



*processes*

an Open Access Journal by MDPI



## Production, Extraction, Analysis and Degradation of Bioplastics

Guest Editors:

**Prof. Dr. Young-Cheol Chang**

Course of Chemical and Biological Engineering, Division of Sustainable and Environmental Engineering, Muroran Institute of Technology, Hokkaido 050-8585, Japan

**Dr. Venkateswer Reddy Motakatla**

Rensselaer Polytechnic Institute (RPI), Troy, NY 12180, USA

Deadline for manuscript submissions:

**closed (30 July 2023)**

### Message from the Guest Editors

Bioplastic production from renewable sources has been considered as one of the most effective means of utilizing biomass. In particular, polyhydroxyalkanoates (PHA), which represent biodegradable plastics, are resource-recycling materials produced by biological processes using biomass as a raw material. However, the popularization of PHA has been limited by production cost, which remains relatively high, with raw materials responsible for most of the price. Therefore, to make PHA production more feasible for industrial application, different inexpensive substrates, starch-based materials, cellulosic materials, and hemicellulosic materials have been tested. However, it is essential to improve productivity and to develop effective PHA extraction methods in order to use bioplastics to replace plastics. Fortunately, the improvement of productivity using gene recombination technology has been very successful. PHA can be biodegradable, but it may become an environmental burden if its widespread use causes it to leak into the environment. Therefore, a comprehensive understanding of bioplastic degradation is an urgent requirement.



[mdpi.com/si/107235](https://mdpi.com/si/107235)

# Special Issue



an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Giancarlo Cravotto**

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

## Message from the Editor-in-Chief

*Processes* (ISSN 2227-9717) provides an advanced forum for process/system-related research in chemistry, biology, material, energy, environment, food, pharmaceutical, manufacturing and allied engineering fields. The journal publishes regular research papers, communications, letters, short notes and reviews. Our aim is to encourage researchers to publish their experimental, theoretical and computational results in as much detail as necessary. There is no restriction on paper length or number of figures and tables.

## 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:** JCR - Q2 (*Engineering, Chemical*) / CiteScore - Q2 (*Chemical Engineering (miscellaneous)*)

## Contact Us

---

Processes Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/processes](http://mdpi.com/journal/processes)  
[processes@mdpi.com](mailto:processes@mdpi.com)  
[X@Processes\\_MDPI](https://twitter.com/Processes_MDPI)