

Polymer Chemistry: An Introduction; 3rd edition; M.P. Stevens (Ed.); Oxford University Press, Oxford, 1999, xix + 551 pages, ISBN 0-19-512444-8, £29.95

Polymers are commercially important besides being part of everyday experiences. Common examples include plastics, fibres, elastomers, coatings, adhesives, rubber, protein and cellulose. Polymer chemistry involves all the traditional subdivisions of chemistry (organic, inorganic, physical, analytical and biochemistry) besides drawing upon physics, engineering and business economics.

“Polymeric Chemistry: An Introduction” provides an understanding of the chemistry of polymeric materials, how they differ from non-polymers, their synthesis and the ways of modifying them to assume a range of chemical and physical properties.

This volume covers significant new developments in polymer science over the past decade. These include: new soft ionisation techniques coupled with time-of-flight mass spectrometers for measuring molecular weight distribution in polymers; supra-molecular assemblies and importance of polymers in photonics. Methods used for testing and characterising polymers are also included.

The book consists of 18 chapters, divided into three parts. Part I covers polymer properties, morphology and

methods of characterisation, whereas carbon-chain polymers from olefinic and vinyl monomers are discussed in Part II. Non-vinyl synthetic and natural polymers make up Part III. The book also includes review exercises and journal references at the end of each chapter. Appendices include commonly used polymer abbreviations, sources of polymer literature, and sources of laboratory experiments in polymer chemistry.

“Polymer Chemistry: An Introduction” starts on a practical note and ends with a view of the macromolecular chemistry of life. It is a very readable, concise, well-produced and indexed book. It is ideal for advanced undergraduates, graduates and industrial chemists working with polymers, as well as a reference source for practising polymer chemists.

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