Demonstrating sustainable value creation from industrial CO_2 by its thermophilic microbial conversion into acetone

PYROCO$_2$ (Demonstrating sustainable value creation from industrial CO_2 by its thermophilic microbial conversion into acetone) will demonstrate the scalability and economic viability of carbon capture and utilization (CCU) using the innovative PYROCO$_2$ bioprocess. Aim is to produce climate-positive acetone out of industrial CO_2 and renewable electricity derived hydrogen, as a platform for manufacturing chemicals and materials with a significantly reduced carbon footprint.

The PYROCO$_2$ project addresses the Green Deal call topic LC-GD-3-1-2020 – Closing the industrial carbon cycle to combat climate change – Industrial feasibility of catalytic routes for sustainable alternatives to fossil resources and has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 101037009.

The PYROCO$_2$ project is currently in its third year of implementation, and the entire consortium has achieved numerous compelling results in demonstrating the creation of sustainable value from industrial CO_2 along the entire PYROCO$_2$ value chain.

To further explore the progress achieved, PYROCO$_2$ hosted its first Exploitation Workshop. The workshop aimed to engage in discussions with stakeholders at the industrial level and representatives of neighboring EU projects regarding the advancements in industrial CO_2 transformation.

PYROCO$_2$ EXPLOITATION WORKSHOP

The PYROCO$_2$ exploitation workshop took place on November 8th, 2023, as part of the Ecomondo Fair and Exhibition. This fair, held in Rimini (Italy) from November 7th to 10th, 2023, stands as the premier event in Europe for new models of circular economy. The event was organized and moderated by CiaoTech - Gruppo PNO, the partner leader of the Exploitation and Dissemination strategies for the project.

The workshop was structured into 4 sessions.

SESSION 1 - THE PYROCO$_2$ PROJECT

In the first session of the workshop, a comprehensive overview on the PYROCO$_2$ project has been provided by Francesca Di Bartolomeo, representing the project coordinator SINTEF. Following, a presentation on one of the project's targeted end product(s) and the overall potential of PYROCO$_2$ was made by Cesar Barbosa from NORNER, and a discussion on Technology Intelligence Analysis and innovation landscape was provided by Anna Franciosini from CiaoTech – PNO Group.

Figure 1: from left to right, Alexander Wentzel and Francesca di Bartolomeo (SINTEF), Cesar Barbosa (NORNER), Anna Franciosini (CiaoTech)

SESSION 2 & 3 – INTERACTIVE SESSION

Anna Franciosini from CiaoTech - Gruppo PNO and Edgar Towa from Ecoinnovazione moderated two interactive questionnaires to collect feedbacks on market and technology trends and experts' opinion on sustainable value creation from industrial CO_2, as well as insights on social assessment of CCU technology and the role of stakeholders.

Figure 2: from left to right, Anna Franciosini (CiaoTech) and Edgar Towa (Ecoinnovazione)

SESSION 4 - TESTIMONIALS FROM OTHER R&D PROJECTS AND EXPERTS IN THE FIELD

The fourth session of the workshop has been dedicated to external stakeholders working in the same technology fields of PYROCO$_2$. Presentations from the neighboring EU projects VIVALDI, Bio-FlexGen and BioSferA have been provided by Elvira Serra (VIVALDI, online), Juan Francisco Gutiérrez Guerra (Bio-FlexGen), and Stefano Rebecchi (BioSFerA).

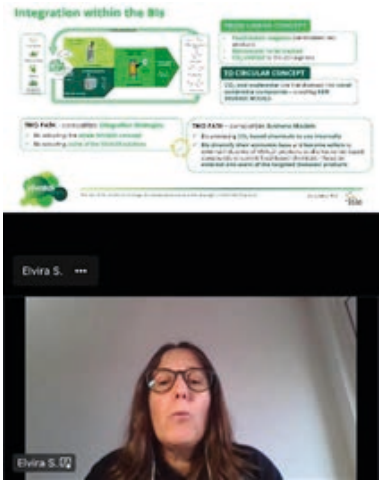

Figure 3: from left to right, Elvira Serra (VIVALDI), Juan Francisco Gutiérrez Guerra (Bio-FlexGen), Stefano Rebecchi (BioSFerA)

PYROCO$_2$ PRESENTED IN ECOMONDO 2023

In addition to organizing the Exploitation Workshop, PYROCO$_2$ was also presented to stakeholders and key players in the Bioeconomy field through an oral presentation held within the framework of the session 'Waste as Resources: Technological Advancements in Waste Treatment and Resource Recovery'. The presentation was delivered on November 7th, 2023, by Patrizia Circelli from CiaoTech - Gruppo PNO, highlighting the project's scope and the work that CiaoTech - Gruppo PNO is undertaking related to the exploitation of the project results.

Figure 4: Patrizia Circelli (CiaoTech) presenting PYROCO2 at the 'Waste as Resources: Technological Advancements in Waste Treatment and Resource Recovery' conference

In addition, PYROCO$_2$ was also displayed in the CiaoTech – PNO Group hub of projects, hosted in pavilion D3 stand 508.

Figure 5: from left to right, Patrizia Circelli and Anna Franciosini (CiaoTech), Alexander Wentzel and Francesca Di Bartolomeo (SINTEF), Pavel Hrabánek (RANIDO) at the CiaoTech booth

PYROCO$_2$ EXECUTIVE BOARD MEETING

On November 9th, 2023, the PYROCO$_2$ Work package leaders convened for and Executive Board (EB) meeting of the project. The meeting, held in Rimini (Italy), aimed to discuss all the latest significant results and milestones achieved up to October 2023. Each partner presented the progress made in their respective Work Package and outlined the next steps to be taken toward achieving the project's goal.

Want to learn more about PYROCO$_2$?
Visit the project website
and the official LinkedIn and Twitter accounts.

Subscribe to the newsletter to be always updated on the latest news!

PYROCO2 Partners

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