarno, A.: *book review* of Electron and photon interactions with atoms and The physics of electronic and atomic collisions, 975  
 Daniel, R. W. *See* Shah, K. V., *et al.*  
 DAVIDSON, N.: Neurotransmitter amino acids, *book review* of, 60  
 Davis, R. M.: Evolution of computers and computing, 1096  
 Dayer, J.-M., *et al.*: Collagenase production by rheumatoid synovial cells: stimulation by a human lymphocyte factor, 181  
 Defined dimensional changes in enzyme cofactors: fluorescent "stretched-out" analogs of adenine nucleotides, D. I. C. Scopes *et al.*, 296  
 Degnan, K. J. *See* Karnaky, K. J., Jr., *et al.*  
 Deinzer, M. L., *et al.*: Pyrrolizidine alkaloids: their occurrence in honey from tansy ragwort (*Senecio jacobaea* L.), 497  
 Delaware River: evidence for its former extension to Wilmington Submarine Canyon, D. C. Twichell *et al.*, 483  
 Demystification of Yap, The, D. LABBY (Ed.), *book review* by J. L. Fischer, 1321  
 Dennis, M., and R. B. Kelly: *book review* of Neuronal recognition, 570  
 Density and competition among sunfish: some alternatives, V. C. Maiorana *et al.*, 94  
 Deuser, W. G. *See* Assaf, G.  
 Deutsch, J. A., and M.-L. Wang: The stomach as a site for rapid nutrient reinforcement sensors, 89  
 Developmental dyslexia: two right hemispheres and none left, S. F. Witelson, 309  
 Dewdney, P. E. *See* Argyle, E., *et al.*  
 Dey, S. K. *See* Dickmann, Z., *et al.*  
 Diabetic cataracts and flavonoids, S. D. Varma *et al.*, 205  
 Diamond, R. *See* Carey, S.  
 Dickmann, Z., *et al.*: Does "blastocyst estrogen" initiate implantation?, 687  
 Differential sensitivity for smell: "noise" at the nose, W. S. Cain, 796  
 DiMartino, R. *See* Solomon, J., *et al.*  
 Dinneen, G. P., and F. C. Frick: Electronics and national defense: a case study, 1151  
 Dobbs, J. *See* Grau, C. R., *et al.*  
 Does "blastocyst estrogen" initiate implantation?, Z. Dickmann *et al.*, 687  
 Dopamine-sensitive adenylyl cyclase: location in substantia nigra, K. Gale *et al.*, 503

- Dorsey, T. *See* Blumer, M., *et al.*  
 Down, K. S. *See* Gibbons, J. F., *et al.*  
 Downhower, J. *See* Gibson, J. H., *et al.*  
 Drachman, D. B. *See* Kao, I.  
 Drake, R. E. *See* Marshall, L. G., *et al.*  
 Dritschilo, W. *See* Kuris, A. M., *et al.*  
 DuBois, G. E., *et al.*: Nonnutritive sweeteners: taste-structure relationships for some new simple dihydrochalcones, 397  
 DUBOS, R. J.: The professor, the Institute, and DNA, *book review of*, 973  
 Duncan, J. R. *See* Eckhert, C. D., *et al.*  
 Dunham, E. *See* Elliot, J. L., *et al.*  
 Durie, B. G. M. *See* Goldgefter, L., *et al.*

**E**

- Eardley, D. M.: *book review* of General relativity and gravitation, 282  
 Early Mesoamerican village, The, K. V. FLANNERY (Ed.), *book review* by D. W. Lathrap, 1319  
 Earthquake hazard in New England, A. F. Shakal and M. N. Toksöz, 171  
 Ecdysis: neural orchestration of a complex behavioral performance, J. R. Carlson and D. Bentley, 1006  
 Eckhert, C. D., *et al.*: Zinc binding: a difference between human and bovine milk, 789  
 Economic issues of the fast breeder reactor program, The, B. G. Chow, 551  
 Economic models in ecology, D. J. Rapport and J. E. Turner, 367  
 Ectoparasitic mites on rodents: application of the island biogeography theory?, A. M. Kuris *et al.*, 596  
 Eddy, J. A.: *book review* of Possible relationships between solar activity and meteorological phenomena, 670  
 Edelson, B. I., and L. Pollack: Satellite communications, 1125  
*Editorials*: Electronics revolution, 1085; Environmental cancer, 443; Learning about energy the hard way, 733; Letters to *Science*, 9; New directions for AAAS, 539; Oil spills, 137; Our last vaccine?, 1287; The overhead headache, 639; Science in the Ford years: last things, 251; Science: too much accountability, 939; Technology transfer, 351; Unfreezing the future, 825  
 Edlin, G. J., and T. Prout: Genetics and IQ (*letter*), 6  
 Edsall, J., and J. Primack: Human rights (*letter*), 245  
 Effect of delta-9-tetrahydrocannabinol on uterine and vaginal cytology of ovariectomized rats, J. Solomon *et al.*, 875  
 Eisenstein, B. I., *et al.*: Conjugal transfer of the gonococcal penicillinase plasmid, 998  
 Electron and photon interactions with atoms, H. KLEINPOPEN and M. R. C. MC DOWELL (Eds.), *book review* by A. Dalgarno, 975  
 Electronic mail, R. J. Potter, 1160  
 Electronics and national defense: a case study, G. P. Dinneen and F. C. Frick, 1151  
 Electronics: past, present, and future, J. R. Pierce, 1092  
 Electronics revolution, The, P. H. Abelson and A. L. Hammond, 1087  
 Electronics revolution (*editorial*), P. H. Abelson and A. L. Hammond, 1085  
 Elliot, J. L., *et al.*: Occultation of  $\epsilon$  Geminorum by Mars: evidence for atmospheric tides?, 485  
 Elson, E. L. *See* Fahey, P. F., *et al.* *See also* Schlessinger, J., *et al.*  
 Emergence of ecology as a new integrative discipline, The, E. P. Odum, 1289  
 Endogenous opiate receptor ligand: electrically induced release in the guinea pig ileum, M. M. Puig *et al.*, 419  
 Endothermy during terrestrial activity in large beetles, G. A. Bartholomew and T. M. Casey, 882  
 Energetic radiation belt electron precipitation: a natural depletion mechanism for stratospheric ozone, R. M. Thorne, 287  
 Eng, L. F. *See* Lim, R., *et al.*

- Engineering and society programs in engineering education, W. R. Lynn, 150  
 Ennis, F. A. *See* Albrecht, P., *et al.*  
 Ensink, J. W. *See* Goodner, C. J., *et al.*  
 Enstrom, J. E., and D. F. Austin: Interpreting cancer survival rates, 847  
 Entman, M. L. *See* Schwartz, A., *et al.*  
 Entrikin, R. K., *et al.*: Avian muscular dystrophy: functional and biochemical improvement with diphenylhydantoin, 873  
 Environmental cancer (*editorial*), R. E. Train, 443  
 Environmental degradation of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), D. G. Crosby and A. S. Wong, 1337  
 Enzyme polymorphisms as genetic signatures in human cell cultures, S. J. O'Brien *et al.*, 1345  
 Epstein, C. F.: *book review* of Another voice, 58  
*Errata*: for M. M. Barnes [194, 998 (1976)], 6; for News and Comment [194, 1395 (1976)], 563  
 Eruptions of the St. Augustine volcano: airborne measurements and observations, P. V. Hobbs *et al.*, 871  
 Esposito, R., and C. Kornetsky: Morphine lowering of self-stimulation thresholds: lack of tolerance with long-term administration, 189  
 Evans, L. B.: Impact of the electronics revolution on industrial process control, 1146  
 Evarts, E. V.: *book review* of Motor control, 482  
 Evolution and the diversity of life, E. MAYR, *book review* by P. H. Raven, 867  
 Evolution in a time-varying environment, R. A. Armstrong and M. E. Gilpin, 591  
 Evolution of computers and computing, R. M. Davis, 1096  
 Evolution of phosphorus limitation in lakes, D. W. Schindler, 260  
 Excitation of the Venus night airglow, G. M. Lawrence *et al.*, 573  
 Exercise and heart disease (*letter*), E. Jakobsen, 822  
 Experimental separation of sensory and motor functions in pea tendrils, M. J. Jaffe, 191  
 Ezrailson, E. G. *See* Schwartz, A., *et al.*

**F**

- Fahey, P. F., *et al.*: Lateral diffusion in planar lipid bilayers, 305  
 Farber, D., and P. Baran: The convergence of computing and telecommunications systems, 1166  
 Farley, J.: *book review* of Starfish, jellyfish, and the order of life, 868  
 Farrington, J. W., *et al.*: The Argo Merchant oil spill (*letter*), 932  
 Fat-containing uterine smooth muscle cells in "toxemia": possible relevance to atherosclerosis?, M. D. Haust *et al.*, 1353  
 Fayer, R. *See* Frelier, P., *et al.*  
 Fedak, M. A. *See* Pinshow, B., *et al.*  
 Feldmann, R. J. *See* Heller, S. R., *et al.*  
 Ferm, V. H. *See* Kilham, L.  
 Fertilizer-ozone connection, The (*letter*), H. S. Johnston, 1280  
 Fetkovich, J. *See* Henrie, J. O., *et al.*  
 Fields, B. N. *See* Ramig, R. F., *et al.*  
 Fields, J. H. A. *See* Hochachka, P. W., *et al.*  
 Fincher, G. B. *See* Wong, Y.-S., *et al.*  
 Finklea, J. F. *See* Moore, R. J., Jr., *et al.*  
 First occurrence of the garnet-ilmenite transition in silicates, L.-G. Liu, 990  
 Fischberg, M. *See* Bisbee, C. A., *et al.*  
 Fischer, J. L.: *book review* of The demystification of Yap, 1321  
 Fishman, J. *See* Goto, J.  
 Fitch, W. M. *See* Kurosky, A., *et al.*  
 Flame-retardant additives as possible cancer hazards, A. Blum and B. N. Ames, 17  
 Flandermeyer, R. R. *See* Nelson-Rees, W. A.  
 FLANNERY, K. V. (Ed.), The early Mesoamerican village, *book review of*, 1319  
 Flory, P. J. *See* Sandved, K. G.  
 Fluidity in the membranes of adult and neo-

- natal human erythrocytes, M. Kehry *et al.*, 486  
 Folger, D. W. *See* Twichell, D. C., *et al.*  
 FORD, T. D., and C. H. D. CULLINGFORD (Eds.), The science of speleology, *book review of*, 776  
 Form and origin of the Parry arcs, R. G. Greenler *et al.*, 360  
 Frank, R. G., Jr.: *book review* of The great instauration, 385  
 Franklin, J. F.: The biosphere reserve program in the United States, 262  
 Frelier, P., *et al.*: Sarcocystosis: a clinical outbreak in dairy calves, 1341  
 French, R. G. *See* Elliot, J. L., *et al.*  
 Frick, F. C. *See* Dinneen, G. P.  
 From piecemeal to configurational representation of faces, S. Carey and R. Diamond, 312  
 Frost, D. V., *et al.*: Selenium in the environment, 594  
 Functional specificity of thymus-dependent lymphocytes, W. E. Paul and B. Benacerraf, 1293  
 Future for insecticides, The, R. L. METCALF and J. J. MC KELVEY, JR. (Eds.), *book review by* H. Oberlander, 169

**G**

- Gail, M.: Mass vaccination: probability of three sudden deaths (*letter*), 934  
 Gainer, H., *et al.*: Neurophysin biosynthesis: conversion of a putative precursor during axonal transport, 1354  
 Galaxies and the universe, A. SANDAGE *et al.* (Eds.), *book review* by I. R. King, 481  
 Gale, K., *et al.*: Dopamine-sensitive adenylate cyclase: location in substantia nigra, 503  
 Galilean satellites: anomalous temperatures disputed, D. Morrison *et al.*, 90  
 Gallagher, P. K. *See* Voorhoeve, R. J. H., *et al.*  
 Galli, C. L. *See* Quenzer, L. F., *et al.*  
 Galt, J. A. *See* Argyle, E., *et al.*  
 Gamboa, G. J. *See* Breed, M. D.  
 Gans, C., and D. Baic: Regional specialization of reptilian scale surfaces: relation of texture and biologic role, 1348  
 Gardner, P. D. *See* Berger, P. J., *et al.*  
 Garey, L. J., and C. Blakemore: Monocular deprivation: morphological effects on different classes of neurons in the lateral geniculate nucleus, 414  
 Gascon, P. *See* Puig, M. M., *et al.*  
 Gaskins, M. H. *See* Rogerson, A. C., *et al.*  
 Gelfand, H. M.: Vaccination: an acceptable risk? (*letter*), 728  
 General relativity and gravitation, G. SHAVIV and J. ROSEN (Eds.), *book review by* D. M. Eardley, 282  
 Genetics and IQ (*letter*), G. J. Edlin and T. Prout, 6  
 Genetics of algae, The, R. A. LEWIN (Ed.), *book review by* R. Sager, 281  
 Georgiev, G. P., *et al.*: Isolation of eukaryotic DNA fragments containing structural genes and the adjacent sequences, 394  
 Gerber, N. L. *See* Klassen, L. W., *et al.*  
 Gibbons, J. F., *et al.*: Tutored videotape instruction: a new use of electronics media in education, 1139  
 Gibbons, M. F., Jr.: *book review* of On the origins of language, 774  
 Gibson, J. H., *et al.*: The biome programs (*letters*), 822  
 Gierasch, P. J. *See* Elliot, J. L., *et al.*  
 Gilbert, B. M. *See* Martin, L. D., B. M. Gilbert, D. B. Adams  
 Gilbert, L. E.: *book review* of Biochemical interaction between plants and insects, 387  
 Gilchrist, A. L.: Perceived lightness depends on perceived spatial arrangement, 185  
 GILMAN, A.: The later prehistory of Tangier, Morocco, *book review of*, 672  
 Gilpin, M. E. *See* Armstrong, R. A.  
 Gilsanz, F. *See* Valentine, W. N., *et al.*  
 Giordmaine, J. A.: Solid-state electronics: scientific basis for advances, 1235

- Glia maturation factor: effect on chemical differentiation of glioblasts in culture, R. Lim *et al.*, 195
- Glial-neural interaction demonstrated by the injection of  $\text{Na}^+$  and  $\text{Li}^+$  into cortical glia, R. G. Grossman and A. Seregin, 196
- Glonek, T. *See* Burt, C. T., *et al.*
- Glutamine synthetase: glial localization in brain, A. Martinez-Hernandez *et al.*, 1356
- Goldegefer, L., *et al.*: Scintillator distribution in high-speed autoradiography, 208
- Goldsmith, H. H. *See* Gottesman, I. I.
- Gonzalez, F. A., and L. D. Byrd: Mathematics underlying the rate-dependency hypothesis, 546
- Goodner, C. J., *et al.*: Insulin, glucagon, and glucose exhibit synchronous, sustained oscillations in fasting monkeys, 177
- Gordon Research Conferences, A. M. Cruickshank, 1009
- Goto, J., and J. Fishman: Participation of a nonenzymatic transformation in the biosynthesis of estrogens from androgens, 80
- Gottesman, I. I., and H. H. Goldsmith: *book review* of Heredity, environment, and personality, 869
- Grassle, J. F. *See* Farrington, J. W., *et al.*
- Grau, C. R., *et al.*: Altered yolk structure and reduced hatchability of eggs from birds fed single doses of petroleum oils, 779
- Gray whale behavior (*letter*), F. H. Wolfson, 534
- Grayson, D. K.: Pleistocene avifaunas and the overkill hypothesis, 691
- Great instauration, The, c. WEBSTER, *book review* by R. G. Frank, Jr., 385
- Green, D. C. *See* Grodzins, L., *et al.*
- Green, R., and S. M. Malcom: Native Americans project finds some barriers breaking down (AAAS), 54
- Greenberg, M. J.: *book review* of Marine mussels, 281
- Greene, H. W. *See* Burghardt, G. M., *et al.*
- Greenler, R. G., *et al.*: Form and origin of the Parry arcs, 360
- Griffin, D. *See* Haase, A. T., *et al.*
- Griffith, J. D. *See* Jasinski, D. R., *et al.*
- Grodzins, L., *et al.*: The "tenure" problem (*letters*), 440
- Gross, S. H. *See* Morrison, D., *et al.*
- Grossman, R. G., and A. Seregin: Glial-neural interaction demonstrated by the injection of  $\text{Na}^+$  and  $\text{Li}^+$  into cortical glia, 196
- Group theoretical techniques in quantum chemistry, c. D. H. CHISHOLM, *book review* by R. M. Hochstrasser, 59
- Growing points in ethology, P. P. G. BATESON and R. A. HINDE (Eds.), *book review* by H. S. Hoffman, 671
- Guidotti, A. *See* Gale, K., *et al.*
- Guillen, O. *See* Cowles, T. J., *et al.*
- Gulhati, K.: Compulsory sterilization: the change in India's population policy, 1300
- Gullino, P. M. *See* Brem, S. S., *et al.*
- Gupta, J. S. *See* Dickmann, Z., *et al.*
- Gutter, B. *See* Prival, M. J., *et al.*
- Gvozdev, V. A. *See* Georgiev, G. P., *et al.*
- H**
- Haase, A. T., *et al.*: Slow persistent infection caused by visna virus: role of host restriction, 175
- Hadjii-Azimi, I. *See* Bisbee, C. A., *et al.*
- Haertzen, C. A. *See* Jasinski, D. R., *et al.*
- Hagins, W. A. *See* Weinstein, J. N., *et al.*
- Hahn, J. *See* Hoy, R. R., *et al.*
- Hall, D. J. *See* Maiorana, V. C., *et al.*
- Hammond, A. L. (*News and Comment*): nuclear moratorium, 156; Brazil's nuclear program, 657; (*Research News*): Brazil and energy, 564, 862; instrument shortage slows Brazilian science, 1316; oceanography and geochemical tracers, 164. *See also* Abelson, P. H., and A. L. Hammond. *See also* Waliske, C., *et al.*
- Hamner, P., and W. M. Hamner: Chemosensory tracking of scent trails by the planktonic shrimp *Acetes sibogae australis*, 886
- Hamner, W. M. *See* Hamner, P.
- Hannon, B. *See* Lave, C. A.
- Hapke, B. *See* Wells, E.
- Harding, P. G. *See* Haust, M. D., *et al.*
- Hardiwidjaja, S. *See* Barkley, D. S., *et al.*
- Hartline, P. H. *See* Hochachka, P. W., *et al.*
- Haskins, C. P. *See* Hölldobler, B.
- Haust, M. D., *et al.*: Fat-containing uterine smooth muscle cells in "toxemia": possible relevance to atherosclerosis?, 1353
- Hawkes, N. (*Science in Europe*): British ponder reprocessing plans, 33; Brookings-style think tank proposed in Great Britain, 659; nuclear wastes stymie West Germans, 962
- Health economics and preventive care, M. M. Kristein *et al.*, 457
- Health records (*letter*), C. R. Buncher, 440
- Healy, G. R. *See* McEnroe, W. D., *et al.*
- Heberling, R. L., *et al.*: Oncornavirus: isolation from a squirrel monkey (*Saimiri sciureus*) lung culture, 289
- Hedlund, L., *et al.*: Melatonin: daily cycle in plasma and cerebrospinal fluid of calves, 686
- Heilbron, J. L.: *book review* of Courant in Göttingen and New York, 775
- Heindell, H. C. *See* Browne, J. K., *et al.*
- Heller, S. R., *et al.*: A computer-based chemical information system, 253
- Helmke, R. J. *See* Heberling, R. L., *et al.*
- Hemmes, N. S., and J. Levy: Writing posture and paper orientation (*letters*), 441
- Henkart, P. *See* Weinstein, J. N., *et al.*
- Henrie, J. O., *et al.*: Ocean thermal gradients—a practical source of energy?, 206
- HEPBURN, H. R. (Ed.), *The insect integument*, *book review* of, 280
- Hereditary hemolytic anemia with increased red cell adenosine deaminase (45- to 70-fold) and decreased adenosine triphosphate, W. N. Valentine *et al.*, 783
- Hereditiy, environment, and personality, J. C. LOEHLIN and R. C. NICHOLS, *book review* by I. I. Gottesman and H. H. Goldsmith, 869
- Herman, L. M. *See* Thompson, R. K. R.
- Herndon, R. M., *et al.*: Regeneration of oligodendroglia during recovery from demyelinating disease, 693
- Herschman, A.: Science and change: hopes and dilemmas (AAAS), 42
- Heterogeneous catalysis: some recent developments, J. H. Sinfelt, 641
- Hicks, J. T. *see* Albrecht, P., *et al.*
- HINDE, R. A. *See* BATESON, P. P. G.
- Hindenlang, D. M., and J. K. Wichmann: Re-examination of tetradeccyl acetates in oak leaf roller sex pheromone and in plants, 86
- Hitch, C. J.: Unfreezing the future (*editorial*), 825
- Hobbs, P. V., *et al.*: Eruptions of the St. Augustine volcano: airborne measurements and observations, 871
- Hochachka, P. W., *et al.*: Octopine as an end product of anaerobic glycolysis in the chambered nautilus, 72
- Hochstrasser, R. M.: *book review* of Group theoretical techniques in quantum chemistry, 59
- Hoffman, H. S.: *book review* of Growing points in ethology, 671
- Hogan, C. L. *See* Linvill, J. G.
- Hoggatt, A. C. *See* Balderston, F. E., *et al.*
- Hojvat, S. *See* Lawrence, A. M., *et al.*
- Holden, C. (*News and Comment*): airbag question, 968; alligator protections loosened, 561; landscape architecture and Ian McHarg, 379; National Center for Appropriate Technology, 857; National Humanities Center, 858; New Directions, a world affairs lobby, 160; science advisory groups, 158; scientific journals and the Postal Service, 37
- Hölldobler, B., and C. P. Haskins: Sexual calling behavior in primitive ants, 793
- Hölldobler, B., and E. O. Wilson: Weaver ants: social establishment and maintenance of territory, 900
- Hollis, J. P. *See* Hoshi, M. M.
- Holt, H. O., and F. L. Stevenson: Human performance considerations in complex systems, 1205
- Hore, J., *et al.*: Basal ganglia cooling disables learned arm movements of monkeys in the absence of visual guidance, 584
- Horodyski, R. J. *See* Bloeser, B., *et al.*
- Howards, S. S. *See* Johnson, A. L.
- Hoy, R. R., *et al.*: Hybrid cricket auditory behavior: evidence for genetic coupling in animal communication, 82
- Hubry, S., *et al.*: Synthetic galactocerebrosides evoke myelination-inhibiting antibodies, 173
- Huber, C. O.: *book review* of The hydrolysis of cations, 1323
- Huey, R. B., and E. R. Pianka: Natural selection for juvenile lizards mimicking noxious beetles, 201
- Hughes, J. V., and T. C. Johnson: Hyperphenylalanemia: effect on brain polyribosomes can be partially reversed by other amino acids, 402
- Human babesiosis, W. D. McEnroe *et al.*, 506
- Human performance considerations in complex systems, H. O. Holt and F. L. Stevenson, 1205
- Human rights (*letter*), J. Edsall and J. Primack, 245
- Huntington's disease: delayed hypersensitivity in vitro to human central nervous system antigens, D. S. Barkley *et al.*, 314
- Hurley, L. S. *See* Eckhert, C. D., *et al.*
- H-Y antigen: behavior and function, W. K. Silvers and S. S. Wachtel, 956
- Hybrid cricket auditory behavior: evidence for genetic coupling in animal communication, R. R. Hoy *et al.*, 82
- Hydrolysis of cations, The, C. F. BAES, JR. and R. E. MESMER (Eds.), *book review* by C. O. Huber, 1323
- 25-Hydroxycholecalciferol to 1,25-dihydroxycholecalciferol: conversion impaired by systemic metabolic acidosis, S. W. Lee *et al.*, 994
- Hyperosmolality in intraluminal fluids from hamster testis and epididymis: a micro-puncture study, A. L. Johnson and S. S. Howards, 492
- Hyperphenylalanemia: effect on brain polyribosomes can be partially reversed by other amino acids, J. V. Hughes and T. C. Johnson, 402.

**I**

- Identification of retinol complexes as the autofluorescent component of the neuronal storage material in Batten disease, L. S. Wolfe *et al.*, 1360
- Ilyin, Y. V. *See* Georgiev, G. P., *et al.*
- Immunobiology of the macrophage, D. S. NELSON (Ed.), *book review* by B. A. Askonas, 387
- Impact of electronics and employment: productivity and displacement effects: A. L. Robinson, 1179
- Impact of integrated electronics in medicine, The, R. L. White and J. D. Meindl, 1119
- Impact of the electronics revolution on industrial process control, L. B. Evans, 1146
- Information economy and public policy, The, M. R. Irwin and S. C. Johnson, 1170
- Insect integument, The, H. R. HEPBURN (Ed.), *book review* by J. Lai-Fook, 280
- Insulin, glucagon, and glucose exhibit synchronous, sustained oscillations in fasting monkeys, C. J. Goodner *et al.*, 177
- Intellectual and economic fuel for the electronics revolution, J. G. Linvill and C. L. Hogan, 1107
- Interaction of *Beggiatoa* and rice plant: de-

- toxicification of hydrogen sulfide in the rice rhizosphere, M. M. Joshi and J. P. Hollis, 179
- Inter- and intraspecies contamination of human breast tumor cell lines HBC and BrCa5 and other cell cultures, W. A. Nelson-Rees and R. R. Flandermeyer, 1343
- Interference with radio astronomy (*letter*), E. Argyle *et al.*, 932
- International trade in electronics: U.S.-Japan competition, J. Walsh, 1175
- Interpreting cancer survival rates, J. E. Enstrom and D. F. Austin, 847
- Intravenous self-feeding: long-term regulation of energy balance in rats, S. Nicolaïdis and N. Rowland, 589
- Ionochromic behavior of gecko visual pigments, F. Crescitelli, 187
- Irwin, M. R., and S. C. Johnson: The information economy and public policy, 1170
- Is delta-9-tetrahydrocannabinol estrogenic?, A. B. Okey *et al.*, 904
- Isaacson, D. L. *See* Deinzer, M. L., *et al.*
- Isolation of eukaryotic DNA fragments containing structural genes and the adjacent sequences, G. P. Georgiev *et al.*, 394
- Isoleucine epimerization for dating marine sediments: importance of analyzing monospecific foraminiferal samples, K. King, Jr., and C. Neville, 1333
- J**
- Jacobson, B. S., and D. Branton: Plasma membrane: rapid isolation and exposure of the cytoplasmic surface by use of positively charged beads, 302
- Jaffe, M. J.: Experimental separation of sensory and motor functions in pea tendrils, 191
- Jakobsson, E.: Exercise and heart disease (*letter*), 822
- Jasinski, D. R., *et al.*: Lithium: effects on subjective functioning and morphine-induced euphoria, 582
- Jeffords, M. R. *See* Sternburg, J. G., *et al.*
- Johnson, A. L., and S. S. Howards: Hyperosmolarity in intraluminal fluids from hamster testis and epididymis: a micropuncture study, 492
- Johnson, D. W., Jr. *See* Voorhoeve, R. J. H., *et al.*
- Johnson, S. C. *See* Irwin, M. R.
- Johnson, T. C. *See* Hughes, J. V.
- JOHNSON-LAIRD, P. N. *See* MILLER, G. A.
- Johnston, H. S.: The fertilizer-ozone connection (*letter*), 1280
- Johnston, M. C.: Page charges: shifting the burden (*letter*), 349
- Jones, T. O.: Some recent and future automotive electronic developments, 1156
- Joravsky, D.: *book review* of Soviet-American academic exchanges, 1958-1975, 480
- Jorgenson, K. F. *See* van de Sande, J. H., *et al.*
- Joshi, M. M., and J. P. Hollis: Interaction of *Beggiatoa* and rice plant: detoxification of hydrogen sulfide in the rice rhizosphere, 179
- JOUSSOT-DUBIEN, J. (Ed.), Lasers in physical chemistry and biophysics, *book review* of, 481
- K**
- Kalnasy, L. *See* Goodner, C. J., *et al.*
- Kalter, S. S. *See* Heberling, R. L., *et al.*
- Kamil, A. C. *See* Pietrewicz, A. T.
- Kamin, L. J., *et al.*: Burt's IQ data (*letters*), 246
- Kao, I., and D. B. Drachman: Thymic muscle cells bear acetylcholine receptors: possible relation to myasthenia gravis, 74
- KAPFERER, B. (Ed.), Transaction and meaning, *book review* of, 772
- Kargon, R.: *book review* of The patronage of science in the nineteenth century, 568
- Karkheck, J., *et al.*: Prospects for district heating in the United States, 948
- Karlik, C. *See* Abelson, P. H., and C. Karlik
- Karnaky, K. J., Jr., *et al.*: Chloride transport across isolated opercular epithelium of killifish: a membrane rich in chloride cells, 203
- Kearny, C. H., and E. P. Wigner: Soviet civil defense (*letter*), 243
- Kehry, M., *et al.*: Fluidity in the membranes of adult and neonatal human erythrocytes, 486
- Keirans, J. E.: Rocky Mountain spotted fever: occurrence in Massachusetts (*letter*), 1284
- Kelly, R. B. *See* Dennis, M.
- Kestenbaum, R. S. *See* Resnick, R. B., *et al.*
- Keyes, R. W.: Physical limits in semiconductor electronics, 1230
- Kilham, L., and V. H. Ferm: Congenital anomalies induced in hamster embryos with ribavirin, 413
- Kim, U. *See* Bernacki, R. J.
- Kincheloe, W. R. *See* Gibbons, J. F., *et al.*
- Kinetic resonance Raman spectroscopy: dynamics of deprotonation of the Schiff base of bacteriorhodopsin, M. A. Marcus and A. Lewis, 1328
- King, A. P., and M. J. West: Species identification in the North American cowbird: appropriate responses to abnormal song, 1002
- King, I. R.: *book review* of Galaxies and the universe, 481
- King, K., Jr., and C. Neville: Isoleucine epimerization for dating marine sediments: importance of analyzing monospecific foraminiferal samples, 1333
- Kinoshita, J. H. *See* Varma, S. D., *et al.*
- Kirsteins, L. *See* Lawrence, A. M., *et al.*
- KISTIAKOWSKY, G. B., A scientist at the White House, *book review* of, 168
- Kleiner, G. *See* O'Brien, S. J., *et al.*
- Klassen, L. W., *et al.*: Ribavirin: efficacy in the treatment of murine autoimmune disease, 787
- KLEINPOPPEN, H., and M. R. C. MC DOWELL (Eds.), Electron and photon interactions with atoms, *book review* of, 975
- Klutch, M. J. *See* Albrecht, P., *et al.*
- Knebel, H. J. *See* Twichell, D. C., *et al.*
- Koerker, D. J. *See* Goodner, C. J., *et al.*
- Kolata, G. B. (*Research News*): aging heart, 166; "new math" aftermath, 854; sexual dimorphism and mating systems, 382; social anthropologists learn to be scientific, 770; structure in large sets, 767
- Koppel, D. E. *See* Fahey, P. F., *et al.* *See also* Schlessinger, J., *et al.*
- Kornetsky, C. *See* Esposito, R.
- Kraft, J. C., *et al.*: Paleogeographic reconstructions of coastal Aegean archaeological sites, 941
- Krane, S. M. *See* Dayer, J.-M., *et al.*
- Kristein, M. M., *et al.*: Health economics and preventive care, 457
- KRISTIAN, J. *See* SANDAGE, A., *et al.*
- Kulkarni, P. S. *See* Needleman, P., *et al.*
- Kuris, A. M., *et al.*: Ectoparasitic mites on rodents: application of the island biogeography theory?, 596
- Kurosky, A., *et al.*: Primary structure of cholera toxin  $\beta$ -chain: a glycoprotein hormone analog?, 299
- L**
- LABBY, D. (Ed.), The demystification of Yap, *book review* of, 1321
- Lai-Fook, J.: *book review* of The insect integument, 280
- Landecker, T. *See* Argyle, E., *et al.*
- Language and perception, G. A. MILLER and P. N. JOHNSON-LAIRD, *book review* by E. V. Clark, 57
- Lansford, H.: Science in Colorado: the second century begins (AAAS), 477
- Large-scale integration: what is yet to come?, R. N. Noyce, 1102
- Larkin, R. P., and P. J. Sutherland: Migrating birds respond to Project Seafarer's electromagnetic field, 777
- Lasers in physical chemistry and biophysics, J. JOUSSOT-DUBIEN (Ed.), *book review* by A. Lewis, 481
- Las Heras, J. *See* Haust, M. D., *et al.*
- Later prehistory of Tangier, Morocco, The, A. GILMAN, *book review* by D. Lubell, 672
- Lateral diffusion in planar lipid bilayers, P. F. Fahey *et al.*, 305
- Lateral transport of a lipid probe and labeled proteins on a cell membrane, J. Schlessinger *et al.*, 307
- Lathrap, D. W.: *book review* of The early Mesoamerican village, 1319
- Lave, C. A., and B. Hannan: Negative energy impact of modern rail transit systems, 595
- Lawrence, A. M., *et al.*: Salivary gland hyperglycemic factor: an extrapancreatic source of glucagon-like material, 70
- Lawrence, G. M., *et al.*: Excitation of the Venus night airglow, 573
- Learning about energy the hard way (*editorial*), P. H. Abelson, 773
- Leavitt, R. A. *See* Ries, S. K., *et al.*
- Lebofsky, L. A. *See* Morrison, D., *et al.*
- Lee, S. W., *et al.*: 25-Hydroxycholecalciferol to 1,25-dihydroxycholecalciferol: conversion impaired by systemic metabolic acidosis, 994
- Lehotay, D. C. *See* Schwartz, A., *et al.*
- Lenard, J. *See* Rothman, J. E.
- Leonard, N. J. *See* Scopes, D. I. C., *et al.*
- Letters to *Science* (*editorial*), P. H. Abelson and C. Karlik, 9
- Leucine 2,3-aminomutase: a cobalamin-dependent enzyme present in bean seedlings, J. M. Poston, 301
- Levey, G. *See* Schwartz, A., *et al.*
- Levy, J. *See* Hemmes, N. S.
- LEWIN, R. A. (Ed.), The genetics of algae, *book review* of, 281
- Lewis, A.: *book review* of Lasers in physical chemistry and biophysics, 481. *See also* Marcus, M. A.
- Lewis, R. S. *See* Manuel, O. K., *et al.*
- Lichtenstein, L. M. *See* Roszkowski, W., *et al.*
- LIEBERMAN, P., On the origins of language, *book review* of, 774
- Lim, R., *et al.*: Glia maturation factor: effect on chemical differentiation of glioblasts in culture, 195
- Lin, C. C. *See* van de Sande, J. H., *et al.*
- Lindemann, B., and W. Van Driessche: Sodium-specific membrane channels of frog skin are pores: current fluctuations reveal high turnover, 292
- Linville, J. G., and C. L. Hogan: Intellectual and economic fuel for the electronics revolution, 1107
- Liposome-cell interaction: transfer and intracellular release of a trapped fluorescent marker, J. N. Weinstein *et al.*, 489
- Lischko, M. M. *See* Hedlund, L., *et al.*
- Lithium: effects on subjective functioning and morphine-induced euphoria, D. R. Jasinski *et al.*, 582
- Littell, R. C. *See* Rogerson, A. C., *et al.*
- Liu, A. *See* Browne, J. K., *et al.*
- Liu, L.-G.: First occurrence of the garnet-ilmenite transition in silicates, 990
- Livermore, A. H.: Courses on ethics and values in science to be surveyed (AAAS), 56
- Llamas, A., *et al.*: Amygdaloid projections to prefrontal and motor cortex, 794
- Localization of cyclic GMP and cyclic AMP in cardiac and skeletal muscle: immunochemical demonstration, S. H. Ong and A. L. Steiner, 183
- LOEHLIN, J. C., and R. C. NICHOLS, Heredity, environment, and personality, *book review* of, 869
- Loewenstein, W. R. *See* Simpson, I., *et al.*
- Lubell, D.: *book review* of The later prehistory of Tangier, Morocco, 672
- Lunar soil: iron and titanium bands in the glass fraction, E. Wells and B. Hapke, 977

- Lunde, M. N. *See* Frelier, P., *et al.*  
 Lynn, W. R.: Engineering and society programs in engineering education, 150  
 Lysis of human cultured lymphoblastoid cells by cell-induced activation of the prooprin pathway, A. N. Theofilopoulos and L. H. Perrin, 878  
 Lysogeny in pneumococci freshly isolated from man, H. P. Bernheimer, 66

**M**

- Macalady, D. L., *et al.*: Sunlight-induced bromate formation in chlorinated seawater, 1335  
 MacLachlan, G. A. *See* Wong, Y.-S., *et al.*  
 MacLeod, D. I. A. *See* Conner, J. D.  
 Madnick, S. E.: Trends in computers and computing: the information utility, 1191  
 Maiorana, V. C., *et al.*: Density and competition among sunfish: some alternatives, 94  
 Malcom, S. M. *See* Green, R.  
 Mallmann, A. J. *See* Greener, R. G., *et al.*  
 Maloff, B. L., *et al.*: Membrane potential of mitochondria measured with microelectrodes, 898  
 Mammalian chimaeras, A. MC LAREN (Ed.), *book review* by W. K. Whitten, 1323  
 Manen, C.-A., and D. H. Russell: Ornithine decarboxylase may function as an initiation factor for RNA polymerase I, 505  
 MANSELL, R. L. *See* WALLACE, J. W.  
 Manuel, O. K., *et al.*: Strange xenon, extinct super-heavy elements, and the solar neutrino puzzle, 208  
 MARAN, S. P. *See* BANDEEN, W. R.  
 Marcus, M. A., and A. Lewis: Kinetic resonance Raman spectroscopy: dynamics of deprotonation of the Schiff base of bacteriorhodopsin, 1328  
 Marek's disease: effects of *B* histocompatibility alloalleles in resistant and susceptible chicken lines, W. E. Briles *et al.*, 193  
 Marine mussels, B. L. BAYNE (Ed.), *book review* by M. J. Greenberg, 281  
 Markel, D. E. *See* Kurosky, A., *et al.*  
 Marshall, L. G., *et al.*: South American geochronology: radiometric time scale for middle to late Tertiary mammal-bearing horizons in Patagonia, 1325  
 Martin, L. D., and J. D. Stewart: Teeth in *Ichthyornis* (class Aves), 1331  
 Martin, L. D., B. M. Gilbert, D. B. Adams: A cheetah-like cat in the North American Pleistocene, 981  
 Martinez-Hernandez, A., *et al.*: Glutamine synthetase: glial localization in brain, 1356  
 Marx, J. L. (*Research News*): analgesia, 471; applied ecology and insect control, 860; heart disease, 39  
 Mass vaccination: probability of three sudden deaths (*letter*), M. Gail, 934  
 Mathematics underlying the rate-dependency hypothesis, F. A. Gonzalez and L. D. Byrd, 546  
 Mathews, M. V. *See* Baker, W. O., *et al.*  
 Maugh, T. H., II (*Research News*): instrumentation and the high cost, 1316; ion cyclotron resonance, 1314; multiple sclerosis, 667, 768, 969; photoacoustic spectroscopy, 1317; x-ray crystallography, 384  
 Mayer, R. *See* Gibson, J. H., *et al.*  
 Mayhew, I. G. *See* Frelier, P., *et al.*  
 MAYR, E.: Evolution and the diversity of life, *book review* of, 867  
 McCoy, E. C. *See* Prival, M. J., *et al.*  
 MC DOWELL, M. R. C. *See* KLEINPOPPEN, H.  
 McElvany, K. D. *See* Riordan, J. F., *et al.*  
 McEnroe, W. D., *et al.*: Human babesiosis, 506  
 MC KELVEY, J. J., JR. *See* METCALF, R. L.  
 MC LAREN, A. (Ed.): Mammalian chimaeras, *book review* of, 1323  
 Meaning in anthropology, K. H. BASSO and H. A. SELBY (Eds.), *book review* by M. J. Swartz, 279

**N**

- Medina, D. *See* Brem, S. S., *et al.*  
 Meindl, J. D. *See* White, R. L.  
 Meints, R. H. *See* Tonelli, Q.  
 Melatonin: daily cycle in plasma and cerebrospinal fluid of calves, L. Hedlund *et al.*, 686  
 Membrane asymmetry, J. E. Rothman and J. Lenard, 743  
 Membrane potential of mitochondria measured with microelectrodes, B. L. Maloff *et al.*, 898  
 Memory for lists of sounds by the bottle-nosed dolphin: convergence of memory processes with humans?, R. K. R. Thompson and L. M. Herman, 501  
 Menkes, J. H. *See* Barkley, D. S., *et al.*  
 MESMER, R. E. *See* BAES, C. F., JR.  
 Metabolic precursors of a known human carcinogen (*letter*), R. M. Moore, Jr., *et al.*, 344  
 METCALF, R. L., and J. J. MC KELVEY, JR. (Eds.), *The future for insecticides*, *book review* of, 169  
 Metz, W. D. (*Research News*): astrophysics, 276; French breeder reactor prototype shut down for repairs, 972; Paris and Bonn alter nuclear stand, 32  
 Meyerhoff, M., and G. A. Rechnitz: Antibody binding measurements with haptene-selective membrane electrodes, 494  
 Meyer-Lohmann, J. *See* Hore, J., *et al.*  
 Meyers, P. A., and P. Myers: Alleviating con fusion (*letter*), 936  
 Migrating birds respond to Project Seafarer's electromagnetic field, R. P. Larkin and P. J. Sutherland, 777  
 Milam, J. R. *See* Rogerson, A. C., *et al.*  
 MILLER, G. A., and P. N. JOHNSON-LAIRD: Language and perception, *book review* of, 57  
 Miller, S. E.: Photons in fibers for telecommunication, 1211  
 MILLMAN, M., and R. M. KANTER (Eds.): Another voice, *book review* of, 58  
 Mills, H. D.: Software engineering, 1199  
 Milne, G. W. A. *See* Heller, S. R., *et al.*  
 Mitchell, R.: *book review* of Biological control of water pollution, 386  
 Mizuno, A. *See* Varma, S. D., *et al.*  
 Molnar, I. G. *See* Mullen, Y. S., *et al.*  
 Monocular deprivation: morphological effects on different classes of neurons in the lateral geniculate nucleus, L. J. Garey and C. Blakemore, 414  
 Moore, B. W. *See* Lim, R., *et al.*  
 Moore, C. A. *See* Macalady, D. L., *et al.*  
 Moore, R. M., Jr., *et al.*: Metabolic precursors of a known human carcinogen (*letter*), 344  
 Morgan, K. Z., and M. Brown: Radiation-induced health effects (*letters*), 344  
 Morgan, S. P. *See* Baker, W. O., *et al.*  
 Morphine lowering of self-stimulation thresholds: lack of tolerance with long-term administration, R. Esposito and C. Kornetsky, 189  
 Morris, S. J. *See* Schober, R., *et al.*  
 Morrison, D., *et al.*: Galilean satellites: anomalous temperatures disputed, 90  
 Motor control, G. E. STELMACH (Ed.), *book review* by E. V. Evarts, 482  
 Moyal, A. M.: *book review* of Building scientific institutions in India, 568  
 Mueller, J. R. *See* Greenler, R. G., *et al.*  
 Mueller, R. O. *See* Asbury, J. G.  
 Mullen, Y. S., *et al.*: Complete reversal of experimental diabetes mellitus in rats by a single fetal pancreas, 68  
 Multiplication and division in mammalian cells, R. BASERGA, *book review* by H. Rubin, 973  
 Munsinger, H. *See* Kamin, L. J., *et al.*  
 Musacchio, J. M. *See* Puig, M. M., *et al.*  
 Myers, P. *See* Meyers, P. A.
- Nafus, D. *See* Kuris, A. M., *et al.*  
 Narayan, O. *See* Haase, A. T., *et al.*  
 Native Americans project finds some barriers breaking down (AAAS), R. Green and S. M. Malcom, 54
- Natural selection for juvenile lizards mimicking noxious beetles, R. B. Huey and E. R. Pianka, 201  
 Needleman, P., *et al.*: Coronary tone modulation: formation and actions of prostaglandins, endoperoxides, and thromboxanes, 409  
 Neff, N. H. *See* Quenzer, L. F., *et al.*  
 Negative energy impact of modern rail transit systems, C. A. Lave and B. Hannon, 595  
 Negus, N. C. *See* Berger, P. J., *et al.*  
 NELSON, D. S. (Ed.): *Immunobiology of the macrophage*, *book review* of, 387  
 Nelson-Rees, W. A., and R. R. Flandermeier: Inter- and intraspecies contamination of human breast tumor cell lines HBC and BrCa5 and other cell cultures, 1343  
 Neuronal recognition, S. H. BARONDES (Ed.), *book review* by M. Dennis and R. B. Kelly, 570  
 Neurophysin biosynthesis: conversion of a putative precursor during axonal transport, H. Gainer *et al.*, 1354  
 Neurotransmitter amino acids, N. DAVIDSON, *book review* by R. J. Wurtman, 60  
 Neville, C. *See* King, K., Jr.  
 New directions for AAAS (*editorial*), W. D. Carey, 539  
 New memory technologies, J. A. Rajchman, 1223  
 New technologies for signal processing, R. W. Brodersen and R. M. White, 1216  
 News and Comment: AAAS meeting, 964; adverse drug reactions, 159; airbag question, 968; Alaskan gas pipeline, 1308; alligator protections loosened, 561; Berger Commission, 1310; Brazil's nuclear program, 657; [Arnold] Brown nominated to head National Cancer Institute, 37; [Harold] Brown and the Department of Defense, 463; Brzezinski and role of science in society and foreign policy, 966; Carter appointments, 560, 852; Carter on agricultural research, 967; Carter's budget, 961; Cooper leaving Department of Health, Education, and Welfare, 376; Dow Chemical and Consumer Power Company, 162; Edelin conviction overturned, 36; energy growth and the National Academy of Sciences, 380; energy jurisdiction redistributed in House, 562; environmentalists and energy plans, 764; fertilizers and the ozone, 658; Ford's farewell budget, 374; Ford's science policy officials leaving, 853; Frederickson retained as director of National Institutes of Health, 376, 663; Guillain-Barré syndrome, 155; Harvard University and Monsanto Company, 759; Jensen election as fellow and AAAS Council, 965; [Donald] Kennedy to head Food and Drug Administration, 1307; landscape architecture and Ian McHarg, 379; Legion fever investigation, 469; military medical school demise likely, 1309; National Center for Appropriate Technology, 857; national health insurance, 467; National Humanities Center, 858; NIH's budget on the decline, 375; National Science Foundation and grant renewal rejection, 556; New Directions as world affairs lobby, 160; "new math" aftermath, 854; New York Academy of Sciences, 35; nuclear moratorium, 156; Paris and Bonn alter nuclear stand, 32; pollution case in Minnesota and Schaumburg book, 468; radioactive wastes, 661; recombinant DNA, 268, 378, 466, 558, 762, 859; Rockefeller University, 272; science adviser and Frank Press, 763; science adviser search, 31; science advisers and use of "nukes" in Vietnam, 968; science advisory groups, 158; *Science* and the natural gas crisis, 557; scientific journals and the Postal Service, 37; Seamans leaving Energy Research and Development Administration, 665; Senate and the committee system, 760; Soviet grain harvests, 377; synthetic fuels, 38; Tennessee Valley Authority and criticism, 274; Teton Dam verdict, 270; Tosteson to Harvard dean, 160; West Valley and nuclear wastes, 1306

- Ney, E. P.: Star dust, 541  
 Neyman, J.: Public health hazards from electricity-producing plants, 754  
 Ng Ying Kin, N. M. K. *See* Wolfe, L. S., et al.  
 NICHOLS, R. C. *See* LOEHLIN, J. C.  
 Nicolaïdis, S., and N. Rowland: Intravenous self-feeding: long-term regulation of energy balance in rats, 589  
 Nijhout, M. M. *See* Carter, R.  
 Niswender, G. D. *See* Hedlund, L., et al.  
 Nitrogen fixation in grass-Spirillum systems, A. C. Rogerson et al., 1362  
 Nitsch, C. *See* Schober, R., et al.  
 Nonnutritive sweeteners: taste-structure relationships for some new simple dihydrochalcones, G. E. DuBois et al., 397  
 Norepinephrine-dopamine interactions and behavior, S. M. Antelman and A. R. Cagigula, 646  
 Norenberg, M. D. *See* Martinez-Hernandez, A., et al.  
 Novel screening procedure for recombinant plasmids, J. Telford et al., 391  
 Noyce, R. N.: Large-scale integration: what is yet to come?, 1102  
 Nuclear arsenals (*letter*), J. Orear, 1284  
 Nuclear moratorium: projected effects (*letters*), C. Walske et al., 634  
 Nuclear waste disposal: two social criteria, G. I. Rochlin, 23  
 Nucleotide sequences from the rabbit beta globin gene inserted into *Escherichia coli* plasmids, J. K. Browne et al., 389  
 Nutt, J. G. *See* Jasinski, D. R., et al.

**O**

- O'Barr, W. M.: *book review* of Transaction and meaning, 772  
 Oberlander, H. *book review* of The future for insecticides, 169  
 O'Brien, C. P., et al.: Conditioned narcotic withdrawal in humans, 1000  
 O'Brien, S. J., et al.: Enzyme polymorphisms as genetic signatures in human cell cultures, 1345  
 O'Brien, T. J. *See* O'Brien, C. P., et al.  
 Occultation of  $\epsilon$  Geminorum by Mars: evidence for atmospheric tides?, J. L. Elliot et al., 485  
 Ocean thermal gradients—a practical source of energy?, J. O. Henrie et al., 206  
 O'Connor, B. *See* Kuris, A. M., et al.  
 Octopine as an end product of anaerobic glycolysis in the chambered nautilus, P. W. Hochachka et al., 72  
 Odum, E. P.: The emergence of ecology as a new integrative discipline, 1289  
 Oil spills (*editorial*), P. H. Abelson, 137  
 Oil spills: risks and relevance (*letters*), D. L. Sills and L. G. Williams, 636  
 Okey, A. B., et al.: Is delta-9-tetrahydrocannabinol estrogenic?, 904  
 Olson, R. *See* O'Brien, S. J., et al.  
 Ommaya, A. K. *See* Wood, J. H., et al.  
 On the origins of language, P. LIEBERMAN, *book review* by M. F. Gibbons, Jr., 774  
 Oncornavirus: isolation from a squirrel monkey (*Saimiri sciureus*) lung culture, R. L. Heberling et al., 289  
 O'Neill, R. V. *See* Auerbach, S. I., et al.  
 Ong, S. H., and A. L. Steiner: Localization of cyclic GMP and cyclic AMP in cardiac and skeletal muscle: immunocytochemical demonstration, 183  
 Orchin, M.: *book review* of Symmetry rules for chemical reactions, 60  
 Orear, J.: Nuclear arsenals (*letter*), 1284  
 Origins of sulfur in coal: importance of the ester sulfate content of peat, D. Casagrande and K. Siefert, 675  
 Ornithine decarboxylase may function as an initiation factor for RNA polymerase I, C.-A. Manen and D. H. Russell, 505  
 Our last vaccine? (*editorial*), A. M. Prince, 1287  
 Overhead headache, The (*editorial*), H. Shull, 639

**P**

- Paddock, G. V. *See* Browne, J. K., et al.  
 Page charges: shifting the burden (*letter*), M. C. Johnston, 349  
 Paglia, D. E. *See* Valentine, W. N., et al.  
 Paleogeographic reconstructions of coastal Aegean archaeological sites, J. C. Kraft et al., 941  
 Panitch, M. (*News and Comment*): Alaskan gas pipeline, 1308; Berger Commission, 1310  
 Palmer, J. *See* Goodner, C. J., et al.  
 Paradox of hail suppression, D. Atlas, 139  
 Paradoxical effects of amphetamine on preweanling and postweanling rats, B. A. Campbell and P. J. Randall, 888  
 Participation of a nonenzymatic transformation in the biosynthesis of estrogens from androgens, J. Goto and J. Fishman, 80  
 Pascual, R. *See* Marshall, L. G., et al.  
 Pathogenic mycoplasmas: cultivation and vertebrate pathogenicity of a new spiroplasma, J. G. Tully et al., 892  
 Patronage of science in the nineteenth century, The, G. L'E. TURNER (Ed.), *book review* by R. Kargon, 568  
 Patterson, G. T. *See* Entrikin, R. K., et al.  
 Paul, R. C. *See* Hoy, R. R., et al.  
 Paul, W. E., and B. Benacerraf: Functional specificity of thymus-dependent lymphocytes, 1293  
 PEARSON, R. G.: Symmetry rules for chemical reactions, *book review* of, 60  
 Perceived lightness depends on perceived spatial arrangement, A. L. Gilchrist, 185  
 Perovskite oxides: materials science in catalysis, R. J. H. Voorhoeve et al., 827  
 Perrin, L. H. *See* Theofilopoulos, A. N.  
 Perspectives on cognitive dissonance, R. A. WICKLUND and J. W. BREHM (Eds.), *book review* by M. E. Shaw, 1322  
 Peterson, J. W. *See* Kurosky, A., et al.  
 Phenolic plant compounds functioning as reproductive inhibitors in *Microtus montanus*, P. J. Berger et al., 575  
 Phenylethanolamine: a new putative neurotransmitter in *Aplysia*, J. M. Saavedra et al., 1004  
 Phillips, B. A. M.: Shoreline inheritance in coastal histories, 11  
 Photons in fibers for telecommunication, S. E. Miller, 1211  
 Physical limits in semiconductor electronics, R. W. Keyes, 1230  
 Physics of electronic and atomic collisions, The, J. S. RISLEY and R. GEBALLE (Eds.), *book review* by A. Dalgarno, 975  
 Pianka, E. R. *See* Huey, R. B.  
 Pierce, J. R.: Electronics: past, present, and future, 1092  
 Pietrewicz, A. T., and A. C. Kamil: Visual detection of cryptic prey by blue jays (*Cyanocitta cristata*), 580  
 Pinshow, B., et al.: Terrestrial locomotion in penguins: it costs more to waddle, 592  
 Plasma membrane: rapid isolation and exposure of the cytoplasmic surface by use of positively charged beads, B. S. Jacobson and D. Branton, 302  
 Plasmid detection and sizing in single colony lysates, W. M. Barnes, 393  
 Plaut, M. *See* Roszkowski, W., et al.  
 Pleistocene avifaunas and the overkill hypothesis, D. K. Grayson, 691  
 Pollak, H. O. *See* Baker, W. O., et al.  
 Pollack, L. *See* Edelson, B. I.  
 Poplack, D. G. *See* Wood, J. H., et al.  
 Porter, S. C., et al.: Chronology of Hawaiian glaciations, 61  
 Possible cyclic nucleotide regulation of calcium mediating myocardial contraction, A. Schwartz et al., 982  
 Possible relationships between solar activity and meteorological phenomena, W. R. BANDEEN and S. P. MARAN (Eds.), *book review* by J. A. Eddy, 670  
 Poston, J. M.: Leucine 2,3-aminomutase: a cobalamin-dependent enzyme present in bean seedlings, 301  
 Potter, R. J.: Electronic mail, 1160  
 Powell, J. *See* Karkheck, J., et al.  
 Prendergast, F. G. *See* Allen, D. G., et al.  
 Presynaptic electrical coupling in *Aplysia*: effects on postsynaptic chemical transmission, R. Waziri, 790  
 Price, D. L. *See* Haase, A. T., et al. *See also* Herndon, R. M., et al.  
 Prim, R. C. *See* Baker, W. O., et al.  
 Primack, J. *See* Edsall, J.  
 Primary structure of cholera toxin  $\beta$ -chain: a glycoprotein hormone analog?, A. Kurosky et al., 299  
 Primate model for long-term study of intraventricularly or intrathecally administered drugs and intracranial pressure, J. H. Wood et al., 499  
 Prince, A. M.: Our last vaccine? (*editorial*), 1287  
 Prival, M. J., et al.: Tris(2,3-dibromopropyl) phosphate: mutagenicity of a widely used flame retardant, 76  
 Professor, the Institute, and DNA, The, R. J. DUBOS, *book review* by A. W. Ravin, 973  
 Prospects for district heating in the United States, J. Karkheck et al., 948  
 Prout, T. *See* Edlin, G. J.  
 Public health hazards from electricity-producing plants, J. Neyman, 754  
 Puig, M. M., et al.: Endogenous opiate receptor ligand: electrically induced release in the guinea pig ileum, 419  
 Pyrrolizidine alkaloids: their occurrence in honey from tansy ragwort (*Senecio jacobaea* L.), M. L. Deinzer et al., 497

**Q and R**

- Quenzer, L. F., et al.: Activation of the nigrostriatal dopaminergic pathway by injection of cholera enterotoxin into the substantia nigra, 78  
 Radioactive wastes (*letter*), B. L. Cohen, 1280  
 Radiation-induced health effects (*letters*), K. Z. Morgan and M. Brown, 344  
 Radke, L. F. *See* Hobbs, P. V., et al.  
 Rainfall results, 1970–1975: Florida area cumulus experiment, W. L. Woodley et al., 735  
 Rajchman, J. A.: New memory technologies, 1223  
 Ramig, R. F., et al.: Suppression of the temperature-sensitive phenotype of a mutant of reovirus type 3, 406  
 Rand, A. S. *See* Burghardt, G. M., et al.  
 Randall, P. J. *See* Campbell, B. A.  
 Rangan, S. R. S. *See* Shah, K. V., et al.  
 RAO, S. T. *See* SUNDARALINGAM, M.  
 Rapid brain cooling in exercising dogs, M. A. Baker and L. W. Chapman, 781  
 Rapp, G., Jr. *See* Kraft, J. C., et al.  
 Rapport, D. J., and J. E. Turner: Economic models in ecology, 367  
 Raven, P. H.: *book review* of Evolution and the diversity of life, 867  
 Ravin, A. W.: *book review* of The professor, the Institute, and DNA, 973  
 Raz, A. *See* Needleman, P., et al.  
 Rechnitz, G. A. *See* Meyerhoff, M.  
 Recombinant DNA: fact and fiction, S. N. Cohen, 654  
 Recombinant DNA research (*letters*), S. Wright et al., 131  
 Reconstitution of chromatin subunits, C. L. F. Woodcock, 1350  
 Reduced warfarin binding of albumin variants, G. Wilding et al., 991  
 Reducing photochemical smog (*letter*), H. L. Shuval, 6  
 Reexamination of tetradecenyl acetates in oak leaf roller sex pheromone and in plants, D. M. Hindenlang and J. K. Wichmann, 86  
 Regeneration of oligodendroglia during recovery from demyelinating disease, R. M. Herndon et al., 693  
 Regional specialization of reptilian scale surfaces: relation of texture and biologic role, C. Gans and D. Baic, 1348

- REID, C.: Courant in Göttingen and New York, *book review* of, 775  
 Reilly, P. *See* Wright, S., *et al.*  
 Reinoso-Suárez, F. *See* Llamas, A., *et al.*  
 Reissig, M. *See* Shah, K. V., *et al.*  
 Release of particles containing metals from vegetation into the atmosphere, W. Beauford *et al.*, 571  
 Remeika, J. P. *See* Voorhoeve, R. J. H., *et al.*  
*Research News*: aging heart, 166; analgesia, 471; applied ecology and insect control, 860; astrophysics, 276; Brazil and energy, 564, 862; French breeder reactor prototype shut down for repairs, 972; heart disease, 39; instrument shortage slows Brazilian science, 1316; instrumentation and the high cost, 1316; ion cyclotron resonance, 1314; microprocessors in instrumentation, 1315; multiple sclerosis, 667, 768, 969; oceanography and geochemical tracers, 164; photo-acoustic spectroscopy, 1317; sexual dimorphism and mating systems, 382; structure in large sets, 767; superheavy elements, 473; x-ray crystallography, 384  
 Resnick, R. B. *et al.*: Acute systemic effects of cocaine in man: a controlled study by intranasal and intravenous routes, 696  
*13-cis-Retinoic acid*: inhibition of bladder carcinogenesis in the rat, M. B. Sporn *et al.*, 487  
 Reverse banding on chromosomes produced by a guanosine-cytosine specific DNA binding antibiotic: olivomycin, J. H. van de Sande *et al.*, 400  
 Ribas, J. *See* Saavedra, J. M., *et al.*  
 Ribavirin: efficacy in the treatment of murine autoimmune disease, L. W. Klassen *et al.*, 787  
 Ries, S. K., *et al.*: Triacontanol: a new naturally occurring plant growth regulator, 1339  
 Rimland, B. *See* Kamin, L. J., *et al.*  
 Rinne, U. *See* Schober, R., *et al.*  
 Riordan, J. F., *et al.*: Arginyl residues: anion recognition sites in enzymes, 884  
 RISLEY, J. S., and R. GEBALLE (Eds.): *The physics of electronic and atomic collisions*, *book review* of, 975  
 Robinson, A. L.: Impact of electronics and employment: productivity and displacement effects, 1179; (*Research News*): colonizing Mars 668; microprocessors in instrumentation, 1315; superheavy elements, 473  
 Rochlin, G. I.: Nuclear waste disposal: two social criteria, 23  
 Rocky Mountain spotted fever: occurrence in Massachusetts (*letter*), J. E. Keirans, 1284  
 Rod photoreceptors detect rapid flicker, J. D. Conner and D. I. A. MacLeod, 698  
 Roger, R. *See* Argyle, E., *et al.*  
 Rogerson, A. C. *et al.*: Nitrogen fixation in grass-*Spirillum* systems, 1362  
 Rollag, M. D. *See* Hedlund, L., *et al.*  
 Romito, R. *See* Greenler, R. G., *et al.*  
 Rose, B. *See* Simpson, I., *et al.*  
 ROSEN, J. *See* SHAVIV, G.  
 Rosenkranz, H. S. *See* Prival, M. J., *et al.*  
 Roszkowski, W., *et al.*: Selective display of histamine receptors on lymphocytes, 683  
 Rothman, J. E., and J. Lenard: Membrane asymmetry, 743  
 Roudybush, T. *See* Grau, G. R., *et al.*  
 Rowland, N. *See* Nicolaïdis, S.  
 Rubin, H.: *book review* of Multiplication and division in mammalian cells, 973  
 Ruminant livestock research and development, T. C. Byerly, 450  
 Russell, D. H. *See* Manen, C.-A.  
 Russell, J. *See* Lee, S. W., *et al.*  
 Russell, R. G. G. *See* Dayer, J.-M., *et al.*  
 Ryskov, A. P. *See* Georgiev, G. P., *et al.*
- S**
- Saavedra, J. M., *et al.*: Phenylethanolamine: a new putative neurotransmitter in *Aplysia*, 1004  
 Sabu, D. D. *See* Manuel, O. K., *et al.*  
 Saffron, P. *See* DuBois, G. E., *et al.*
- Sagan, C. *See* Elliot, J. L., *et al.*  
 Sager, R.: *book review* of The genetics of algae, 281  
 SAHLINS, M.: The use and abuse of biology, *book review* of, 773  
 Salivary gland hyperglycemic factor: an extra-pancreatic source of glucagon-like material, A. M. Lawrence *et al.*, 70  
 Salk, D. *See* Salk, J.  
 Salk, J., and D. Salk: Control of influenza and poliomyelitis with killed virus vaccines, 834  
 Salser, W. *See* Browne, J. K., *et al.*  
 SANDAGE, A., *et al.* (Eds.): *Galaxies and the universe*, *book review* of, 481  
 SANDAGE, M. *See* SANDAGE, A., *et al.*  
 Sanders, E. H. *See* Berger, P. J., *et al.*  
 Sanders, H. L. *See* Farrington, J. W., *et al.*  
 Sandved, K. G., and P. J. Flory: Unesco and nongovernmental organizations (*letters*), 344  
 Sarcocystosis: a clinical outbreak in dairy calves, P. Frelier *et al.*, 1341  
 Sarne, Y. *See* Gainer, H., *et al.*  
 Sass, J. *See* Blumer, M., *et al.*  
 Satellite communications, B. I. Edelson and L. Pollack, 1125  
 Schaffner, W. *See* Telford, J., *et al.*  
 Schätte, C. *See* Swan, H.  
 Scheie, P. *See* Wright, S., *et al.*  
 Schimmel, P. R.: *book review* of Structure and conformation of nucleic acids and protein-nucleic acid interactions, 170  
 Schindler, D. W.: Evolution of phosphorus limitation in lakes, 260  
 Schlessinger, J., *et al.*: Lateral transport of a lipid probe and labeled proteins on a cell membrane, 307  
 Schmidt-Nielsen, K. *See* Pinshow, B., *et al.*  
 Schober, R., *et al.*: Calcium-induced displacement of membrane-associated particles upon aggregation of chromaffin granules, 495  
 Schopf, J. W. *See* Bloeser, B., *et al.*  
 Schwartz, A., *et al.*: Possible cyclic nucleotide regulation of calcium mediating myocardial contraction, 982  
 Schwartz, L. K. *See* Resnick, R. B., *et al.*  
 Science and change: hopes and dilemmas (AAAS), A. Herschman, 42  
 Science in Colorado: the second century begins (AAAS), H. Lansford, 477  
*Science in Europe*: British ponder reprocessing plans, 33; Brookings-style think tank proposed in Great Britain, 659; nuclear wastes stymie West Germans, 962  
 Science in the Ford years: last things (*editorial*), W. D. Carey, 251  
 Science of speleology, The, T. D. FORD and C. H. D. CULLINGFORD (Eds.), *book review* by B. F. Beck, 776  
 Science: too much accountability (*editorial*), E. A. Shneour, 939  
 Scientist at the White House, A. G. B. KISTIAKOWSKY, *book review* by H. Scoville, Jr., 168  
 Scintillator distribution in high-speed autoradiography, L. Goldgefer *et al.*, 208  
 Scopes, D. I. C., *et al.*: Defined dimensional changes in enzyme cofactors: fluorescent "stretched-out" analogs of adenine nucleotides, 296  
 Scordilis, S. P. *See* Maloff, B. L., *et al.*  
 Scoville, H., Jr.: *book review* of A scientist at the White House, 168  
 Sea straits and glacial periods in the Red Sea, G. Assaf and W. G. Deuser, 90  
 Seil, F. J. *See* Hrubý, S., *et al.*  
 SELBY, H. A. *See* BASSO, K. H.  
 Selective blockade of hypothalamic hyperphagia and obesity in rats by serotonin-depleting midbrain lesions, D. V. Coscina and H. C. Stancer, 416  
 Selective display of histamine receptors on lymphocytes, W. Roszkowski *et al.*, 683  
 Selenium in the environment, D. V. Frost *et al.*, 594  
 Seregin, A. *See* Grossman, R. G.  
 Sexual calling behavior in primitive ants, B. Hölldobler and C. P. Haskins, 793  
 Shah, K. V., *et al.*: Congenital transmission of a papovavirus of the stump-tailed macaque, 404  
 Shakal, A. F., and M. N. Toksöz: Earthquake hazard in New England, 171  
 Shannon, J. E. *See* O'Brien, S. J., *et al.*  
 Shapley, D. (*News and Comment*): Carter appointments, 560; fertilizers and the ozone, 658; grain harvests in the U.S.S.R., 377; nuclear power plants, 1311; Tennessee Valley Authority and criticism, 274. *See also* Van Mol, J.  
 SHAVIV, G., and J. ROSEN (Eds.): *General relativity and gravitation*, *book review* of, 282  
 Shaw, M. E.: *book review* of Perspectives on cognitive dissonance, 1322  
 Shneour, E. A.: Science: too much accountability (*editorial*), 939  
 Shoreline inheritance in coastal histories, B. A. M. Phillips, 11  
 SHOREY, H. H.: Animal communication by pheromones, *book review* of, 569  
 Shull, H.: The overhead headache (*editorial*), 639. *See also* Grodzins, L., *et al.*  
 Shuval, H. I.: Reducing photochemical smog (*letter*), 6  
 Siebert, K. *See* Casagrande, D.  
 Sills, D. L., and L. G. Williams: Oil spills: risks and relevance (*letters*), 636  
 Silvers, W. K., and S. S. Wachtel: H-Y antigen: behavior and function, 956  
 Simon, H. A.: What computers mean for man and society, 1186  
 Simpson, G. G.: *book review* of The use and abuse of biology, 773  
 Simpson, I., *et al.*: Size limit of molecules permeating the junctional membrane channels, 294  
 Simpson, J. *See* Woodley, W. L., *et al.*  
 Sinfelt, J. H.: Heterogeneous catalysis: some recent developments, 641  
 Singer, S. J. *See* Kehry, M., *et al.*  
 Size limit of molecules permeating the junctional membrane channels, I. Simpson *et al.*, 294  
 Sloane, M. V. *See* Eckhert, C. D., *et al.*  
 Slow persistent infection caused by visna virus: role of host restriction, A. T. Haase *et al.*, 175  
 Smith, G. C. *See* Heberling, R. L., *et al.*  
 Smith, J. M. *See* Sporn, M. B., *et al.*  
 Smith, R. L. *See* Rogerson, A. C., *et al.*  
 Snyder, G. K.: Blood corpuscles and blood hemoglobins: a possible example of coevolution, 412  
 Social behavior in hatchling green iguanas: life at a reptile rookery, G. M. Burghardt *et al.*, 689  
 Socially induced inhibition of genetically determined maturation in the platyfish, *Xiphophorus maculatus*, J. J. Sohn, 199  
 Sodium-specific membrane channels of frog skin are pores: current fluctuations reveal high turnover, B. Lindemann and W. Van Driessche, 292  
 Software engineering, H. D. Mills, 1199  
 Sohn, J. J.: Socially induced inhibition of genetically determined maturation in the platyfish, *Xiphophorus maculatus*, 199  
 Solar energy and electric utilities: should they be interfaced?, J. G. Asbury and R. O. Mueller, 445  
 Solid-state electronics: scientific basis for advances, J. A. Giordmaine, 1235  
 Solomon, J. *See* Okey, A. B., *et al.*  
 Solomon, J., *et al.*: Effect of delta-9-tetrahydrocannabinol on uterine and vaginal cytology of ovariectomized rats, 875  
 Some recent and future automotive electronic developments, T. O. Jones, 1156  
 South American geochronology: radiometric time scale for middle to late Tertiary mammal-bearing horizons in Patagonia, L. G. Marshall *et al.*, 1325  
 Soviet-American academic exchanges, 1958–1975, R. F. BYRNES, *book review* by D. Joravsky, 480  
 Soviet civil defense (*letter*), C. H. Kearny and E. P. Wigner, 243

Sox, T. *See Eisenstein, B. I., et al.*  
 Sparling, P. F. *See Eisentein, B. I., et al.*  
*Speaking of Science: colonizing Mars*, 668;  
 social anthropologists learn to be scientific,  
 770  
 Species identification in the North American  
 cowbird: appropriate responses to abnormal  
 song, A. P. King and M. J. West, 1002  
 Spielman, A. *See McEnroe, W. D., et al.*  
 Sporn, M. B., et al.: 13-cis-Retinoic acid:  
 inhibition of bladder carcinogenesis in the  
 rat, 487  
 Springer, S. *See Sporn, M. B., et al.*  
 Squire, R. A. *See Sporn, M. B., et al.*  
 Srinivasan, B. *See Manuel, O. K., et al.*  
 Stancer, H. C. *See Coscina, D. V.*  
 Star dust, E. P. Ney, 541  
 Starfish, jellyfish, and the order of life, M. P.  
 WINSOR, book review by J. Farley, 868  
 Stein, H. P. *See Moore, R. M., Jr., et al.*  
 Steinburg, A. D. *See Klassen, L. W., et al.*  
 Steiner, A. L. *See Ong, S. H.*  
 STELMACH, G. E. (Ed.), Motor control, book  
 review of, 482  
 Sternberg, S. *See Baker, W. O., et al.*  
 Sternburg, J. G., et al.: Batesian mimicry:  
 selective advantage of color pattern, 681  
 Stevenson, F. L. *See Holt, H. O.*  
 Stewart, J. D. *See Martin, L. D., and J. D.*  
 Stewart  
 Stith, J. L. *See Hobbs, P. V., et al.*  
 Stomach as a site for rapid nutrient reinforcement  
 sensors, The, J. A. Deutsch and  
 M.-L. Wang, 89  
 Stone, H. A. *See Briles, W. E., et al.*  
 Stowring, L. *See Haase, A. T., et al.*  
 Strange xenon, extinct superheavy elements,  
 and the solar neutrino puzzle, O. K. Manuel  
 et al., 208  
 Strausfeld, N. J., and J. A. Campos-Ortega:  
 Vision in insects: pathways possibly underlying  
 neural adaptation and lateral inhibition,  
 894  
 Structure and conformation of nucleic acids  
 and protein-nucleic acid interactions, M.  
 SUNDARALINGAM and S. T. RAO (Eds.),  
 book review by P. R. Schimmel, 170  
 Stuiver, M. *See Porter, S. C., et al.*  
 Subacute sclerosing panencephalitis: experimental  
 infection in primates, P. Albrecht et  
 al., 64  
 Sulfate aerosol: its geographical extent in the  
 midwestern and southern United States, R.  
 E. Weiss et al., 979  
 SUNDARALINGAM, M., and S. T. RAO (Eds.):  
 Structure and conformation of nucleic acids  
 and protein-nucleic acid interactions, book  
 review of, 170  
 Sunlight-induced bromate formation in chlorinated  
 seawater, D. L. Macalady et al., 1335  
 Superhelix densities of circular DNA's: a generalized  
 equation for their determination by the  
 buoyant method, W. B. Upholt, 891  
 Suppression of the temperature-sensitive  
 phenotype of a mutant of reovirus type 3,  
 R. F. Ramig et al., 406  
 Surface molecules of hematopoietic stem  
 cells: requirement for sialic acid in spleen  
 colony formation, Q. Tonelli and R. H.  
 Meints, 897  
 Sutherland, P. J. *See Larkin, R. P.*  
 Swan, H., and C. Schätte: Antimetabolic extract  
 from the brain of the hibernating ground squirrel  
*Citellus tridecemlineatus*, 84  
 Swann, J. *See Saavedra, J. M., et al.*  
 Swanson, K. L. *See Entrikin, R. K., et al.*  
 Swartz, M. J.: book review of Meaning in  
 anthropology, 279  
 Sweeley, C. C. *See Ries, S. K., et al.*  
 Symmetry rules for chemical reactions, R. G.  
 PEARSON, book review by M. Orchin, 60  
 Synthetic galactocerebrosides evoke myelination-inhibiting antibodies, S. Hruby et al.,  
 173  
 Sze, N. D.; Anthropogenic CO emissions:  
 implications for the atmospheric CO-OH-CH<sub>4</sub> cycle, 673

Tan, S. *See Lawrence, A. M., et al.*  
 Tartaglia, A. P. *See Valentine, W. N., et al.*  
 Tchurikov, N. A. *See Georgiev, G. P., et al.*  
 Teal, J. M. *See Farrington, J. W., et al.*  
 Technology transfer (*editorial*), P. H. Abelson and I. Tinker, 351  
 Tedeschi, H. *See Maloff, B. L., et al.*  
 Teeth in *Ichthyornis* (class Aves), L. D. Martin and J. D. Stewart, 1331  
 Telford, J., et al.: Novel screening procedure  
 for recombinant plasmids, 391  
 "Tenure" problem, The (*letters*), L. Grodzins et al., 440  
 Terrestrial locomotion in penguins: it costs  
 more to waddle, B. Pinshow et al., 592  
 Testa, T. *See O'Brien, C. P., et al.*  
 Theofilopoulos, A. N., and L. H. Perrin:  
 Lysis of human cultured lymphoblastoid  
 cells by cell-induced activation of the pro-  
 perdin pathway, 878  
 Thomas, A. W. *See Moore, R. M., Jr., et al.*  
 Thomas, J. A.: TVA's record (*letter*), 243  
 Thompson, R. K. R., and L. M. Herman:  
 Memory for lists of sounds by the bottle-  
 nosed dolphin: convergence of memory  
 processes with humans?, 501  
 Thomson, P. A. *See Deinzer, M. L., et al.*  
 Thorne, R. M.: Energetic radiation belt elec-  
 tron precipitation: a natural depletion mech-  
 anism for stratospheric ozone, 287  
 Thymic muscle cells bear acetylcholine recep-  
 tors: possible relation to myasthenia gravis,  
 I. Kao and D. B. Drachman, 74  
 Tinker, I. *See Abelson, P. H., and I. Tinker*  
 Toder, V. *See Goldgefer, L., et al.*  
 Toksöz, M. N. *See Shakal, A. F.*  
 Tonelli, Q., and R. H. Meints: Surface mole-  
 cules of hematopoietic stem cells: require-  
 ment for sialic acid in spleen colony forma-  
 tion, 897  
 TOURBIER, J., and R. W. PIERSON, JR. (Eds.),  
 Biological control of water pollution, book  
 review of, 386  
 Train, R. E.: Environmental cancer (*editorial*), 443  
 Transaction and meaning, B. KAPFERER (Ed.),  
 book review by W. M. O'Barr, 772  
 Trends in computers and computing: the infor-  
 mation utility, S. E. Madnick, 1191  
 Triacetinol: a new naturally occurring plant  
 growth regulator, S. K. Ries et al., 1339  
 Tris(2,3-dibromopropyl) phosphate: muta-  
 genicity of a widely used flame retardant,  
 M. J. Prival et al., 76  
 Troy, S. S. *See Lim, R., et al.*  
 Tsin, A. T. C., and D. D. Beatty: Visual  
 pigment changes in rainbow trout in re-  
 sponse to temperature, 1358  
 Tully, J. G., et al.: Pathogenic mycoplasmas:  
 cultivation and vertebrate pathogenicity of  
 a new spiroplasma, 892  
 TURNER, G. L'E. (Ed.), The patronage of sci-  
 ence in the nineteenth century, book review  
 of, 568  
 Turner, J. E. *See Rapport, D. J.*  
 Turriff, D. E. *See Lim, R., et al.*  
 Tutored videotape instruction: a new use of  
 electronics media in education, J. F. Gib-  
 bons et al., 1139  
 TVA and *The Valley So Wild* (*letter*), C. Brew-  
 er, 726  
 TVA's energy policy (*letters*), J. Van Mol and  
 D. Shapley, 6  
 TVA's record (*letter*), J. A. Thomas, 243  
 Twichell, D. C., et al.: Delaware River: evi-  
 dence for its former extension to Wilming-  
 ton Submarine Canyon, 483  
 Tyler, M. E. *See Rogerson, A. C., et al.*

U

Underwood, H.: Circadian organization in lizards: the role of the pineal organ, 587  
 Unesco and nongovernmental organizations  
 (*letters*), K. G. Sandved and P. J. Flory,  
 344  
 Unfreezing the future (*editorial*), C. J. Hitch,  
 825  
 U.S. science and technology: a prescription  
 for "health" (*letter*), H. Brooks, 536  
 Upholt, W. B.: Superhelix densities of circu-  
 lar DNA's: a generalized equation for their  
 determination by the buoyant method, 891  
 Use and abuse of biology, The, M. SAHLINS,  
 book review by G. G. Simpson, 773  
 Utilities and nuclear power: one system's ap-  
 proach (*letter*), W. S. White, 535

V

Vaccination: an acceptable risk? (*letter*), H.  
 M. Gelfand, 728  
 Valentine, W. N., et al.: Hereditary hemo-  
 lytic anemia with increased red cell adeno-  
 sine deaminase (45- to 70-fold) and de-  
 creased adenosine triphosphate, 783  
 van de Sande, J. H., et al.: Reverse banding  
 on chromosomes produced by a guanosine-  
 cytosine specific DNA binding antibiotic:  
 olivomycin, 400  
 Van Driessche, W. *See Lindemann, B.*  
 Van Mol, J., and D. Shapley: TVA's energy  
 policy (*letter*), 6  
 Varma, S. D., et al.: Diabetic cataracts and  
 flavonoids, 205  
 Veeder, G. J. *See Morrison, D., et al.*  
 Vesell, E. S. *See Wilding, G., et al.*  
 Veverka, J. *See Elliot, J. L., et al.*  
 Vision in insects: pathways possibly under-  
 lying neural adaptation and lateral inhibition,  
 N. J. Strausfeld and J. A. Campos-  
 Ortega, 894  
 Visual detection of cryptic prey by blue jays  
*(Cyanocitta cristata)*, A. T. Pietrewicz and  
 A. C. Kamil, 580  
 Visual pigment changes in rainbow trout in  
 response to temperature, A. T. C. Tsin and  
 D. D. Beatty, 1358  
 Voorhoeve, R. J. H., et al.: Perovskite  
 oxides: materials science in catalysis, 827

W

Wachtel, S. S. *See Silvers, W. K.*  
 Wade, N. (*News and Comment*): Brzezinski  
 and role of science in society and foreign  
 policy, 966; recombinant DNA, 268, 378,  
 466, 558, 762, 859; science adviser search,  
 31; science advisers and use of "nukes" in  
 Vietnam, 968  
 Waggoner, A. P. *See Weiss, R. E., et al.*  
 Waldbauer, G. P. *See Sternburg, J. G., et al.*  
 Walike, B. C. *See Goodner, C. J., et al.*  
 WALLACE, J. W., and R. L. MANSELL (Eds.),  
 Biochemical interaction between plants and  
 insects, book review of, 387  
 Walsh, J.: International trade in electronics:  
 U.S.-Japan competition, 1175; (*News  
 and Comment*): [Harold] Brown and De-  
 partment of Defense, 463; energy jurisdi-  
 ction redistributed in House, 562; Rockefel-  
 ler University, 272; Senate and the com-  
 mittee system, 760  
 Walske, C., et al.: Nuclear moratorium: pro-  
 jected effects (*letters*), 634  
 Wang, M.-L. *See Deutsch, J. A.*  
 Wathen, J. *See Grau, C. R., et al.*  
 Waziri, R.: Presynaptic electrical coupling in  
*Aplysia*: effects on postsynaptic chemical  
 transmission, 790  
 Weaver ants: social establishment and mainte-  
 nance of territory, B. Hölldobler and E. O.  
 Wilson, 900  
 Webb, W. W. *See Fahey, P. F., et al.* See  
 also Schlessinger, J., et al.  
 WEBSTER, C.: The great instauration, book  
 review of, 385  
 Weidoff, P. M. *See Entrikin, R. K., et al.*  
 Weinberg, A. M. *See Walske, C., et al.*  
 Weiner, L. P. *See Herndon, R. M., et al.*

## INDEX TO VOLUME 195

- Weinstein, J. N., *et al.*: Liposome-cell interaction: transfer and intracellular release of a trapped fluorescent marker, 489
- Weiss, R. E., *et al.*: Sulfate aerosol: its geographical extent in the midwestern and southern United States, 979
- Wells, B. *See* O'Brien, C. P., *et al.*
- Wells, E., and B. Hapke: Lunar soil: iron and titanium bands in the glass fraction, 977
- Wenk, M. L. *See* Sporn, M. B., *et al.*
- Werner, E. E. *See* Maiorana, V. C., *et al.*
- Wert, V. *See* Ries, S. K., *et al.*
- West, M. J. *See* King, A. P.
- What computers mean for man and society, H. A. Simon, 1186
- WHEELER, G. C., and J. WHEELER, Ant larvae, *book review* of, 975
- WHEELER, J. *See* WHEELER, G. C.
- Whitcomb, R. F. *See* Tully, J. G., *et al.*
- White, R. L., and J. D. Meindl: The impact of integrated electronics in medicine, 1119
- White, Richard M. *See* Broderson, R. W.
- White, Rosalyn M. *See* Ramig, R. F., *et al.*
- White, W. S.: Utilities and nuclear power: one system's approach (*letter*), 535
- Whitten, W. K.: *book review* of Mammalian chimaeras, 1323
- Whritner, R. *See* Bernstein, R. L., *et al.*
- Wichmann, J. K. *See* Hindenlang, D. M.
- WICKLUND, R. A., and J. W. BREHM (Eds.),
- Perspectives on cognitive dissonance, *book review* of, 1322
- Wigner, E. P. *See* Kearny, C. H.
- Wilding, G., *et al.*: Reduced warfarin binding of albumin variants, 991
- Williams, G. W. *See* Klassen, L. W., *et al.*
- Williams, L. G. *See* Sills, D. L.
- Williamson, D. L. *See* Tully, J. G., *et al.*
- Wilson, A. C. *See* Bisbee, C. A., *et al.*
- Wilson, B. W. *See* Entrikin, R. K., *et al.*
- Wilson, E. O.: *book reviews* of Animal communication by pheromones, 569; Ant larvae, 975. *See also* Hölldobler, B.
- WINSOR, M. P.: Starfish, jellyfish, and the order of life, *book review* of, 868
- Witelson, S. F.: Developmental dyslexia: two right hemispheres and none left, 309
- Wolf, D. E. *See* Fahey, P. F., *et al.*
- Wolfe, L. S. *et al.*: Identification of retinoyl complexes as the autofluorescent component of the neuronal storage material in Batten disease, 1360
- Wolfson, F. H.: Gray whale behavior (*letter*), 534
- Wong, A. S. *See* Crosby, D. G.
- Wong, P. T. S. *See* Frost, D. V., *et al.*
- Wong, Y.-S., *et al.*: Cellulases can enhance  $\beta$ -glucan synthesis, 679
- Wood, J. H., *et al.*: Primate model for long-term study of intraventricularly or intrathecally administered drugs and intracranial pressure, 499
- Woodcock, C. L. F.: Reconstitution of chromatin subunits, 1350
- Woodley, W. L., *et al.*: Rainfall results, 1970–1975: Florida area cumulus experiment, 735
- Woolf, B. S. *See* Moore, R. M., Jr., *et al.*
- Wright, S., *et al.*: Recombinant DNA research (*letters*), 131
- Writing posture and paper orientation (*letters*), N. S. Hemmes and J. Levy, 441
- Wurtman, R. J.: *book review* of Neurotransmitter amino acids, 60
- Wynder, E. L. *See* Kristein, M. M., *et al.*

## X-Z

- Yang, I. C. *See* Porter, S. C., *et al.*
- Yenikolopov, G. N. *See* Georgiev, G. P., *et al.*
- Yerg, D. G.: Advice on Project Seafarer (*letter*), 130
- Yguerabide, J. *See* Kehry, M., *et al.*
- Yoshikami, S. *See* Weinstein, J. N., *et al.*
- Zadunaisky, J. A. *See* Karnaky, K. J., Jr., *et al.*
- Zener, C. *See* Henrie, J. O., *et al.*
- Zinc binding: a difference between human and bovine milk, C. D. Eckhert *et al.*, 789