

Book Reviews

Preparation and characteristics of solid luminescent materials. Gorton R. Fonda and Frederick Seitz. (Eds.) New York: John Wiley; London: Chapman & Hall, 1948. Pp. xv + 459. (Illustrated.) \$5.00.

This volume consists of papers and discussion presented at the conference on luminescence held at Cornell University in October 1946, under the sponsorship of the Division of Electron and Ion Optics of the American Physical Society. As might be expected, it deals with a wide variety of topics and presents points of view which are sometimes widely divergent; nevertheless, because of the careful organization of the conference and of the book, it gives a well-balanced picture of this rapidly developing field. It opens with four broadly general chapters on the preparation, structure, and properties of phosphors. The next two chapters, also general in character, present theoretical analysis of a number of features in their behavior. The introductory discussion of the subject concludes with chapters on infrared phosphors and on excitation and emission processes in phosphors. The remaining chapters deal in a more specialized way with a wide variety of subjects: changes in fluorescence characteristics with composition, temperature, and intensity of excitation; energy storage in phosphors; the growth and decay of phosphorescence; factors affecting absorption and emission spectra; photochemical effects in luminescent materials; correlations between the structure and luminescence of materials; and so on. The book concludes with a summary of the final discussion of the conference, indicating what needs to be done, experimentally and theoretically, to gain a better understanding of luminescence.

The book gives, to a surprising degree, the atmosphere of a conference: the sometimes bewildering variety of subjects; the conflicts in point of view and sometimes even in experimental results; the abundance of unanswered questions; and the stimulation of surveying a subject in the course of rapid development. A beginner in the field might wish for a more carefully unified and polished account of the subject, but such a book cannot yet be written without danger of serious oversimplification of the subject. At any rate, he will find here references to the older, as well as to recent, literature, a reasonably complete summary of established facts, a good indication of the directions of present-day development, and a wealth of suggestions for future work. Indeed, this book may be as valuable for the questions it raises as for the answers it provides.

In view of the large number of items of information on various materials scattered through the book, it is unfortunate that no index is provided. In all other respects it can serve as a model for similar volumes dealing with other subjects undergoing such rapid development that a definitive text cannot yet be written.

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Scientific Book Register

BARNES, H. F. *Gall midges of economic importance*. Vol. III: *Gall midges of fruit*. London: Crosby Lockwood, 1948. Pp. 184. (Illustrated.) 15/-.

COWARD, KATHARINE H. *The biological standardisation of the vitamins*. (2nd ed.) Baltimore: Williams & Wilkins, 1947. Pp. vii + 224. (Illustrated.) \$5.00.

CURRAN, JEAN A., and COCKERILL, ELEANOR. (Co-chairmen.) *Widening horizons in medical education: a study of the teaching of social and environmental factors in medicine 1945-1946*. (Rep. of the Joint Committee of the Association of American Medical Colleges and the American Association of Medical Social Workers.) New York: Commonwealth Fund, 1948. Pp. xiv + 228. \$2.75.

DOWLING, HARRY F. *The acute bacterial diseases: their diagnosis and treatment*. Philadelphia-London: W. B. Saunders, 1948. Pp. ix + 465. (Illustrated.)

FOOT, N. CHANDLER. *Identification of tumors: essential gross and microscopic pathologic features systematically arranged for easier identification*. Philadelphia-London-Montreal: J. B. Lippincott, 1948. Pp. xxi + 397. (Illustrated.) \$6.00.

FRISCH, KARL VON. *Duftgelenkte Bienen im Dienste der Landwirtschaft und Imkerei*. (The training of bees for the benefit of agriculture and bee-keeping.) Vienna: Springer-Verlag, 1947. Pp. 189. (Illustrated.) \$3.70 plus postage.

GREENWOOD, IVAN A., JR., HOLDAM, J. VANCE, JR., and MACRAE, DUNCAN, JR. (Eds.) *Electronic instruments*. (Massachusetts Institute of Technology Radiation Laboratory Series.) New York-Toronto-London: McGraw-Hill, 1948. Pp. xvii + 721. (Illustrated.) \$9.00.

GUIGNOT, FÉLIX. *Faune de France: 48 Coléoptères Hydrocanthares*. Paris: Paul Lechevalier, 1947. Pp. 286. (Illustrated.) 1.200 fr.

KUPPER, WILLIAM H. (Ed.) *Interesting and useful medical statistics*. Dubuque, Ia.: Wm. C. Brown, 1948. Pp. vii + 528. \$6.50.

METTLER, FRED A. *Neuroanatomy*. (2nd ed.) St. Louis, Mo.: C. V. Mosby, 1948. Pp. 536. (Illustrated.)

RAGAN, GEORGE L. (Ed.) *Microwave transmission circuits*. (Massachusetts Institute of Technology Radiation Laboratory Series.) New York-Toronto-London: McGraw-Hill, 1948. Pp. xvii + 725. (Illustrated.) \$8.50.

RALSTON, A. W. *Fatty acids and their derivatives*. New York: John Wiley; London: Chapman & Hall, 1948. Pp. ix + 986. \$10.00.

SHERIFF, MUZAFER. *An outline of social psychology*. New York: Harper, 1948. Pp. xv + 479. (Illustrated.) \$4.00.

WIENER, MEYER. (Ed.) *Ophthalmology in the war years*. (Vol. II: 1944-June, 1946.) Chicago: Year Book Publishers, 1948. Pp. x + 977. \$16.00.