

Special Issue

Symmetry in Chemical and Systems Engineering: From Resource Recovery to Sustainable Design

Message from the Guest Editors

This Special Issue will explore the role of symmetry and asymmetry in chemical and systems engineering, with an emphasis on multiscale processes where balance, pattern, and structure determine performance. Emphasis will be placed on interactions across molecular, process, and spatial scales, where symmetry governs reaction pathways, flow distribution, and the design of resilient system architectures. Contributions may also consider spatial and computational methods that detect or exploit geometric and topological symmetry to optimize distribution patterns. By linking theoretical modeling, simulation, and applied studies, the collection will highlight how symmetry-informed approaches can advance sustainable process integration and innovative engineering solutions.

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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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