Special Issue

Study on Magnetic Properties of Nanostructured Materials

Message from the Guest Editors

Nanostructured advanced magnetic materials have aroused growing and intensive research interest in recent years due to their high theoretical efficiency and potential applications in modern technology. Topological spin textures at the nanoscale, such as skyrmions, bimerons, and vortices, not only have advantages, such as a small size and low depinning current density, but they can also be driven by various methods, including spin currents, electric fields, magnetic anisotropy gradients, spin waves, and temperature gradients. These characteristics indicate that skyrmions and other topological spin textures are advanced information carriers for spintronic devices. such as logic gates, memory, diodes, and spin torque oscillators. This Special Issue covers a very wide and varied range of subject areas that fall under advanced magnetic nanomaterials (not limited to magnetic skyrmions and permanent magnets) and all aspects (theoretical, computational, experimental studies and/or industrial applications) of advanced magnetic materials, from state-of-the-art fundamental research to applied research and applications in emerging technologies.

Guest Editors

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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 nanometerscale 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.

Editor-in-Chief

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