

# Special Issue

## Chemical Models and Symmetry/Asymmetry Applications

### Message from the Guest Editors

The search for regularities in the structure of chemical substrates and the direction of a chemical reaction is closely related to the concept of symmetry/asymmetry of the potential energy of interaction between the structural units of a substance. On a smaller scale, the characteristics of a structural unit are a consequence of the symmetry of the wave functions of the particles included in it. Not only group theory, but also elements of graph theory, probability theory, fuzzy set theory, matroid theory, discrete geometry, topology, and many other branches of modern mathematics are widely used to interpret the symmetry/asymmetry of chemical objects. The purpose of this Special Issue is to collect materials that explore the applications of any branches of mathematics, including those listed above, to chemical modeling, with the aim of revealing new information about the symmetry/asymmetry of the structures of living and non-living matter, which will undoubtedly help theoretical chemists overcome barriers in understanding the results obtained by mathematicians and vice versa...

### Guest Editors

Dr. A. M. Banaru

Dr. Sergey N. Volkov

Dr. Wolfgang Hornfeck

### Deadline for manuscript submissions

closed (31 December 2023)



## Symmetry

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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.

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### Editor-in-Chief

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