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Magnetic Nanostructured Materials and Spin Electronics

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Deadline for manuscript submissions:
closed (31 May 2024)

Message from the Guest Editors

Dear Colleagues,

Spin manipulation is the key to the next-generation spintronic devices that can process information faster with higher energy efficiency and better recoverability. Most digital information today is encoded in the magnetization of ferromagnetic materials for spintronics applications.

The demand for magnetic memory for ever-increasing storage space fuels continuous research for energy-efficient manipulation of magnetism at miniature scales. Conventional current-driven spintronics inevitably suffers from the heating issue (ultrahigh current density), limiting device minimization and increasing energy consumption.

At present, the technologies of voltage control of magnetic anisotropy (VCMA) and light control (including laser light, polarized light, and visible light) of spintronics hold great promise compared to conventional current-driven methods. Papers that exhibit the potential to achieve the modulation of spin states effectively in an energy-efficient manner are welcome.

You can submit your paper at the following link:
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Dr. Yifan Zhao
Guest Editor

Dr. Lei Wang
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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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