devised and should extend greatly the scope and utility of the book.

The initial chapter discusses the reactivity of polar organometallic species and is followed by chapters concerned with the metallation of (i) aromatic and olefinic hydrocarbons, (ii) saturated sulphur compounds, (iii) methyl-arenes containing hetero substituents, (iv) hetero-substituted allylic and benzylic compounds, (v) heterocyclic compounds, (vi) aldimines and ketimines, (vii) nitriles and isonitriles, (viii) halohydrocarbons and (ix) carbonyl and thiocarbonyl compounds. In each of these chapters, a specific introduction and discussion of the literature precedes the experimental procedures.

In all, the book will be a very valuable manual for any organic/organometallic laboratory; it is certainly a most welcome acquisition for this reviewer's laboratory.

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Metal Ions in Biology and Medicine
P Collery, L A Poirier, M Manfait and J C Etienne (eds)

John Libbey Eurotext, Paris, 1990
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Many scientists throughout the world, including chemists, biochemists and physicians, are involved in research projects concerning the implications of both Main Group and transition-metal ions in life processes. In spite of the hard work done in this field, there are still many gaps in understanding the exact role of metal ions. Therefore, it was very important for these scientists to meet and to expose the results of their studies. This opportunity was offered by the First International Symposium on Metal Ions in Biology and Medicine, which was held in Reims (France), on 16–19 May 1990.

The papers presented at this international symposium by scientists and physicians from 25 different countries are organized in the four chapters of this book.

Chapter A is devoted to papers presenting the results obtained with common metals, i.e. sodium, potassium, magnesium, calcium, manganese, iron, cobalt and zinc related to their implications in the immune system, inflammation, carcinogenesis, aging and miscellanous diseases.

The second chapter of the book contains studies on the same major themes of the Symposium, using toxic metal ions, e.g. beryllium, barium, aluminium, lead, titanium, vanadium, chromium, nickel, cadmium, cerium etc. Some papers are also devoted to tissue distribution, antidotes and various other biological effects of such metals and their compounds.

Studies on the therapeutic metal complexes, such as compounds of lithium, germanium, tin, selenium, lanthanum, titanium, ruthenium, platinum, gold and others, used in cancer treatment, are presented in the papers included in chapter C. Reports on the antitumour activity of platinum, gold, gallium, ruthenium and selenium, as well as other new metal compounds, including organometallics, are grouped in a special section.

Several papers are also devoted to the use of various radioisotopes in the early diagnosis of cancerous diseases or as radiosensitizers.

Chapter D presents some new results on the interactions of metal ions with biological molecules, pointing out the large variety of metal bonding possibilities in life systems.

The book also contains an author index of all the scientists who contributed by their work to the success of this symposium.

In conclusion, this book underlines the importance of interdisciplinary studies and of the co-operation between chemists, biochemists and physicians in order to understand the role of metal ions in biological systems. Therefore, it is warmly recommended to all scientists involved in the synthesis of new metal complexes and their toxicological, animal and even clinical therapeutic screening.

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