

The project

EBIO aims at generating energy dense biofuels through electrochemical transformation of intermediate liquified biomass.

Launched in December 2020 with a budget of around 4M Euro, EBIO is a H2020 project that brings together partners from all over Europe with the goal of turning low value crude bio liquids into sustainable road transport fuels.

The consortium is built in order to create synergies between research, industrial and innovation partners with a shared target of developing the next generation of renewable energy technologies.

The impacts of EBIO will range from generation of knowledge and know-how in electrochemistry to the research and study of new and alternative ways for renewable energy generation together with the technical implementation in existing facilities with reduced CAPEX and OPEX.

PROJECT PARTNERS:



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🌐 EBIO H2020 Project



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101006612.



Biofuels through electrochemical transformation of intermediate bio-liquids



www.ebio-h2020.eu

The challenge

The availability of compact cost-efficient solutions for sustainable energy production is essential for renewables to become Europe's dominant primary energy source. EBIO contributes to achieve the EU's ambitious objective, by providing an innovative technical solution for the conversion of low value crude bio liquids into energy dense transport fuels.



Develop sustainable process designs



Electrochemical system for pyrolysis and lignin value chains



Develop electrocatalysis & electrode design.



Production of energy dense carriers

The vision of EBIO covers

Process design and integration and impact assessment

from feedstock suppliers to end-users in the refinery and chemical sectors. The selection of the feeds, pyrolysis liquids and kraft mill black liquor, is based on their availability as of date.

Small pilot scale (TRL4)

EBIO will validate the new technology and forms the basis for further scale up activities beyond the current proposal. No external source of hydrogen will be needed at the first stage hydro-processing of pyrolysis oil.

The process of upgrading liquified biomass

To environmentally friendly transport fuels consist of successive depolymerisation, hydrogenation and decarboxylation, optimised by developing electrode materials, cell designs, separation processes and efficient integration into existing biorefinery infrastructure.

The experimental development

supported by a broad sustainability analysis including economic feasibility, environmental footprint and impact on society and rural development.

Impacts of EBIO's project

