Special Issue

Catalytic Processes for Energy Conversion and Storage Based on Advanced Nanomaterials

Message from the Guest Editors

Electrocatalytic processes play a central role in advancing sustainable electrochemical energy conversion and storage technologies. The development of efficient, stable, and cost-effective electrocatalysts is essential for addressing global energy and environmental challenges. In this context, advanced nanomaterials have emerged as promising platforms owing to their unique structural, electronic, and surface properties, which enable enhanced electrocatalytic performance. This Special Issue welcomes recent advances in electrocatalysis for energy-related applications, including hydrogen evolution reaction (HER), oxygen evolution reaction (OER), oxygen reduction reaction (ORR), carbon dioxide reduction reaction (CO2RR), as well as electrochemical energy storage systems such as batteries and supercapacitors. Particular attention is given to the design strategies of nanostructured electrocatalysts, including morphology control, defect engineering, heteroatom doping, and the construction of hybrid and composite materials. We look forward to receiving and sharing your innovative research studies.

Guest Editors

Dr. Kristina Radinović

Faculty of Physical Chemistry, University of Belgrade, 11158 Belgrade, Serbia

Prof. Dr. Biljana Sljukic

Faculty of Physical Chemistry, University of Belgrade, 11158 Belgrade, Serbia

Deadline for manuscript submissions

30 November 2026

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/280624

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).