Special Issue

Advances in Electrocatalysts for Sustainable Hydrogen Energy Conversion

Message from the Guest Editors

The development of advanced electrocatalysts is crucial for achieving efficient and sustainable hydrogen energy conversion. Recent research has focused on improving the catalytic activity, stability, and cost-effectiveness of materials for key reactions such as the hydrogen evolution reaction (HER) and oxygen evolution reaction (OER). Innovations in nonprecious metals, nanostructured intermetallics, MXenes, carbon-based materials, and ruthenium-based catalysts have significantly advanced the field, paving the way for scalable hydrogen production technologies. This Special Issue aims to highlight the latest breakthroughs in electrocatalyst design, synthesis, and application, with a focus on enhancing performance for hydrogen energy conversion.

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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