Special Issue

Advanced Nanotechnology in Fuel Cells

Message from the Guest Editor

Fuel cells can generate electricity through the electrochemical oxidation of hydrogen and various other small organic molecules. They are widely regarded as promising future energy sources due to their numerous advantages and applications. However, significant challenges such as cost, durability, and the susceptibility to poisoning have hindered their large-scale commercial deployment. Nevertheless, nanotechnology can play a significant role in addressing these issues. Over the past decade, nanostructured materials have led to innovative findings that have contributed to performance improvements. The distinct properties of nanomaterials, including its high surface area and unique size effects, can significantly enhance overall efficiency as well as cell performance. Nanotechnology has also played a significant role in developing novel electrolytes used in fuel cells. This Special Issue aims to present the current state of the art in the use of nanomaterials or nanostructures to improve the performance of fuel cells. Original research articles and reviews are welcome.

Guest Editor

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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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