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Laser-Based Synthesis, Processing, and Characterization of 2D Quantum Materials

Guest Editor:

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Deadline for manuscript submissions:
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Message from the Guest Editor

Dear Colleagues,

Two-dimensional (2D) quantum materials have recently emerged as an exciting class of atomically thin structures that possess extraordinary optical, electrical, and mechanical properties. Motivated by their properties and potential applications, there has been a worldwide interest in research areas ranging from synthesis and processing to characterization and functionality of 2D materials. Interestingly, the strong light interactions with 2D materials not only govern their behavior but can also be used as versatile synthesis, processing, and diagnostic tools to precisely tailor their structures and probe their properties. The spatial and temporal tunability, controlled energy, and power densities of laser beams enable a broad spectrum of applications in the synthesis and processing of 2D quantum materials that are not accessible by other means. This Special Issue of *Nanomaterials* aims to document recent advances in the application of lasers for the synthesis, processing, and characterization of 2D materials and heterostructures.

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Editor-in-Chief

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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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