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## Volume Editor's Preface

This volume is the third in Heteroarenes and Related Ring Systems (Category 2) of **Science of Synthesis** and deals with five-membered heteroarenes with one chalcogen and one additional heteroatom. Throughout this category, a heteroarene is considered to be a heterocyclic ring with a fully conjugated perimeter of  $\pi$ - or nonbonding electrons. Also, potentially tautomeric systems with a hydroxy, sulfanyl, or amino substituent are included when conjugation is possible at least in one tautomer. In the present volume, this formal definition leads to quite different types of five-membered heterocyclic ring systems including the 1,2- or 1,3-arrangement of two chalcogen atoms to give cationic rings, as well as 1,2- or 1,3-combinations of a chalcogen atom and a nitrogen or phosphorus atom. The latter group comprises well-known ring systems such as oxazoles or thiazoles, but also less well-studied ring systems.

In each case, not only monocyclic rings are considered but also annulated derivatives, in particular benzoannulated systems, and other examples of arenoannulation and also heteroarenoannulation. When convenient, syntheses of these derivatives are covered together with the chemistry of the monocycles, otherwise they immediately follow the chapter on the corresponding monocyclic system. A separate chapter is devoted to the chemistry of tri- or tetraheteropentalenes, which have a particularly interesting electronic structure.

Special thanks are due to the many authors of this volume who critically considered a vast amount of material and selected the most important synthetic methods. To some extent, the information of **Houben-Weyl**, Vols. E 8a and E 8b could be used, but those volumes were published in German and with a less-vigorous organizational scheme. It should be especially acknowledged that the authors patiently followed the changes in the formal presentation which had to be implemented while work on this volume was already in progress.

Throughout the development of this volume, it was a pleasure to cooperate with the publishing house in Stuttgart and in particular with Dr. Fiona Shortt and her team, who were always ready to help and have done a great job in securing the quality of this volume.

**Volume Editor**

Clausthal-Zellerfeld, November 2001

Ernst Schaumann