Special Issue

Ferroelectricity, Multiferroicity, and Magnetism in Low-Dimensional Nanomaterials

Message from the Guest Editor

This Special Issue aims to provide a comprehensive overview of the latest advancements in ferroelectricity, multiferroicity, and magnetism in low-dimensional nanomaterials. It seeks to highlight fundamental principles, innovative experimental techniques, and theoretical models that advance our understanding of these phenomena. Recent research has made significant strides in this area. For example, the coexistence of altermagnetism and ferroelectricity in 2D materials like Cr_2SeO has been explored, demonstrating the potential for designing materials with tailored magnetic and electric properties. Studies on the piezoelectric properties of Janus Cr_2SeO monolayers have shown robust ferroelectricity at room temperature. Additionally, the discovery of intrinsic ferroelectricity in materials such as SnTe and $CuInP_2S_6$ has opened new avenues for the development of next-generation nanoscale devices. These advancements highlight the potential of low-dimensional nanomaterials to revolutionize modern electronics and spintronics. We invite researchers to submit original research articles, review papers, and ideas on relevant topics.

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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