Power-to-Gas Internship

Overview

Electrochaea GmbH is seeking an Intern to support the development and optimization of the Microbial Electrolysis Cell (MEC) technology for its biological methanation process. The Company is developing a disruptive new technology for conversion of carbon dioxide into methane, using renewable power and a variety of CO_2 feed stocks. Electrochaea's main power-to-gas technology represents a commercially viable solution for utility-scale energy storage, grid balancing, and carbon recycling.

The core of the technology is a proprietary biocatalyst – an adapted strain of methanogenic archaea, a single-celled anaerobic microorganism – which efficiently converts hydrogen and carbon dioxide into pipeline-grade methane for direct injection into the existing natural gas grid.

The Company is commercializing this power-to-gas technology in markets with high penetration of wind and solar energy (Denmark, Sweden, Germany, Benelux countries, UK, California, etc.), where the intermittent nature of renewable energy sources leads to prolonged periods of excess electricity production.

Description of Position

The Intern will be part of our Development department and work within a multidisciplinary team of engineers and biologists on the further development, optimization and scale-up of Electrochaea's Microbial Electrolysis Cell technology.

Detailed Tasks and Activities

- Perform experiments aimed to optimize the current Electrochaea MEC setup
- Develop hypothesis, understanding principles and support interpretation of experimental data.
- Utilize mass balance and chemical reaction modeling to identify key factors for process optimization and scale-up.
- Evaluate and translate the results generated and design conclusive experiments.
- Participate in process evaluations through the analysis and interpretation of experimental data, *in silico* data and existing literature to provide recommendations for further development activities.
- Communicate and appropriately document work in the form of internal reports/presentations

Starting date: 1st October 2019

Duration: 4 months minimum, full-time

For this internship position basic electrochemical and laboratory experience in handling chemicals and biological materials is required. This project is available either for internship or master thesis applicants.

All interested candidates irrespective of age, gender, disability, race, religion or ethnic background are encouraged to apply.

Please send your CV including your previous laboratory experience to jobs@electrochaea.com.
For questions about the project please contact:

Dr. Jose Rodrigo Tel. +49 (89) 3249367-15 E-Mail: jose.rodrigo@electrochaea.com
Dr. Manuel Hoerl Tel. +49 (89) 3249367-15 E-Mail: manuel.hoerl@electrochaea.com