Special Issue

Novel Nanomaterials for Applications in Energy and Catalysis

Message from the Guest Editor

With an increasing worldwide energy demand and a growing need to protect our environment, the development of technologies for green-energy production and storage, renewable fuels, and closing the carbon cycle is of tremendous interest to the research community. Nanomaterials have shown breakthrough performance and potential for these applications due to nanoscale surface morphology and quantum confinement effects enabling their chemical reactivity and selectivity, catalytic behavior, and light-driven properties.

With the nanomaterial prospective for our global energy and sustainability challenges in mind, this Special Issue focuses on nanomaterials and nanocatalysts for energy storage and production, including:

1. (Photo)electrochemical hydrogen production catalysts;
2. Photo- and electrocatalysts for conversion of CO2 into fuels;
3. Nanomaterials for gas-to-liquid and power-to-X conversion technologies;
4. Materials for fuel cells;
5. Materials for photovoltaics;
6. Materials for batteries.

Guest Editor

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Deadline for manuscript submissions

closed (31 October 2020)

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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

Prof. Dr. Eugenia Valsami-Jones
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