

will result depending upon whether fungicides are used or not. There are other chapters, of course: fungi on foliage and fruit, fungi on wood, and fungi on paper, plastics, paint, fuel oil, and so on.

If one wishes to learn about the fight with the fungi and how even the fungus fights back by degrading fungicides, I think he will find this book useful and satisfying. I shall look forward to the second volume.

JAMES G. HORSFALL

Connecticut Agricultural Experiment Station, New Haven

Protein-Analysis Technique

Electrophoresis. Theory, Methods, and Applications. Vol. 2. MILAN BIER, Ed. Academic Press, New York, 1967. xviii + 553 pp., illus. \$21.

It is evident from volume 2 of this series that the electrophoretic method has received widespread application. In the new volume, applications have assumed the predominant role, whereas theory and methodology predominated in volume 1. It is also evident that the resolving power, speed, and simplicity of electrophoresis on paper, on starch gel, and more recently on polyacrylamide gel, have accounted for its unprecedented utilization in biology.

Among the contributions to this volume are reviews devoted to the application of electrophoretic methods for the identification of normal human serum proteins, protein variants in human serum, antibodies and myeloma proteins, the macromolecular constituents of lymph and cerebrospinal fluid, and gastrointestinal secretions. Each of these is a complex protein system which can be uniquely resolved by electrophoresis, alone or in conjunction with immunological techniques, and the ways in which this can be done are described. The chapter by Burtin and Grabar on the nomenclature and identification of the normal serum proteins is a clearly written and well-organized review. A significant portion of the chapter on the inheritance of protein variation in human serum by B. H. Bowman is a review of the molecular biology of genetic variation. The author's intent is to point out the impact that this subject has on understanding of the variations in serum proteins. However, because there are many unanswered questions on the

structure and macromolecular configurations of the serum proteins, attempts to relate the two kinds of variation may be premature, especially since there are still differences (with respect to initiators, histone control, and so on) to be resolved between *Escherichia coli* and mammalian systems. H. M. Grey provides an informative review of the structure of the myeloma proteins and their relation to the immunoglobulins, particularly with reference to the portions of the heavy and light chains which contribute to the antibody moiety and the crystallizable or tissue-binding moiety.

In the chapter "Primary protein structure," by Sorm and Meloun, only one-fourth of the information is related to electrophoretic techniques. Unfortunately, only brief mention is made of the "diagonal electrophoresis" method of Hartley and co-workers [see *Science* 156, 376 (1967)]. In his chapter "High resolution techniques," Bloemendal stresses the advantages of gel electrophoresis over other methods. His review of the techniques and literature on the many applications of gel electrophoresis is excellent, and he is even kind enough to include sources from which current information on the latest applications may be obtained.

In general, the volume is a thorough compilation of reviews on the theory, methods, and applications of electrophoresis, with some references dated as recently as 1967. It should be useful, as is volume 1, as a reference manual to any investigator utilizing the electrophoretic method.

GEORGE F. VANDE WOUDE

Plum Island Animal Disease Laboratory, U.S. Department of Agriculture, Greenport, Long Island, New York

Books Received

The Addictive States. Proceedings of the Association for Research in Nervous and Mental Disease, New York, Dec. 1966. Abraham Wikler, Ed. Williams and Wilkins, Baltimore, 1968. xii + 520 pp., illus. \$24.

Advances in Atomic and Molecular Physics. Vol. 3. D. R. Bates and Immanuel Estermann, Eds. Academic Press, New York, 1967. xii + 371 pp., illus. \$16.50.

Advances in Immunology. Vol. 8. F. J. Dixon, Jr., and Henry G. Kunkel, Eds. Academic Press, New York, 1968. xvi + 246 pp., illus. \$12.

Advances in Microwaves. Vol. 3. Leo Young, Ed. Academic Press, New York, 1968. xiv + 450 pp., illus. \$19.50.

Advances in Organometallic Chemistry.

Vol. 6. F. G. A. Stone and Robert West, Eds. Academic Press, New York, 1968. xvi + 363 pp., illus. \$16.50.

Advances in Quantum Chemistry. Vol. 4, 1968. Per-Olov Löwdin, Ed. Academic Press, New York, 1968. xvi + 334 pp., illus. \$17.

Alchemical Studies. C. G. Jung. Translated by R. F. C. Hull. Princeton University Press, Princeton, N.J., 1967. xiv + 453 pp., illus. \$7.50. Bollingen Series 20. The Collected Works of C. G. Jung, vol. 13.

Alcoholism and Mortality. Per Sundby. Universitetsforlaget, Oslo, Norway, 1967 (distributed in the United States by Rutgers University Center of Alcohol Studies, New Brunswick, N.J.). 207 pp. \$8. Alcohol Research in the Northern Countries. National Institute for Alcohol Research, Publication No. 6.

Allgemeine und experimentelle Immunologie und Immunpathologie. Sowie ihre klinische Anwendung. Carl Steffen. Thieme, Stuttgart, 1968 (distributed in the United States by Intercontinental Medical Book Corp., New York). xxiv + 702 pp., illus. DM 89.

An American Genius. The Life of Ernest Orlando Lawrence. Herbert Childs. Dutton, New York, 1968. 576 pp., illus. \$12.95.

American Indian Painting of the Southwest and Plains Areas. Dorothy Dunn. University of New Mexico Press, Albuquerque, 1968. xxviii + 429 pp., illus. \$25.

Astronomy. Globes, Orreries and Other Models. H. R. Calvert. Her Majesty's Stationery Office, London, 1967 (distributed in the U.S. by British Information Services, New York). Unpaged, illus. Paper, \$1.20.

Anabolic Steroids. H.-L. Kruskemper. Translated from the German edition (Stuttgart, 1963) by Charles H. Doering. Academic Press, New York, 1968. x + 236 pp., illus. \$12.50.

An Atlas of the Brains of Fishes of Japan. Hideomi Tuge, Kiyoshi Uchihashi, and Hatsutarō Shimamura. Tsukiji Shokan, Tokyo, 1968. 240 pp., illus., boxed \$75.

Antibiotics. David Gottlieb and Paul D. Shaw, Eds. Vol. 1, Mechanism of Action (xii + 785 pp., illus. \$39); vol. 2, Biosynthesis (xii + 466 pp., illus. \$24). Springer-Verlag, New York, 1967.

Antibiotics in Agriculture. Proceedings of the 5th symposium of the Group of European Nutritionists, Jouy-en-Josas, April 1966. J. C. Somogyi and A. C. François, Eds. Karger, Basel, 1968 (distributed in the United States by Phiebig, White Plains, N.Y.). viii + 208 pp., illus. Paper, \$17.50.

Application of Physico-Chemical Methods in Chemical Analysis. Plenary lectures presented at a conference, Budapest, April 1966. International Union of Pure and Applied Chemistry in conjunction with the Hungarian Academy of Sciences and the Hungarian Chemical Society. Butterworths, London, 1967 (distributed in the United States by Plenum, New York). vi + 144 pp., illus. \$10.

Applied Mathematics for Electronics. John H. Westlake and Gordon E. Noden. Prentice-Hall, Englewood Cliffs, N.J.,

(Continued on page 198)

BOOKS RECEIVED

(Continued from page 156)

1968. xvi + 608 pp., illus. \$12.25. Prentice-Hall Series in Technical Mathematics.

As a Tale That Is Told. The autobiography of R. M. MacIver. University of Chicago Press, Chicago, 1968. x + 269 pp., illus. \$7.50.

Aspects of Neural Ontogeny. A. F. W. Hughes. Logos Press, London; Academic Press, New York, 1968. xii + 249 pp., illus. \$12.50.

The Atomists (1805-1933). Basil Schonland. Oxford University Press, New York, 1968. x + 198 pp., illus. \$5.60.

Atoms and Elements. A Study of Theories of Matter in England in the Nineteenth Century. David M. Knight. Hutchinson, London, 1967. vi + 167 pp., illus. 30 s.

The Autonomic Nervous System. For Students of Physiology and of Pharmacology. J. Harold Burn. Davis, Philadelphia, ed. 3, 1968. viii + 149 pp., illus. \$3.75.

Autonomous Group Functioning. An Exploration in Behaviour Theory and Measurement. P. G. Herbst. Social Science Paperbacks in association with Tavistock Publications, London, 1968 (distributed in the U.S. by Barnes and Noble, New York). xiv + 271 pp., illus. Paper, \$3.25. Reprint of the 1942 edition.

Basalts. The Poldervaart Treatise on Rocks of Basaltic Composition. Vol. 2. H. H. Hess and Arie Poldervaart, Eds.

Interscience (Wiley), New York, 1968. viii + 400 pp., illus. \$22.

Basic Electronic Test Equipment. A Programmed Introduction. Donald H. Schuster. McGraw-Hill, New York, 1968. Unpaged, illus. \$7.95.

Basic Real and Abstract Analysis. John F. Randolph. Academic Press, New York, 1968. xii + 515 pp., illus. \$14.

Biblia Pauperum. Facsimile Edition of the Forty-Leaf Blockbook in the Library of the Esztergom Cathedral. Introduction, notes and subtitles by Elizabeth Soltesz. Corvina Press, Budapest, 1967. xxxi + 40 pp., illus. \$12.

Bibliography for Beginners. Form A. Daniel Gore. Appleton-Century-Crofts, New York, 1968. xiv + 192 pp., illus. Paper, \$1.60.

The Big Bend of the Rio Grande. A Guide to the Rocks, Landscape, Geologic History, and Settlers of the Area of Big Bend National Park. Ross A. Maxwell. University of Texas, Austin, 1968. vi + 139 pp., illus., maps. Paper, \$2.

Bile Pigments. Chemical, Biological, and Clinical Aspects. Torben K. With. Translated from the German edition (Stuttgart, 1960) by J. P. Kennedy. Academic Press, New York, 1968. xiv + 830 pp., illus. \$35.

Bonding Theory. Donald J. Royer. McGraw-Hill, New York, 1968. x + 275 pp., illus. \$10.75.

Bone for Bone. Written and illustrated by Margaret Cosgrove. Dodd, Mead, New York, 1968. 128 pp. \$3.95.

The Brain Drain. Papers presented at an international conference, Lausanne, Aug. 1967. Walter Adams, Ed. Macmillan, New York; Collier-Macmillan, London, 1968. xiv + 273 pp., illus. \$6.95.

Brain Function. Vol. 4, Brain Function and Learning. Proceedings of the 4th conference, Los Angeles, Nov. 1964. Donald B. Lindsley and Arthur A. Lumsdaine, Eds. University of California Press, Berkeley, 1967. xiv + 364 pp., illus. \$15.

Carbon-14. Vernon F. Raaen, Gus A. Ropp, and Helen P. Raaen. McGraw-Hill, New York, 1968. xii + 388 pp., illus. \$15.

F. Catherwood. Architect-Explorer of Two Worlds. Victor Wolfgang von Hagen. Barre, Barre, Mass., 1968. 60 pp., illus. \$6.95.

Cell Walls and Membranes. H. J. Rogers and H. R. Perkins. Spon, London, 1968 (distributed in the U.S. by Barnes and Noble, New York). xii + 436 pp., illus. \$12.

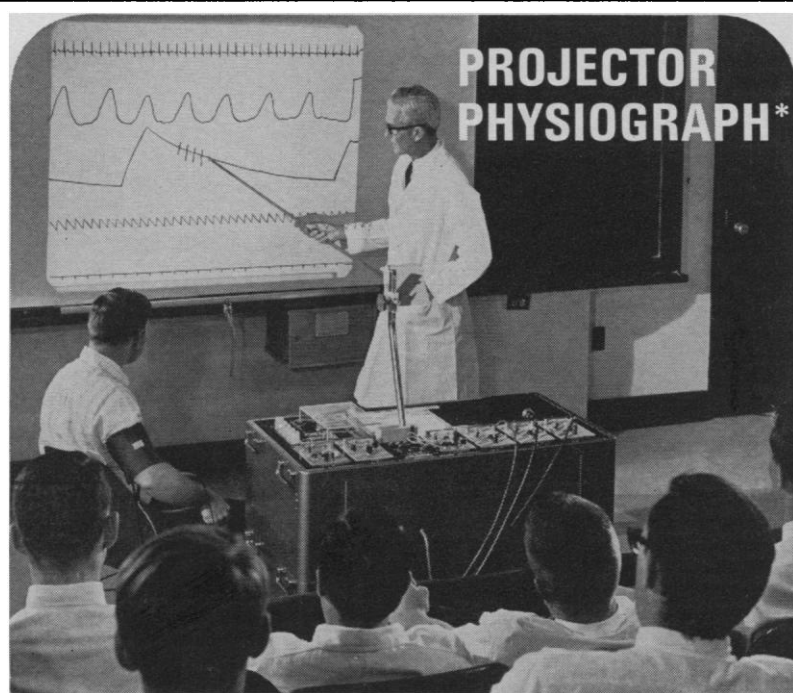
Challenge to Reason. C. West Churchman. McGraw-Hill, New York, 1968. xii + 223 pp. Cloth, \$5.95; paper, \$3.95.

Chemistry. A Survey of Fundamentals. Lawrence P. Eblin. Harcourt, Brace and World, New York, 1968. xxvi + 676 pp., illus. \$9.95.

College Algebra and Trigonometry. Daniel E. Dupree and Frank L. Harmon. Prentice-Hall, Englewood Cliffs, N.J., 1968. xii + 288 pp., illus. \$7.95.

The College Environment. Alexander W. Astin. American Council on Educa-

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tion, Washington, D.C., 1968. xii + 187 pp., illus. Cloth, \$5; paper, \$3.

Communication in Science. Documentation and Automation. Proceedings of a Ciba Foundation symposium, London, Nov. 1966. Anthony de Reuck and Julie Knight, Eds. Little, Brown, Boston, 1967. xii + 274 pp., illus. \$12.50.

A Comparative Quantitative Phonology of Russian, Czech, and German. Henry Kučera and George K. Monroe. Elsevier, New York, 1968. xii + 113 pp. \$12.

Computers. A Programming Problem Approach. R. Clay Sprowls. Harper and Row, New York, ed. 2, 1968. xii + 399 pp., illus. \$9.95.

Delinquency and Crime. Cross-Cultural Perspectives. Ruth Shonle and Jordan T. Cavan. Lippincott, Philadelphia, 1968. vi + 244 pp. \$5.95.

Depression. Clinical, Experimental, and Theoretical Aspects. Aaron T. Beck. Hoeber Medical Division (Harper and Row), New York, 1967. xiv + 370 pp., illus. \$10.50.

Developmental Language Disability. Adult Accomplishments of Dyslexic Boys. Margaret B. Rawson. Johns Hopkins Press, Baltimore, 1968. xvi + 127 pp., illus. \$5.50.

Differential Equations with Application. Paul D. Ritger and Nicholas J. Rose. McGraw-Hill, New York, 1968. xiv + 545 pp., illus. \$9.50.

Dispersion Fuel Elements. A. N. Holden. Gordon and Breach, New York, 1967. x + 255 pp., illus. \$4.50; to libraries, \$12.50. 20 percent discount if prepaid.

The Dynamics of Machinery. Jeremy Hirschhorn. Barnes and Noble, New York, 1968. xvi + 447 pp., illus. \$9.75.

Electric Network Theory, Laplace Transform Technique. Myril B. Reed and Georgia B. Reed. International Textbook Co., Scranton, Pa., 1968. xii + 235 pp., illus. \$9.

Electromagnetic Radiation in Space. Proceedings of the 3rd ESRO Summer School in Space Physics, Alpbach, Austria, July-Aug. 1965. J. G. Emming, Eds. Springer-Verlag, New York; Reidel, Dordrecht-Holland, 1967. viii + 307 pp., illus. \$17.40.

Electromechanical Devices for Energy Conversion and Control Systems. Vincent Del Toro. Prentice-Hall, Englewood Cliffs, N.J., 1968. xx + 617 pp., illus. \$13.75.

Electron Paramagnetism. Juan A. McMillan. Reinhold, New York, 1968. xii + 226 pp., illus. \$14.50.

Electronic Digital Techniques. Paul M. Kintner. McGraw-Hill, New York, 1968. xiv + 315 pp., illus. \$11.95.

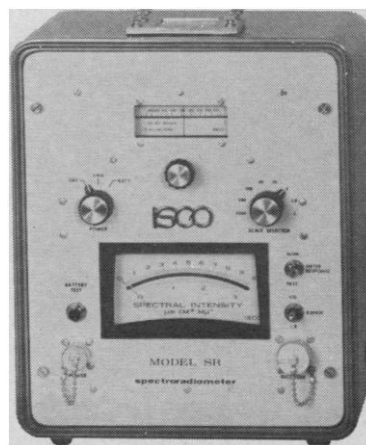
Elements of Control Systems Analysis. Classical and Modern Approaches. Chih-Fan Chen and I. John Haas. Prentice-Hall, Englewood Cliffs, N.J., 1968. viii + 471 pp., illus. \$13.50.

Elements of General Biological Chemistry. An Introduction to the Molecular Basis of Life. John R. Holum. Wiley, New York, ed. 2, 1968. xvi + 576 pp., illus. \$8.95.

Emulsion Science. Philip Sherman, Ed. Academic Press, New York, 1968. x + 496 pp., illus. \$21.

Energy Flow in Biology. Biological Organization as a Problem in Thermal Physics. Harold J. Morowitz. Academic Press,

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New York, 1968. xii + 179 pp., illus. \$9.50.

Engineering and the Liberal Arts. A Technologist's Guide to History, Literature, Philosophy, Art, and Music. Samuel C. Florman. McGraw-Hill, New York, 1968. x + 278 pp. \$8.95.

Essential Mathematics for College Students. Francis J. Mueller. Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1968. viii + 230 pp., illus. Paper, \$4.75.

Every Man His Way. Readings in Cultural Anthropology. Alan Dundes, Ed. Prentice-Hall, Englewood Cliffs, N.J., 1968. xviii + 551 pp., illus. Paper, \$4.95.

Freud. Political and Social Thought. Paul Roazen. Knopf, New York, 1968. xii + 332 pp. \$6.95.

Fundamentals of Optics and Modern Physics. Hugh D. Young. McGraw-Hill, New York, 1968. xvi + 510 pp., illus. \$8.95.

La Genèse des Sols en tant que Phénomène Géologique. Esquisse d'une Théorie Géologique et Géochimique. Biostasie et Rhexistasie. H. Erhart. Masson, Paris, ed. 2, 1967. 177 pp. 31 F.

Genetics for Medical Students. E. B. Ford. Methuen, London, ed. 6, 1967 (distributed in the United States by Barnes and Noble, New York). xii + 211 pp., illus. \$3.50.

Helmholtz on Perception. Its Physiology and Development. Richard M. Warren and Roslyn P. Warren. Wiley, New York, 1968. x + 277 pp., illus. \$9.95.

High Energy Physics. Hal Hellman. Illustrated by Edward A. DeVille. Lippincott, Philadelphia, 1968. 192 pp. \$4.75.

The History of Life. A. Lee McAlester. Prentice-Hall, Englewood Cliffs, N.J., 1968. viii + 151 pp., illus. Cloth, \$5.95; paper, \$2.50.

How to Find Out in Philosophy and Psychology. D. H. Borchardt. Pergamon, New York, 1968. viii + 97 pp., illus. Cloth, \$3.50; paper, \$2.

Human Aging and Behavior. Recent Advances in Research and Theory. George A. Talland, Ed. Academic Press, New York, 1968. xiv + 322 pp., illus. \$12.

Industrial Research and Technological Innovation. An Econometric Analysis. Edwin Mansfield. Published for the Cowles Foundation for Research in Economics at Yale University by Norton, New York, 1968. xx + 235 pp., illus. \$7.50.

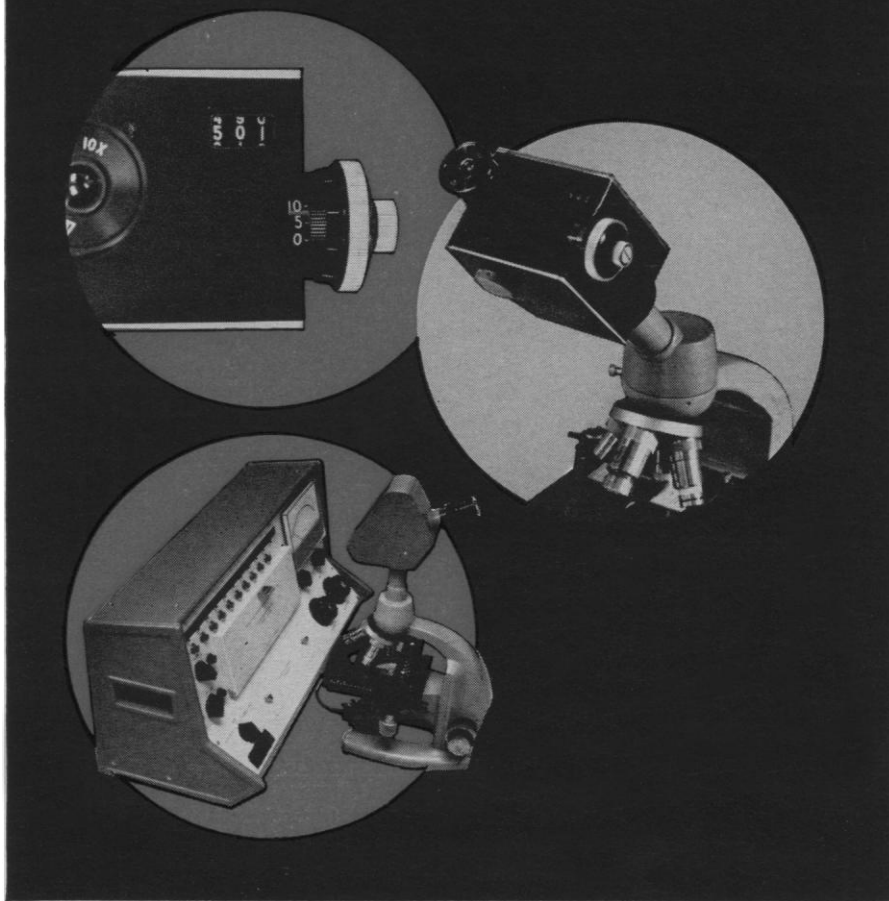
Industry and Tropical Health VI. Proceedings of the 6th Conference of the Industrial Council for Tropical Health, Boston, Oct. 1966. Published for the Industrial Council for Tropical Health by the Harvard School of Public Health, Boston, 1967. 214 pp., illus. \$10; \$5, professional rate.

Interference Microscopy for the Biologist. S. Tolansky. Thomas, Springfield, Ill., 1968. xii + 166 pp., illus. \$11.75.

Intermediate Structure in Nuclear Reactions. Lectures by Richard H. Lemmer, Leonard S. Rodberg, James E. Young, J. J. Griffin, and Alexander Lande. Hugh P. Kennedy and Rudolph Schriels, Eds. University of Kentucky Press, Lexington, 1968. x + 219 pp., illus. Paper, \$7.50.

International Action to Avert the Impending Protein Crisis. Report to the Economic and Social Council of the Advisory Committee on the Application of Science and Technology to Development. United

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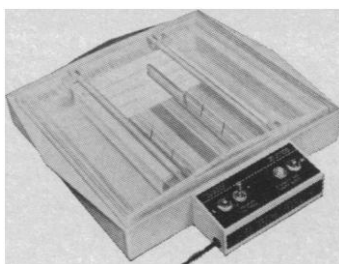
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Introduction to Chemistry. Amos Turk, Herbert Meislich, Frank Brescia, and John Arents. Academic Press, New York, 1968. xiv + 577 pp., illus. \$9.75.

Introduction to Electronics. H. Alex Romanowitz and Russell E. Puckett. Wiley, New York, 1968. xx + 763 pp., illus. \$10.95.

Introduction to Fluid Mechanics. Stephen Whitaker. Prentice-Hall, Englewood Cliffs, N.J., 1968. xvi + 457 pp., illus. \$12.

Introduction to Strengthening Mechanisms. David K. Felbeck. Prentice-Hall, Englewood Cliffs, N.J., 1968. xii + 146 pp., illus. Cloth, \$6.50; paper, \$3.75.

Introduction to Thermodynamics of Irreversible Processes. I. Prigogine. Interscience (Wiley), New York, ed. 3, 1968. xvi + 147 pp., illus. \$5.95.

Invertebrate Structure and Function. E. J. W. Barrington. Houghton Mifflin, Boston, 1967. x + 549 pp., illus. \$10.95.

Invertebrate Zoology. Robert W. Hegner and Joseph G. Engemann. Macmillan, New York; Collier-Macmillan, London, ed. 2, 1968. xviii + 619 pp., illus. \$10.95.

Investigations into Generation 1651-1828. Elizabeth B. Gasking. Hutchinson, London, 1967. 192 pp., illus. 30 s.

Isotopes in Hydrology. Proceedings of a conference, Vienna, Nov. 1966, sponsored by the International Atomic Energy Agency in co-operation with the International Union of Geodesy and Geophysics. International Atomic Energy Agency, Vienna, 1967. x + 740 pp., illus. Paper, \$15.

Killer Smog. The World's Worst Air Pollution Disaster. William Wise. McNally, Chicago, 1968. 181 pp. \$5.95.

Laboratory Studies in Integrated Zoology. Cleveland P. Hickman and Frances M. Hickman. Mosby, St. Louis, Mo., ed. 3, 1968. xii + 447 pp., illus. Paper, \$4.75.

Lie Theory and Special Functions. Willard Miller, Jr. Academic Press, New York, 1968. xviii + 338 pp. \$16.50.

Life, Death, and the Doctor. Louis LaSagna. Knopf, New York, 1968. xiv + 334 pp. \$6.95.

Life or Death. Ethics and Options. Papers presented at a symposium, Portland, March 1966. Edward Shils, Norman St. John-Stevan, Paul Ramsey, P. B. Medawar, Henry K. Beecher, and Abraham Kaplan. Reed College, Portland, Ore.; University of Washington Press, Seattle, 1968. xxiv + 167 pp. \$4.95.

Linear Difference Equations. Kenneth S. Miller. Benjamin, New York, 1968. x + 105 pp. Cloth, \$9.50; paper, \$4.95. Mathematics Monograph Series.

H. P. Luhn: Pioneer of Information Science. Selected Works. Claire K. Schultz, Ed. Spartan, New York; Macmillan, London, 1968. x + 320 pp., illus. \$18.75.

Man and Environment. Crisis and the Strategy of Choice. Robert Arvill. Penguin, Baltimore, 1967. 332 pp., illus. Paper, \$3.25.

Man and the California Condor. The Embattled History and Uncertain Future of North America's Largest Free-Living Bird. Ian McMillan. Dutton, New York, 1968. 191 pp., illus. \$5.95.

Man, Medicine, and Environment. René Dubos. Praeger, New York, 1968. vi + 125 pp. \$4.50.

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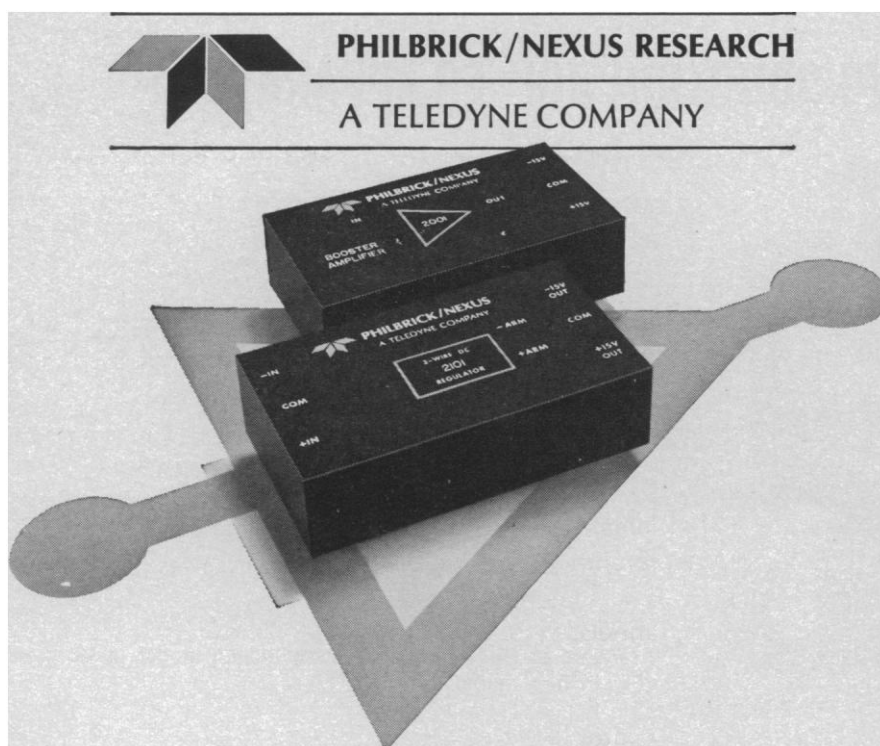
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Manufactured Carbon. H. W. Davidson, P. K. C. Wiggs, A. H. Churchouse, F. A. P. Maggs, and R. S. Bradley. Pergamon, New York, 1968. x + 111 pp., illus. Cloth, \$4.50; paper, \$3. Commonwealth and International Library: Chemical Industry.

Mathematical Methods. Vol. 1, Linear Algebra, Normed Spaces, Distributions, Integration. Jacob Korevaar. Academic Press, New York, 1968. xii + 505 pp., illus. \$14.

Mathematics for Elementary School Teachers. A First Course. James W. Armstrong. Harper and Row, New York, 1968. xiv + 320 pp., illus. \$9.50.

Mécanique Statistique. A. Blanc-Lapierre. Masson, Paris, 1967. xii + 432 pp., illus. Paper, 97 F.

Men and Dinosaurs. The Search in Field and Laboratory. Edwin H. Colbert. Dutton, New York, 1968. xviii + 283 pp., illus. \$8.95.

Men, Machines, and Modern Times. Elting E. Morison. M.I.T. Press, Cambridge, Mass., 1968. x + 235 pp. Paper, \$1.95. Reprint of the 1966 edition.

Men Who Dig Up History. Lynn Poole and Gray Poole. Dodd, Mead, New York, 1968. xiv + 175 pp., illus. \$4.

Metaphysics and Measurement. Essays in Scientific Revolution. Alexandre Koyré. Essays iii, v, and vi translated from the French by R. E. W. Maddison. Harvard University Press, Cambridge, Mass., 1968. x + 165 pp. \$7.

The Microscopic Anatomy of the White Rat. A Photographic Atlas. Esther M. Smith and M. Lois Calhoun. Iowa State University Press, Ames, 1968. 190 pp. \$9.90.

Migrants and Malaria in Africa. R. Mansell Prothero. University of Pittsburgh Press, Pittsburgh, 1968. x + 148 pp., illus. Paper, \$1.50.

Modern Electronic Circuit Design. James D. Long. McGraw-Hill, New York, 1968. xii + 286 pp., illus. \$12.50.

Modern Methods of Chemical Analysis. Robert L. Pecsok and L. Donald Shields. Wiley, New York, 1968. xvi + 480 pp., illus. \$9.95.

Modern Microscopy or Seeing the Very Small. V. E. Cosslett. Cornell University Press, Ithaca, N.Y., 1968. 160 pp., illus. Paper, \$1.95. Cornell Paperbacks. Reprint of the 1966 edition.

Modern Optics. Proceedings of a symposium, New York, March 1967. Polytechnic Press, Brooklyn, N.Y., 1968 [distributed by Interscience (Wiley), New York]. xxxvi + 804 pp., illus. \$17.50. Microwave Research Institute Symposia Series, vol. 17.

Molecular Associations in Biology. Proceedings of an international symposium, Paris, May 1967. Bernard Pullman, Ed. Academic Press, New York, 1968. xx + 571 pp., illus. \$24.50.

Muons. A. O. Weissenberg. Translated from the Russian edition (Moscow, 1964) by S. Chomet. J. S. Imrie, translation Ed. North-Holland, Amsterdam; Interscience (Wiley), New York, 1967. viii + 347 pp., illus. \$19.50.

My Life and My Views. Max Born. Scribner's, New York, 1968. vi + 216 pp. \$4.95.

Mysteries of the Skies. UFO's in Perspective. Gordon I. R. Lore, Jr., and Harold H. Deneault, Jr. Prentice-Hall, Englewood Cliffs, N.J., 1968. xvi + 237 pp., illus. \$5.95.

The New Science of Strong Materials. J. E. Gordon. Walker, New York, 1968. 269 pp., illus. \$6.50.

La Nomenclature en Chimie Organique. Noël Lozac'h. Masson, Paris, 1967. viii + 296 pp., illus. 103 F.

Nonlinear Ordinary Differential Equations in Transport Processes. William F. Ames. Academic Press, New York, 1968. xiv + 265 pp., illus. \$14.50.

The Open Heart. N. Amosoff. Translated from the Russian edition by George St. George. Ballantine, New York, 1968. 221 pp. Paper, 75c. Reprint.

Operation Brother's Brother. Cyril E. Bryant. Lippincott, Philadelphia, 1968. xii + 206 pp., illus. \$4.95.

Pain. A Psychophysiological Analysis. Richard A. Sternbach. Academic Press, New York, 1968. xviii + 185 pp. \$8.

Papers on Biological Membrane Structure. Selected by Daniel Branton and Roderic B. Park. Little, Brown, Boston, 1968. viii + 311 pp., illus. Paper, \$6.

Papers on Plant Systematics. Selected by Robert Ornduff. Little, Brown, Boston, 1967. xii + 429 pp., illus. Paper, \$6.

A Paradise of Birds. When Spring Comes to Texas. Helen Gere Cruickshank. Photographs by Allan D. Cruickshank. Dodd, Mead, New York, 1968. xviii + 398 pp. \$7.50.

Pharmacological Experiments on Isolated Preparations. Staff of the Department of Pharmacology of the University of Edinburgh. Preface by W. L. M. Perry. Livingstone, Edinburgh, 1968 (distributed in the U.S. by Williams and Wilkins, Baltimore). x + 131 pp., illus. Spiral binder, \$5.75.

Plant Viruses. Kenneth M. Smith. Methuen, London, ed. 4, 1968 (distributed in the U.S. by Barnes and Noble, New York). x + 166 pp., illus. \$5.

The Politics of Science. Readings in Science, Technology, and Government. William R. Nelson, Ed. Oxford University Press, New York, 1968. x + 495 pp. Paper, \$3.95.

Population and People. Edward G. Stockwell. Quadrangle Books, Chicago, 1968. xii + 307 pp., illus. \$6.95.

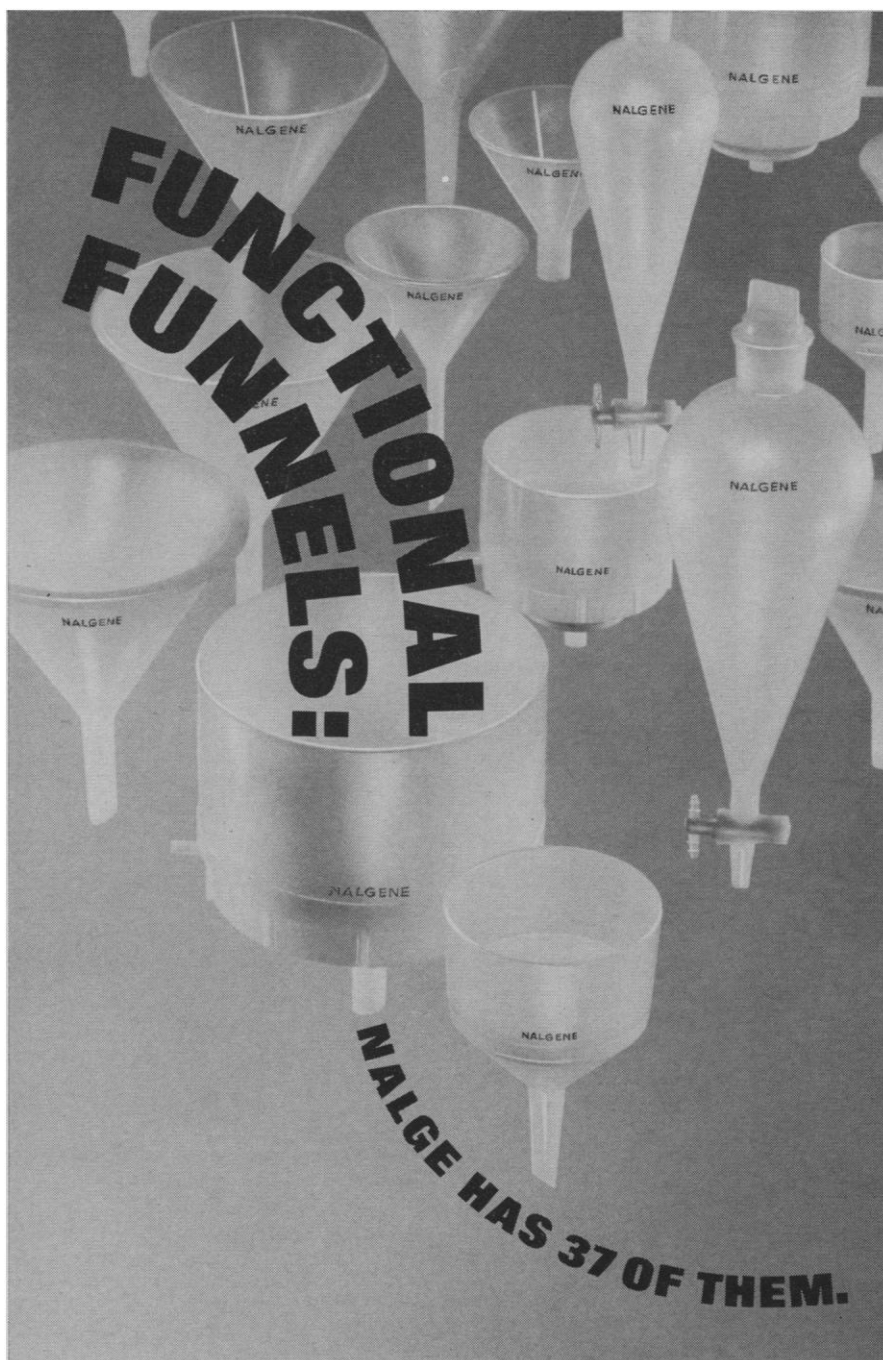
Potassium Therapy. A Seminar. Alfred Soffer, Ed. Thomas, Springfield, Ill., 1968. xii + 109 pp., illus. \$8.75.

Practical Emulsions. H. Bennett, Jack L. Bishop, and Max F. Wulfinhoff. Vol. 1, Materials and Equipment (viii + 181 pp., illus. \$12); vol. 2, Applications (viii + 204 pp. \$13). Chemical Publishing Co., New York, 1968.

Practical Inorganic Chemistry. Preparations, Reactions and Instrumental Methods. Geoffrey Pass and Haydn Sutcliffe. Chapman and Hall, London, 1968 (distributed in the U.S. by Barnes and Noble, New York). xvi + 225 pp., illus. \$6.50.

The Precambrian. Vol. 3. Kalervo Rankama, Ed. Interscience (Wiley), New York, 1967. viii + 325 pp., illus. \$17.50.

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Primer of Chromosome Practice. Plant and Animal Chromosomes under the Microscope. G. Haskell and A. B. Wills. Oliver and Boyd, Edinburgh, 1968. xvi + 180 pp., illus. £2. 5 s.

Principles of Solid State Physics. Robert A. Levy. Academic Press, New York, 1968. x + 464 pp., illus. \$11.50.

Probabilistic Methods in Applied Mathematics. Vol. 1. A. T. Bharucha-Reid, Ed. Academic Press, New York, 1968. xii + 291 pp., illus. \$15.

Proceedings of the Symposium on Upper Mantle Project. Hyderabad, India, Jan. 1967. Geophysics Research Board and National Geophysical Research Institute, Hyderabad, 1967. xxxviii + 540 pp., illus. Paper, \$5. GRB and NGRI Publication, No. 8.

A Programmed Course in Calculus. The Committee on Educational Media of the Mathematical Association of America. Vol. 1, Functions, Limits, and the Derivative (xii + 295 pp., illus.); vol. 2, The Definite Integral (xiv + 237 pp., illus.); vol. 3, Transcendental Functions (xiv + 129 pp., illus.); vol. 4, Applications and Techniques of Integration (xii + 213 pp., illus.); vol. 5, Infinite Sequences and Series (xiv + 121 pp., illus.). Benjamin, New York, 1968. Paper, \$2.95 each volume.

Progress in High Temperature Physics and Chemistry. Vol. 2. Carl A. Rouse, Ed. Pergamon, New York, 1968. vi + 176 pp., illus. \$10.

The Promise of Space. Arthur C. Clarke. Harper and Row, New York, 1968. xxii + 325 pp., illus. \$8.95.

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Selective Renal Arteriography. Its Application to the Diagnosis of Renal Vascular and Parenchymal Lesions. Ivan L. Bunnell. Thomas, Springfield, Ill., 1968. xii + 235 pp., illus. \$18.75.

Selenium and Selenides. D. M. Chizhikov and V. P. Shchastlivyi. Translated from the Russian by Eugene M. Elkin. Collet's, London, 1968. xvi + 403 pp., illus. 152s 6d.

Services for the Chemical Industry. J. Davidson Pratt and T. F. West, Eds. Pergamon, New York, 1968. xii + 203 pp., illus. Cloth, \$6; paper, \$4.50. Commonwealth and International Library: Chemical Industry.

The Silent Weapons. Robin Clarke. McKay, New York, 1968. xvi + 270 pp. \$4.95.

Social Sciences and the Environment. Conference on the Present and Potential Contribution of the Social Sciences to Research and Policy Formulation in the Quality of the Physical Environment, Boulder, Colo., Jan-Feb. 1967. Morris E. Garnsey and James R. Hibbs, Eds. University of Colorado Press, Boulder, 1968. vi + 249 pp., illus. \$6.

Socio-Economic Models in Geography. Richard J. Chorley and Peter Haggett, Eds. Methuen, London, 1968 (distributed in the U.S. by Barnes and Noble, New York). 468 pp., illus. Cloth, \$19; paper, \$3.50. University Paperbacks.

Songbirds in Your Garden. John K. Terres. Illustrated by Matthew Kalmenoff. Crowell, New York, ed. 2, 1968. xvi + 256 pp. \$6.95.

Sourcebook of Electronic Circuits. John Markus. McGraw-Hill, New York, 1968. viii + 888 pp., illus. \$18.50.

Sources for the History of the Science of Steel, 1532-1786. Cyril Stanley Smith, Ed. Published jointly by the Society for the History of Technology and the M.I.T. Press, Cambridge, Mass., 1968. xvi + 357 pp., illus. \$12.

Substoichiometry in Radiochemical Analysis. Jaromír Ružička and Jirí Starý. M. Williams, Ed. Pergamon, New York, 1968. xii + 151 pp., illus. \$7. International Series of Monographs in Analytical Chemistry, vol. 30.

Switching Theory. Paul E. Wood, Jr. McGraw-Hill, New York, 1968. xii + 390 pp., illus. \$13.50. Lincoln Laboratory Publications.

Symbol Manipulation Languages and Techniques. Proceedings of the International Federation for Information Processing Working Conference, Pisa, Sept. 1966. Daniel G. Bobrow, Ed. North-Holland, Oct. 1966. M. D. Mesarović, Ed. illus. \$19.50.

Systems Theory and Biology. Proceedings of the 3rd Systems Symposium, Cleveland, Oct. 1966. M. D. Mesarovic, Ed. Springer-Verlag, New York, 1968. xii + 403 pp., illus. \$16.

Total Positivity. Vol. 1. Samuel Karlin. Stanford University Press, Stanford, Calif., 1968. xiv + 576 pp. \$17.50.

Towards a Theoretical Biology. 1. Prolegomena. Proceedings of an International Union of Biological Sciences symposium, Bellagio, Aug.-Sept. 1966. C. H. Waddington, Ed. Aldine, Chicago, 1968. viii + 234 pp., illus. \$8.95.

Traditional Medicine in Modern China. Science, Nationalism, and the Tensions of Cultural Change. Ralph C. Croizier. Harvard University Press, Cambridge, Mass., 1968. xviii + 325 pp., illus. \$6. Harvard East Asian Series, No. 34.

Le Travail en Milieu Hostile. Michel Grenon. Presses Universitaires de France, Paris, 1968. viii + 210 pp., illus. Paper, 18 F. Le Science Vivante.

Tropical Fishes of the Great Barrier Reef. Tom C. Marshall. Illustrated by George Coates. Angus and Robertson, London; Elsevier, New York, 1968. 239 pp. \$14.

Vegetation and Soils. A World Picture. S. R. Eyre. Aldine, Chicago, ed. 2, 1968. xvi + 328 pp., illus. \$8.95.

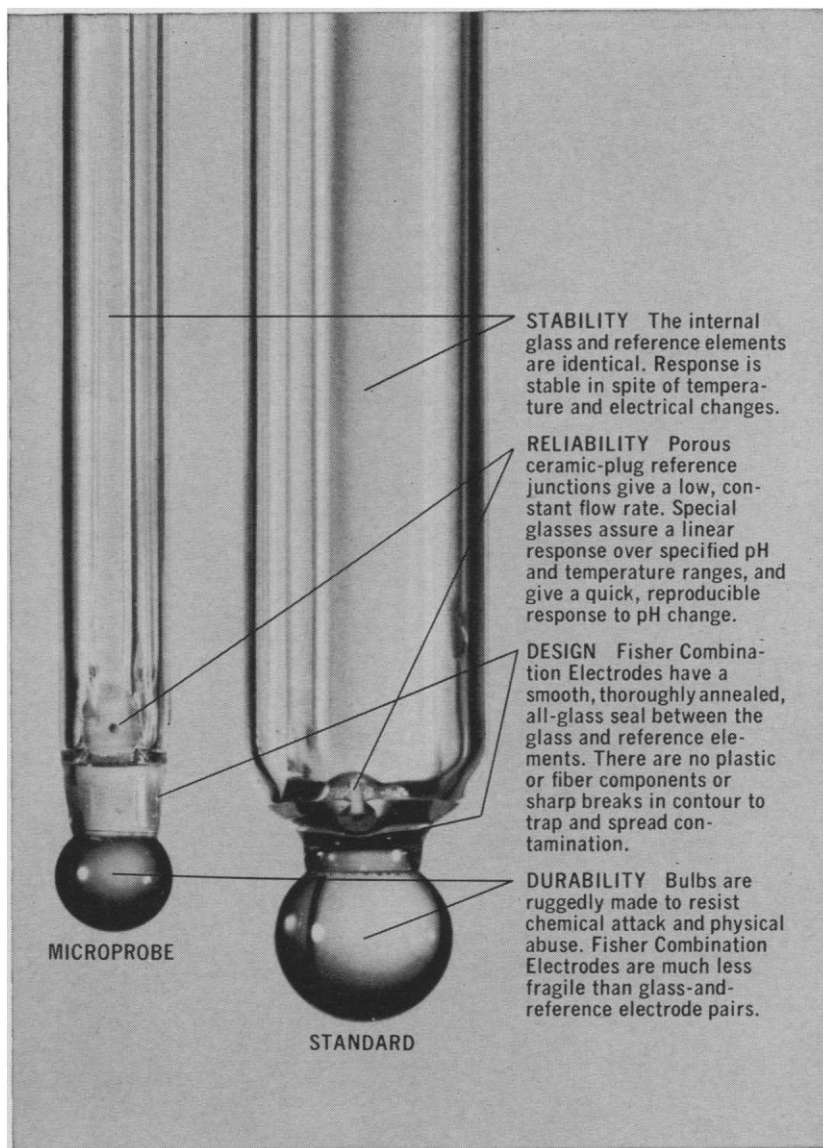
Who Speaks for Civil Defense? Eugene P. Wigner, Ed. Scribner's, New York, 1968. 125 pp., illus. Cloth, \$3.95; paper, \$1.65.

Wood as Raw Material. Source, Structure, Chemical Composition, Growth, Degradation and Identification. George Tsoumis, Pergamon Press, New York, 1968. xii + 276 pp., illus. \$10.

Writing for Professional and Technical Journals. John H. Mitchell. Wiley, New York, 1968. x + 405 pp., illus. \$7.50. Wiley Series on Human Communication.

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