



Phase Change Material and Magnetic Research

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Deadline for manuscript submissions:

closed (15 December 2023)

Message from the Guest Editor

Magnetic phase transitions cover a broad range of research in magnetism and magnetic materials, such as alloys and compounds. Based on the magnetic-field-induced transition, an abundance of physical effects are obtained in the vicinity of magnetic phase transitions, such as magnetocaloric, magnetostriction and magnetoresistance, which have the most potential for practical applications. The solid-state refrigeration technology based on the caloric effects, including magneto-, elasto- and barocaloric effects, is honored as the most probable alternative to today's gas compression refrigeration technology. In addition, based on the spin reorientation and premartensitic transitions, the exchange bias effect, magnetic topological properties and skyrmions are produced in the materials undergoing magnetic phase transitions. In the world, magnetic phase transition and magnetic transition materials are active and pioneering fields. As for the types of magnetic transition materials, one-dimensional, two-dimensional, and three-dimensional materials, e.g., powder, ribbons, films, alloys and so on, can be fabricated, which would produce unprecedented magnetic properties.





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Message from the Editor-in-Chief

Magnetochemistry constitutes a multidisciplinary field where chemists and physicists not only study magnetic properties but also design and synthesize chemical compounds with desired magnetic properties. *Magnetochemistry* is inviting contributions in any field related with this area, such as theoretical models, crystal engineering, molecular magnetism, SMM, SIM, SCM, SCO, magnetic nanostructures, magnetic MOFs, magnetic recording, qubits, magneto-caloric materials, etc. Our goal is to share your contribution in a timely fashion and in a manner that will be valued by the scientific community.

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