

Redox-Mediated economic, critical raw material free, low capex and highly efficient green hydrogen production technology

**Dear reader,**

**Welcome to the latest edition of the REDHy Newsletter!**

In this edition, we share important updates and recent developments from our project, including highlights from the General Assembly meeting in Messina, insights from our very first webinar, and the participation of our partners in recent events.

As the year comes to a close, we would like to sincerely thank everyone who has contributed to the success so far of the REDHy project. We truly appreciate your dedication, teamwork, and support.

Best wishes for the holidays and a successful New Year.

**Kind regards,**

**The REDHy Team**

**Upcoming events**

**European Hydrogen Energy Conference 2026**

Website: [EHEC 2026](#)

Date: March 11-13 March 2026

Location: Seville, Spain

**EU Sustainability Week 2026**

Website: [EUSW2026](#)

Date: 9-11 June 2026

Location: Brussels, Belgium

**European Hydrogen Week 2026**

Website: [EHW2026](#)

Date: 26-30 October 2026

Location: Brussels, Belgium

## News

### REDHy Holds Fourth General Assembly and 24-Month Progress Meeting

On 2 December 2025, all REDHy project partners met in Messina, Italy, for the 24-months progress meeting.

Project results and update from the different work packages and tasks were presented; the discussions focused mostly on the strategy for the next project period: how to overcome some of the technical challenges and reach the project targets.

The day ended with a visit to the PEM/AEM laboratories at CNR and a dinner for participants.

The meeting also provided a reflection on the interim review progress (reached at the end of the summer), discuss next steps, and strengthen collaboration across the consortium.



## REDHY webinar: Electrolysis and Redox Flow Batteries: Combining the Two Worlds

On November 25th, 2025, the REDHy project held its first webinar, titled “Electrolysis and Redox Flow Batteries: Combining the Two Worlds”, where leading experts discussed the integration of novel electrolysis technologies with redox flow battery systems. The online event attracted participants from both research and industry, providing insights into the latest electrochemical methods and system innovations.

The webinar began with an introduction to redox flow batteries and water electrolysis, covering vanadium redox flow systems, CO<sub>2</sub> reduction, hydrogen evolution processes, and recent advances and challenges in water electrolysis, including the development of porous transport layers for anion exchange membrane (AEM) electrolyzers.

The second part highlighted innovations within the REDHy project, such as 3D-printed electrodes, optimized CROCs, CRM-free catalysts, advanced bipolar membrane designs, and a hybrid electrolysis system with decoupled gas evolution.

[Read more](#) on our REDHy website.



## Results

### REDHY's first scientific publication is now available!



We are proud to share the first scientific paper resulting from the REDHY project. Authored by our project partner **CNR**, this paper represents an important step forward in our research on sustainable hydrogen technologies.

**Title:** Durability of nanostructured non-precious MoS<sub>2</sub>-based electrocatalysts for H<sub>2</sub> evolution in PEM water electrolysis

**Authors:** Fausta Giacobello, Veronica Ciccì, Maria Aurora Mancuso, Alessandra Muscolino, Stefania Siracusano, Antonio Salvatore Aricò (2025)

Curious to learn more? Read the full publication [here](#).

## Milestones

The REDHy project has achieved a new milestone.

- Heterogeneous catalysts scaling up and optimisation

## Deliverables

The following deliverables are now available to read on our website:

- [D2.1: Theoretical calculations](#)
- [D5.2: Heterogeneous catalysts scaling up](#)

## Events

### Showcasing REDHY at WHTC 2025



The REDHY project had a presence at the World Hydrogen Technologies Convention (WHTC) 2025, which took place from 21-23 October in Dublin, Ireland.

Our partner, the National Research Council of Italy (CNR), delivered an oral presentation outlining recent progress and key findings from the REDHY project. This provided an opportunity to contribute to

international discussions on hydrogen technologies.

WHTC is a well-established international conference focusing on hydrogen energy and fuel cell technologies. It brought together researchers, industry professionals, and policymakers to discuss current research and market developments, promoting collaboration across the hydrogen sector.

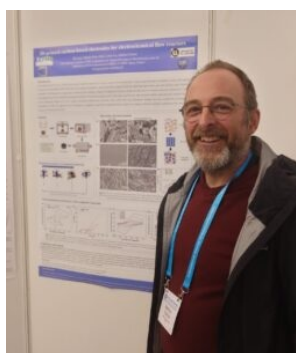
### De Nora showcases REDHy at INORG2025 conference



The INORG2025 conference gathered leading scientists in inorganic chemistry to share groundbreaking research, foster collaboration, and explore innovations in materials, sustainability, and energy. With an estimated 300-400 participants, the event featured plenary and keynote lectures, oral presentations, and poster sessions across diverse subfields.

As a REDHY partner, De Nora contributed to the conference through an invited keynote lecture delivered by Daniela Galliani. Her presentation highlighted REDHy's innovative approach to water electrolysis and its crucial role in enabling economically viable green hydrogen production. Positioned within the broader context of sustainability, the lecture also emphasized the important role of industrial chemical researchers in shaping a cleaner future.

### REDHY at the 76th Annual ISE Meeting in Mainz



From 7 to 12 September 2025, the 76th Annual Meeting of the International Society of Electrochemistry (ISE) took place in Mainz, Germany. This international conference brought together leading researchers, industry partners, and experts to explore the latest developments in the field of electrochemistry.

Our REDHY partner, CNRS, was actively involved throughout the event, contributing scientific presentations and chairing a session. CNRS presented a poster titled "3D-printed carbon-based electrodes for water electrolysis using electrochemical flow reactors," showcasing recent progress achieved within the REDHY project.

## Coffee break interview

### Get to know Angelika Knoll from DLR



**What was your original motivation to become a researcher/project manager?**

At school, I enjoyed workshop and math classes. When I turned 16, I wanted to study mechanical engineering for this reason. Therefore, I went to a school that specialized in this field. After graduating, I studied mechanical engineering at the University of Stuttgart. So I am not a traditional researcher. I

became interested in electrolysis through my master's thesis at DLR. Since I enjoyed the topic, I continued working in electrolysis.

**What is your (main) research area today?**

My area of research is electrolysis.

**What is the main focus of your team in REDHy?**

Our focus is on the REDHy system. We design and create the stack, then build the system around it. At the end of the project, we perform a duration test.

**Could you describe your favourite moment/satisfaction when working for the project and - more in general - for your organisation?**

It's great to see how the development of cell components and redox mediators is getting closer and closer to meeting the project's requirements.

**How do you expect REDHy results will affect your organisation and the energy storage sector?**

The REDHy project has the potential to advance two areas: electrolysis and redox flow batteries, as a system, as well as their individual components. Its major advantages are compatibility with renewable energies, decoupled gas evolution from the cell and decoupled hydrogen from oxygen evolution.

## REDHy partners



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