



## Chemistry Using the Symmetry of Crystals

Guest Editor:

**Prof. Dr. Takashiro Akitsu**

Department of Chemistry,  
Faculty of Science, Tokyo  
University of Science, Tokyo,  
Japan

Deadline for manuscript  
submissions:

**15 December 2024**

### Message from the Guest Editor

Dear Colleagues,

Crystallography is widely used as a structure determination tool in various fields of natural science. In principle, the three-dimensional periodic arrangement of atoms in a solid or crystal is measured via diffraction in the reciprocal space field of electromagnetic waves, and the atomic positions in real space are determined via Fourier transformation. In chemistry, 3D structures are discussed in stereochemistry and structural chemistry, but they are also closely related to condensed matter chemistry and chemical reactions involving molecular recognition. They have now become an indispensable research tool for analyzing low-molecular-weight crystal structures; however, once a crystal is formed, it follows the laws of crystal symmetry, such as the center of symmetry of the space group and the presence or absence of chirality. This Special Issue broadly calls for chemical research that essentially utilizes such symmetries of crystals.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Sergei D. Odintsov

1. Institució Catalana de Recerca  
i Estudis Avançats (ICREA),  
Passeig Luis Companys, 23,  
08010 Barcelona, Spain  
2. Institute of Space Sciences  
(ICE-CSIC), C. Can Magrans s/n,  
08193 Barcelona, Spain

## 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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q2 (*Multidisciplinary Sciences*) / CiteScore - Q1 (General Mathematics)

## Contact Us

---

*Symmetry* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/symmetry  
symmetry@mdpi.com  
X@Symmetry\_MDPI