FROM THE EDITOR

Thematic issue "Green chemistry of heterocycles"

It is not an exaggeration to say that the heterocycles are predominantly leading in the sphere of natural product chemistry, pharmaceuticals, agrochemicals, and materials sciences. Heterocycles readily facilitate tunable interactions with the biological targets, thereby providing a degree of structural and metabolic stability. Henceforth, heterocyclic chemistry is looked upon as the foundation of novel chemical compounds of biological interest, owing to the immense conceivable amalgamations of carbon, hydrogen, and heteroatoms. Additionally, concerning the environmental and economic challenges, the development of nonhazardous synthetic methodologies is of utmost importance to organic chemists in the realms of green chemistry. The catalytic construction of heterocyclic skeletons has been primarily reported either via C-C bond formation or by C-X bond formation from the corresponding acyclic precursors with a variety of intra- and intermolecular catalytic processes. In addition, multicomponent reactions are favored to generate a variety of heterocycles due to step economy and diversity introduction in just one step.

Recent technological developments to alleviate the precarious practices in the chemical industry encouraged us to compile a volume especially toward the green chemistry methods for the heterocyclic synthesis. This thematic issue covers topics like the use of microwave irradiation, ultrasound, ionic liquids, solid-phase chemistry, solvent-free conditions, heterogeneous catalysis, and aqueous media, along with multicomponent reaction strategies in the form of mini, micro, and full-length reviews on recent advances, and a few original articles providing a snapshot of this highly dynamic field. An attempt has been made to cover topics with relevance to: a) global coverage of recent developments and scope in green chemistry in relevance to

heterocyclic synthesis; b) featuring cutting-edge research in the field of bioactive heterocyclic compounds; and c) potential of new applications combined with other modern methods in the organic synthesis.

I anticipate that this thematic issue would also help researchers to understand better the chemistry behind reactions which will be offered by a versatile overview of the topic besides discussing the recent progress. This would, in turn, provide a platform for future innovations toward the designing of novel green transformations for heterocyclic synthesis. I firmly believe that this will be of great help to both the novices in the field as well as to the experts in academia and industry for future innovations. As a guest editor of this thematic issue, I am grateful to all authors for their excellent contributions. I am also thankful to the Editorial office in particular Dr. Marina Teus (Managing Editor of the journal "Chemistry of Heterocyclic Compounds") for professional support and assistance during this endeavor.

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