Special Issue

Electrocatalysts and Components for Oxygen Reduction and Evolution Reactions: From Nanostructured Active Materials to 3D-Printed Devices

Message from the Guest Editors

Hydrogen technologies have gained increased relevance in the wake of the sustainable energy transition. Renewable hydrogen is a green energy vector that will play a key role in achieving a global carbon-neutral economy. Fuel cells can have a positive impact on the decarbonization and on the electromobility policies. In recent years, advanced electrocatalysts for the electrochemical reactions occurring in electrolyzers and fuel cells have shown promising performance in both acid and alkaline media. Additionally, cutting-edge research is rapidly expanding into the evaluation and demonstration of 3D-printed components and devices. We invite researchers to contribute their most recent high-quality research papers, reviews, and short communications to this Special Issue. Contributions on the following topics related to ORRs and OERs in acid and alkaline media are welcome:Noble metal electrocatalysts;
Non-Pt-group metal electrocatalysts;
Advanced carbon-based materials;
Novel designs for nanostructured electrocatalysts;
Electrospun nanofibers for electrolyzers and fuel cells;
3D-printed components for electrolyzers and fuel cells;
All 3D-printed electrolyzers and fuel cells.

Guest Editors

Prof. Dr. Francisco Javier Rodríguez-Varela
Dr. Kai Zhang
Dr. Ivonne Liliana Alonso-Lemus

Deadline for manuscript submissions

15 July 2026

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/263457

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

mdpi.com/journal/catalysts

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/journal/catalysts

MDPI

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 15.9 days after submission; acceptance to publication is undertaken in 3.5 days (median values for papers published in this journal in the second half of 2025).