Special Issue

Microalgae Photobiology, Biotechnology, and Bioproduction

Message from the Guest Editors

Photosynthetic microalgae are eukaryotic unicellular organisms that live in aquatic environments and use light energy to bind carbon dioxide (CO2) 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

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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.

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