Special Issue

Symmetry and Asymmetry in Bioorganic Chemistry

Message from the Guest Editor

- Symmetry and asymmetry are fundamental principles that underpin molecular recognition, reactivity, and function in bioorganic chemistry. The interplay between symmetric and asymmetric features governs stereochemical outcomes in enzymatic catalysis, influences molecular assembly and supramolecular interactions, and ultimately defines the behavior of biological systems. Harnessing these principles is critical not only for advancing mechanistic understanding but also for enabling innovation in drug discovery, catalysis, and biomaterials.
- This Special Issue aims to highlight recent advances at the interface of symmetry, asymmetry, and bioorganic chemistry. We invite contributions that explore stereoselective synthesis, chiral catalysis, biomimetic and bioinspired approaches, supramolecular systems, and the role of chirality in biological processes. Both experimental and computational studies are welcome, as are reviews that provide perspective on emerging directions in the field. By bringing together diverse viewpoints, this collection will showcase how symmetry and asymmetry shape fundamental concepts and practical applications in modern bioorganic chemistry.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

Editor-in-Chief

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