

Special Issue

Innovative Electrocatalysts for Fuel Cell and Battery Applications

Message from the Guest Editor

The development of sustainable energy systems is vitally essential to hinder global warming and environmental pollution emergencies. Fuel cells and batteries have undoubtedly emerged in the last decades as the most promising technologies for stationary, portable, and automotive applications. Their large-scale commercialization is closely related to the research of innovative electro-catalysts able to achieve efficient, durable, and low-cost energy conversion and storage, with a low environmental impact. Particularly, for polymer electrolyte membrane fuel cells and their subcategories, platinum scarcity, their high cost and low tolerance to alcohol crossover have led to the requirement of alternative materials catalyzing both the oxygen reduction and fuel oxidation reactions, both in acid and alkaline environment. Further optimization could be address reliability and durability, required by the market, under critical temperature and relative humidity conditions.

Guest Editor

Dr. Carmelo Lo Vecchio

National Council of Research, Institute for Advanced Energy Technologies (CNR ITAE), Messina, Italy

Deadline for manuscript submissions

closed (20 December 2021)



Catalysts

an Open Access Journal
by MDPI

Impact Factor 4.5
CiteScore 8.3



mdpi.com/si/46043

Catalysts
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
catalysts@mdpi.com

[mdpi.com/journal/
catalysts](https://mdpi.com/journal/catalysts)





Catalysts

an Open Access Journal
by MDPI

Impact Factor 4.5
CiteScore 8.3



[mdpi.com/journal/
catalysts](https://mdpi.com/journal/catalysts)



About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan,
KS, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, CAB Abstracts, and other databases.

Journal Rank:

JCR - Q2 (Chemistry, Physical) / CiteScore - Q1 (General Environmental Science)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 13.3 days after submission; acceptance to publication is undertaken in 4.6 days (median values for papers published in this journal in the first half of 2026).