

Special Issue

Biodegradable Polymers: From Chemical Synthesis to Biodegradable Mechanism

Message from the Guest Editors

In recent years, there has been an increase in interest in biodegradable polymers. They are useful in agriculture, packaging, biomedical, and other areas, and represent the most acceptable means of solving the many environmental issues related to non-biodegradable polymers.

Three types of synthetic bio-composites that are commonly used in biodegradable polymers are the following: (1) polyesters, (2) polymers containing both ester and other heteroatom-containing linkages in the main chains, and (3) polymers with heteroatom-containing linkages other than ester linkages in the main chains.

This Special Issue welcomes an overview of the different biodegradable polymers, such as biodegradability, design and modification, structure, hydrolysis kinetics, and properties research, as well as new developments in their synthesis. All research should focus on providing insight into the molecular structure. Studies of the physical and chemical mechanisms by which the major classes of polymers are degraded are also welcomed.

Guest Editors

Dr. Ling-Ping Xiao

Dr. Oana Lelia Pop

Prof. Dr. Gabrijel Ondrasek

Deadline for manuscript submissions

closed (30 August 2025)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/190121

*International Journal of
Molecular Sciences*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
ijms@mdpi.com

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





International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

The *International Journal of Molecular Sciences (IJMS)* is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, and molecular biophysics. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPus / SciFinder, and other databases.

Journal Rank:

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