Special Issue

Two-Dimensional Materials for Nanophotonic, Optoelectronic, and Polaritonic Device Applications

Message from the Guest Editor

The first realization of graphene devices in 2004 sparked a revolution in materials science research. The outstanding mechanical, electrical, and optical properties of two-dimensional (2D) materials, combined with the possibility of preparing high-quality devices and interfaces by artificially assembling different 2D materials and 2D materials-based hybrid devices, opened a vast range of possibilities for tailoring the functionalities and performance of the resulting devices.

One sub-area of growing interest within 2D materials and heterostructure devices research is the study and exploitation of light–matter interactions at the nanoscale (including photonic, optoelectronic, and polaritonic phenomena) for device applications.

This Special Issue invites the submission of original contributions or comprehensive reviews (upon request) in the area of 2D materials and heterostructures for nanophotonic, optoelectronic, and polaritonic device applications from both experimental and theoretical perspectives.

Guest Editor

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Deadline for manuscript submissions

closed (31 March 2022)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 10.3
Indexed in PubMed

mdpi.com/si/58210

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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