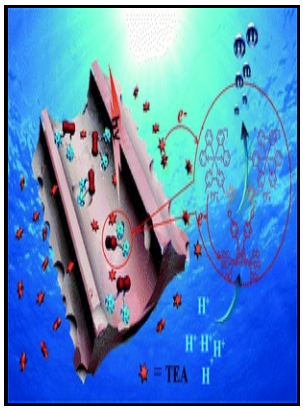
Use of immobilized hydrogenase for hydrogen production

Directorate-General Information Market and Innovation, Commission of the European Communities - Biohydrogen production by immobilized Chlorella sp. using cycles of oxygenic photosynthesis and anaerobiosis



Description: -
-Use of immobilized hydrogenase for hydrogen production
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EnergyUse of immobilized hydrogenase for hydrogen production
Notes: At foot of title page: Directorate-General for Research, Science and Education.
This edition was published in 1981

Tags: #Hydrogen #production #by #immobilized #Chlorella #vulgaris: #optimizing #pH, #carbon #source #and #light

Immobilized algal cells used for hydrogen production

Semicontinuous flask cultivation supplied the cells with sufficient nutrients while minimizing the toxicity caused by isobutanol.

Hydrogen photoproduction by immobilized n2

Ralstonia eutropha also known as Cupriavidus necator is a Gram-negative, facultatively chemolithoautotrophic bacteria.

Hydrogen photoproduction by immobilized n2

No data have been fabricated or manipulated including images to support our conclusions. Hydrogenase sensitivity to oxygen is a big challenge for this method, so that further research is needed to develop engineered hydrogenase so that it is not sensitive to oxygen inactivation. Open Access This article is licensed under a Creative Commons Attribution 4.

Hydrogenase

In the chloroplast reactor, oxidized ferrodoxin circulating from the hydrogenase bed would be reduced by photosynthetic interactions, and oxygen would be formed. The immobilized cells systems have advantages such as an increase in the cell retention time within bioreactors and higher metabolic activity than free cells Tam and Wong.

PHOTOBIOLOGICAL PRODUCTION OF HYDROGEN AND ELECTRICITY

Glucose, fructose, sucrose and malt extract were compared as organic carbon sources. With the growing body of experimental data in hand, mathematical models were constructed to demonstrate and map the cellular kinetics, mass transfer of heterotrophic and autotrophic substrates in

the hollow fiber, and the adsorption process in the resin column.

Hydrogen photoproduction by immobilized n2

The effect of temperature on hydrogen production by CCMP1619 was compared with the wild-type Chlamydomonas st rain 137c.

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