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Recent Advances in Biofuel Production from Microalgae Biomass

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Message from the Guest Editor

Dear Colleagues,

The use of fossil fuels for energy production leads to increased pollution levels, including the amount of greenhouse gases emitted, and has global economic consequences. An alternative way to cover the increasing energy demand is to use renewable sources, including biomass. Conventional biomass use, the method of obtaining such feedstocks, and their availability raise concerns; therefore, a great deal of attention is focused on algal biomass.

Biofuels from microalgae have the potential to promote energy diversification in the future and, due to the high level of carbon dioxide sequestration in biomass, to decarbonize transport. There is a need for economic analyses of microalgal biofuel production to indicate the current level of competitiveness compared to other conventional energy carriers. Sustainable production of microalgal biomass, integrated energy conversion technologies in biorefineries, and appropriate regulations are key areas for the development of commercial microalgal biofuel production.



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