

# Celcibus

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<https://www.innoenergy.com/discover-innovative-solutions/online-marketplace-for-energy-innovations/celcibus/>  
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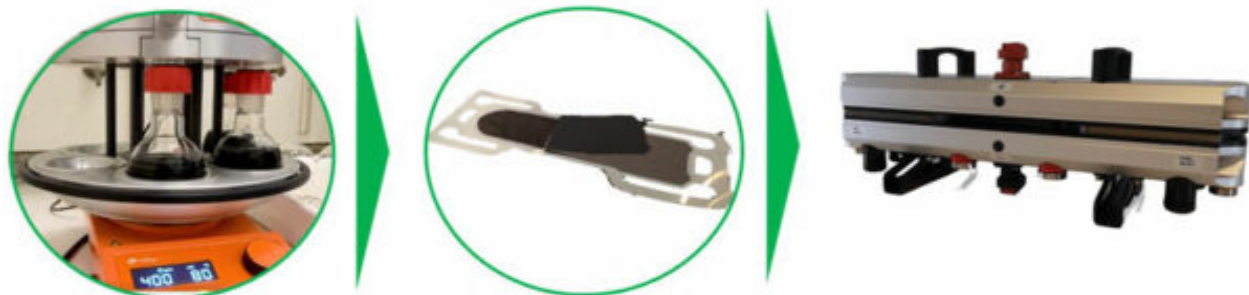
## De Challenge

A durable nobel metal-free catalyst for next generation fuel cells.

Current proton-exchange membrane (PEM) fuel cells rely on noble metals like platinum for their performance. Pt is a critical raw material making up over 50% of the fuel cell stack cost, but is limited in supply and with a volatile cost. Supply is concentrated in South Africa, Zimbabwe and Russia.

## De Solution

The Celcibus catalyst can lower the cost for the fuel cell stack by up to 30% with a more sustainable footprint. It is based on transition metals, much cheaper than noble metals, in the active sites. While traditional fuel cells require the recovery of noble metals, a process creating poisonous by-products, fuel cells using the Celcibus catalyst can be handled in the regular metal recycling process.



## De Businesscase

- Elimination of the dependence on critical raw materials.
- Up to 30% lower fuel cell stack cost.
- More sustainable life cycle process.
- Control over supply chain (no conflict minerals issues).

## About EIT InnoEnergy

EIT InnoEnergy operates at the centre of the energy transition and is the leading innovation engine in sustainable energy, bringing the technology and skills required to accelerate the green deal, progress towards Europe's decarbonisation goal, and improve energy security. Ranked as Europe's top impact investor in cleantech in 2022, named in 2023 as a top 10 active deeptech investor by Sifted, and recognised globally as the most active sustainable energy investor, EIT InnoEnergy backs innovations across a range of areas. These include energy storage, transport and mobility, renewables and sustainable buildings and cities – leveraging its trusted ecosystem of 1200+ partners and 29 shareholders.

EIT InnoEnergy is the driving force behind three strategic European initiatives which include the European Battery Alliance (EBA), the European Green Hydrogen Acceleration Center (EGHAC) and the European Solar Photovoltaic Industry Alliance.

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