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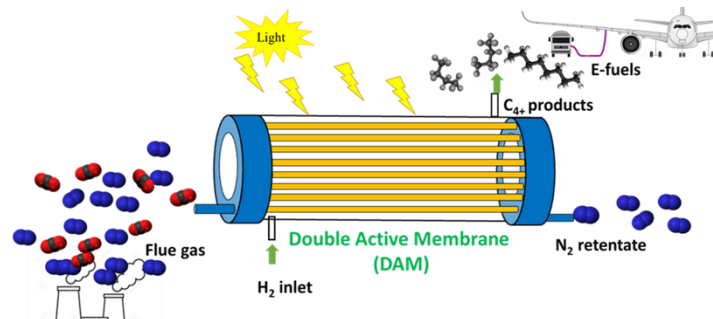
Funded by
the European Union



UK Research
and Innovation

Double-Active Membranes for a sustainable CO₂ cycle

DAM4CO₂, responding to the call "EIC Pathfinder Challenge: Carbon dioxide and nitrogen management and valorisation", aims at changing the existing paradigm within separation and utilization of CO₂ by coupling membrane and catalytic technologies.



DAM4CO₂ develops a novel membrane technology for the simultaneous CO₂ separation and its photocatalytic conversion to C₄-C₉ molecules, as renewable fuels.

The project will deliver a prototype, designed using the design-build-test-learn approach, for a proof-of-concept validation that will be tested in lab-conditions. The DBTL approach is inherent in each scientific/technological WP of the project.

Partners:



CNR (IT)



INSTM (IT)



UPV-ITQ (ES)



USwan (UK)



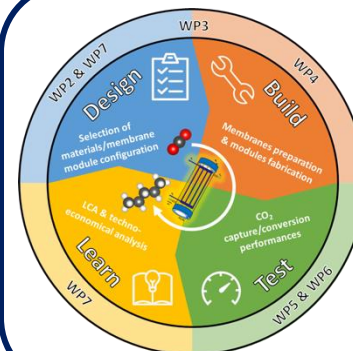
UEdin (UK)

PRIMALCHIT

PRIMALCHIT (ES)

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ME-SEP (PL)



- WP1:** Coordination & Management
- WP2:** Materials Synthesis
- WP3:** Materials Characterization
- WP4:** Membrane preparation & Characterization
- WP5:** Capture with Membranes
- WP6:** Conversion with Membranes
- WP7:** Multiscale Modelling & Life Cycle Assessment
- WP8:** Dissemination & Communication & Exploitation
- WP9:** Portfolio Activities

Our objective:

- Use of non-critical raw materials at any stage of the project
- Greener material and protocols for membrane production
- Development of the next generation membranes for CO₂ capture using advanced polymers and MOFs
- Development of photocatalytic membranes using mono and bi-functional catalysts for CO₂ conversion into C₄-C₉ molecules
- Integration of the CO₂ management and valorisation processes into a single device
- Design of novel membrane modules

Project number: 101115488

Project title: Double-Active Membranes for a sustainable CO₂ cycle

Project Acronym: DAM4CO₂

Granting authority: EISMEA and UKRI

Start date: 01/11/2023

Duration: 36 months

EU Contribution: 2 975 275.00 €

UK Contribution: 823 176.00 £

Contacts

PROJECT COORDINATOR

Dr. Alessio Fuoco, CNR – ITM

E-mail: alessio.fuoco@cnr.it

Website: www.dam4co2.eu

E-mail: dam4co2@itm.cnr.it



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