



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 CO₂ 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 CO₂ (steel and cement production).

>> [See IFPEN's CO₂ 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 CO₂ 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 CO₂ 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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Introduction of green hydrogen in refineries

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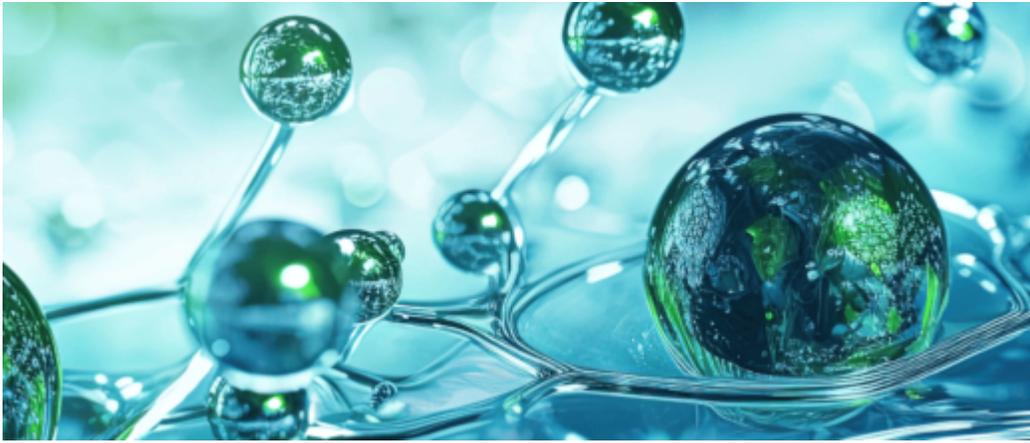


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News



IFPEN
News April 2024

Focus on natural hydrogen: IFPEN involve in IEA and DGEC initiatives



Training and Careers
News January 2024

IFP School launches an Advanced-Master program – Mastère spécialisé dédié à l'hydrogène

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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