New generation of AEM electrolyzers for green hydrogren production

Anion exchange membrane electrolyzer without noble metals or critical materials

DISRUPTIVE TECHNOLOGY

A new generation of electrolyzer, efficient like a PEM and scalable like an AE.

Power and surface: 08 kW and 100cm^2

PROBLEM SOLVING

Fossil fuel dependence mitigation.

ADVANTAGES

- **Lower cost:** The protocols avoid any precious metal and allow the reduction of costs for every component.
- **Scalability:** Due to the nature of technology, we can generate any size and fit the necessity of the costumers.
- **Compatible with renewable energies (RE):** The membrane electrolyzer can handle ON-OFF situations and be easily coupled to RE.
- **No PFAS:** The protocols are designed to avoid pollutants like per- and polyfluoroalkyl substances.
- **No corrosive environments:** The nature of the innovative idea can easily work in soft conditions, like diluted electrolyte conditions.
- **Compact design:** The designs and protocols allow the generation of compact and efficient devices, maximizing space.
- **Hydrogen production rate:** Efficient catalysts were chosen to be part of the AEMEL, generating highly efficient and productive devices.

BUSINESS MODEL

B2B

TARGET MARKET

Energetic sector, transport and chemical sector. Hydrogen market, specially green hydrogen and also electrolyzer manufacturer market

KEYWORDS

AEMEL, non-critical raw materials, scalability, green hydrogen, energy

AVAILABILITY

Open to negotiate

Needs

- Validation in small industries
- Public or industrial funding to bring the high power version real
- Strength arrangements with crucial partners (for massive production)
- Visibility at the industrial level

Milestones

- Team organization (CEO), Technicians, Marketing, Purchasing.
- Manufacture infrastructure
- Commerzialization

Requirements

- Investment
- Manufacturing
- Partnership with engineering companies

Roadmap

- Bring public or private funding
- Improve and scale up the devices
- Manufacturer construction
- Commercialize the new generation of electrolyzers for green hydrogen production

ICIQ Knowledge and Technology Transfer