

(1) Theoretical Physics

By Prof. Georg Joos. Translated from the first German edition by Dr. Ira M. Freeman. Pp. xxiii + 748. (London, Glasgow and Bombay: Blackie and Son, Ltd., 1934.) 25s. net.

(2) Lehrbuch der theoretischen Physik

Von Prof. Dr. Georg Joos. Zweite Auflage. Pp. xvi + 676. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1934.) 24 gold marks.

(1) THE first edition of the book by Dr. Joos appeared in 1932 and was favourably noticed in NATURE, 131, 221; 1933. The English edition now before us shows every sign of having been prepared with great care, and is written in clear and straightforward language, which is unfortunately more than can be said for many translations from the German. Only minor alterations and corrections have, apparently, been made in preparing the English version. We can congratulate Dr. Freeman on his very satisfactory performance of a task which we are glad to see accomplished.

(2) The second German edition contains a new chapter on nuclear physics, which consists mainly of a non-mathematical description of the new work on artificial transmutation and the newly-discovered elementary particles. There is also a brief addition concerning the method of magnetic cooling which has been applied with such success by de Haas, Simon and others to obtain exceedingly low temperatures. Otherwise there is little change in this admirable textbook.

It seems a little strange to an English reader that a German cannot bring out even a new edition of a work on theoretical physics to-day without a preface reference to the *neues Reich* and the *harter Daseinskampf des deutschen Volkes*, but we suppose that it has its reason. We further note the addition of a glossary explaining 'foreign' terms, in which *Absorption* (*Verschlungung*), *Elastizität* (*Dehnbarkeit*), *Kapillarität* (*Haarröhrchenkraft*) and such-like non-Prussian words, are translated into the new German, although these 'foreign' words appear in the articles in Gehler's "Physikalisches Wörterbuch" of more than a hundred years ago. Merkwürdig!

E. N. da C. A.

(1) Grundriss der Cytologie

Von Dr. Lothar Geitler. Pp. viii + 296. (Berlin: Gebrüder Borntraeger, 1934.) 19.20 gold marks.

(2) Handbuch der Pflanzenanatomie

Herausgegeben von Prof. K. Linsbauer. Allgemeiner Teil: Cytologie (Die Organe der Zelle). Band 2: Allgemeine Pflanzenkaryologie. Hälfte 1: Der "Ruhekern". Von Prof. Dr. Georg Tischler. Zweite Auflage. Pp. xx + 630. (Berlin: Gebrüder Borntraeger, 1934.) 64 gold marks.

(1) THE number of cytological books is rapidly increasing. The two before us, while both morphological, are almost entirely different in their contents. The work by Geitler aims, on the whole successfully, at giving a statement of the fundamental facts of general cytology, and cites results from plant and animal cells with equal frequency. Its six sections deal respectively with cell morphology, cell division,

nuclear division, fertilisation, meiosis, and cytology in relation to heredity. The work is illustrated with 209 figures, some of which are original, a number being photomicrographs. Some of the recent studies of chromosome structures are given, including photographs of the salivary gland chromosomes in the *Simulium* larva. Selected studies are given from the Protozoa, Algæ and other groups of plants as well as the higher plants and animals. This book will serve a useful function as an introduction to the modern problems connected with cytology.

(2) Prof. Tischler's work is a second edition, the first having appeared in 1922. It deals exclusively with the resting plant nucleus, being an exhaustive review with citations of all the relevant literature. The present edition is largely increased in size, the number of publications cited having risen from 1,909 to 3,883, a striking index of the rapid increase in cytological literature. The topics considered are arranged under such headings as the general morphology and chemical organisation of the resting nucleus, the morphology of network, karyolymph, nucleoli, protein crystalloids, the nuclear membrane and exchanges through it, multinucleate cells, and the relation of the resting nucleus to cell division. This volume will be of permanent value as a work of reference.

Experimental Physical Chemistry

By Prof. Farrington Daniels, Prof. J. Howard Mathews and Prof. John Warren Williams. (International Chemical Series.) Second edition. Pp. xix + 499. (New York and London: McGraw-Hill Book Co., Inc., 1934.) 21s. net.

FOR this second edition the authors have largely rewritten their book; alterations in experimental procedure to give higher accuracy, replacement of less satisfactory methods by new ones, and a different treatment of electromotive force and capacity constitute the principal changes.

In Part I, "Laboratory Experiments", each of the fifteen chapters deals with a particular field of physico-chemical work. The experiments are systematically described, each method being preceded by an adequate explanation of the theoretical principles involved, and followed by a summary of the practical applications of the method and suggestions for further work. Under the heading of Apparatus, Part II deals with means and technique necessary for work of a more advanced nature. These operations are grouped under chapter headings of the subjects to which they are most applicable, the order adopted for Part I being repeated in Part II; this, together with adequate cross-references, gives the book added coherence. Part III is concerned with miscellaneous operations, such as calibration, thermostatic control, the determination and influence of errors, which are of value in the conducting of any detailed systematic investigation.

Though the authors make no claim for completeness, this is a well-proportioned and comprehensive guide for both the student and the research worker.

H. K. W.