

## Book review

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*Transition Metal Complexes of Phosphorus, Arsenic and Antimony Ligands*, ed. by C.A. McAuliffe, Macmillan, London, 1973, xix + 428 pp., £10.50.

This review is divided into five parts: Part I (30 pages), by A. Pidcock on Group V to transition metal bonds; Part II (170 pages); by K.K. Chow, W. Levason, and C.A. McAuliffe on monodentate phosphine complexes; Part III (60 pages); by J.C. Cloyd, Jr. and C.A. McAuliffe on monodentate arsine and stibine complexes; Part IV (36 pages), by B. Chiswell on multi-dentate, i.e., tridentate and higher, ligand complexes; and Part V (63 pages), by E.C. Alyea on ditertiary arsines. The literature is quite thoroughly covered in the articles well into 1971. A sixteen pages appendix lists additional references in the same topical sequence as in the main text with a one or two sentence summary of each paper. These publications are from the 1971 and 1972 literature. Also included is an author index and a very brief subject index.

In general, the subject matter is covered and documented well. The only area that is glaringly missing is the topic of ditertiary phosphines, which is presumably absent because several authors in common with those of this book have recently published a long review on this subject in another annual series. The authors also have wisely chosen not to include organometallic compounds (except carbonyls) where the main interest is the organic moiety. Complexes of organophosphites and phosphorus halides are also excluded.

Part I has a short discussion of the now tiresome  $\sigma$ - $\pi$  controversy involving phosphorus, which is naturally slanted to the author's interpretation. For example, on page 26 he remarks disdainfully on the " $\pi$ -only" view. But in fact, was there ever a " $\pi$ -only" view?

Part II is especially comprehensive with 1359 references. It required considerable searching to find missing references, e.g., some of the *cis*-Pd and -Pt compounds in Table 16, pages 156-157, seem to be lacking reference numbers.

Overall, the book will be of considerable value to coordination chemists and organophosphorus chemists.

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