

Special Issue

Borophene and Boron-Based Nanomaterials

Message from the Guest Editors

Borophene, a two-dimensional (2D) material composed of boron atoms, has emerged as a focal point of extensive research due to its exceptional mechanical properties, surpassing even graphene in strength and flexibility. These attributes render borophene pivotal in the development of robust and resilient nanomaterials. In addition, its high electrical conductivity and anisotropic electronic characteristics present promising opportunities in advanced electronics and energy storage technologies. Moreover, its unique chemical reactivity offers potential applications in catalysis, particularly in hydrogen storage and fuel cells. The present Special Issue of *Nanomaterials* aims to showcase the latest advancements in borophene and boron-based compounds, highlighting their synthesis, properties, and multifaceted applications, including advances in both theoretical and experimental aspects. By presenting cutting-edge research from leading experts in the field, we hope to attract high-quality submissions that contribute to the high impact and significance of this journal, fostering further advancements and collaborations in this exciting area of research.

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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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