Special Issue

Advanced Porous Nanomaterials for Environmental Treatment and Energy Conversion

Message from the Guest Editors

The adsorption of guest molecules on the solid surface of porous materials is a natural phenomenon that has been utilized in the fields of environmental treatment, energy conversion, and biomedical applications. The structural properties of porous materials, including pore size, surface area, and surface affinity, play critical roles in determining their performance in water treatment, air purification, chemical separation, toxic substance removal, adsorption desalination, adsorption cooling, and biomolecules interactions. Significant efforts have been devoted to the development of experimental and theoretical approaches to identify top-performing porous materials and their composites for industrial application. In addition, exploration of the underlying adsorption mechanism of novel nanoporous materials is key to the design and development of high-performing porous materials. This Special Issue is open to contributions from all aspects of advanced porous materials for adsorption in environment, energy, and biomedical applications. Original research papers, reviews, technical reports, and perspectives are welcome for submission.

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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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