



## Symmetric and Asymmetric Structure in Drug Design and Biomolecules

Guest Editor:

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### Message from the Guest Editor

Dear Colleagues,

Chirality in chemistry refers to the asymmetry or ‘handedness’ of the molecular structures.

Two important aspects of the chirality of a molecule are the absolute configuration and the conformation. For example, alpha amino acids possess L and D configuration that are mirror images of each other and neurological diseases such as Alzheimer’s and Parkinson’s disease are caused by protein misfolding forming beta strand aggregates in the human brain.

Chiral self-assembled superstructures have attracted the interest of scientists for long time and have seen a number of potential applications in the development of pharmaceuticals, photodetectors and biosensors.

Chirality is an important property of chemical and biological systems, and the chiral nature of organic molecules is central to the origin of life. Enantiomeric molecules often taste and smell different and have different effects; enzymes and drugs distinguish between enantiomers of a chiral substrate in the same manner that a glove only fits well one hand but not the other...





## Editor-in-Chief

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## 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.

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