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## Sustainability in Nanomaterials and Photonics Research

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### Message from the Guest Editors

In recent years, the fields of nanomaterials and photonics have witnessed remarkable progress, enabling breakthroughs in numerous scientific and technological domains, including advanced electronics, biomedical diagnostics, and environmental remediation. These advancements have sparked a growing interest in exploring sustainable approaches within these research areas. Sustainability has become a paramount concern, emphasizing the urgent need to develop environmentally friendly and energy-efficient solutions. The synergy between nanomaterials and photonics presents an extraordinary opportunity to address sustainability challenges.

This Special Issue aims to explore the intersection of sustainability and nanomaterials and photonics research. By focusing on key aspects such as the controllable synthesis of low-dimensional materials using green fabrication techniques, sustainable investigations into the fundamental properties of these materials, and their application in catalysis, energy storage and conversion, sensing, and water purification, this Special Issue will shed light on cutting-edge research efforts that align with the principles of sustainability.



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# Special Issue



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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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