



New Insights into Microalgal Biorefinery for Bioenergy Production

Guest Editors:

Dr. José Carlos Magalhães Pires

LEPABE—Laboratory for Process Engineering, Environment, Biotechnology and Energy, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal

Dr. Helena Amaro

LEPABE – Laboratory for Process Engineering, Environment, Biotechnology and Energy, Faculty of Engineering, Universidade do Porto, Porto, Portugal

Deadline for manuscript submissions:

closed (20 February 2024)

Message from the Guest Editors

The biorefineries may become of high relevance in the near future since microalgal biofuel can be a great alternative source of sustainable fuel. Another advantage is the possibility of integrating wastewater bioremediation and CO₂ capture with bioenergy production. However, for multiproduct microalgal biorefineries to be a cost-effective approach at an industrial scale, research should focus on several aspects: (i) increasing process efficiencies in all steps involved in biorefinery; (ii) enhancing the product's value; (iii) mitigating negative impacts on the environment; and (iv) reducing capital and operational costs.

This Special Issue aims to explore research perspectives and scientific approaches in the field of microalgal biorefinery for bioenergy production. The main research topics include microalgal cultivation systems and harvesting techniques, bioproduct extraction and recovery, wastewater bioremediation, CO₂ capture, and production of microalgal biofuels.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica,
Politecnico di Milano, Piazza L.
da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

Contact Us

Applied Sciences Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/applsci
applsci@mdpi.com
[X@Applsci](#)