magnetism

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Magnetocaloric Effect: Theory and Experiment in Concert

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Message from the Guest Editors

Dear Colleagues,

Magnetocaloric effect (MCE) is heating or cooling of magnetic material when the applied magnetic field changes. At the heart of the MCEs lays coupling between the magnetic moments and external the magnetic field, and in some cases, the MCE involves structural transitions concomitant with magnetic transitions.

In this special issue, the articles should improve:

1. Theoretical prediction of the magnetocaloric effect (thermodynamics, magnetism)
2. Magnetocaloric Materials.
3. Applications studies and development (actuators, sensors, magnetic refrigeration). Magnetic refrigeration based on the caloric effect of solid-state materials is supposed to be one of the most promising approaches.

The purpose of this special issue is to highlight the latest developments in the shaping of Magnetocaloric Materials. Researchers are therefore invited to present all their original scientific and technical articles of a theoretical and experimental nature on a wide range of materials and processes.

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Guest Editor