Mohanty, P. (ed.): **Special Issue on Cyanobacterial Photosynthesis: Concepts and Applications**. [J. sci. ind. Res. **55**(8&9): 553-764, 1996.]

Blue-green algae, called at present often cyanobacteria, are organisms important not only as interesting objects of basic research, but also for their practical use. This includes photoproduction of biofuels and NH_3, consumption of atmospheric CO_2 and thus removal of the "greenhouse" effect, and production of various secondary metabolites; all these applications are connected with photosynthesis. Therefore several books or special journal issues have been produced recently on these interesting species of microorganisms.

The reviewed journal issue contains 15 review articles on various physiological and biotechnological aspects of cyanobacteria. Some reviews deal with molecular genetics, photosynthetic and respiratory electron transfer chains, photosynthetic activities studied as gas exchange or by means of fluorescence induction parameters, flexibility of energy conversion processes (this includes also functions of phycobilisomes), interrelations of photosynthesis and nitrogen fixation, responses to limited nutrient supply, and related theoretical problems. Further reviews are on cyanobacterial biotechnology, utilisation of genetically manipulated strains, their use for producing food, animal feed, biofertilisers, special metabolites (*e.g.*, lipids), pharmaca, isotopically enriched substances, and photosynthetic pigments, use in biocontrol of pollution and pests, *etc*. Present and future culture systems for commercial production are also outlined.

Other papers deal with cyanobacterial endotoxins, symbiotic cyanobacteria (included are also fixation of atmospheric nitrogen and its utilisation), and ecology of both freshwater and terrestrial cyanobacteria. Molecular biological aspects are cleared in almost all reviews.

Authors of the reviews are experts from India (8), the U.S.A. (4), Japan (2), and Hungary (1). They overview a broad choice of literature (55 to 265 references per chapter): unfortunately, only brief references (without titles of the papers) are presented which lowers information quality of this material. Nevertheless, all scientists studying photosynthetic processes of these organisms or trying to improve the respective bioenergetics will certainly profit from reading this interesting collection of reviews.

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