
Volume Editor's Preface

This is the ninth and final volume covering Hetarenes and Related Ring Systems (Category 2) of **Science of Synthesis**. The volume deals with the synthesis of a variety of six-membered compounds with two unlike or more than two heteroatoms and of fully unsaturated larger-ring heterocycles. The hetarenes covered here all contain perimeters with fully conjugated systems of π -bonds or nonbonding electrons. However, it should be noted that this conjugation does not always lead to molecules which have aromatic stability, and indeed a number of these hetarenes are non-aromatic (or even anti-aromatic). One unique feature of this volume is the diversity of ring systems covered. Syntheses of small ring hetarenes such as 1,4-oxathiins, 1,4-thiazines, and 1,4-oxazines to complex macrocycles such as porphyrins, cyclazines, and phthlocyanines are included. In addition, benzoannulated derivatives are covered for a number of systems.

This volume follows the same organization as the previous hetarene volumes of **Science of Synthesis**. The material has been organized into methods of synthesis of the particular product class, usually with a brief discussion of the scope of the method, followed by specific examples and experimental procedures. In general, the product classes are ordered using the usual **Science of Synthesis** pattern, with the methods and variations within each class in the following order: synthesis by ring-closure reactions, synthesis by ring transformation, aromatization, and synthesis by substituent modification. This volume presents selected procedures for the synthesis of these hetarenes and the chemistry of the particular compounds is in most cases presented only when relevant to their synthesis (such as by modification of substituents). However, there are a few exceptions to this general rule, particularly in the porphyrin chapter.

I would like to thank the many authors who sifted through large amounts of material and culled out the important information for inclusion in their chapters. The syntheses of most of the oxygen-, sulfur-, and/or nitrogen-containing hetarenes covered in this volume were previously reviewed in **Houben-Weyl** Volumes E 9a, c, and d, which were published in 1998. However, the **Science of Synthesis** organization and degree of coverage is quite different from **Houben-Weyl**, and the new format required the authors to do considerably more than simply paraphrase and/or revise older chapters. I am indebted to Prof. Ernst Schaumann and Dr. Joe Richmond for their early work in planning and organizing this volume before I joined the team. I also thank the many members of my research group at Penn State University who proofread (often more than once) all of the chapters prior to publication. Finally, it was a pleasure working with Dr. M. Fiona Shortt de Hernandez and her group of capable editors at Thieme.

Volume Editor

Steven M. Weinreb

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