BOOK REVIEWS

The Electronic Theory of Acids and Bases. Second Revised Edition. By W. F. LUDER, Professor of Chemistry, Northeastern University, and SAVERIO ZUFFANTI, Professor of Chemistry, Northeastern University. Dover Publications, Inc., 180 Varick Street, New York 14, N. Y. 1961. xi + 165 pp. 13.5 × 20.5 cm. Price, $1.50.

This paper-bound edition is substantially a reprint of the earlier edition published by Wiley and Sons in 1946. "Only a few changes have been made and a few additional references have been added." The most noteworthy is a new atomic structure chart (p. 24). The original edition was reviewed in detail in *J. Phys. Chem.*, 51, 887 (1947).

Since the present reviewer agrees with this critical review of Kolthoff, particularly in respect to the "unconciliatory attitude with regard to the Brønsted theory" there is no need to consume space reviewing this book again. He would like only to re-emphasize Kolthoff's remark "There has not been and there is no conflict between the G. N. Lewis and the Lowry–Brønsted theory" as Luder and Zuffanti seem to feel.

The Dover Press have performed a service to chemists by reprinting this monograph for the modest price of $1.50.

DEPARTMENT OF CHEMISTRY
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NEW YORK 27, N. Y.

Writing Guide for Chemists. By WALTER J. GENSLER, Professor of Chemistry, Boston University, and KINERETH D. GENSLER. McGraw–Hill Book Company, Inc., 330 West 42nd Street, New York 36, N. Y. 1961. xiii + 149 pp. 14 × 21 cm. Price, $4.50; soft cover, $2.95.

In the past decade several "Writer's Manuals to Aid the Chemist" have appeared and one might expect that all of them would be alike and cover the same ground, in the same way. Actually, however, they all differ in content, approach and details of topic coverage. This means that the earnest beneficiary has had to invest in each one, but fortunately these books are not expensive in comparison with the good which they may accomplish if writers will only buy and use them. This little Gensler book gives the user a still different content and treatment compared with its predecessors in the field. It is divided into Part One, General Aspects (six chapters), and Part Two, Specific Aspects (nine chapters), for a total of 140 text pages. Part One develops the life history of a report or article, while Part Two deals with the clinical details of composing the document itself.

Chapter One begins by reminding the writer that the reader is his consuming public and hence deserves first thought and attention at all times, both as to his mentality level and his reasons for interest in the paper. These considerations effectively govern the content, length, arrangement, construction, style and other aspects of the final composition. Since the laboratory notebook is the progenitor of the subsequent paper, Chapter Two has been included to aid the writer in recording his literary roots in such a way as to make them most helpful and usable later. The working outline is considered next in Chapter Three, and this topic leads logically (Chapter Four) into composition of the actual paper: Title Page, Contents, Abstract, Introduction and Background, Results, Experimental Details, References and Appendices (if needed). Chapter Five goes more extensively into the handling of Experimental Details. Chapter Six considers Revision, Proof-reading (checking of transcription), and Mechanics (format and typing details).

Part Two, Specific Aspects, occupies the latter two thirds of the book and provides a wealth of helpful, detailed material on (by chapters): (7) Inappropriate Expressions in Formal Writing, (8) Ambiguous Grammatical Relationships, (9) Punctuation and Italics, (10) Spelling and Capitalization, (11) Chemical Nomenclature, (12) Abbreviations and Symbols, (13) Forms for Physical Data, (14) Tables, Figures and Structural Formulas, (15) Documentation (and Index).

The content of these latter nine chapters is not susceptible to detailed comment or criticism; all the bits of advice given and topics included are well written and very pertinent to the subject, and all are well illustrated with examples of good, bad, and preferred usages. Writers, however, should remember at all times that Gensler's (or any other Guide Author's) recommendations may not accord with the style sheet usages of the Journal which receives his paper.

As has been noted in other reviews of similar books, a mere reading of this Gensler–Gensler "Guide" will not convert a low-grade scribbler into a polished author, but careful study of its content and examples can be of great assistance to any author, amateur or ragged scientific veteran, who sincerely wishes to improve his papers while composing and revising them—and for this end result production editors will be devoutly grateful.

DEPARTMENT OF CHEMISTRY
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Theoretical Inorganic Chemistry. By M. CLYDE DAY, JR., Associate Professor of Chemistry, Louisiana State University, Baton Rouge, Louisiana, and JOEL SELBIN, Associate Professor of Chemistry, Louisiana State University, Baton Rouge, Louisiana. Reinhold Publishing Corporation, 430 Park Avenue, New York 22, N. Y. 1962. xiv + 413 pp. 16 × 23.5 cm. Price, $12.00.

This book represents a considerable and, in substantial part, a desirable departure from nearly all inorganic texts available as of April, 1962. As the title would suggest, virtually no descriptive material on any subject treated is included although space is given over in several instances to historical development of certain subjects, notably the quantum theory and the periodic table. Instead, effort is expended toward a semi-mathematical treatment of a number of subjects, nearly all of which should be considered bedrock knowledge for any inorganic chemist.

The book begins at the expected place with a discussion of the origin of the quantum theory followed by a chapter on wave mechanics including a solution of the hydrogen atom. Next is presented a summary of the evolution of the periodic table and a brief treatment of the periodic properties of the elements. These are followed by chapters on chemical bonding, inorganic stereochemistry, electromotive force, acids and bases, coördination chemistry, non-aqueous solvents, and the theory of the nucleus.

The treatment of chemical bonding is conventionally developed, paralleling closely the expositions of the subject in other standard tests. Valence bond and molecular orbital theories are developed for simple systems such as the hydrogen molecule and molecule-ion. The mathematical steps involved are set out in more detail than is usually found as, for example, in the illustration of the calculations of coefficients in certain hybrid bond wave functions. Although the developments of the bonding theories are standard, some readers may welcome their inclusion in a single source.

The largest section of the book, some fifty-five pages, is devoted to coördination chemistry. Included here are discussions of Werner's coördination theory, and the valence bond, crystal field, and molecular orbital theories of complexes. Results of the latter approaches are of course emphasized with discussion of magnetic properties, stereochemical predictions, thermodynamics of complexation, and absorption spectra. The discussion of molecular orbital theory, especially, is too cryptic to be very meaningful to the student reader, who is asked to make the improbable transition in understanding from the hydrogen molecule-ion to an octahedral metal complex. Symmetry notations are introduced in this section with no explanation as are expressions for the σ and π molecular orbitals of an octahedral complex. Similarly, the section dealing with absorption spectra is far too incompletely developed in proportion to its importance. It is perhaps in this chapter that the book