Microalgae: Current Research and Applications

From Tsaloglou Maria Nefeli
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From Tsaloglou Maria Nefeli : Microalgae: Current Research and Applications before purchasing it in order to gage whether or not it would be worth my time, and all praised Microalgae: Current Research and Applications:

Microalgae, also known as phytoplankton, are abundant microorganisms which are found in freshwater and marine environments. Phytoplankton are important in global biogeochemistry since they produce the bulk of oxygen on Earth

through photosynthesis. They form the base of the marine food web and are primary producers of organic carbon. Microalgal species can synthesize high value chemical products, such as carotenoids, antioxidants, fatty acids, and sterols. Most recently, microalgae have become an attractive raw material of biofuel, in the form of biodiesel. In this concise book, expert contributors describe the latest research and newest approaches to the study of these important organisms, as well as covering the more traditional methods, such as morphotaxonomy. The book provides practical information on cultivation of phytoplankton, growth media and division rates for different algal species, optical techniques, and automated instrumentation, such as flow cytometry. Furthermore, methods and approaches to study gene expression and regulation in phytoplankton are reviewed. A separate chapter is dedicated to the discussion of algal blooms and their effects on local environments. Coccolithophore Emiliania huxleyi and bioluminescent phytoplankton are thoroughly reviewed by experts in these fields. Finally, the book reviews the state-of-the-art of microfluidic and in situ sensors for phytoplankton identification. It is an authoritative and contemporary review of research on microalgae and is indispensable for anyone working in this field, or who wishes to learn more about these important microorganisms. [Subject: Molecular Biology, Life Science, Marine Biology]