

Book Review

NMR Basic Principles and Progress. Vol. 16, ^{31}P and ^{13}C NMR of Transition Metal Phosphine Complexes. Editors P. Diehl, E. Fluck and R. Kosfeld. Springer, New York, U.S. \$ 39.60.

This book is well described by its title, and is both a basic introduction and a review of ^{31}P and ^{13}C NMR of transition metal phosphine complexes up to 1977, with some overlap into early 1978. The book summarizes modern measurement techniques and then goes on to deal with coupling constants, chemical shifts and their application to the elucidation of structure. Suitable examples, with clear diagrams and tables, are given throughout and particular attention is paid to interpretation of trends in the NMR parameters. From this point of view, a most useful part of the book is found in the appendices. These deal with the influence of π orbitals on coupling constants, a discussion of s-electron density at the nucleus and a brief empirical LCAO—MO treatment of π -bond coupling. This section also has relevant information in tabular form, and clear diagrams which lack proper titles but fortunately are unambiguously placed in the script. The last third of the book consists of extensive tables of shifts and coupling constants. There is little doubt that the location of all this material in one book is a boon both to the researcher and to students and teachers in upper level and graduate courses. The cost probably restricts its use in the latter sense to that of a library reference text. The book is well written and presented and contains information and ideas that are relevant to areas of NMR other than the two nuclei indicated. It should take its place proudly with the other volumes in this series.

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