

Special Issue

Nano-based Catalysts for Renewable Energy

Message from the Guest Editors

Meeting the global energy demand in a clean, reliable and economically affordable way is one of the biggest challenges of this century. Particularly challenging is to find sustainable alternatives to fossil fuels by utilizing solar energy, water and CO₂, where active, selective, stable and yet economic catalysts are needed. Although significant advances have been made in this field, there is still room for improvement by engineering nanomaterials with enhanced catalytic performance. This Special Issue aims at covering research on promising nano-based catalysts with potential applications to renewable energy and the fundamental understanding of chemical processes related to renewable energy. This includes (but is not limited to) the most interesting aspects of nanostructuring of catalysts such as reaction confinement, creation of uncoordinated edge sites in nano-objects, and single site catalysts. We are especially interested in original research that shows: i) the electro-catalytic performance of nano-based catalysts, ii) the availability of active sites with potential to break existing scaling relations, or iii) examples where the structure and activity have been well resolved.

Guest Editors

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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