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Characterization of Nanostructured Magnetic Materials Using Neutron Scattering Techniques

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Message from the Guest Editor

Neutron scattering is the key experimental method for the exploration of structures, dynamics, and excitations in condensed matter. Particularly fruitful are neutron scattering studies of ferro-, ferri-, and antiferromagnetic materials as well as multiferroics. In recent years, scientific interest and technological applications have moved to the nanoscale, and therefore neutron scattering techniques have been adapted to meet this challenge. Indeed, neutron scattering work has contributed much to nanomagnetic topics such as interlayer exchange coupling, exchange bias effects, non-collinear spin structures, magnetization reversal processes, proximity effects, and others. For this Special Issue, original research articles, review articles, as well as short communications are invited, which reflect the progress that neutron scattering has achieved in the field of nanostructured magnetic materials. The contributions should also identify the challenges that lie ahead and potential solutions utilizing powerful neutron sources, including those that will become available in the near future.



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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal-organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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