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CO2 recycling into alternative proteins and entrants for cosmetics, pharma, fine chemicals



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Abstract

There is a need for new technologies to recycle CO2 on an industrial scale, economically, into valuable alternative proteins and entrants for the foods, feeds, fine chemicals (pharma, cosmetics, fragrances etc) industries.

NeoCarbons has successfully tested its patented industrial photosyntheis reactor design with the University of Zurich in a 50L pilot reactor, which represents a 2 orders of magnitude scale-up with respect to existing research equipment, with excellent results.

NeoCarbons enters the phase of semi industrial developments and looks for corporate, finance and research partners.

Biography

JL Roux Dit Buisson has an MSc from MIT chemical engineering, an MBA from Insead. He has worked more than 25 years in M&A and BD&L, coaching spin-offs and startups, responsible for turanarounds. He was granted 2 patents on a disruptive approach to growing micro-algae on an industrial scale, economically.

Dr Neutsch.....

Importance of Research and Development

As the demand for alternative proteins is estimated to be 200 million tons in 2035, compounded to the fact that the EU for example is fostering research in new micro-algae production technologies, the demand for efficient production capacities for micro-algae is buoyant.

The next steps of R&D for NeoCarbons are focused on an additional 1 order of magnitude scale-up of the proposed equipment, in order to reach semi-industrial prodcution capacities. The work will be based on results obtained in the lab-pilot equipment, and is mainly focusing on the hydrodynamics in a larger scale vessel, as the scientific basis for growing micro-algae at optimum productivity has already been demonstrated according to NeoCarbons' analysis of initial tests results.

Importance of this research and development cannot be subdued considering such potential and need for this equipment.

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About University

Research Partner: ZHAW Wädenswil - Bioprocess Technology Lab

ZHAW (Zurich University of Applied Sciences, Switzerland) is a leading center for applied sciences-oriented research and education in Switzerland. ZHAW is host to the Combined Competence Centre for MicroAlgae (CCMA), an inter-institutional contact point dedicated to the production, analysis and processing of biomass and compounds from photsynthetic organisms.

Dr. Lukas Neutsch (Group Head Bioprocess Technology)

Dr. Neutsch is leading a research team dedicated to the development and optimization of cultivation systems in photoautotrophic, mixotrophic or heterotrophic mode under contained and strictly controlled conditions, together with advanced PAT and process control tools. They hold expertise in bioprocessing of specialty products for high-quality applications (pharma, food, cosmetics), including the intracellular trafficking, expression, characterization and delivery of proteins and biopolymers from cyanobacteria and other microbial host systems.

Recent Publications (Minimum 5)

https://www.zhaw.ch/en/about-us/person/neuc/

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References

1. **https://www.zhaw.ch/en/about-us/person/neuc/**

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