



Synthesis and Properties of Macrocyclic Compound

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Message from the Guest Editor

Dear Colleagues,

Nitrogen-bridged macrocycles, beginning with cyclophanes synthesized in the early 1950s, have been the subject of Nobel Prizes for bicyclic amines, azacrown ethers, and cryptands. Even today, nitrogen atoms are essential for catenanes, rotaxanes, and self-assembling molecules. Nitrogen macrocycles play an important role in various situations.

Nitrogen atoms are useful for the synthesis of host compounds with three-dimensional structures, characterized by their trivalent nature, simple and broad synthetic methods, and electron lone pairs. This makes it possible to synthesize azacrown ethers and cryptands, among others. Moreover, their basicity can be increased tens of thousands of times by appropriate spatial arrangements of nitrogen atoms. In other words, the birth of the proton sponge.

In this Special Issue, we invite original research papers and timely reviews on the synthesis, structure, and properties of nitrogen-bridged macrocycles and other compounds with special properties based on the properties of nitrogen atoms.

Prof. Dr. Hiroyuki Takemura
Guest Editor





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Message from the Editor-in-Chief

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