



*plants*



an Open Access Journal by MDPI

## Microalgae Photobiology, Biotechnology, and Bioproduction

Guest Editors:

**Prof. Dr. Michael Hippler**

Institute of Plant Biology and  
Biotechnology, University of  
Münster, Münster, Germany

**Dr. Shin-Ichiro Ozawa**

Institute of Plant Science and  
Resources, Okayama University,  
Okayama, Japan

Deadline for manuscript  
submissions:

**30 June 2024**

### Message from the Guest Editors

Photosynthetic microalgae are eukaryotic unicellular organisms that live in aquatic environments and use light energy to bind carbon dioxide (CO<sub>2</sub>) to produce biomass. Photosynthesis research on microalgal model systems has contributed significantly to our understanding of the basic principles of the photosynthetic process. The light-controlled production of microalgal biomass also holds the potential for the biotechnological use of photosynthetic microalgae for the production of biofuels and high-value raw materials.

The purpose of this Special Issue is to discuss how microalgal research has provided insights into identifying photosynthetic bottlenecks. In this context, aspects of light harvesting to drive photosynthetic charge separation and the dissipation of light to heat to protect the photosynthetic machinery will be addressed. Other topics include the generation, storage, and use of the proton motive force, as well as photosynthetic and alternative electron transfer processes. An additional topic is towards an understanding of how microalgae have evolved acclimation strategies to maintain photosynthetic performance under unfavorable environmental conditions



[mdpi.com/si/174461](https://mdpi.com/si/174461)

**Special** Issue



an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Dilantha Fernando**  
Department of Plant Science,  
University of Manitoba, Winnipeg,  
MB R3T 2N2, Canada

## Message from the Editor-in-Chief

*Plants* is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

## 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, PubAg, AGRIS, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (*Plant Sciences*) / CiteScore - Q1 (*Plant Science*)

## Contact Us

---

*Plants*  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

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

[mdpi.com/journal/plants](http://mdpi.com/journal/plants)  
[plants@mdpi.com](mailto:plants@mdpi.com)  
[@Plants\\_MDPI](https://twitter.com/Plants_MDPI)