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Book review

Inorganic Polymers, by J.E. Mark, H.R. Allcock and R. West, Prentice Hall, Englewood Cliffs (NJ), xiv + 272 pages. £55.65. ISBN 0-13-465881-7

This is an exceptionally good book, and to my mind its appearance must be regarded as a major event in the development of the chemistry of inorganic polymers. Its special quality arises partly from the fact that the subject has now reached the stage at which enough is known of properties and applications of the polymers to make an introductory account of them really interesting, and partly from the outstandingly good work by the authors in selecting and presenting their material. I found myself reading it as I would a novel, for pleasure rather than just for instruction!

As indicated in the Preface, the book is not intended to be a comprehensive survey of the field of inorganic polymers but to present an account of related areas in order to develop general principles. It is truly introductory, and assumes only the background provided by an undergraduate course in chemistry. It is, indeed, designed to be used as a text-book, and will serve admirably in that role.

A brief introductory chapter on the nature of polymers is followed by an effective outline of the characterization of polymers. There is then a fascinating account of the polyphosphazenes, the chemistry and applications of which have been developed almost wholly through the remarkable foresight, persistence, and scientific ability of one of the authors of the book, H.R. Allcock. This is followed by chapters on (a) polysiloxanes and related polymers; (b) polysilanes and related polymers, and (c) brief accounts of miscellaneous inorganic polymers, including some containing germanium, sulfur, selenium, boron, and aluminium, and some metal-coordination polymers. The text is interspersed with helpful formulae, equations, and diagrams, and enlivened by some relevant photographs.

The authors recommend readers to read the book in the order of the chapters, and rightly so since it has been devised as a coherent entity — so much more effective than so many of the somewhat random collection of papers by individual contributors that are increasingly common in so-called introductory compilations. It should certainly find a place in many undergraduate and postgraduate courses, and I recommend it without reservation. It deserves a very extensive readership, and although it is already reasonably priced it is to be hoped that once the libraries have purchased their copies the publishers will bring out a paperback edition so that many students (and others) can have their personal copies.

The book comes with a free sample of medical-grade siloxane sheeting from Dow Corning!

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