

Book Review

NMR of Paramagnetic Molecules in Biological Systems. I. Bertini and C. Luchinat, Benjamin/Cummings, Menlo Park, 1986, ISBN 0-8053-0780-X, Hardbound, 320 pp.

This third volume of the Physical Bioinorganic Chemistry Series (Benjamin/Cummings, 1986) on 'NMR of Paramagnetic Molecules in Biological Systems' is a lucidly written treatise of this area of bioinorganic chemistry and will be helpful for experimentalists who want to use this technique for studying metallobiomolecules. It has been over ten years since the publication of 'NMR of Paramagnetic Molecules' by La Mar, Horrocks and Holm (Academic Press, 1973) and 'NMR in Biochemistry' by Dwek (Clarendon Press, 1973), both of which dealt with aspects of this topic. Since that time, developments in NMR instrumentation have increased the utility

of this technique for the study of paramagnetic biomolecules. The authors divide the book into two parts, providing the basic theoretical background regarding isotropic shifts and relaxation mechanisms in the first half and then illustrating these principles with examples from the current literature in the second. Separate chapters are devoted to copper, iron, and manganese, with the two remaining chapters dealing with the other first row transition metals and the lanthanides. Of great utility is the chapter on experimental techniques, which provides a starting point for executing important aspects of these studies. Overall, this is a resource book that anyone contemplating the study of paramagnetic biomolecules should read. It would also serve as a good text for discussing this area in a special topics course.

Lawrence Que, Jr.