

Special Issue

Advanced Materials for Applications in Water Splitting

Message from the Guest Editor

Hydrogen energy has been regarded as a prospective energy to meet global energy demands.

Electrochemical water splitting is one of the most attractive strategies to gain hydrogen. To enhance the conversion efficiency of water splitting, it is necessary to use catalysts to accelerate the reaction kinetics and reduce reaction energy barriers. At present, electrocatalysts have become a research hotspot, including precious metal (Pt, Pd, Ru, Ir), transition metal (Fe, Co, Ni, Mo), and non-metallic materials.

Researchers have been devoted to exploring and designing high-performance and stable catalysts. Structural design, especially heterostructures, is crucial for realizing efficient catalysts. Component regulation is also an effective strategy. Advanced characterization techniques are applied to explore the structure–activity relationship of the catalysts. Density functional theory can be applied to reveal the electrocatalytic mechanism. The Special Issue aims to study the material design, characterization, catalytic property, and mechanism for electrochemical water splitting. In this Special Issue, original research articles and reviews are welcome.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

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