



Nanomaterials for Water Treatment and Desalination

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Message from the Guest Editors

Water scarcity and pollution pose critical challenges that demand innovative solutions. Nanomaterials have emerged as promising tools for water treatment and desalination due to their efficiency and cost-effectiveness. This Special Issue aims to gather cutting-edge research on nanomaterials, creating an interdisciplinary platform for scientists, engineers, and researchers to address the global water crisis.

Topics covered include nanomaterial synthesis and characterization, nanoadsorbents for contaminant removal, nanocatalysts for advanced oxidation processes, nanomaterial-enhanced membranes, nanocomposites for water remediation, applications of nanotechnology in seawater desalination, and nanosensors for water quality monitoring. Furthermore, it addresses environmental impact and safety assessment, scaling up nanotechnology, and integrating nanomaterials with conventional water treatment. Energy-efficient nanodesalination techniques and nanomaterial applications in brackish water, groundwater desalination, and wastewater reclamation are also welcome.





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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.

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