

Special Issue

Nanomaterials for Catalytic Upcycling/Conversion of Plastics/Biomass

Message from the Guest Editors

Given the immense pressure from carbon dioxide emissions and the enormous demand for resources and energy, converting biomass and waste plastics into high-value chemicals such as fuels and other chemicals is of great significance for reducing carbon emissions, optimizing carbon resource cycling, and promoting sustainable development. Nanomaterials play a crucial role in the catalytic conversion of biomass and plastics, and the design of efficient catalysts is key to achieving highly efficient and highly selective conversions. This has attracted widespread attention in academia and has led to significant progress. This Special Issue aims to provide a broad survey of the most recent advances in the developed nanomaterials for catalytic upcycling/conversion of plastics/biomass. Original research articles or reviews that discuss the design and fabrication of effective catalysts for the conversion of plastics/biomass, the process research, the structure-activity effect, the mechanism in catalysis, and the applications of products in different fields are welcome.

Guest Editors

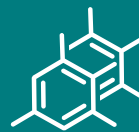
Dr. Lei Huang

Prof. Dr. Xiang Wang

Prof. Dr. Zhili Li

Deadline for manuscript submissions

30 December 2025



Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



mdpi.com/si/219223

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).