Renewable energies | Hydrogen

HYDROGEN

OUR STRENGTHS

Focused on new energy technologies and sustainable mobility, IFPEN's R&I activities are aimed at developing **competitive and sustainable technologies**.

IFPEN can support the development of the industrial hydrogen sector by contributing its expertise, with multidisciplinary teams and an international dimension (European projects, JIPs, partnerships).

IFPEN's cross-cutting positioning throughout the "Hydrogen" value chain

IFPEN's expertise covers the production, storage, transport and different energy uses of decarbonized hydrogen. Some of its expertise is **directly mobilized** for the solutions it develops in this specific field, while other **cross-functional areas** of expertise can be applied to hydrogen for the energy transition:

Decarbonization of industry

IFPEN's CO_2 capture technologies contribute to the **decarbonization of biorefineries, the refining sector and industrial units**, which consume a lot of energy and emit high levels of CO_2 (steel and cement production).
>> See IFPEN's CO_2 capture solutions to decarbonize hydrogen.

The eco-efficient biogas purification processes developed by IFPEN can also support the production of decarbonized hydrogen. Biogas, a mixture made up of methane and CO_2 produced by a biological conversion process known as methanization, **offers the potential to produce hydrogen via reforming**.

Decarbonization of transport

Hydrogen can be combined with a **fuel cell or used directly as a fuel in an IC engine**, first of all in heavy trucks and off-road vehicles.
>> See IFPEN's hydrogen solutions applied to mobility

Hydrogen transport and storage

With its experimental capacity in the field of **corrosion** and its tried and **tested CO_2 capture technologies**, IFPEN is capable of overcoming the various problems associated with hydrogen storage and transport.
>> Read about IFPEN's expertise, tools and partnerships concerning this theme

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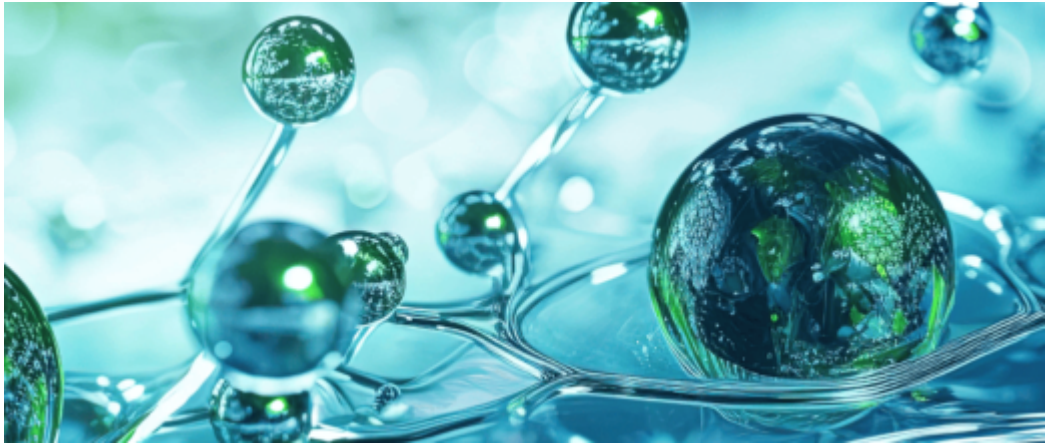
News



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News April 2024

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Training and Careers

News January 2024

IFP School launches an Advanced-Master program – Mastère spécialisé dedicated to hydrogen

Press release

Hydrogen

Fundamental Research

News September 2023

PEM Electrolysis for hydrogen production from water: is platinum strictly required ?

Hydrogen

Surface, interface and materials science

Hydrogen: Our strengths

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