

ANEMEL: Green hydrogen from dirty waters



Our project

11

Partners

8

Countries

4

Years

€ 3.31M

EU Funds



Catalysts



Membranes



Cells



Stacks



Eco-design

Renewable energy sources

Most hydrogen today comes from fossil fuel sources. Separating the components in water is a cleaner process. To make **green hydrogen**, the energy required must come from renewable sources, like solar and wind.



Membranes

They're key components for the **separation** of gases and liquids. Moreover, they enable the movement of ions, charged particles that will eventually form hydrogen.

- ✓ Free from fluorinated "forever chemicals"
- ✓ Ready for scale-up through electrospinning

Our central goal: an electrolyser



Proof of concept 1kW_e, low-grade water, 100h operation, reduced carbon emissions

Catalysts

Some chemical compounds, called **catalysts**, accelerate reactions. Traditionally, water splitting catalysts required expensive and scarce metals, like platinum and iridium.

- ✓ **Without critical raw materials**
- ANEMEL will use more **abundant** and affordable elements, including iron, nickel and manganese.

Sustainability

ANEMEL focuses on sustainable solutions for electrolysis, studying aspects beyond the laboratory.



Ready for low-grade waters



Full life cycle analysis



Oxygen used for water treatment



Recyclable components

The European Innovation Council

The EIC is Europe's flagship innovation programme to identify, develop and scale up breakthrough technologies. It's established under the Horizon Europe programme.

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Green hydrogen portfolio partners

ANEMEL works closely with nine other projects in the "Green Hydrogen Challenge".