

Organic Phosphorus Compounds; edited by G.M. Kosolapoff and L. Maier, Wiley-Interscience, New York, N.Y., 1973. Vol. 5, 329 pp; Vol. 6, 940 pp; each volume \$29.95.

These two volumes continue the Kosolapoff/Maier organophosphorus compound series, the first four volumes of which have been reviewed in this journal [1]. Volume 5 covers organic derivatives of hypophosphorous, hypodiphosphorous and hypophosphoric acid (M. Baudler) in a very short chapter and organic derivatives of phosphorous acid and thiophosphorous acid (W. Gerrard and H.R. Hudson) in a long chapter which makes up over 9/10 of the book. Volume 6 contains four long chapters: phosphinic acids and derivatives (P.C. Crofts), organic derivatives of phosphoric acid (E. Cherbuliez), phosphorus(V)—nitrogen compounds with phosphorus in coordination number 4 (E. Fluck and W. Haubold) and cyclophosphazenes and related ring compounds (R. Keat and R.A. Shaw). As in the previous volumes, preparative procedures, basic chemistry, physical and spectroscopic properties, structural and thermochemical data and, where appropriate, technological aspects are discussed in some detail for each compound class. Extensive tables of compounds follow each chapter. The general format and style is the same as in the previous four volumes.

This monumental opus, which now already numbers over 3350 pages and lists well over 15000 references, will be completed with Vol. 7 which is expected to appear around the end of the year. In view of its complete coverage of the field, it may be considered the "Gmelin" or the "Beilstein" of organophosphorus chemistry. However, although the editors have good cause to rest on their laurels when this task is complete, it is hoped that they will arrange to keep this series up-to-date, perhaps with supplementary tables of compounds.

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1 *J. Organometal Chem.*, 57 (1973) C27.

Rodd's Chemistry of Carbon Compounds (Edited by S. Coffey). *Supplement to Vol. 1* (Edited by M.F. Ansell). *Aliphatic Compounds, Parts C and D*. Elsevier, Amsterdam, 1973, xx + 464 pages, Dfl. 120.00.

This supplement to the much used Rodd's Chemistry of Carbon Compounds covers material which has appeared since the second edition was published in 1964–65. It contains two sections, Part C, which deals with mono-carbonyl derivatives of aliphatic hydrocarbons, their oxidation products and derivatives, and Part D, which deals with dihydric alcohols, their oxidation products and derivatives. It consists of Chapters 8–17 of the Supplement

to Volume 1, as follows: Aldehydes and Ketones (107 pages, by G. Pattenden); Monobasic Carboxylic Acids (34 pages, by C.Y. Hopkins); Carbon Monoxide Isocyanides and Fulminic Acid (10 pages, by C.W. Bird); Carbonic Acid and its Derivatives (117 pages, plus a 12 page Addenda, by R. Howe); Dihydric Alcohols, Glycols and their Derivatives (12 pages, by A. Nechvatal); Hydroxy-aldehydes and -ketones, Related Compounds and Dicarbonyl Compounds (11 pages, by A. Nechvatal); Aliphatic Monohydroxycarboxylic Acids and Related Compounds (18 pages, by D.E. Ames); Aliphatic Nitro- and Amino-monocarboxylic Acids and Related Compounds (54 pages, by H.D. Law); Aldehydic and Ketonic Monocarboxylic Acids and Related Compounds (16 pages, by D.E. Ames); Aliphatic Dicarboxylic Acids and Related Compounds (34 pages, by V. Matthews). There is a good subject index.

Newer organometallic methods of synthesis, including transition metal catalysed processes, seem to have been appropriately included, but the coverage of organometallic compounds as such is necessarily very limited. Thus, the chapter on carbon monoxide has only 2 pages on metal carbonyls and only about 1 page on hydroformylation and related reactions; while there are references to original and review literature to meet this deficiency, none of these are to publications later than 1969.

The many users of this series of volumes will certainly wish to have this supplement in their libraries.

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Nitrogen N.m.r., edited by M. Witanowski and G.A. Webb, Plenum Press, New York & London, 1973, ix + 403 pages, \$32.00.

The development of enhanced sensitivity techniques in nuclear magnetic resonance spectroscopy is making it possible to study routinely nuclei which have been hitherto the concern of the specialist. However, whereas the preparative chemist can readily envisage that results from nuclei other than hydrogen, but with the same nuclear spin of $\frac{1}{2}$, will be comprehensible using the ideas with which ^1H NMR spectroscopy has made him familiar, he is generally not so clear about how to deal with nuclei with spins greater than $\frac{1}{2}$. This useful book should therefore be of considerable value.

The major part of this book deals with ^{14}N NMR, and all aspects of the technique are considered. The theoretical background to nitrogen NMR is discussed first, and then the experimental techniques used to obtain spectra. The complications due to the ^{14}N quadrupole are considered in some detail, but here, as elsewhere, it is not necessary to understand the theory in order to obtain valuable guidance from this book. There are then three large and apparently comprehensive reviews on nitrogen chemical shifts in organic compounds, correlations of coupling constants and structure, and ^{14}N NMR