

Special Issue

The Role of Functional Materials and Nanotechnology in Energy and Environmental Applications

Message from the Guest Editors

This Special Issue, titled “The Role of Functional Materials and Nanotechnology in Energy and Environmental Applications”, aims to explore cutting-edge advancements in engineered materials and nanoscale technologies that address critical challenges in sustainable energy and environmental stewardship. The focus lies in the design, synthesis, and application of functional materials—such as perovskites, metal-organic frameworks (MOFs), graphene, and quantum dots—for energy generation (e.g., solar cells, fuel cells), storage (e.g., batteries, supercapacitors), and environmental remediation (e.g., pollutant degradation, carbon capture). The scope spans interdisciplinary research, covering innovations in nanotechnology for air/water purification, energy-efficient catalysts, and sensors for environmental monitoring, while emphasizing the scalability, sustainability, and lifecycle impacts of nanomaterials. The purpose is to bridge gaps between lab-scale discoveries and real-world deployment, fostering dialog on sustainable material design, manufacturing, and policy frameworks to align innovations with global sustainability goals, such as the UN SDGs.

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I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

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