Special Issue

Advances in Nanoscale Spintronics

Message from the Guest Editor

Spintronics has emerged as a transformative field, offering profound implications for data storage and sensing technologies. Early breakthroughs, such as the discovery of giant magnetoresistance, have set the stage for the development of modern spintronic devices and materials. This Special Issue, titled "Advances in Nanoscale Spintronics", seeks to showcase the latest developments in the synthesis, fabrication, and characterization of nanoscale spintronic materials and devices. We aim to highlight cutting-edge research on the design and application of nanoscale spintronic systems, fostering interdisciplinary collaboration across materials science, physics, and engineering. We particularly encourage submissions that focus on advanced computational methods, machine learning approaches for materials discovery, and innovative strategies in spintronic device fabrication and performance. We invite original research articles and comprehensive reviews addressing the following: synthesis and fabrication of novel spintronic materials; development of spintronic devices for real-world applications; fundamental studies on spin-related phenomena; and the optimization of materials.

Guest Editor

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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.

Editor-in-Chief

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