Special Issue

Design and Synthesis of Macrocyclic Compounds

Message from the Guest Editor

The chemistry of macrocyclic compounds has a long history. From simple annulenes to powerful antibiotics, these molecules are united by one thing—the presence of a molecular cavity. Due to this property, macrocyclic molecules are unique synthons in supramolecular chemistry capable of intermolecular guest–host interactions with other molecules. Recently, of particular interest are the functional supramolecular macrocyclic systems capable of self-organization, which makes it possible to obtain smart materials on their basis for sensing, targeted drug delivery, and catalysis in green media. Changes in the structure and the introduction of new motifs into the macrocyclic framework allow researchers to modify existing ones and discover new properties of these molecules. This Special Issue aims to familiarize readers with the most modern trends and achievements in the field of macrocyclic chemistry with a special focus on both the synthetic chemistry of macrocyclic compounds as well as the usage of macrocyclic compounds in molecular recognition, nanotechnology, catalysis, and biotechnology.

Guest Editor

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As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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