Special Issue

From Solid-State to Liquid-State: Smart, Sustainable, and Recyclable Magnetic/Electronic Nanomaterials for Energy, Environmental, and Biomedical Applications

Message from the Guest Editor

This Special Issue aims to highlight the latest research and innovations in magnetic and electronic nanomaterials across solid- and liquid-state platforms, with a particular focus on sustainable design, smart functionalities, and real-world applications. We welcome original research articles, short communications, and comprehensive reviews in areas including, but not limited to, the following:

- Design, synthesis, and characterization of magnetic and electronic nanomaterials;
- Solid-state and liquid-state nanostructures with tailored physical and chemical properties;
- Nanomagnetic materials for energy storage, harvesting, and nanogenerators;
- Smart, flexible, and stretchable devices based on magnetic/electronic nanomaterials;
- Recyclable and eco-friendly nanomaterials and fabrication methods;
- Magnetic nanomaterials for environmental monitoring, remediation, and resource recovery;
- Electronic and multifunctional nanomaterials for biomedical diagnostics and therapy;
- Device integration strategies, performance optimization, and durability enhancement;
- Advanced modeling and simulation of nanomaterial behavior in solid- and liquid-state systems.

Guest Editor

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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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
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