

Special Issue

Mathematical Models of Material Science: Symmetry and Applications

Message from the Guest Editors

Materials are the physical basis for human survival and development and constitute one of the three pillars of modern civilization, together with energy and information. Numerous materials have spatially symmetric configuration in the microscale, such as crystalline material, carbon nanotubes, composite material, etc. Research on material science is one of the core scientific issues in modern science and technology. In recent years, scientific computing and data-driven modeling based on mathematical models and theories have shown prominent advantages in material science research. In order to provide a solid theoretical basis and advanced algorithm for predicting and simulating the physical behaviors of materials, especially with spatially geometric symmetry, it is of great practical value and theoretical significance to study mathematical models and methods in material science. The aim of the present Special Issue is to provide an exchange platform for experts and scholars engaged in interdisciplinary research in mathematics and material science.

Guest Editors

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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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