



Magnetic Properties of Nanomaterials

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Now, these nanomaterials (new magnetic materials, hard, semi-hard and soft magnetic nanomaterials) play a key role in concerning the reduction of fossil fuel consumption and climate change.

Nanomaterials offer a wide range of possibilities in terms of both synthesis and characterization. In the field of magnetism, several characteristic dimensions are found at the nanoscale, such as the domain wall thickness and the exchange length in hard magnetic phases. In the case of magnetic recording media, nanoscaling allows the increasing of the surface density of the data storage. As for permanent magnets, the energy product has been successfully improved through using nanocomposite phases.

This special issue focuses on many areas of magnetic nanomaterial applications (giant magnetoresistance, automotive applications, high density recording media, magnetic refrigeration, biomedicine...). Contributions may cover topics but are not limited, such as theoretical work and ab initio calculations, the characterization of magnetic compounds, spintronic materials, magnetic nanoparticles for recording media, and magnetocaloric effects.

