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The Magnetic Properties of Superconducting and Ferromagnetic Materials at the Nanoscale

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Message from the Guest Editor

Dear colleagues,

In numerous fields of science and technology, magnetism is a critical property. Several significant technologies have been developed based on the study of magnetic properties, such as electric motors, generators, and magnetic storage devices. This Special Issue examines the magnetic properties of superconducting materials and nanoscale ferromagnetic materials. At the nanoscale, these materials exhibit unique magnetic properties that differ from their macroscopic behavior. This is due to the influence of quantum mechanical effects, such as the tunneling of electrons and the Josephson effect, which occur at this scale. Understanding these properties has significant implications for developing advanced technologies, including spintronics and quantum computing. Its collection could broaden ideas of exploration for relevant researchers and pave the way for future research and communities. See more information at https://www.mdpi.com/si/177475

Prof. Dr. Haifeng Zhang
Guest Editor

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Editor-in-Chief

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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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