CHEMISTRY

Electrochemistry and Electrochemical Analysis

A Theoretical and Practical Treatise for Students and Analysts. By Dr. Henry J. S. Sand. Vol. 1: Electrochemical Theory. Pp. viii + 134. (London, Glasgow and Bombay: Blackie and Son, Ltd., 1939.) 4*s*. 6*d*. net.

THE preface states that this, the first of two volumes, deals with general principles, the second volume being planned to be a guide to modern methods of gravimetric electroanalysis. The present volume provides a clear and sound introduction to electrochemistry and covers all the theoretical matters which will arise in the practical part, some of which are not very well explained in other books. The section on transport numbers is good and the concentration changes at electrodes dealt with in Chapter vii are clearly explained. The modern theory of electrolytes is briefly yet adequately dealt with, but it is unfortunate that both the equations given on p. 64 are incorrectly printed. Some expressions are peculiar; for example, on p. 57 the 'valency of a reaction' is mentioned, and the system of numbering of the equations is sometimes rather puzzling. The book will be particularly useful to analysts who have to use the electroanalytical methods and have not kept up to date in electrochemical theory, whilst all students will welcome the concise and clear way in which the principles of the subject are discussed.

Aids to Organic Chemistry

By Stanley F. Smith. (Students' Aids Series.) Second edition. Pp. viii + 120. (London: Baillière, Tindall and Cox, 1939.) 3*s*. 6*d*.

THE second edition of this useful little work has been revised, the sections on sugars and complex aromatic compounds have been re-written to bring them up to date and give the modern ideas on their structural formulæ, and the index has been enlarged. The author, however, has been careful not to expand the text so as to change the character of the book. The volume provides a concise summary of organic chemistry which will be very useful to medical students in the preparation and revision of the subject, and it is a useful supplement to text-books which deal with the topics in more detail.

The Economics of Chemical Industries

By Dr. Edward H. Hempel. Pp. ix + 259. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1939.) 15*s*. net.

IT is regarded at least as important to be able to sell an article as to make it: indeed the salesmen are more highly remunerated than the technical workers. Whilst personality is the greatest asset for a salesman, there is growing up a science of salesmanship and management which is evidenced by the increasing number of books dealing with various aspects of the subject.

This particular one seeks to portray the characteristic background and the economics common to the American chemical industries. It is very informative and will be of great value in its country of origin and of interest elsewhere to firms which have business connexions with the American chemical industry. It deals largely with legislation, foreign chemical trade, and financial policies, and contains a considerable amount of statistical matter. A similar volume based on British customs would have wide appeal.

ENGINEERING

(1) Lehrbuch der Hochfrequenztechnik

Von Dr. Fritz Vilbig. Zweite verbesserte und erweiterte Auflage. Pp. xxviii + 1019. 35.80 gold marks.

(2) Schrifttumsverzeichnis zum Lehrbuch der Hochfrequenztechnik

Von Dr. Fritz Vilbig. Zweite verbesserte und erweiterte Auflage. Pp. iv + 172. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1939.) 8 gold marks.

THE publication of Dr. F. Vilbig's monumental text-book on high-frequency phenomena two years ago provoked expressions of general and well-merited approval, for it was clear that its author had successfully attempted the difficult task of surveying, in up-to-date fashion, a field already extensive and yet expanding. In particular was his effort commended for the judicious balance of his selection of material, old and new. Two years is a long time in wireless history, so that it is not at all surprising that Dr. Vilbig has already been obliged to undertake the preparation of a second edition (1) of his book. The changes made are naturally mainly by way of additions, the chapters being expanded on the average by a fifty per cent increase of text, though naturally the expansion is relatively greater in the case of such swiftly developing subjects as the study of wave propagation and television. An entirely new chapter on modern acoustics has, however, been added at the end of the book.

In Dr. Vilbig's first edition a most comprehensive and up-to-date bibliography of books and original papers occupied no less than a hundred pages. In view of the expansion of the main text in the second edition, it has become necessary to publish this bibliography as a separate volume (2), which is, of course, correspondingly enlarged and brought up to date.

Radio Interference Suppression

By G. W. Ingram. Pp. viii + 154. (London: The *Electrical Review*, Ltd., 1939.) 5*s*. net.

IT is not often that one branch of applied science reacts so unfavourably on another branch, and the difficulties which have arisen from the interference from power circuits and apparatus in the prevailing types of radio-receivers were scarcely anticipated. The problem assumed international magnitude, and has only within the last few years been brought down to a qualitative basis. Meanwhile the British Post Office has been investigating and advising on tens of thousands of cases per annum, and it is to them that we owe the idea that