Special Issue

Metal Sulfides and MXene-Based Nanostructured Materials for High-Performance Supercapacitors and Overall Water Splitting

Message from the Guest Editors

This Special Issue, titled "Metal Sulfides and MXene-Based Nanostructured Materials for High-Performance Supercapacitors and Overall Water Splitting," highlights research at the intersection of supercapacitors and water splitting. Supercapacitors are leading next-generation energy storage systems known for their high power density and rapid charge–discharge rates. Water splitting is crucial for green hydrogen production, leveraging renewable energy for sustainable fuel. Innovative materials and techniques are driving progress in both areas, enabling efficient energy storage and conversion. We welcome contributions focused on the design and application of advanced materials, including metal oxides, sulfides, and hybrid nanostructures for supercapacitors and electrocatalysts. Topics include novel electrode materials, catalyst innovations for water splitting, and strategies to enhance energy density and stability. This Special Issue aims to provide an overview of emerging trends in energy storage and hydrogen generation, encouraging researchers to contribute findings that advance sustainable energy solutions.

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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