

Preface

The books on heterocyclic series “Green Bioactive Heterocycles” consists of 9 volumes till date. Each volume of this series deals with different aspects of bioactive heterocycles. This 6th volume, entitled ‘*Bioactive Three-Membered Heterocycles: Natural Products, Green Synthesis and Bioactivity*’, of the above series focuses on various aspects of three-membered heterocycles. All the chapters have exhaustively covered the topics and the corresponding literature.

Three-membered heterocycles have generated significant importance in the pharmaceutical industry. Three-membered heterocycles are widely distributed in many naturally occurring bioactive compounds. In the field of agrochemicals, many compounds with three-membered heterocycles have been used as pesticides or herbicides to protect crops. Many synthetic scaffolds bearing three-membered heterocyclic skeletons have been reported to possess diverse biological activities such as antimicrobial, anticancer, antiviral and several other bioactivities. Due to high reactivity, molecules with thiirane skeleton are very rare.

The ever-increasing presence of the three-membered heterocyclic scaffold in drugs and pharmaceuticals has given much impetus to synthetic chemists for discovering and designing efficient ways of synthesizing three-membered heterocyclic scaffolds that have resulted in the development of numerous synthetic strategies and protocols for the synthesis of bioactive three-membered heterocyclic compounds over the years.

This book comprises nine chapters.

In Chapter 1, Banerjee et al. covered a handful literature related to the commercially available and preclinical drug molecules having three-membered *N*- or *O*-heterocyclic skeletons. In Chapter 2, Kumaraswamy et al. summarized the recently reported literatures related to the photo-irradiated synthesis of three-membered heterocycles. In Chapter 3 entitled ‘Synthesis of three-membered heterocycles under electrolysis’, Mandal et al. address several aspects of the synthesis of three-membered heterocycles under the influence of electrolysis. Nageswar et al., in Chapter 4, summarized the literature related to the ultrasound-assisted synthesis of three-membered heterocycles while Ajarul et al. in Chapter 5, compiled the literature related to the metal-free organocatalyzed synthesis of three-membered heterocycles. Further, in Chapter 6, Dr. Majhi highlighted the efficient strategies related to the solvent-free synthesis of three-membered heterocycles. Prof. Maiti and his research group summarized an informative account on the synthesis of a series of biologically promising diaziridines or oxaziridines under greener conditions in the Chapter 7 and Chapter 8, respectively. At the end, in Chapter 9, Das et al. demonstrated the role of three-membered heterocycles to construct various higher-membered heterocycles.

All the chapters aimed to present advance information about the three-membered heterocycles with their ever-increasing application in drug design and developments. We are thankful to all the esteemed contributors. We are also thankful to Ms.

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