

Special Issue

Sustainable Waste Management: Application of Biotechnology to Reduce Waste

Message from the Guest Editors

The increasing volume of global waste presents not only an environmental concern but also a biological opportunity to harness living systems for sustainable solutions. This Special Issue, "Biotechnological Approaches for Sustainable Waste Management," invites contributions that explore the biological mechanisms, organisms, and systems used to reduce, transform, and valorize waste. We particularly welcome studies focusing on microbial consortia, metabolic and enzymatic pathways, genetic and metabolic engineering, and bio-based systems that underpin the bioconversion of waste into valuable products such as biofuels, bioplastics, biofertilizers, and purified water. This Special Issue aims to bring together advances in biological science and biotechnology that contribute to sustainable waste management. Submissions may include original research, reviews, and case studies related to solid waste treatment, wastewater bioremediation, agro-industrial by-product utilization, and biologically driven pollution mitigation. We also welcome interdisciplinary research that links biological processes with circular bioeconomy strategies and sustainable development goals.

Guest Editors

Dr. Sushanta Kumar Saha

Centre for Applied Bioscience Research, LIFE Health and Biosciences Research Institute, Technological University of the Shannon: Midlands Midwest, Moylish Park, V94 E8YF Limerick, Ireland

Dr. Hande Ermis

Centre for Applied Bioscience Research, LIFE Health and Biosciences Research Institute, Technological University of the Shannon: Midlands Midwest, Moylish Park, V94 E8YF Limerick, Ireland

Deadline for manuscript submissions

1 June 2026



Biology

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 7.4
Indexed in PubMed



mdpi.com/si/250208

Biology
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biology@mdpi.com

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





Biology

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 7.4
Indexed in PubMed



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



About the Journal

Message from the Editorial Board

A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

Editors-in-Chief

Prof. Dr. Jukka Finne

Research Programme in Molecular and Integrative Biosciences, Faculty of Biological and Environmental Sciences, University of Helsinki, P.O. Box 56, FI-00014 Helsinki, Finland

Prof. Dr. Andrés Moya

Integrative Systems Biology Institute, University of Valencia and CSIC, 46980 Valencia, Spain

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q1 (Biology) / CiteScore - Q1 (General Agricultural and Biological Sciences)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.4 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the first half of 2025).