

## Special Issue

# Synthesis and Applications of Novel Low-Dimensional Nanomaterials in Catalysis

### Message from the Guest Editors

Low-dimensional nanomaterials have emerged as some of the most promising candidates for heterogeneous electrocatalysts due to their unique physical, chemical, and electronic properties. Various low-dimensional nanomaterials have been constructed and applied as electrocatalysts in the water, carbon, and nitrogen cycles. This Special Issue aims to provide a broad survey of the most recent advances in low-dimensional nanomaterials and their applications in electrocatalysis. We invite researchers in this field to submit original research articles or reviews that discuss different engineering strategies for low-dimensional nanomaterials and these strategies have the influence on intrinsic electrocatalytic performance, such as electronic properties and adsorption energetics, and their applications in diverse electrochemical reactions are welcome.

### Guest Editors

Dr. Lu Lu

Paris Curie Engineer School, Beijing University of Chemical Technology, Beijing 100029, China

Prof. Dr. Xingcai Wu

Key Laboratory of Mesoscopic Chemistry, Ministry of Education of China, School of Chemistry and Chemical Engineering, Nanjing University, Nanjing 210023, China

### Deadline for manuscript submissions

closed (31 May 2025)



## Molecules

an Open Access Journal  
by MDPI

Impact Factor 4.6  
CiteScore 8.6  
Indexed in PubMed



[mdpi.com/si/175453](https://mdpi.com/si/175453)

*Molecules*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[molecules@mdpi.com](mailto: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).