

### Mixotrophic cultivation of Cyanobacteria

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Cyanobacteria have gained great attention for the potential of directly converting CO<sub>2</sub> to biofuel by their photosynthetic activity. However, for scale-up, the current approaches for its photoautotrophic culture have some limitations due to the ununiformed light condition inside open-pond system or the high cost of photo-bioreactor. *Synechocystis* sp. PCC 6803 is known to be capable of mixo- or heterotrophic growth as well as the photoautotrophic growth. Here, we demonstrate that biomass production of *Synechocystis* sp. can be improved by mixo- or heterotrophic cultivation with glucose and acetate. This result shows that it is possible to develop more economically feasible and promising process of bioenergy production when using organic waste water as the carbon and other nutrient sources for cultivation of cyanobacteria.