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Structure, Magnetocaloric Properties, and Thermodynamic Modeling of Alloys

Guest Editor:

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Deadline for manuscript submissions:
closed (20 November 2023)

Message from the Guest Editor

The magnetocaloric effect (MCE) was discovered more than one hundred years ago. The newest studies suggest that the ideal MCM lays on the border between first- and second-order phase transition, due to the fact that it combines a relatively high magnetic entropy change and broad temperature working range. The potential application of this kind of alloys is as an active magnetic regenerator in magnetic refrigerators or heat pumps.

This Special Issue will focus on research papers on magnetic alloys (especially magnetocaloric materials) based on materials with an amorphous, nanocrystalline or crystalline structure. We expect novelties and original results in chemical composition, production, and investigation of magnetic materials, especially with enormous magnetocaloric properties. Manuscripts concerning modeling of magnetic properties confirmed through experimental techniques will also be considered, as well as partially glass alloys, nanostructured or crystalline magnetic materials.

We invite you to submit full papers, reviews or communications to this Special Issue. In all cases, the papers must demonstrate novelty and importance to the scope.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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