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Nano-based Catalysts for Renewable Energy

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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 electrocatalytic 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.



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