

Book reviews

Bio-inorganic Chemistry; by R.W. Hay, Ellis Horwood Limited, Chichester, U.K., 1984, pp. 210, ISBN 0-85312-200-8, £21 (hardback), £9.50 (paperback).

Bio-inorganic chemistry is an area of activity which is difficult to define but which is clearly definable in the minds of its practitioners. However, a definition which is not so enormously inclusive as to render it of little value is not easy to derive. It is an activity in an area of overlap between more conventionally recognized disciplines, and consequently anyone writing a book on bio-inorganic chemistry has either to present vast amounts of "background" material usually available elsewhere, or else to assume a high degree of understanding on the part of the reader and leave out such material. Writing a text book is a challenge indeed. This book is aimed at undergraduate students and postgraduates, but not really at researchers. It should prove suitable for short courses in bio-inorganic chemistry. It must, of necessity, be superficial and discursive, in view of its audience and its size. For U.K. third-year undergraduates it has probably struck the right level.

There are nine chapters. The first, on general background, summarises a whole range of concepts with which the student should already be familiar, such as HSAB and the general features of proteins. The second chapter, on physical methods, quotes, with examples but little theory, the principal methods of physico-chemical characterisation used in bio-inorganic laboratories. The remaining two-thirds of the book survey the fields of bio-inorganic chemistry: alkali metals, non-redox metalloenzymes, oxygen carriers, haem and copper proteins, iron-sulphur proteins, metal transport and storage, and the obligatory chapter on pollution and medical applications. This is an enormous mass of material to present in some 140 pages. It suffers from over-generalisation, and in the discussion of nitrogen fixation, at least, it is not particularly up-to-date. However, all the chapters have extensive lists of review references for further reading.

This book is probably the best yet produced for undergraduate teaching purposes. It may be of value for those wishing to start bio-inorganic research, but there are more appropriate texts available. I have no doubt that undergraduates and their teachers will find it very useful.

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