

Modern Rubber Chemistry

By Dr. Harry Barron. Second edition. Pp. viii + 502. (London: Hutchinson's Scientific and Technical Publications, 1947.) 36s. net.

The Water-Soluble Gums

By Dr. C. L. Mantell. Pp. v + 279. (New York: Reinhold Publishing Corporation; London: Chapman and Hall, Ltd., 1947.) 36s. net.

IN "Modern Rubber Chemistry" Dr. Barron covers an immense field, stretching his title to include such topics as fabric construction, mould design and physical testing. The author's intention of being understood will be largely achieved, but there are some repetitions and examples of careless writing. A more selective account of early work would permit a clearer treatment of the scientific principles underlying, for example, the structure of rubber and the theory of vulcanization. The work of Farmer and his co-workers on this latter topic is surprisingly omitted. The useful analogy of likening the process of polymerization to the joining of hands is weakened by an unnecessary reference to chain formation through secondary valencies. The work as a whole can, however, be recommended as a valuable text-book on the technology of rubber.

Accompanying an increased insight into the structure and properties of synthetic polymers, our knowledge of many naturally occurring substances has been greatly enriched in recent years; indeed, many significant advances in high polymer science have resulted from studies on cellulose and natural rubber. It is of interest to note that while Dr. Barron turns to current high polymer theory to clarify some of the obscurities of rubber behaviour, this approach is not evident in Dr. Mantell's work.

"The Water-Soluble Gums" is a comprehensive account of the sources, collection, manufacturing processes and applications of a class of substances obtained mainly from plants. Gums are here described loosely as hydrophilic colloids, and it seems possible that the scope of the subject might be better defined by the phrase "Water-Soluble High Polymers". This definition would necessarily include polyvinyl alcohol, which is rapidly assuming importance, particularly in the United States, as a 'synthetic gum'. In general, the treatment of the subject is somewhat uncritical, and recent work, on chemical constitution is not adequately described.

Volumetric Analysis

By Prof. I. M. Kolthoff and V. A. Stenger. Second revised edition. Vol. 2: Titration Methods; Acid-Base, Precipitation, and Complex-Formation Reactions. Pp. xiii + 374. (New York and London: Interscience Publishers, Inc., 1947.) 36s.

THE issue of the second revised edition of this standard work on volumetric analysis will be welcomed by a wide circle of analytical chemists. The book under review, the second of a set of three volumes, confirms the favourable reception accorded to the first edition.

This volume is divided broadly into three parts: (a) apparatus and general principles describing equipment and technique needed to achieve the best results with volumetric methods; (b) acid-base reactions, which include standard titrations and reactions involving displacement, hydrolytic precipitation and complex formation; and (c) quantitative precipitation and complex formation reactions in

which titrations with silver nitrate, potassium ferrocyanide and many other reagents are described.

Within the scope of this book, which does not include oxidation-reduction methods, the treatment is very comprehensive and contains a wealth of practical detail and shrewd comment. Many references and notes are included, but, as the authors point out, the lack of information during the war years has prevented a full description of work published outside the United States since 1940.

This book is recommended with confidence not only to analytical chemists but also to workers in other branches of chemistry.

Chemistry in the Service of Man

By Prof. Alexander Findlay. Seventh edition. Pp. xx + 390. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1947.) 12s. 6d. net.

THE appearance of a seventh edition of this widely read book is timely and welcome. It has long been recognized as a valuable general account of the way in which the science of chemistry helps to meet the needs of mankind. Advances, both scientific and technical, have been so rapid of late that it is essential for the subject to be reviewed at frequent intervals, all the more so because of the effect of war.

Prof. Findlay has carried out such a review admirably in this latest edition. He handles his vast theme with authority and skill. A wise selection of material has been made, and the subject-matter has been kept up to date without a loss in the general balance.

As in previous editions, sound scientific treatment is happily married with a most agreeable ease of style.

Honey and Your Health

A Nutritional, Medicinal and Historical Commentary. By Dr. B. F. Beck and Dorée Smedley. Pp. 231 + 21 plates. (London: Museum Press, Ltd., 1947.) 12s. 6d. net.

THIS book is really a companion volume to the late Dr. Beck's earlier work "Bee Venom Therapy". Although it is difficult to accept some of the author's views with regard to the nutritional advantages of honey over other mixtures of sugars, it is almost impossible not to become infected by his enthusiasm, and to enjoy reading the folk-lore about honey which he has collected together from so many parts of the world. His history of the uses to which honey was put in bygone times makes fascinating reading and will, I feel sure, give pleasure to many people besides those who keep bees. Incidentally, this book contains some excellent recipes in which honey plays a major part.

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Sociology of Religion

By Joachim Wach. (International Library of Sociology and Social Reconstruction.) Pp. xii + 429. (London: Kegan Paul and Co., Ltd., 1947.) 30s. net.

THE author summarizes and reviews the literature dealing with the forms, social expressions and general social relations of religion in all its various manifestations. It is a work of immense erudition. The index occupies 29 pages and the number of footnote references is (roughly estimated) 5,000. As a work of reference it is undoubtedly useful and well worth publishing. It is very doubtful, though, whether anyone will have a better understanding of religion after reading the book than he had before, or even a better understanding of sociology.

A. D. R.