

3D printing living materials

Optimizing the longevity and photosynthetic ability of microalgae structures

This graduation project aimed to improve the mechanical properties of a sustainable 3D print material made of microalgae, in order to create an macro-porous 3D structure with enhanced longevity and photosynthetic activity.

The optimized microalgae bio-ink is a valuable material with sustainable benefits. The material can actively fight carbon dioxide pollution, is carbon neutral in production and is biodegradable. The technical optimization of the bio-ink in this study formed the first steps towards a functional living microalgae artefact.

