

Electrochaea Signs CRADA with LLNL and SoCalGas to Develop a Single-Stage Electro-Bioreactor to Combat Climate Change

Electrochaea, Lawrence Livermore, and SoCalGas partner to revolutionize biomethane production, enhancing energy security and combating climate change

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Electrochaea, the world's leading technology provider for the production of carbon-neutral and fossil-free synthetic biomethane, today announced that it has entered a Cooperative Research and Development Agreement (CRADA) with the Lawrence Livermore National Laboratory (LLNL) and SoCalGas.

Under the CRADA, Electrochaea is working with LLNL and SoCalGas to develop and test a single-stage electro-bioreactor that can operate using excess renewable electricity and upgrade biogas to carbon-neutral synthetic biomethane. This biomethane can displace conventionally sourced natural gas to help decarbonize gas infrastructure. The project is funded with one million US dollars by the Department of Energy and will run for two years.

The project's objective is to merge the two essential steps in methane production, namely electrolysis and methanation, into a single, streamlined process unit. This technology can enable both processes to seamlessly integrate within a single reactor, leading to increased energy efficiency and reduced CAPEX.

This second-generation bioreactor is an addition to existing commercial 10 MWe, 25 MWe and 75



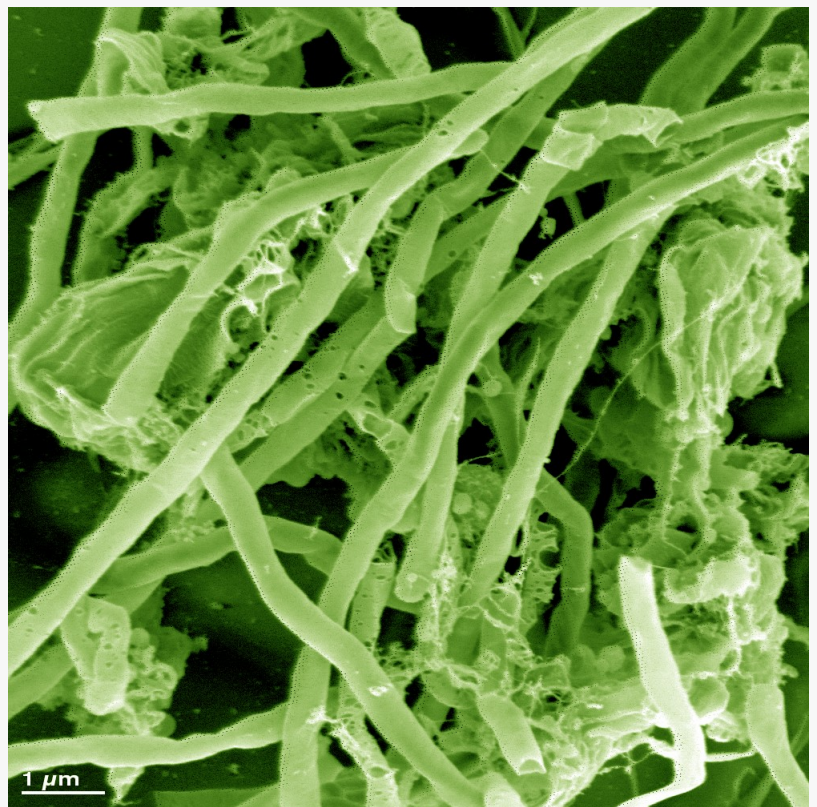
Electrochaea's Logo



Electrochaea's headquarters in Munich, Germany © Müller-BBM

MWe plant designs which are ready for market entry and are actively employed in several of Electrochaea's ongoing projects at various stages of project development. The continued advancement of this groundbreaking technology represents a significant stride in the evolution of Power-to-X technology.

Electrochaea stands as one of the global leaders in the development of a single-stage bioreactor solution, holding a prestigious position at the forefront of innovation. With a substantial portfolio of patents, the company has secured its place as a pioneering force, driving advancements and setting the standard for excellence in its field.



Archaea © Prof. Andreas Klingl

“Electrochaea’s team is highly committed to contributing to a secure, affordable, and environmentally friendly energy supply now and in the future. The new highly efficient single-stage bioreactor is an essential asset in this endeavor. We are excited to collaborate with SoCalGas and Lawrence Livermore, our esteemed long-term partners who are undisputed leaders in their respective fields. The enthusiasm to continue and expand this collaborative effort is a testament to the shared commitment to making a meaningful impact on the energy landscape. It is an honor to work with such high-caliber partners”, says Dr. Doris Hafenbradl, Electrochaea’s CTO and Managing Director.

About Electrochaea: Electrochaea provides technology to produce synthetic methane, a renewable fuel that replaces fossil natural gas and can be stored and transported in the existing gas grid. Electrochaea's patented process helps combat climate change by using CO₂ to generate a renewable energy source and provides a solution for long-term storage of intermittent renewable energy. Industrial-scale pilot plants have already been commissioned in the U.S., Switzerland, and Denmark. Electrochaea is headquartered in Munich, Germany, with offices in Denmark and the United States. Electrochaea is one of the Global Cleantech 100 List companies. Visit us at www.electrochaea.com.

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