

Power farmING



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Power farmING – students group for developing algae reactors

About

Power farmING was originally part of the Interdisciplinary Bachelor Project of TUHH's Centre for Teaching and Learning.

After the end of that project in early 2016, this is its student-led continuation. All presented concepts will be used in the new design for the next generation of reactors.

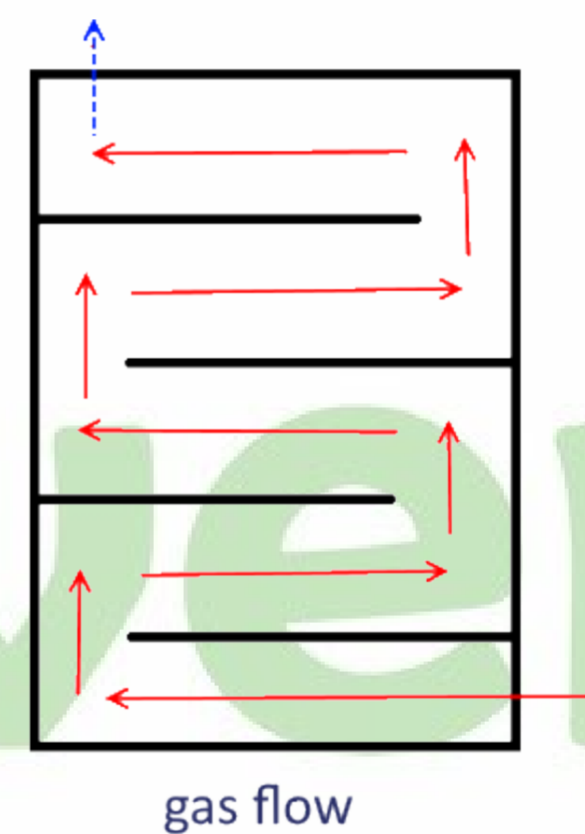
For more information please contact:
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Goals

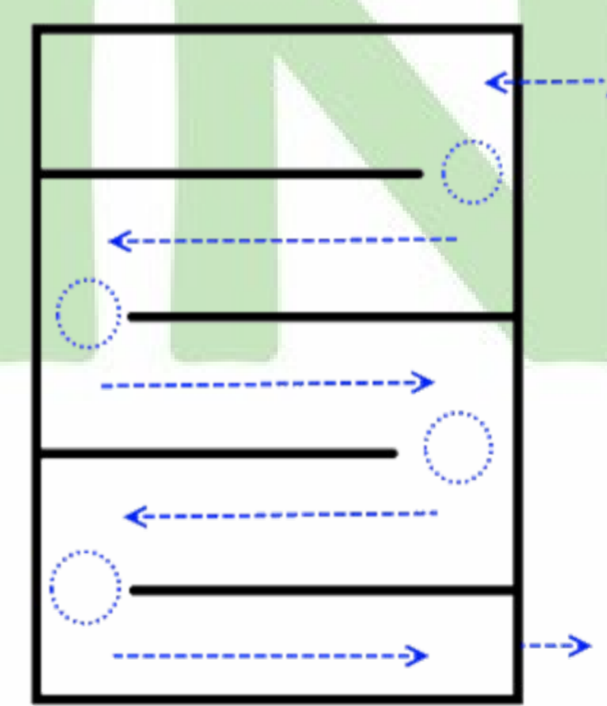
- Photobioreactor with maximum dimensions of 800x800x1500 mm
- Maximum operating weight of 100kg
- Cultivation and harvest of microalgae on lab-scale
- Low emission of CO₂
- Low initial energy consumption

Concept

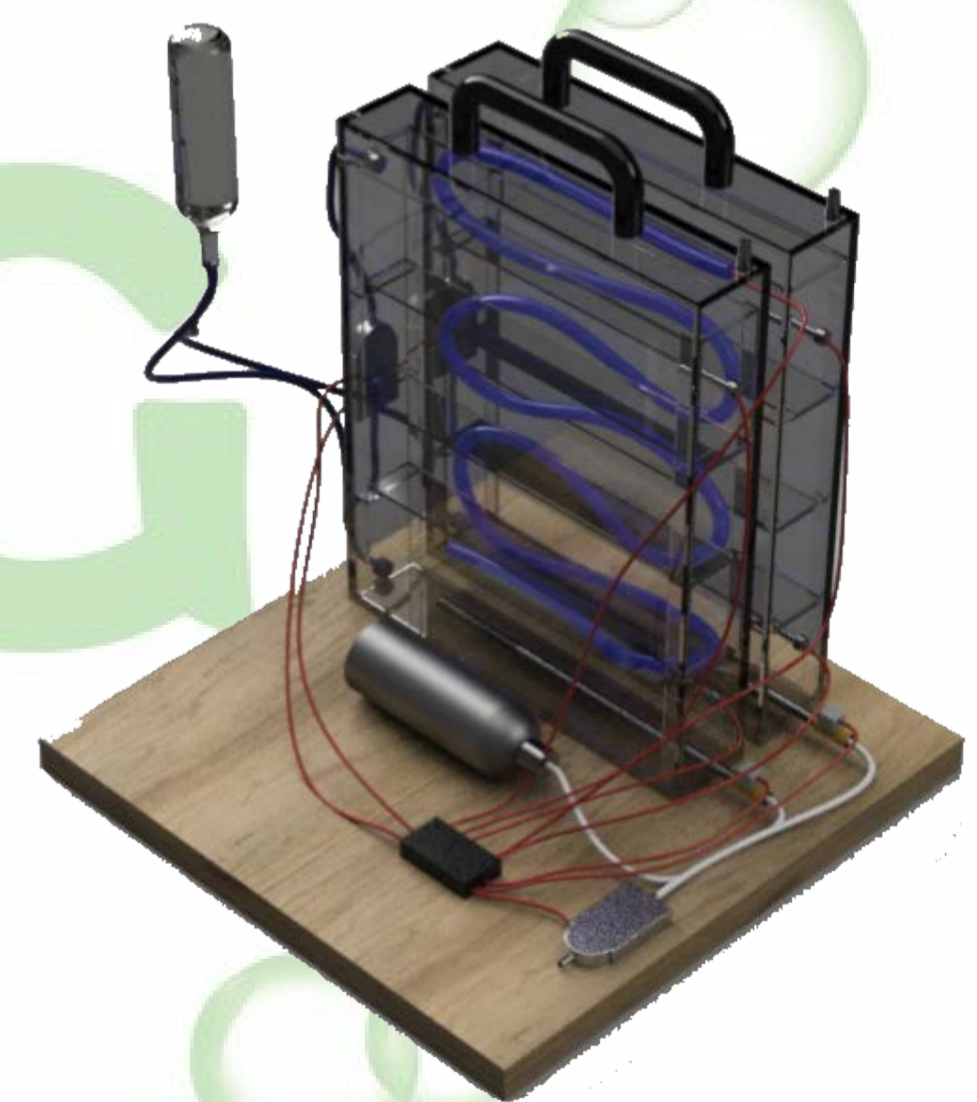
- Two redundant chambers
- Lighting with red and blue LEDs
- Curved boards within the chambers
- Water circulates in a counter current with air
- Water vortexes in the intermediate spaces
- CO₂ is being diffused from the bottom of the container
- Manual addition of nutrients
- Continuous pH and temperature monitoring



gas flow



culture flow



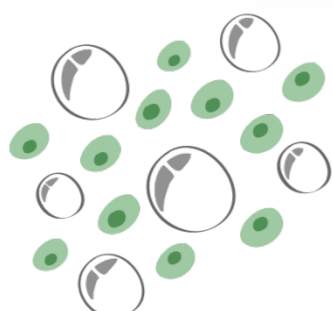
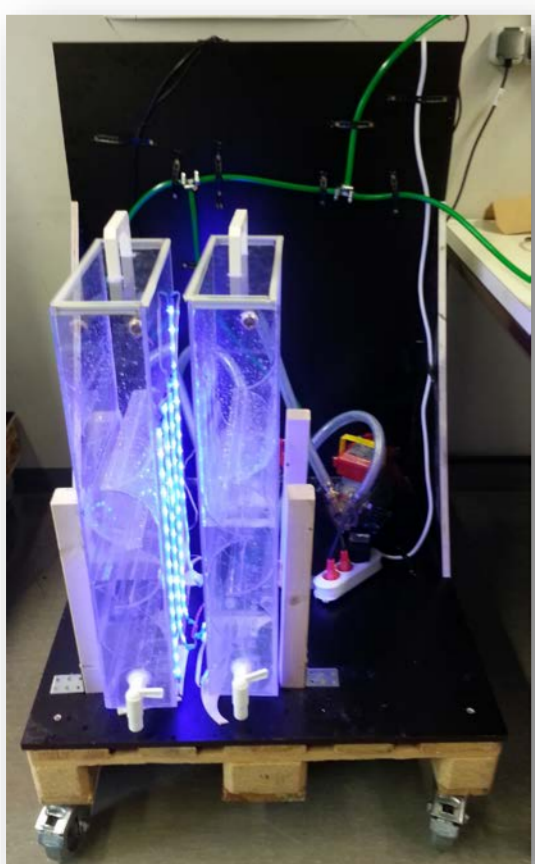
Search and Offer

Offer:

- Student-based concepts for small algae reactors

Search:

- Tanks for the cultivation of micro algae



Dieses Vorhaben wird aus Mitteln des Bundesministeriums für Bildung und Forschung unter dem Förderkennzeichen 01 PL 11047 gefördert. Die Verantwortung für den Inhalt dieser Veröffentlichung liegt beim Autor.

Gemeinsames Bund-Länder-Programm für bessere Studienbedingungen und mehr Qualität in der Lehre



GEFÖNDERT VOM