

genetic aspects of the agammaglobulinemia and of the results of experiments in which the mentioned proteins were treated with mercaptoethanol, attests to the value of this book. Finally, mention should be made of the excellent quality of the printing and especially of the illustrations.

This impressive monograph in which a field of research on the borderline of protein chemistry, immunochemistry and medicine is discussed, is to be recommended highly to investigators and clinicians who have a major concern in these disciplines.

LOVETT MEMORIAL UNIT
MASSACHUSETTS GENERAL HOSPITAL
BOSTON, MASS.

KARL SCHMID

Thermoelectricity. Including the Proceedings of the Conference on Thermoelectricity Sponsored by the Naval Research Laboratory, September, 1958. Edited by PAUL H. EGLI, U. S. Naval Research Laboratory, Washington, D. C. John Wiley and Sons, Inc., 440 Fourth Avenue, New York 16, N. Y. 1960. X + 407 pp. 15.5 X 23.5 cm. Price, \$10.00.

Increased financial support for scientific work has created an expanded market for scientific books and journals, so that almost any technical work can now be published at an assured profit. Thus we have had in recent years an outpouring of new journals and symposium volumes from commercial publishers. If these publications were a little bit worse, it would be easy to dismiss them as a waste of money. They often fall, however, into a no man's land of value. If four or five people see one \$12 book and learn anything at all from it, it is hard to deny that they have had their money's worth.

The merchandising of these books to scientists often lacks exactitude. The jacket of the present book, for example, states that "Section I presents an introduction and broad survey of the fundamental concepts of thermoelectricity." This statement, which is copied from the editor's preface, is simply not true. The actual content of Section I is as follows: There is a chapter by C. Zener which points out the application of Carnot's theorem to thermoelectric devices. There is a chapter by W. Teutsch (with a grandiose title) which briefly defines the thermoelectric coefficients. There is a chapter which describes several devices developed by the Whirlpool Corporation. "The development of this device grew out of the cooperation of the Whirlpool Corporation and the Franklin Institute of Philadelphia. The need for its development arose out of the desire of the liquor industry to have a reliable, accurate and unquestioned instrument to determine the density of liquor"—and so on. We also learn that a similar device can be used to cool beverages but that "such items probably would not have the market potential now enjoyed by full size refrigerators." The concluding chapter in this section on "fundamental concepts of thermoelectricity" is an analysis by two G. E. engineers of "some considerations of the problems of minimizing the weight of thermopile generators in space applications."

Once these "fundamentals" are disposed of, the book branches out into the fascinating field of "materials research." There are good informative chapters on how to measure and interpret a wide variety of properties of solid materials: thermal and electrical conductivity, mechanical properties of ceramics, thermionic emission, and even thermoelectric coefficients. There are also short chapters on the properties of mixed valence semi-conductors and porous semiconductors. Most of these chapters were originally prepared for a 1958 Naval Research Laboratory symposium. They are excellent summaries and do much to alleviate the pain caused by the earlier sections. A short chapter on liquids appears to have wandered in by mistake from another book.

The book has been given a truly beautiful production. Paper, illustrations, printing and binding are of the highest quality. In other words, the packaging is up to the highest standards of a highly competent industry.

If a book like this were presented modestly and truthfully we could welcome it as a survey of the technology of thermoelectric devices, with valuable background information for engineers working in the field. As a scientific work on "Thermoelectricity" it is poorly organized, incomplete and strongly biased toward the development work done in a

few industrial laboratories. The important Russian work in this field, for example, is only briefly mentioned, and the general thermodynamic theory is not discussed. The omission of an author index, in view of the sketchy bibliographies, may have been a defensive measure. My criticism finally comes to the point that this is a fairly useful book, but the same amount of time and effort could surely have produced a more useful one.

DEPARTMENT OF CHEMISTRY
INDIANA UNIVERSITY
BLOOMINGTON, INDIANA

WALTER J. MOORE

Fundamental Aspects of Normal and Malignant Growth.

Edited by WIKTOR W. NOWINSKI, Associate Professor of Bio-chemistry, Director of Tissue Metabolism Research Laboratory, University of Texas, Medical Branch, Galveston, Texas. D. Van Nostrand Company, Inc., 120 Alexander Street, Princeton, New Jersey. 1960. xv + 1025 pp. 18 X 25 cm. Price, \$37.50.

This large volume consists of 13 separate monographs, each by an outstanding investigator in his field. The subject matter is concerned with the many aspects of growth, including definitions of growth (L. von Bertalanffy), the metabolism of proliferating cells (S. Kit), the role of nucleic acids in growth (J. Brachet), embryonic development and induction (A. M. Dalcq), regeneration (A. E. Needham), plant growth (K. V. Thimann) and aging (W. Andrew). Special chapters are given to wound healing (W. W. Washburn, Jr.), nitrogen metabolism and growth (H. Clark) and the protein-forming system of developing cells (H. Hermann). Neoplastic problems are reviewed in separate sections on carcinogenesis (A. Kirschbaum), the metabolism of the cancer cell (A. C. Griffin), and the effects of antimetabolites on mitosis (J. J. Bieseke). The monographs are generally broad and detailed, with an extensive list of references; several have been published separately in a more extensive form. The book, however, falls short of the goals of the editor, to publish an "introduction into various aspects of the growth problem," and to provide "an up-to-date survey of the results of basic cancer research and allied fields." While an investigator may find the book useful for information or references on a particular problem, it is not integrated or organized to provide a coherent or unified synthesis of the problems of growth. Thus, it does not wholly succeed as an introduction, a general survey, a fundamental analysis, or a current review of the status of our knowledge on normal and malignant growth. References are lavishly used, but only a few are cited after 1957. A detailed outline is provided for each chapter, and there is a 52 page subject index.

MEMORIAL CENTER FOR CANCER
AND ALLIED DISEASES
444 EAST 68TH STREET
NEW YORK 21, NEW YORK

DAVID A. KARNOFSKY

Anleitungen für Die Chemische Laboratoriumspraxis. Band IV. **Polarographisches Praktikum.** Zweite Neuedition. By JAROSLAV HEYROVSKY. Springer-Verlag, Heidelberger Platz 3, Berlin-Wilmersdorf, Germany. 1960. vii + 116 pp. 16 X 23.5 cm. Price, DM. 19.80.

This second edition of this famous little book adheres to the purpose of the original edition, namely, to introduce the reader to the field of polarography by emphasizing basic technique and practical applications. In the author's own words "Das Werk soll als Einführung in die polarographischen Arbeitsmethoden dienen, namentlich für Analytiker, die die Polarographie als Routine-analyse benutzen sollen; diejenigen, die in der Polarographie wissenschaftlich arbeiten wollen, können sich nicht mit dieser Schrift begnügen und sollen eines der modernen Lehrbücher der Polarographie studieren."

The text comprises two main parts. The first (Mesanordnungen) reviews in 53 pages cardinal aspects of polarographic technique, with emphasis on manipulative details and the simplest instrumentation. The neophyte should appreciate the wealth of detailed practical directions un-