

*Carbon-13 NMR Spectroscopy*, by J.B. Stothers, Academic Press, New York, N.Y., xi + 559 pages, \$26.50. (*Organic Chemistry monograph series*, Vol. 24)

A rather large body of data concerned with  $^{13}\text{C}$  NMR spectroscopy has been accumulated during the past sixteen years, but it has only been since the very recent advent of Fourier transform NMR spectroscopy that the important applications of  $^{13}\text{C}$  NMR have expanded at a rapid pace in a variety of fields of chemistry, including organometallic chemistry. Hence, the publication of this book is quite timely, particularly since it contains most of the important information available up to mid-1970.

The first fifty pages contain a brief introduction and a survey of experimental methods, but as the author admits, these topics are more adequately covered elsewhere, particularly with respect to Fourier transform techniques.

The remainder of the book contains a rather comprehensive coverage of  $^{13}\text{C}$  shieldings and their interpretation, with emphasis on structural and stereochemical aspects. In addition, a compound index that lists over 2300 compounds is provided. Such information is invaluable for interpreting or predicting  $^{13}\text{C}$  spectra. Although TMS has not gained universal acceptance as the reference for  $^{13}\text{C}$  shieldings, all of the data in this book have been converted to shieldings with respect to TMS. This important feature avoids the complication of comparing, from the literature, shieldings that have been reported with respect to several different references.

Chapter 6 is entitled "Organometallic and Ionic Species", but only about one-fourth (8 pages) of this chapter deals directly with compounds having a carbon-metal bond, at least in a formal sense. This is not an oversight on the author's part, but is due instead to a lack of available data. Thus, the organometallic chemist will find this book most useful for  $^{13}\text{C}$  data for carbon atoms not directly bound to metals, the notable value of such data notwithstanding.

The book is well-written and contains a wealth of information on trends, correlations, and interpretations of  $^{13}\text{C}$  shieldings, as well as innumerable examples of practical applications. It represents the only excellent single source of the  $^{13}\text{C}$  shieldings reported in the literature prior to mid-1970, and is thoroughly referenced. Organometallic chemists dealing with  $^{13}\text{C}$  NMR spectroscopy will find it well worth the price.

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