

Theoretische Grundlagen der organischen Chemie
 Von Prof. Walter Hückel. Band 2. Zweite Auflage.
 Pp. viii + 338. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1935.) 15.60 gold marks.

VOL. 1 of the second edition of Prof. W. Hückel's work was recently reviewed (*NATURE*, March 9, 1935, p. 384); vol. 2, divided into two main sections, contains a not inconsiderable amount of new material and there are certain changes in the presentation of the subject.

The first section (Book 3) on "Constitution and Physical Properties" contains the larger proportion of the new material included in the volume. This new material deals with dipole moment and with colloid problems in organic chemistry which, apart from the polysaccharides, are chiefly concerned at the present time with polymerisation of unsaturated simple compounds to products of high molecular weight. The author has purposely omitted to include the consideration of the physical basis of optical activity, a subject in which so much original work is being carried out particularly in England and in Germany at the present time.

Book 4 is concerned with various aspects of "Constitution and Velocity of Reaction" treated largely from the kinetic point of view. In this, not very much new matter is included, although there has been a rapid increase in our knowledge, particularly of the mode of reaction of simple organic molecules in the gaseous phase, since the publication of the first edition.

There is no doubt that Hückel's "Theoretical Principles" is a most stimulating work, in spite of the necessary restrictions which the author evidently feels it desirable to impose in a work of this kind; in his *Ausblick*, after referring to the work of Heisenberg and Schrödinger, the author indicates the importance of the application of quantum mechanics to the organic chemistry of the immediate future.

C. S. G.

An Introduction to Experimental Embryology

By Dr. G. R. de Beer. Second edition. Pp. xii + 148. (Oxford: Clarendon Press; London: Oxford University Press, 1934.) 7s. 6d. net.

THE appearance of a second edition of de Beer's "Introduction to Experimental Embryology" is evidence of its well-deserved popularity. The book deals with the whole subject of modern research into the form changes of animals. The field is so wide and the subjects touched on so varied, that perforce a very large number of experimental facts have to be included. It is Dr. de Beer's particular merit to have provided an exposition which is at once perfectly clear as to the actual data and also never loses sight of the main principles involved.

The achievement is the more remarkable as in point of fact there is no generally recognised set of principles extant which can be applied over the whole field. The author has had to select boldly, from the conflicting hypotheses which are available, one main thesis to which he can refer his experimental data. Dr. de Beer chooses the axial gradient theory, which has the somewhat dubious advantage of being so

flexible that it can be more widely applied than many of the more specialised theories. Apart from any consideration of its ultimate scientific worth, however, it fulfils very well the function it is called upon to play in this book—the function of providing a connecting thread on which the data of experimental embryology can be strung together to make an interesting and not too mysterious story for beginners. If the vagueness which still attaches to the theory stimulates the reader to try to make precise in his own mind some of the questions which are raised, that too will have been not without its usefulness.

A Bibliography of Two Oxford Physiologists:

Richard Lower 1631–1691, John Mayow 1643–1679. By Prof. John F. Fulton. Pp. 62 + 7 plates. (Oxford: Printed at the University Press, 1935.) n.p.

THIS work is a reprint from the *Proceedings of the Oxford Bibliographical Society and Papers* (4, 1; 1935). Prof. Fulton states that he has chosen this subject owing to the recent interest caused by Dr. K. J. Franklin's studies on Lower and Prof. T. S. Patterson's critical discussion of Mayow's work. In a short introduction to Lower's bibliography, Dr. Franklin adds some supplementary matter to his previous studies, and maintains that the pre-eminent position occupied by Oxford in scientific achievement during the seventeenth century was due among others to Lower, who was alike great as an anatomist, physiologist and medical practitioner. Dr. Fulton himself has an equally high opinion of Lower, whom he regards as the foremost English physiologist of the seventeenth century after Harvey. On the other hand, he agrees with Prof. Patterson that Mayow has been credited with many things which had been definitely mentioned by other people, though he emphasises the fact that Mayow was the second English writer after Glisson to publish a treatise on rickets with novel and praiseworthy suggestions concerning orthopædic treatment.

The bibliographies of the two physiologists are each divided into three sections devoted respectively to their separate works, of which facsimiles of the title pages are inserted, contributions to other works, especially the *Philosophical Transactions*, and biography and criticism.

La Tchécoslovaquie: étude économique

Par Prof. André Tibal. (Collection Armand Colin: Section de géographie, No. 183.) Pp. 224. (Paris: Armand Colin, 1935.) 10.50 francs.

PROF. TIBAL's economic survey of Czechoslovakia is mainly concerned with agriculture and the country's industries, but reference is incidentally made to educational, cultural and scientific matters. The book is most noteworthy for its account of the influence of the world economic crisis upon national life, and the methods that are being pursued to overcome the general stagnation. It is significant that the industrial and political leaders have sought the aid of men of science and have adopted some of their suggestions in attempts to surmount their difficulties. They are already meeting with a measure of success.