

Atmospheric CO₂ capture by algae: negative carbon dioxide emission path

Carbon dioxide is one of the most important greenhouse gas, which concentration increase in the atmosphere is associated to climate change and global warming. Besides CO₂ capture in large emission point sources, the capture of this pollutant from atmosphere may be required due to significant contribution of diffuse sources. The technologies that remove CO₂ from atmosphere (creating a negative balance of CO₂) are called negative emission technologies. Bioenergy with carbon capture and storage may play an important role for CO₂ mitigation. It represents the combination of bioenergy production and carbon capture and storage, keeping carbon dioxide in geological reservoirs. Algae have a high potential as the source of biomass, as they present high photosynthetic efficiencies and high biomass yields. Their biomass has a wide range of applications, which can improve the economic viability of the process. Thus, this paper aims to assess the atmospheric CO₂ capture by algal cultures.

José Pires

*LEPABE - Laboratório de Engenharia de Processos, Ambiente, Biotecnologia e Energia,
Departamento de Engenharia Química, Faculdade de Engenharia, Universidade do Porto, Porto,
Portugal*

Publication

[Atmospheric CO₂ capture by algae: Negative carbon dioxide emission path..](#)

Moreira D, Pires JC.

Bioresour Technol. 2016 Mar 14