



## Multiferroic Dynamics

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### Message from the Guest Editor

Materials with coexisting multiple orders, named multiferroics, are attracting a great deal of attention and are part of the concept of multifunctional devices. On a fundamental level, multiferroic systems allow investigating the connection and interplay between symmetry, electronic correlation, magnetism, polarization, and/or elasticity. The coupling strength between the order parameters, as well as the underlying coupling mechanisms are crucial for the material physical properties, and govern the dynamical response to external driving fields.

This Special Issue of Symmetry features articles on multiferroic systems with an emphasis on symmetry, topology and dynamics. Contributions will cover a broad range of topics including: Novel coupling mechanisms of ferroelectricity with magnetism in single phase and heterostructure materials, emergent multiferroicity at interfaces, topological states, such as skyrmions, ultrafast dynamics in composite multiferroics driven by electric and magnetic fields, ...





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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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