



Design of Nanocatalysts and Electrodes: Application to Fuel Cell and Water Electrolysis

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Message from the Guest Editor

Fuel cells such as proton-exchange membrane fuel cells (PEMFCs) and anion-exchange membrane fuel cells (AEMFCs) using H₂ as a fuel are one of the promising eco-friendly energy conversion devices since they produce electricity without pollution. Furthermore, strategies for the production and storage of H₂ fuel have been extensively studied to accelerate the commercialization of fuel cell systems. In fuel cell applications, to decrease the use of expensive Pt or to replace the Pt-based catalysts by non-Pt- or carbon-based catalysts, scientist have proposed new ideas centered on the modification of catalyst structures. In the field of water electrolysis research, interesting approaches for the design of novel electrode and catalyst structures have been developed. In this Special Issue, recent advances and novel ideas regarding the design of nanomaterials and electrode structures for fuel cell and water electrolysis systems are presented. This collection also covers the electrochemical analysis of nanomaterials for H₂ oxidation/evolution, O₂ reduction/evolution, and methanol oxidation reactions in electrochemical energy conversion systems.





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Message from the Editor-in-Chief

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