

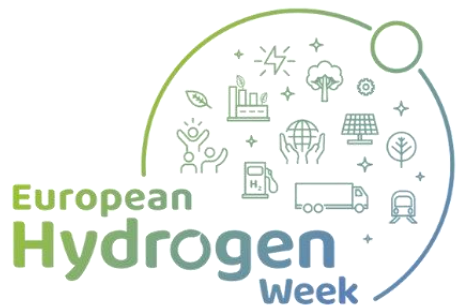
# Greenet



The network of Horizon Europe  
Cluster 5 National Contact Point.



Topic/area: **Renewable H<sub>2</sub> production (electrolysis, other routes)**  
Specific contribution to the topic/area: **Biomass conversion for H<sub>2</sub> production**



European Hydrogen Week 2024  
GREENET Pitch session  
TechForum, 19<sup>th</sup> November 2024



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**Our team**

## Ongoing projects

Hydrocarbons reforming for hydrogen production

Dry reforming of  $\text{CH}_4$  (DRM)

LPG steam reforming

Microorganisms as bio-catalysts for biomass conversion to hydrogen

PERFORMANCE

Microbial electrolysis cells (MECs)

Development of low or non-noble metal electrocatalysts for low temperature  $\text{H}_2$ -fuelled fuel cells

## Past projects

Low temperature steam reforming of ethanol over supported Pt and Ni catalysts

Purification of  $\text{H}_2$  rich gas streams ( $\text{CO}_2$  capture, CO oxidation)

Water gas shift reaction over supported noble metal catalysts

Glycerol and bio-oil steam reforming reaction over supported metal catalysts

Development of Pt- and Pd-based electrocatalysts for ORR and HOR

$\text{CO}_2$  hydrogenation to value added products over supported Pd catalysts and composite metal oxides ( $\text{CuO}/\text{ZnO}/\text{M}_x\text{O}_y$ )



Development of next generation synthetic renewable fuel technologies (HORIZON-CL5-2024-D3-02-02)

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl5-2024-d3-02-02>

Biomass reforming to produce H<sub>2</sub>



Development of alternative low-cost catalytic materials

Potential combination with other technologies for H<sub>2</sub> production (e.g. MECs or low T electrolyzers) and H<sub>2</sub> energy use (e.g. fuel cells) or storage

Research groups



Innovative low-cost catalytic/electro (or-bio) catalytic materials & processes (incl. scale-up)

Mathematical modelling - DFT calculations

Life Cycle Analysis (LCA)

Technologies for H<sub>2</sub> production

Processes for purifying H<sub>2</sub>-rich gas streams

Fuel cell technologies

H<sub>2</sub>-storage technologies



# Thanks!



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