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Nature Inspired Approaches for Carbon Sequestration and Eco-plastic Production

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Extended Abstract

Microbial systems, including microalgae, bacteria and fungi offer benign solutions to the ever-increasing societal issues of water, air and soil pollution, and climate change caused by Greenhous Gas emissions. In particular challenging waste water streams, not amenable to conventional treatment and emerging from non point sources are a major challenge and cause billions of dollars in economic and environmental damage via the generation of harmful algal blooms (HABs). Research in the Bassi lab is focussed both on the remediation of such waste streams and also on resource recovery. Examples of ongoing projects such as on using microalgae cultivation for eco-plastic production will be presented. The potential of commercialization of these approaches and areas of future opportunities in research and development will be discussed.