Book Reviews

Textbook of Electrochemistry. G. Kortüm and J. O'M. Bockris. Elsevier, Houston–Amsterdam, 1951. vol. I, 352 pp. $7; vol. II, 544 pp. $10.

The appearance of an English edition of Kortüm's *Lehrbuch der Elektrochemie* is indeed a welcome event, for the widespread application of electrochemical methods in the chemical and biological sciences during the postwar period has made the need for a work of this character greater than ever before. It is also a pleasure to note that the masterly organization and presentation of the subject matter in the original German text has been retained in an idiomatic and concise translation. A comparison with the original shows, however, that considerably more than merely a faithful translation has been achieved. Not only is there evidence of critical revision, particularly in the chapter on the essentials of chemical thermodynamics, but two entirely new chapters have been added which, respectively, give a detailed account of experimental methods and present numerous useful tables of physicochemical quantities relevant to electrochemistry. In addition, a list of problems, graded in difficulty, together with solutions and explanatory notes, has been supplied to adapt the book for use by university students. The final result, which brings together in two volumes a lucid exposition of fundamentals, a comprehensive summary of modern electrochemistry, and a tabulation of up-to-date reference material. will appeal especially to research workers. Those who desire to gain an introduction to electrochemistry by means of self-study will also find this excellent textbook well adapted for such a purpose.

The enlargement of the scope of the book so that two volumes are now required has led, however, to difficulties in the division of the subject matter and in the indexing which are perhaps not ideally resolved. Thus, the average student who may not want or feel able to buy the complete work, unfortunately, may also be reluctant to buy the first volume, since both the index and the illustrative problems that go with it are in the second volume. This possible defect could easily be remedied by including the relevant problems and index in the first volume, thereby increasing the present 350-page length to only approximately 430 pages at most.

The copy is relatively free from errors, typographic or otherwise. Some readers, however, may find amusement in the discussion of redox systems (p. 305) in which a German bear has become an Irish bull: "In cells of this type it is immaterial whether the oxidizing agent is added to the cell, or *vice versa*." Certain other differences in terminology and convention may give pause to the American audience for this book. Thus (p. 75) the constant pressure, Gibbs free energy G, is termed: "the free heat content." More important, perhaps, is that the European convention for the sign of the electrode potential was preserved in the translation. Of course, this convention need not be a source of confusion on this side of the Atlantic, provided that a consistent formalism is followed in the writing of the cell equations.

In the second volume the more advanced, specialized topics of electric phenomena at interfaces, irreversible electrode processes, and the electrochemistry of gases have received relatively greater attention than in previous electrochemical textbooks, in keeping with the important developments in this branch of the subject during the past decade. The second of these chapters, 88 pages, is especially noteworthy. In the future, doubtless an exposition of the thermodynamics of irreversible processes will supply a foundation for the discussion of many of the transport processes in electrochemistry. It also seems probable that many of the discussions of electrokinetic phenomena may then be treated in a coherent and quantitative fashion .

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Introduction to Opinion and Attitude Measurement. H. H. Remmers. Harper, New York, 1954. viii + 437 pp. $5.

As a comprehensive survey of the attitude measurement field, this book has a good deal to recommend it. It at least touches on nearly every phase of the field and treats some subjects in considerable detail.

The first section is devoted to the techniques of measurement, with chapters on sampling, statistics, scaling, and questioning techniques. The second section is concerned with applications of opinion and attitude measurement to business, government, education, and the community.

According to the publisher's statement, "this is, we believe, the first suitable textbook prepared for college courses in the subject." While I can think of one or two other textbook candidates, the fact remains that Remmers has written a thorough and inclusive introduction to the theory and practice of attitude measurement.

A book that attempts to cover an entire field in the space of a few hundred pages inevitably suffers from some shortcomings. One is a tendency to move from one subject to another with a minimum of delay. Thus question wording, one of the crucial phases of opinion measurement, is disposed of in about five pages. Another weakness is the occasional introduction of terms and concepts without thorough explanation of them. In general, the chapters on sampling, statistics, and scaling are quite good, but they do employ terminology and concepts that will be difficult for the beginning student to master, particularly for one without a statistical background.

Finally, the attempt to cover everything in the field has resulted in a mass of briefly summarized studies, particularly in the "applications" section of the book.