



Inorganics

an Open Access Journal by MDPI

CiteScore: 4.1

Impact Factor: 3.0

Special Issue Reprint

Advanced Electrocatalysis Materials Design

Edited by: Junxian Liu

This Reprint compiles nine research articles and one review article published in *Inorganics* between 2024 and 2025 within a Special Issue focused on advanced materials design. These contributions reflect the rapid progress in the development of inorganic materials for electrochemical energy conversion and storage technologies. The studies included in this Reprint explore a broad range of electrocatalytic systems and applications, including hydrogen evolution, oxygen evolution and reduction reactions, CO₂ electroreduction, supercapacitor electrode materials, corrosion-resistant materials for fuel cells, and the electrooxidation of biomass-derived molecules. They highlight current strategies in catalyst design such as heterostructure construction, transition-metal doping, defect engineering, interface regulation, and theoretical modeling for understanding catalytic mechanisms. By integrating experimental investigations with computational insights, these articles demonstrate how rational materials design can enhance catalytic activity, stability, and selectivity. This Reprint therefore provides a relevant overview of current advances in inorganic electrocatalyst development and offers valuable perspectives for future research toward sustainable energy conversion and green chemical production.

<https://www.mdpi.com/books/reprint/12581>

