

Book review

"The Chemistry of Phosphorus", by J. Emsley and D. Hall, Halsted Press, Division of John Wiley & Sons, New York, 1976, xi + 563 pages, \$ 39.50.

Phosphorus chemistry, especially organophosphorus chemistry, is well represented in the recent monograph and review literature. However, a good introduction to this subject for those who have only a passive interest in it or who are planning to become active in one of its varied aspects has been lacking. The present book admirably fulfills this purpose; it is not aimed at the expert, rather it is a graduate-level textbook devoted to the subject of phosphorus chemistry in its broadest possible definition. A successful collaborative effort by an inorganic and an organic phosphorus chemist, it covers all aspects of phosphorus chemistry: in the main the chemistry of inorganic and organic phosphorus derivatives, but also structure and bonding, spectroscopy (^{31}P NMR and vibrational spectra), biophosphorus chemistry (principally the role of ATP in metabolic pathways), phosphorus in the environment and applications of phosphorus compounds - in everyday life, in industry, in agriculture and in warfare. Useful appendices give information on nomenclature of phosphorus compounds and on antidotes for toxic organophosphorus chemicals.

The book is well-written. It is very "readable" and it presents complex materials very clearly. The dominant themes which are stressed throughout the book are those of bonding, structure and mechanism. Liberal use of equations and figures helps in the presentation. Thermochemical data are given both in kcal/mole and kJ/mol - a welcome feature for this time of transition. Each chapter concludes with a number of problems designed to help the reader assess his understanding of the material presented; answers are given at the end of the book. The discussions in each chapter are well referenced. An appendix devoted to the literature of phosphorus which tells the reader where to find what kind of information on phosphorus compounds would have been a useful addition for those readers who are new to the field.

All in all, this is an excellent book which will serve as a

C60

very useful introduction and guide to the newcomer to phosphorus chemistry. Even the phosphorus expert will enjoy reading this book and he may even gain some useful knowledge of aspects of phosphorus chemistry outside his immediate research area from it.

Department of Chemistry
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139 (USA)

Dietmar Seyferth