Special Issue

Applications of the Metal-Organic Frameworks and Nanoporous Materials in Nanocatalysis

Message from the Guest Editors

In recent years, the development of efficient materials for environmental remediation has gained prominence due to the global challenge of pollution. Adsorption and photocatalytic degradation are particularly valued for their low costs, minimal by-products, ease of separation, and eco-friendliness. Effective materials for these processes must possess high porosity, enabling them to serve as both sorbents and catalysts. Metal-organic frameworks (MOFs), a subclass of nanomaterials, are increasingly utilized across fields like engineering, biosciences, and energy. Their green synthesis methods yield sustainable materials with unique properties. MOFs consist of metal clusters linked with diverse organic ligands, offering significant chemical diversity. MOFs are vital in environmental remediation, excelling in degrading organic pollutants and adsorbing atmospheric contaminants like NOx and CO2. This Special Issue invites papers on sustainable synthesis methods for MOFs and related materials, as well as their applications in (photo)catalysis, energy storage, and biomedicine.

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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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