

# Biofuels Through Electrochemical Transformation Of Intermediate Bio-Liquids

Issue 7 / December 2024

EBIO is a four-year project that is part of the European Union's Horizon 2020 Research and Innovation Programme. It is set to be a game changer in the field of biofuel production with the aim to generate energy dense biofuels through electrochemical transformation of intermediate liquified biomass. The project launched in December 2020 with a budget of around 4 million euros. After some Covid-19 pandemic related start-up challenges, the project has successfully brought together partners from all over Europe, and has successfully reached its final year of research, all with the same goal: to turn low value crude bio liquids into sustainable road transport fuels. The consortium is built on strong foundations of research, innovation, and industrial knowledge. It consists of nine beneficiaries from seven different countries, among them some of the world leaders in the field.

## CONTENTS

- 1. EBIO Final Event Recording Now Available**
- 2. The Webinar Series is Now Complete**
- 3. EBIO: The Conclusive Steps of the Project – Press Release**
- 4. EBIO's Journey – Our LinkedIn articles series**



## 1. EBIO Final Event Recording Now Available

The EBIO project celebrated its successful conclusion with a final event on October 16, 2024, in Örnsköldsvik, Sweden. Hosted as a side event of the Nordic Wood Biorefinery Conference (NWBC) 2024 in a morning session called «Green Chemistry Approaches for the Wood Industry».

The event was filled with presentations from consortium partners, showcasing key discoveries, supply chain integration strategies, and scale-up possibilities.

The session was well-received, generating significant interest from both project stakeholders and external attendees.

For those unable to attend in person, the event recording is available on [YouTube](#).

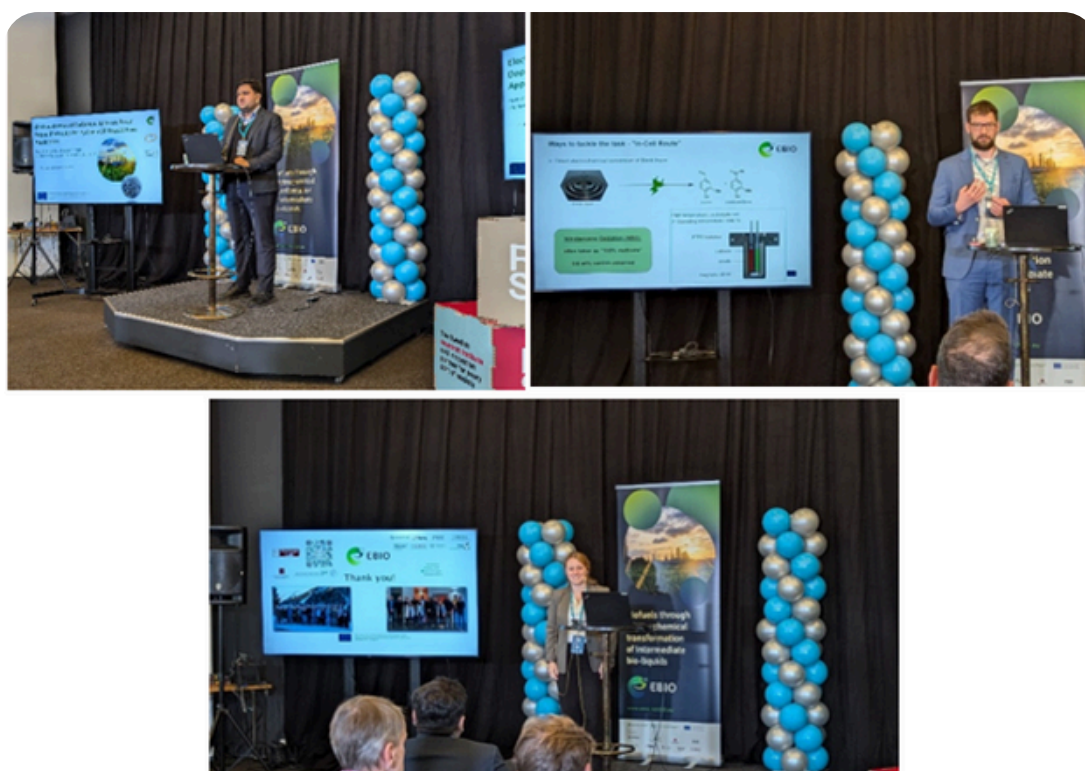


Figure 1. Highlights from EBIO final event.

## 2. The Webinar Series is Now Complete

Missed the final EBIO webinar? The recording is now available on [YouTube](#).

The webinar, organized by ETA Florence on November 26th, featured Matteo Gilardi (SINTEF) presenting the techno-economic assessment and process design of pyrolysis liquid upgrading, and Jurjen Spekreijse (BTG) presenting the results from the life-cycle assessment of the EBIO process.

This session marked the conclusion of a year-long webinar series that showcased the key outcomes of the EBIO project.

Overview of the Webinar Series:

- **EBIO Webinar #1** – Pyrolysis Oil: Production, Challenges, Developments, and Real-Life Uses
- **EBIO Webinar #2** – Connecting Heterogeneous and Electrocatalysis: Understanding Substrate Specificity
- **EBIO Webinar #3** – Upgrading Pyrolysis Liquid into Biofuel: Opportunities & Challenges
- **EBIO Webinar #4** – EBIO Process Design, Techno-Economic and Life-Cycle Assessment

Watch the Full Webinar Series on [YouTube](#).

### 3. EBIO: The Conclusive Steps of the Project – Press Release

After four years of dedicated research and collaboration, the EBIO H2020 Project has reached its conclusion.

Focused on advancing electrochemical technologies for upgrading bioliquids—by-products of the pulp and paper industry—EBIO provided a sustainable alternative to fossil-fuel-intensive processes. By eliminating the need for high-pressure hydrogen, the project demonstrated a more cost-effective and environmentally friendly route for bioliquid treatment.

The final event in Örnsköldsvik, Sweden, highlighted the integration of these innovations into existing industrial value chains.

As Dr. Roman Tschentscher, EBIO's coordinator, noted:

*“Our goal was not to produce a fuel directly in the electrochemical cell but to stabilize bioliquids, improving their long-term stability, energy content, and distillability for easier integration into refinery processes.”*

The project's achievements, including up to 90% reduction in greenhouse gas emissions, have set a strong foundation for further advancements in the field.

The full press release can be read here: [Press Release #4](#).

### 4. EBIO's Journey – Our LinkedIn articles series

EBIO might have concluded, but the knowledge it generated will continue to inspire. We're excited to share a series of articles highlighting insights and studies conducted during the project. Each piece showcases a different aspect of EBIO's work.

The full titles of the articles can be found in the right column.

1. Greener Fuels, Stronger Communities: How EBIO Technology Could Transform Innlandet, Norway
2. From Wood to Fuel: Electrochemistry's Role in the Bioeconomy
3. Electrochemistry in Action: Real-World Testing of EBIO's Innovations
4. EBIO's Integration in Existing Refineries for Sustainable Aviation Fuels Production







## PROJECT PARTNERS




## Contacts:

info@EBIO-h2020.eu

## Follow us:

<https://www.EBIO-h2020.eu/>

 @EBIO\_H2020

 EBIO H2020 Project

**Disclaimer**

The content of this newsletter cannot be considered as the European Commission's official position and neither the European Commission, EBIO project consortium nor any person acting on behalf of these organisations is responsible for the use which might be made of it. Although EBIO project endeavours to deliver a high level of service, no guarantee can be given on the correctness or completeness of the content of this newsletter and neither the European Commission, EBIO project consortium are responsible or may be held accountable for any loss suffered as a result of reliance upon the content of this newsletter.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006612.