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Nano-Composites for Photo- and Electrocatalysis and Its Application

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Message from the Guest Editors

Photo- and electrocatalysis are concerned with redox reactions at the solid-liquid interface. Various emerging photo-electrochemical devices in the energy and environmental field are strongly associated with catalytic half-reactions, such as OER (oxygen evolution reaction), ORR (oxygen reduction reaction), HER (hydrogen evolution reaction), and CO₂RR (carbon dioxide reduction reaction), etc.

This Special Issue of *Nanomaterials* aims to present original research or reviews highlighting the application of nanocomposites in photo- and electrocatalysis. The design and engineering of heterogeneous nanocomposites are the main focus of this SI, but other topics include: noble-metal-based nanocomposites; transition-metal-based nanocomposites; carbon-based nanocomposites; MOF-derived nanocomposites; polymer matrix nanocomposites; and magnetic nanocomposites. This Special Issue will highlight the current trends and progress in the field of photo- electrocatalysis.



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Special Issue



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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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