Special Issue

Design of Nanocatalysts and Electrodes: Application to Fuel Cell and Water Electrolysis (Second Edition)

Message from the Guest Editor

As global warming becomes increasingly serious due to rises in CO2 emissions from the combustion of fossil fuels, the demand for alternative energy resources is continuously growing. Fuel cells such as proton-exchange membrane fuel cells (PEMFCs) and anion-exchange membrane fuel cells (AEMFCs) using H2 as a fuel are examples of promising eco-friendly energy conversion devices, as they produce electricity without pollution. Furthermore, strategies for the production and storage of H2 fuel have been extensively studied to accelerate the commercialization of fuel cell systems. In fuel cell applications, to decrease the use of expensive Pt or to replace Pt-based catalysts with non-Pt- or carbon-based catalysts, scientists have proposed new ideas centered on the modification of catalyst structures. In the field of water electrolysis research, interesting approaches for the design of novel electrode and catalyst structures have been developed. This Special Issue is open to original research articles, as well as review papers, that help researchers worldwide understand the latest trends and progress in fuel cell and water electrolysis research.

Guest Editor

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Deadline for manuscript submissions

closed (22 August 2025)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/226791

Nanomaterials
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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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