

Special Issue

Advance Studies in Catalysis with Symmetry/Asymmetry

Message from the Guest Editors

This Special Issue will invite theory and experimental aspects that promote catalysis, including, but not limited to, catalytic systems with unique symmetric or asymmetric characteristics and the effect of catalyst symmetry on the reaction mechanism and pathway.

Through research papers in different fields such as organic, inorganic, physical, and material chemistry, the Special Issue aims to comprehensively outline the current progress and encourage discussions on the future direction of the catalytic field. The key points are the design and synthesis of symmetric and asymmetric catalysts and the advanced characterization methods during the catalysis process. Suitable topics include, but are not limited to, the following:

- Design and synthesis of symmetric and asymmetric catalysts;
- Methods for catalyst characterization;
- Optimization of parameters during the catalytic process;
- In situ characterization (SEM, TEM, XRD, optical microscopy, AFM, Raman, etc.) of catalytic reactions;
- Simulations of catalysis mechanisms;
- Surface and interface chemistry in catalysis;
- Stability and regeneration of catalysts;
- Catalyst applications in energy conversion and storage;

Guest Editors

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Deadline for manuscript submissions

closed (30 April 2025)



Symmetry

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Impact Factor 2.2
CiteScore 5.3



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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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