Special Issue

Metal-Oxide Nanomaterials for Energy Application

Message from the Guest Editors

Great effort has been expended and assets spent to improve technologies for the conversion of renewable energy resources; day-by-day we face increasing energy consumption. Considering the request to reduce the dependence on conventional resources and develop a new energy landscape, renewable energy sources must be complemented by efficient energy storage systems characterized by robust technologies and at low associated costs. In this context, metal-oxide nanostructures represent the most interesting candidates to overcome the actual limitations of several energy technologies. They have now been widely used in the design of energy saving and harvesting devices, such as mechanical nanogenerators, lithium-ion batteries, supercapacitors, fuel cells, photovoltaics, and even for hydrogen production by water photolysis. This Special Issue of *Nanomaterials* will attempt to cover the most recent advances in metal oxide nanostructures, concerning, not only the synthesis and characterization, but especially focusing on their applications in energy harvesting, conversion and storage devices.

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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