

Die Chemie der Pyrrole; by A. Gossauer, Springer-Verlag, Berlin/Heidelberg/-New York, 1974, xx + 433 pp., DM158.

This book presents a thorough and well organized account of all aspects of the chemistry of pyrroles, and lists 2621 references. Its chief interest for organometallic chemists lies in a chapter of 19 pages devoted to pyrrole-metal derivatives, which deals not only with metal and magnesium compounds, but also with boron, silicon, germanium, tin and phosphorus derivatives. The latter section is brief, but gives a good range of leading references.

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Highlights of Organic Chemistry; by William J. le Noble, Dekker, New York, xvii + 976 pages, \$19.50.

The publishers announcement for this book, which is described as an Advanced Textbook, says that it "presents a new and exciting treatment of organic chemistry which is both classically based and impressively modern. Unique in its approach, the book surpasses many of the current "physical-organic" texts in terms of broad coverage, readability, and detailed examination of modern organic chemistry's basic concepts." For once the claims are fully justified, for this is an exceptional and first rate work, which teachers of organic chemistry at university level should not fail to examine. Even when they are concerned with courses not sufficiently advanced to recommend this as a class text or even as supplementary reading, they cannot fail to find many sections which will make their own lectures more interesting and exciting.

The chapter headings, which cannot, however, do justice to the breadth or depth of the coverage, are as follows:

Elementary Concepts in Chemistry. Instrumental Techniques in Organic Chemistry. Notes on Nomenclature and Literature. The Structural Theory. Stereochemistry. Conformational Analysis. Strain and Steric Hindrance. Resonance. Aromaticity. Organometallic Compounds. Valence Isomerization. Tautomerism. Photochemistry. The Woodward-Hoffman Rules. Reactive Intermediates: General Considerations. Carbenes. Nitrenes. Free Radicals. Benzyne. Carbonium Ions. Intermediates Related to Carbonium Ions. Carbanions. Complexes. Miscellaneous Intermediates.

The chapter on organometallic compounds is concerned largely with olefin and sandwich complexes, stabilization by complexing, and fluxional molecules, but organometallic chemists will find much to interest and stimulate them in the rest of the book; for example, as an aside in the chapter concerned with reactive intermediates, with reference to stabilization of such intermediates by complexing, there is the pertinent comment: "One should realize that the enormous stabilization claimed in some cases must be taken with a grain of salt: the properties of the stabilized intermediate may be so completely

altered that it is really no longer proper to consider it a stabilized intermediate. Thus the description of compounds such as $\text{XYC}=\text{ML}_n$ as carbene metal complexes is no more justified than the description of cyclopropanes as carbene ethylene complexes."

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Topics in Current Chemistry; Springer-Verlag, Berlin/Heidelberg/New York, 1974; No. 50, *Silicon Chemistry 1*, 177 pp., DM48; No. 51, *Silicon Chemistry 2*, 127 pp., DM42.

These two volumes offer four reviews of high quality. In Vol. 50, subjects are "Low-Valent Silicon" (40 pp., ca. 130 references); by H. Bürger and R. Eujen, "Organometallic Syntheses of Carbosilanes" (84 pp., 55 references); by G. Fritz, and "The Chemistry of Silicon—Transition Metal Compounds" (36 pp., 222 references); by F. Höfler. Vol. 51 contains a single review, "Properties and Preparations of Si—Si Linkages" (696 references); by E. Hengge. The review on low-valent silicon is of quite a different character from the others, being concerned predominantly with spectroscopic properties of unstable species; it seems authoritative and well organized, and its inclusion in these volumes will serve to widen the horizons of the great majority of organosilicon chemists. What I have in mind is nicely illustrated by the minor paradox that Vol. No. 51 contains the sentence "The simplest imaginable compound with Si—Si bonding is the disilane Si_2H_6 ", whereas three pages of the Bürger—Eujen review are devoted to the properties of Si_2 ! The review by Fritz is a timely survey of a subject to which he has made such a dominant contribution, while the account by Höfler, with its complete list of Silicon—Transition Metal Compounds reported up to the end of 1972, will be of considerable value to transition metal as well as organosilicon chemists. The review by Hengge is an especially thorough account of a topic which is becoming increasingly important, in large part because of the fine work in recent years by Kumada and his colleagues. All the reviews contain references extending into 1972. Together they form a valuable source of information, and it is a pity they did not appear in a single volume.

The English language, while nowhere ambiguous as far as I could see, is sometimes rather odd, (e.g. " $\text{Si}_2\text{H}_5\text{Br}$ originates by bromination of $\text{Si}_2\text{H}_5\text{I}$ with AgBr ", and "In addition to efforts in the synthesis of . . ."), and publishers should feel some duty to have English language articles checked by a British (or even an American!) chemist.

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