

The Multinuclear Approach to NMR Spectroscopy; edited by J.P. Lambert and F.G. Riddell. D. Reidel Publishing Company, Dordrecht-Boston-Lancaster, 1983, xvi + 548 pages, US\$ 72.00.

This volume is an outcome of a NATO Advanced Study Institute at Stirling, Scotland, in which the participants examined many of the recent advances in chemical and biochemical applications of NMR. The twenty-two chapters in the book originated in lectures at the Institute, and on the reasonable assumption that they reflect the quality of the lectures, the Institute must have been very successful. The book directly reproduces a uniform typescript, and it is very well produced, except in my copy between pages 307 and 334, where about one page in two has been affected by a printing problem. The pages in this section can, however, still be deciphered.

The opening chapters deal with sensitivity and methods (C. Brevard), calculations of shifts and coupling constants (G.A. Webb), relaxation (J. Reisse), dynamic processes (J.D. Lambert), and NMR in solids (K.J. Packer). Then follow chapters on nuclei or groups of nuclei: deuterium (H.C. Jarrell and I.C.P. Smith), tritium (J.A. Elvidge), nitrogen (R.L. Lichter), oxygen (W.G. Klemperer), and alkali metals (P. Laszlo), alkaline earth metals in chemistry (O. Lutz) and biology (T. Drakenberg and S. Forsén). R.G. Kidd deals with Group III, heavier Group V elements and the transition metals, R.K. Harris with heavier Group IV elements in solution and in solids, O. Lutz with the heavier Group VI elements, and the heavier halogens are covered by T. Drakenberg and S. Forsén. The book concludes with a long article by P.D. Ellis on bioinorganic aspects of cadmium NMR, and there is a short subject index. In some ways the volume can be regarded as a supplement to the current principal source on NMR of "other" nuclei, "NMR and the Periodic Table" (1978, edited by R.K. Harris and B.E. Mann), though naturally there is some duplication.

The book can be strongly recommended. The chapters show much evidence of first hand experience, and there is much of practical value as well as of learned discourse.

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