

Book review

Arsenoheterocyklen; by A. Tzschach and J. Heinicke, VEB Deutscher Verlag für Grundstoffindustrie, Leipzig, 1978, 234 pages, DM 59 (in German).

Since it is only eight years since the publication of F.G. Mann's comprehensive treatise on heterocyclic compounds of phosphorus, arsenic, antimony, and bismuth, it would seem pertinent to compare the two books and then ask if a new book devoted to heterocyclic arsenic compounds is justified at this time. Mann's book contains 318 references to arsenic compounds compared to 959 references in the present book, approximately three times as many. In the bibliography of the present book approximately half of the references are to publications subsequent to 1967, the last year covered in Mann's book. The present book is complete through 1976. It is indeed surprising how much has been published on heterocyclic arsenic compounds during the intervening nine years, and a new treatise on heterocyclic arsenic compounds would seem justified at this time. In neither book is the chemistry confined solely to compounds containing only As—C bonds. Tzschach and Heinicke's book also includes ring systems containing As—B, As—Si, As—Sn, As—P, and As—As bonds. Except for those compounds containing As—As bonds, heterocyclic compounds containing ring systems with these linkages were not known when Mann's work was published. Considerable space in the new book is devoted to cyclopolyarsines and their use as ligands to transition metals, a field which has only recently been explored.

The present volume is well organized but it is more difficult to find the desired type of ring system from the Table of Contents than in Mann's book where the various types of ring systems are set in bold-face type with considerable space between each entry.

Slightly over half of the present book is devoted to cyclic compounds in which the ring system contains no As—C bond or not more than one As—C bond. Thus approximately half of the book could be considered as inorganic chemistry. The last half of the book contains compounds with C—As—C bonds, i.e., compounds which are more organic in nature. Considerable space is devoted to the chemistry of arsenin (arsabenzene) which was first reported in 1975. Also included is a section on various methods of synthesizing organic arsenic compounds.

The book is well printed with clear, legible formulas. There is a bibliography and subject index at the end of the book. An author index would have made it somewhat easier to use.