Special Issue

Photocatalytic Nanocomposites for Environmental Purification

Message from the Guest Editor

Artificial photosynthesis (photocatalytic conversion), a promising technology for environmental purification, is considered an effective way to achieve carbon neutrality. In recent years, a great deal of high-efficient photocatalysts have been reported for environmental purification. Recently, newly developed nanotechnologies have provided an opportunity for nanostructures to significantly improve the absorption of visible light, the separation efficiency of photogenerated electrons and holes, and the adsorption efficiency of reactants. Additionally, a variety of efficient photocatalytic materials have been developed, such as MOF, MXene, perovskite, quantum dot, etc. The introduction of nanostructures can greatly enhance photocatalysts' performance. This Special Issue aims to present a comprehensive outline of the progress in the application of nanostructures to improve the performance of photocatalysts. Potential topics include, but are not limited to:

- metal nanoparticles
- heterogeneous
- noble metal
- photocatalysis
- environmental purification

Guest Editor

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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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