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Application of Nanomaterials as Catalysts for Energy Storage and Conversion

Guest Editors:

Dr. Kathalingam Adaikalam
Millimeter-Wave Innovation Technology (MINT) Research Centre, Dongguk University-Seoul, Seoul, Republic of Korea

Dr. K. Karuppasamy
Department of Chemical and Petroleum Engineering, Khalifa University, Abu Dhabi, United Arab Emirates

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Message from the Guest Editors

The need for energy is increasing like never before due to global economic development. This situation forces us to concentrate on renewable sources like solar, wind and hydrogen energies to mitigate environmental changes. Nanomaterials prepared via simple procedures exhibit efficient catalytic activities compared with bulk counterparts produced using expensive techniques. Nanoparticles of different composite materials can have high surface areas with high dispersion ability, and consequently, the catalytic activities are increased. These nanoparticles are synthesized without agglomeration, and uniform size distribution is key for the preparation of efficient catalytic materials. As these nanoparticles provide more active sites due it their high specific surface areas, they can increase the rates of chemical reactions and related efficiencies. In this present Special Issue, we invite research and review articles from various groups working on related studies to contribute a collection of research outcomes that benefit society in state-of-the-art areas of the field.

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Editor-in-Chief

Prof. Dr. Shirley Chiang
Department of Physics, University of California Davis, One Shields Avenue, Davis, CA 95616-5270, USA

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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Contact Us

Nanomaterials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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