



Microalgae Biotechnology: Methods and Applications

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Message from the Guest Editor

Microalgae are a group of unicellular photosynthetic microorganisms, which can utilize atmospheric CO₂ as a carbon source. They are regarded as sustainable feedstocks for the production of valuable bioactive molecules, biochemicals and biofuels. However, the industrial production of these products from microalgae is not economically viable due to biological and biotechnological limitations, and microalgae-based strategies to remediate waste resources and pollutants also have a low economic efficiency. Therefore, the development of microalgal biotechnology is urgently required to meet the increasing demand for microalgal-based commercial applications.

This Special Issue aims to collate recent achievements in genetic tools, which are useful for modifying microalgal species, as well as recent achievements in efficient and cost-effective microalgae production. We also welcome papers that focus on bioengineering and biotechnological strategies to enhance the production of biofuels and other value-added products in microalgae through CO₂ fixation and/or the use of carbon from waste resources and pollutants.





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