Special Issue

Emerging Two-Dimensional Semiconductors and Magnetic Materials for Next-Generation Spintronics

Message from the Guest Editor

Two-dimensional (2D) semiconducting magnetic materials have garnered widespread attention in condensed matter research due to their unique properties and vast potential applications in areas such as low-power spintronics, sensors, data storage, quantum computing and optical communications. These materials have challenged fundamental concepts of magnetism by exhibiting unusual behavior at the single layer limit, including controllable magnetic phase transitions by external stimuli and spin–valley coupled excitonic physics, etc. Consequently, the field of 2D semiconducting magnets is expanding rapidly, offering an unprecedented opportunity for exploring fundamental concepts and developing the new spintronic technologies. This Special Issue offers a premier interdisciplinary platform for novel and cutting-edge theoretical and experimental research on all aspects of 2D semiconducting magnets and their associated heterostructures and devices. You can submit your paper at the following link: https://www.mdpi.com/si/168679

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.

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