Special Issue

Highly Efficient Energy Harvesting Based on Nanomaterials

Message from the Guest Editor

Energy harvesting systems have received a large amount of attention for various scales of application, from mega-watt grid systems using renewable energy to micro-watt power supply for the Internet of Things (IoTs). These systems generate electricity or produce fuels from many kinds of energy, which is floating around the environment or wasted from various systems. Nanomaterials and nanostructures have contributed to the large improvement of harvesting efficiency and power output, as well as enabled new principles of energy harvesting. This Special Issue welcomes contributions from researchers working on various energy harvesting systems using nanomaterials, as well as on suggesting new principles of energy harvesting, high power output, high efficiency of energy conversion, and new applications. In addition to energy harvesting, studies of highly efficient systems to reduce energy consumption and create efficient energy storage systems are also encouraged for this issue. However, the Special Issue will not be limited to the aforementioned topics and welcomes original research papers as well as review papers.

Guest Editor

Prof. Dr. Seok Woo Lee
School of Electrical and Electronic Engineering, Nanyang Technological University, 50 Nanyang avenue Singapore 639798, Singapore

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Nanomaterials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

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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
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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