

## Activities



Cell and process development



System & prototype manufacture and scale-up



Demonstration and downstream integration



Road map to sustainable business

## Project Partners



## Contacts

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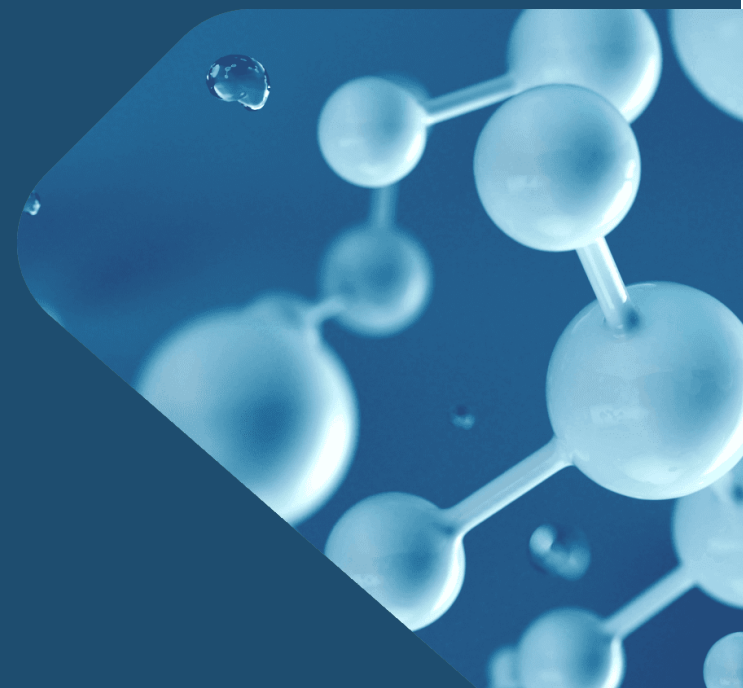


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An electrochemically produced oxidiser for modular, onsite generation of HYdrogen PERoxide (Grant Agreement No. 101091554). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Health and Digital Executive Agency (HaDEA). Neither the European Union nor the granting authority can be held responsible for them.



An electrochemically produced oxidiser for modular, onsite generation of HYdrogen PERoxide



# The Project

HYPER aims to help transform H<sub>2</sub>O<sub>2</sub> production from a large-volume, energy intensive chemical process to a smaller-scale, robust, modular, sustainable, electrochemical process, providing significant benefits.

## Where H<sub>2</sub>O<sub>2</sub> is used



TEXTILE INDUSTRY



PAPER PULP BLEACHING



CHEMICAL SYNTHESIS



ELECTRONIC INDUSTRY



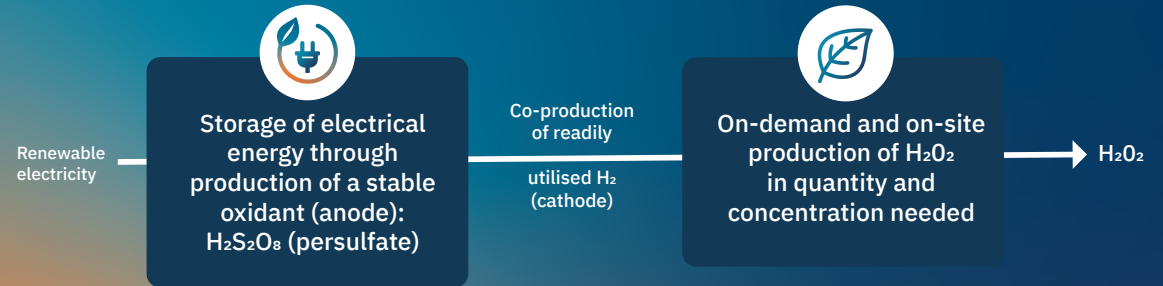
WASTEWATER TREATMENT



MEDICAL INDUSTRY

# HYPER Process

TRL6 - demonstration of H<sub>2</sub>O<sub>2</sub> on-site, modular, electrochemical production using stable oxidants



## ENVIRONMENTAL INNOVATIONS

- Up to 75% decrease in CO<sub>2</sub> footprint
- Energy consumption reduced by over one third
- Energy storage in the form of stable & strong oxidants
- Recycling of electrolytic components
- Energy efficient, safe & cost effective

## Current Process Drawbacks



Dependent on fossil fuel derived H<sub>2</sub>



Produced and shipped in large volumes, of which half is water



Energy intensive O<sub>2</sub> separation



On-site handling of unstable oxidant

## Benefits of HYPER

Flexible integration of H<sub>2</sub>O<sub>2</sub> production in downstream production lines

Versatility to other sectors and products

