Special Issue

Advances in Nanostructured Catalysts for Energy and Environmental Applications

Message from the Guest Editors

The issue of energy shortage and environmental crisis is becoming increasingly serious due to the economy's and society's rapid expansion. Developing green and renewable technologies for environmental remediation and energy production is critical to solving these problems. Nanostructured catalysts have attracted worldwide attention for water splitting, CO2 reduction, N2 reduction, and degradation of organic pollutants via photochemical, electrochemical, and photoelectrochemical strategies. The catalytic reactivity of catalysts is critically affected by their electronic and surface atomic structures, which depend strongly on their nanostructure. Therefore, the regulation of the structure of the catalysts is one of the best ways to modulate the catalytic properties. This Special Issue aims to promote advances in synthetic strategies of nanostructured catalysts, crystal facet engineering, heterostructure, band gap engineering, morphology tailoring, plasmonic coupling, co-catalyst loading, and other aspects for energy and environmental applications. Original research articles and reviews are welcome.

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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