

Special Issue

Biocatalysis in Organic Synthesis

Message from the Guest Editors

The preparation of valuable chiral compounds requires the development of more efficient methodologies, in which selectivity and atom economy of the processes become the 'evolutionary pressure'. Biocatalysis, i.e., the use of purified enzymes, cell free extracts or whole cells, as catalyst in organic processes, offers several advantages for the synthesis of high-added value materials. Thus, biocatalysts generally display exquisite selectivities while using mild and eco-friendly reaction conditions. Enzymatic reactions are economically feasible. Biocatalysis often face some drawbacks that hampered their complete application in organic methodologies, including low substrates concentrations or the need of expensive cofactor molecules for different types of reactions. In the last few years, several efforts have been devoted to overcoming these bottlenecks, including the preparation of immobilized biocatalysts, medium engineering with the use of different non-conventional media for biocatalyzed reactions, the development of efficient cofactor recycling systems, and even designing cascade reactions.

Guest Editors

Prof. Dr. Gonzalo de Gonzalo

Departamento de Química Orgánica, Universidad de Sevilla, 41014 Sevilla, Spain

Dr. Fabricio R. Bisogno

1. Departamento de Química Orgánica, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba, Córdoba, Argentina
2. Instituto de Investigaciones en Físico-Química de Córdoba (INFIQC), CONICET

Deadline for manuscript submissions

closed (31 May 2019)



Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



mdpi.com/si/17901

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 molecular chemistry, now in its 30th 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 all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of 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 15.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).