

Special Issue

Sustainable Biorefinery Platforms for Water Treatment, Nutrient Recovery, and the Biomass Waste Valorization

Message from the Guest Editors

Waste to energy and waste to materials have become part of the sustainable development goals (SDG) in a circular bioeconomy. In the biorefinery concept, waste water treatment for nutrient recovery and biomass valorization to produce energy and materials are some important aspects. Sustainable biorefineries link water treatment, nutrient circularity, and biomass valorization using biodiverse tech stacks—hydrothermal, biological, electrochemical, and thermochemical. The most advanced setups are modular and circular, yet research is ongoing to optimize integration, economics, and real-world viability. This Special Issue will focus on the latest research and development related to sustainable biorefinery platforms for water treatment and nutrient recovery by microalgae cultivation, waste biomass valorization to energy, fuels, and materials. The main topics include, but are not limited to, the following:

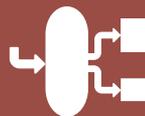
- Sustainable biorefinery concept for waste biomass valorization.
- Microalgae cultivation for nutrient recovery and water treatment.
- Residual and waste biomass valorization to energy and materials.
- Nutrient recovery strategies from waste water and residues.

Guest Editors

Dr. Joseph Sebastian Pathiyamattom
Prof. Dr. Carlos Alberto Guerrero-Fajardo
Dr. Dulce María Arias

Deadline for manuscript submissions

10 May 2026



Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



mdpi.com/si/248960

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

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





Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



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



About the Journal

Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and Technology, University of Turin, Via P.
Giuria 9, 10125 Turin, Italy

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), Ei Compendex, Inspec, AGRIS, and other databases.

Journal Rank:

CiteScore - Q2 (Chemical Engineering (miscellaneous))