



# Synthetic Methods and Applications of Heterocyclic Compounds in Medicinal and Organic Chemistry

T. R. Swaroop  
*Editor*

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## Preface

This book offers a comprehensive exploration of synthetic methods for heterocyclic compounds and their applications in medicinal and organic chemistry. Heterocyclic compounds are an important class among different types of organic compounds. They found applications not only in medicinal chemistry but also in metarial science and agrochemicals.

The book begins with synthesis and biological applications of tryptanthrin based heterocyclic compounds in Chapter 1. In Chapter 2, synthesis and applications of  $\alpha$ -oxothioamides is presented. Chapter 3 gives a summary of synthesis of new coumarine derivatives. Synthesis of tartaric acid based heterocyclic compounds and their applications in asymmetric catalysis are presented in Chapter 4. Chapter 5 describes recent advancements in the synthesis and applications of heterocycles in the perspective of emerging strategies and multidisciplinary applications. Interestingly, Chapter 6 shed light on electroorganic synthesis of heterocyclic compounds. Chapter 7 concludes different methods for multicomponent synthesis of 4*H*-pyrans. Applications of anthranils in the synthesis of nitrogen containing heterocyclic compounds are detailed in Chapter 8. Chapter 9 entails synthesis and applications of glycoconjugated heterocycles. Chapter 10 summarizes catalytic strategies for the synthesis of heterocyclic compounds. Finally, Chapter 11 gives a view on synthesis, physical properties and biological behaviours of synthetic derivatives of aromatic heterocyclic compounds.

This book provides lot of information related to different approaches involved in the synthesis of heterocycles and their applications in different scientific domains. I hope this book may provoke chemists to develop novel aspects, which can contribute to the development of chemistry of heterocyclic compounds.

I thank the researchers from all over India, who have contributed chapters to this book. I am grateful to Deep Science Publishing for giving me an opportunity to edit this book.

T. R. Swaroop

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