

Special Issue

Optoelectronic Nanodevices

Message from the Guest Editor

Over the last decade, graphene and beyond graphene nanomaterials (TMDs, Xenes) have centralized the interest of the scientific community, due to the extraordinary physical, optical, thermal, and electrical properties, which are correlated with their 2D ultrathin atomic layer structure, large interlayer distance, ease of functionalization, as well as tunable bandgap. Therefore, potential applications in the fastest growing fields of energy (photovoltaics, energy storage, fuel cells, hydrogen storage, catalysis, etc.), electronics, photonics, spintronics and sensing have been developed. The continuous nanostructure-based applications development offers the confidence to significantly improve existing products and to enable the design of materials and devices with novel functionalities. The present Special Issue focuses on new insights demonstration, as well as the potential and challenges in the realization of various efficient optoelectronic devices, such as solar cells (OSCs, PeSCs), LEDs, sensors, photodetectors, etc., upon the incorporation of nanostructured materials. Please [click here to submit your manuscript](#).

Guest Editor

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About the Journal

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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

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