

Special Issue

Electrocatalysts for Oxygen/Hydrogen-Involved Reactions

Message from the Guest Editors

Oxygen/hydrogen-involved reactions are at the core of many energy storage and conversion technologies—for example, water electrolysis, ammonia synthesis, carbon dioxide reduction, fuel cells, metal–air batteries, and hydrogen peroxide synthesis. However, the low efficiency and poor durability of oxygen/hydrogen-involved electrode materials have greatly limited their application and development. Therefore, the design and synthesis of high-performance electrocatalysts for these reactions are urgent. This Special Issue is devoted to reporting novel electrocatalysts or electrochemical systems for oxygen/hydrogen-involved reactions. We invite researchers to contribute original articles and reviews, which include, but are not limited to, the following topics:

- electrochemical water splitting;
- electrocatalyst for oxygen evolution reaction of hydrogen evolution reaction;
- $4e^-$ or $2e^-$ oxygen reduction evolution for H_2O or H_2O_2 ;
- electrocatalytic N_2 reduction to ammonia;
- electrocatalytic CO_2 reduction reaction;
- metal–air battery.

Guest Editors

Prof. Dr. Jingqi Guan

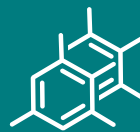
Institute of Physical Chemistry, College of Chemistry, Jilin University, Changchun 130012, China

Dr. Yin Wang

Inner Mongolia Key Laboratory of Carbon Nanomaterials, Nano Innovation Institute (NII), College of Chemistry and Materials Science, Inner Mongolia University for Nationalities, Tongliao 028000, China

Deadline for manuscript submissions

closed (31 January 2022)



Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



mdpi.com/si/70819

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

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





Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts and novel materials. Pushing the boundaries of the discipline, we invite papers on multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all these areas.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt

Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Reaxys, CaPlus / SciFinder, MarinLit, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).