served transits of Venus to obtain distance measurements, devised a diving bell, edited the mortality tables of Breslau, thus pioneering in the application of statistical methods for sociological studies, wrote on meteors, grasped the nature of nebulae, thus anticipating Herschel, noted the proper motion of stars, investigated Roman excavations. He was a Deputy Controller of the Mint, Savilian Professor of Astronomy, Secretary of the Royal Society, Astronomer Royal.

To put Halley's work in its proper perspective the author of this book also presents other scientists and their work. Thus the reader can appreciate the importance or lack of importance of each of Halley's activities. The author has chosen to treat each of these activities as a unit. This leads to an understanding of the state of each project during Halley's lifetime and makes it possible for the reader to use the book as a reference and confine himself to the material dealing with one topic. On the other hand, it makes for a disjointed story, going backward and forward in time, with considerable repetition.

The author is well qualified to handle his topic and has produced a very useful book which will serve both laymen and scientists well. However, the question arises as to what audience was intended. Some passages or concepts which seem elementary are explained, whereas a considerable knowledge of geometry, trigonometry, and physics on the part of the reader is assumed.

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Chelation

Chelates in Analytical Chemistry. Vol. 1. H. A. FLASCHKA and A. J. BARNARD, JR., Eds. Dekker, New York, 1967. xii + 418 pp., illus. \$18.75.

This is the first volume in a series that intends to "employ chelation as a concept serving to unify a large area of analytical chemistry." The subjects to be covered fall into three categories: chelates formed by certain elements, selected chelating reagents and families of chelating reagents, and analytical methods and techniques employing chelation. This first volume contains seven chapters treating topics in these categories. For example, two of the chapters are "Chelates and chelating agents in

the analytical chemistry of molybdenum and tungsten" by Püschel and Lassner and "Xylenol orange and methylthymol blue as chromogenic reagents" by Buděšínský.

In addition, this volume contains a chapter by Szabadvary and Beck entitled "An outline of the history of analytical methods based on complex formation." This chapter has two main faults. The important contributions toward understanding the fundamentals of chelate formation made by certain researchers are not mentioned, and more space should have been devoted to chelating agents of current analytical importance. For example, the important research of Schwarzenbach on aminocarboxylic acid chelates warrants more than two sentences.

The chapter by Blasius and Brozio on "Chelating ion-exchange resins" sents a fairly complete picture of current research on chelating agents bonded to a resin matrix in the chromatographic separation of cation mixtures. The chapters "Chelates in inorganic polarographic analysis: fundamentals" and Chelates in inorganic polarographic analysis: applications," however, do not contain many of the developments of the last five years. The remaining chapters, "Conductometric and highfrequency impedimetric titrations involving chelates and chelating agents" by Vydra and Stulik and "The thermal dissociation of chelating agents and chelates of analytical interest" by Wendlandt, are complete and well referenced. However, the material presented by Wendlandt is also treated in his recent book.

The information compiled in this volume should prove valuable to those doing research on these specific subjects. Equally important, this volume will be useful to those developing analytical procedures or modifying already existing ones. The principles forming the basis for the analytical usefulness of particular chelating agents are presented, methods using these chelates for specific problems are recommended, and, in some cases, procedures are given in working detail.

Both research chemists and analysts should find this volume to be of interest. However, some of the topics discussed are quite specific and may be of only limited interest to many. Also, some of the topics have already been treated in other texts.

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