Special Issue

New Investigations of Nanostructured Metal-Organic Frameworks

Message from the Guest Editors

Metal–organic frameworks (MOFs) are versatile porous materials known for their high surface area, tunable porosity, and structural diversity. They have been extensively explored for applications in gas storage, separation, catalysis, sensing, and biomedicine. Recent advances in nanoscale engineering of MOFs are creating new opportunities to address global challenges in energy, healthcare, and environmental sustainability. This Special Issue will highlight cutting-edge research in this field, covering innovative methods for fabricating MOF nanostructures and hybrid composites, as well as developments in MOF-based systems for gas capture and controlled release. Contributions will also explore the role of MOFs in electrocatalysis, photocatalysis, and energy storage solutions like batteries and supercapacitors. We invite high-quality original research articles, reviews, and perspectives that enhance our understanding of nanostructured MOFs. This Special Issue aims to provide a comprehensive overview of the latest breakthroughs, inspiring further innovation and collaboration within the community.

Guest Editors

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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

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