

with genetic data, but it will prove valuable to geneticists who plan to work on population genetics of small mammals.

On the whole, the present volume can be highly recommended to geneticists and to biologists in general. It contains a number of contributions that will prove to be of high importance for the development of the science of genetics. Every geneticist will find in it information that will be valuable for the progress of his own work and in the development of his own ideas.

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**Electrochemical Constants.** N.B.S. Circular 524. Proceedings of the National Bureau of Standards Semicentennial Symposium on Electrochemical Constants, held September 19–21, 1951. National Bureau of Standards, Washington, D.C., 1953. (Order from: Supt. of Documents, GPO, Washington, D.C.) 310 pp. Illus. \$2.

Much more emphasis in today's chemistry centers on the properties of substances than was given in past decades. Scientists are probing to greater depths into the reasons for the behavior of substances and systems and are acquiring fuller understandings of the ordered complexity of forces that interplay to give to the material its peculiar properties. It is necessary that investigators get together at not too infrequent intervals to pool their information.

This volume prepared by Walter J. Hamer contains 30 papers presented by 42 authorities at the Symposium on Electrochemical Constants held by the National Bureau of Standards. The papers discuss the latest developments, both experimental and theoretical, in the field of fundamental electrochemistry from many leading establishments in the United States and abroad. Although many constants, tables, and graphs are contained in this book, it cannot be considered a handbook of complete information.

Each contributor, in general, gives the historical background of his particular subject and then critically reviews the pertinent findings. Experimental details are entirely omitted, and the design of experimental apparatus is illustrated only briefly. More detailed description of apparatus is given where the apparatus is a major contribution to the field of investigation. For details of experimentation, the reader is referred to the original literature in the bibliography following each chapter.

The material presented in the 30 specific titles falls into the following general fields: coulometry and the faraday, conductance, transference, standard cells, thermal phenomena, cell potentials, absolute half-cell potentials, overvoltage, electrode kinetics, electrochemical double layers, proton transfer reactions, potential diagrams and chemical behavior, activity coefficients, and equilibria in electrolytic solutions.

The contributors to this work are to be congratulated for the clarity of their presentations and for suggesting and outlining approaches for further studies. With new tools continually becoming available,

there is no reason to doubt that further and deeper probing into these problems will lead to more complete understanding of electrochemical phenomena.

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## New Books

**Fourth Symposium (International) on Combustion.** Held at Massachusetts Institute of Technology, September 1–5, 1952. Published by the Standing Committee on Combustion Symposia, Bernard Lewis, Chairman. Williams & Wilkins, Baltimore, 1953. 926 pp. Illus. \$7.00.

**Sample Survey Methods and Theory.** Vol. I: *Methods and Applications*; Vol. II: *Theory*. Morris H. Hansen, William N. Hurwitz, and William G. Madow. Wiley, New York; Chapman & Hall, London, 1953. Vol. I, 638 pp., \$8.00; Vol. II, 332 pp., \$7.00.

**Annual Review of Nuclear Science,** Vol. 3. James G. Beckerley *et al.*, Eds. Annual Reviews, Stanford, Calif., 1953. 412 pp. Illus. \$7.00.

**Manual of Cane-Growing.** Australian agricultural and livestock series. Norman J. King, R. W. Mungomery, and C. G. Hughes. Angus & Robertson, Sydney, 1953. (U.S. distr.: Anglobooks, New York.) 349 pp. Illus. + plates. 63s.

**Die Welt der Ungewohnten Dimensionen.** Arnold Hildeheimer. A. W. Sijthoff, Leiden, Holland, 1953. 368 pp. Illus. Dutch fl. 17.90.

**Refining of Oils and Fats for Edible Purposes.** A. J. C. Andersen. Academic Press, New York, 1953. 204 pp. Illus. + plates. \$7.00.

**The Mars Project.** Wernher Von Braun. Univ. Illinois Press, Urbana, Ill., 1953. 91 pp. Illus. \$3.95.

**Advances in Applied Mechanics,** Vol. III. Richard von Mises and Theodore von Kármán, Eds. Academic Press, New York, 1953. 324 pp. Illus. \$9.00.

**Thermionic Valves: Their Theory and Design.** A. H. W. Beck. Cambridge Univ. Press, New York, 1954. 570 pp. Illus. \$12.00.

**Viruses.** Cold Spring Harbor Symposia on Quantitative Biology, Vol. XVII. Biological Laboratory, Cold Spring Harbor, N. Y., 1953. 301 pp. Illus. \$8.00.

**The Actinide Elements.** Glenn T. Seaborg and Joseph J. Katz, Eds. McGraw-Hill, New York, 1954. 870 pp. Illus. \$11.75.

**Cell Chemistry.** A collection of papers dedicated to Otto Warburg on the occasion of his 70th birthday. Dean Burk, Ed. Elsevier, Houston-Amsterdam, 1953. 362 pp. Illus. \$7.50.

**Organic Syntheses,** Vol. 33. Charles C. Price, Ed. Wiley, New York, Chapman & Hall, London, 1953. 115 pp. \$3.50.

**Physiological Acoustics.** Ernest Glen Wever and Merle Lawrence. Princeton Univ. Press, Princeton, N. J., 1954. 454 pp. Illus. + plates. \$10.00.

**From Fish to Philosopher.** Homer W. Smith. Little, Brown, Boston, 1953. 264 pp. Illus. \$4.00.

**The Challenge of Our Times.** Contemporary trends in science and human affairs as seen by twenty professors at the University of Wisconsin. Farrington Daniels and Thomas M. Smith, Eds. Burgess, Minneapolis, Minn., 1953. 364 pp. Illus. \$3.50.

**Causality in Natural Science.** Victor F. Lenzen. Thomas, Springfield, Ill., 1954. 121 pp. \$3.00.