Special Issue

Two-Dimensional Materials and Beyond: Innovations and Applications in Next-Generation Devices

Message from the Guest Editors

In recent decades, the field of 2D materials, including graphene, hexagonal boron nitride, and transition metal dichalcogenides (TMDs), has gained significant momentum as a promising avenue for next-generation devices. These materials exhibit exceptional properties, such as high carrier mobility, mechanical strength, and tunability through diverse strategies such as gate tunability and strain engineering. As a result, 2D materials offer unprecedented opportunities for the design and fabrication of advanced devices that deliver enhanced performance and functionality across various fields.

This Special Issue encompasses a wide array of topics, including material synthesis, characterization, device fabrication techniques, and device physics, with a particular focus on applications in electronics, optoelectronics, magnetic, energy, and beyond.

The primary objective of this Special Issue is to stimulate further discussions, collaborations, and innovations in this rapidly evolving field. By fostering an environment of knowledge exchange and collaboration, we aim to push the boundaries of what is possible with 2D materials and inspire breakthroughs in device applications.

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