

Special Issue

Biodegradable Polymers in Biological Application

Message from the Guest Editors

Biodegradable polymers are vital in biological applications, enabling controlled release of active agents, temporary structural frameworks, and materials that degrade after use. Both naturally derived and synthetic polymers are widely used, offering unique properties and compatibility with biological systems. They can be processed through techniques such as extrusion, injection molding, thermoforming, electrospinning, casting, 3D (bio)printing, and spray drying. Synthetic polymers generally provide superior processing and mechanical strength, while natural polymers add bioactivity, renewability, and mild processing conditions. Combining both allows balanced mechanical and biological performance. Chemical modifications and physical modifications further enhance and fine-tune properties. This Special Issue, “Biodegradable Polymers in Biological Application,” invites research on natural and synthetic biopolymers, including synthesis, extraction, characterization, processing, and validation, across fields such as pharmaceuticals, biomedical engineering, tissue engineering, agriculture, environmental sciences, and materials engineering.

Guest Editors

Prof. Dr. Hernane S. Barud

Department of Biotechnology, University of Araraquara (UNIARA), Araraquara, Brazil

Dr. Mariana Pires Figueiredo

Department of Min-Met-Materials Engineering and Regenerative Medicine, Université Laval, Quebec, QC, Canada

Deadline for manuscript submissions

30 September 2026



Molecules

an Open Access Journal
by MDPI

Impact Factor 4.6
CiteScore 8.6
Indexed in PubMed



mdpi.com/si/250442

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).