SWEETHY newsletter nr. 1 View webversion



#### Dear reader,

Welcome to the first edition of the SWEETHY newsletter. During the upcoming 4 years the SWEETHY-project will explore the production of green hydrogen directly from seawater. The challenging project requires development of the new type of materials, components and an electrolyser system, which will sustain the corrosive salty environment. Additionally, the newly developed products need to find the opportunities for facilitated market integration and industrial acceptance when ready, and therefore, the project will also focus on sustainability assessment and techno-economical aspects development chain, as well as on the symbioses with other industries. SWEETHY journey has only started, but it already gained the highlights that we are willing to share with you in this first edition of the SWEETHY newsletter.

Don't forget to follow the updates and share your thoughts!

Kind regards,

The SWEETHY team





The SWEETHY consortium consists of 9 partners from 7 different European countries. Click here to get an overview of all the SWEETHY project partners.

## **Upcoming event**

#### European Hydrogen Energy Conference 2026

Website: EHEC 2026

Date: March 11th - 13th, 2026

Location: Fibes II Congress and Exhibition

Centre, Seville, Spain

#### European Hydrogen Week 2025

Website: EHW 2025

Date: September 29th - October 3rd,

2025

Location: The Square, Brussels, Belgium

# Kick-off meeting in Borås Sweden

The SWEETHY project officially began with a successful two-day kick-off meeting in Borås, Sweden, on March 18-19, 2025. We focused on the four key objectives:

- 1. Developing materials for catalysts, membranes, bipolar plates, and porous transport layers capable of withstanding seawater conditions.
- 2. Developing and testing a scalable 0.5 kW stack.
- 3. Finding industrial partners capable of reusing by-products from the electrolyser plant.
- 4. Minimizing the environmental impact of the electrolyser.

We discussed in detail the project planned steps and targets, including electrocatalysts, membranes, corrosion protection and operational conditions for seawater electrolysis. The event also provided time for beginning of discussions about configuration of the electrolysis cell, electrolyser cell and stack prototype design, not least on sustainability work planned during the project.

Participants also had the opportunity to visit the RISE facilities, where they learned about the research and testing activities of RISE in corrosion, electrolysis, fuel cells, batteries, but also about the activities in maintaining primary measurement standards, as RISE hosts the Swedish National Metrology Institute.

The meeting fostered an informal yet highly productive atmosphere, with deep technical discussions and a focus on the project's critical paths and interlinkages. The successful kick-off sets a strong foundation for the SWEETHY project's future collaboration and innovation in sustainable energy. These few days together highlighted the team's high motivation and enthusiasm, while also offering everyone a taste of Swedish coffee culture.

# The SWEETHY coffee break: get to know Olesia Danyliv from RISE, Research Institutes of Sweden



Olesia Danyliv received her PhD in Materials and Chemical Technology with focus on development of ion-conducting materials for energy applications from the University Grenoble Alps (France) in 2015. Since then, her academic research and industrial experience were related to the broader

development of fuel cells and batteries. In 2024 Olesia joined RISE as a researcher in Hydrogen Technologies, where apart from the research work, she leads projects related to hydrogen production, hydrogen conversion and hydrogen implementation in transportation.

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

"I have always loved chemistry since I started learning it at school. During my bachelor studies at the university in 2008 I was given a task to make an overview of studies on fuel cells and that was a decisive point of getting myself into a research topic, which captured me, and into an idea that being a researcher is my destiny. After several experiences of pure laboratory development, I realised that it would be interesting to combine hands-on work with project development/management and luckily for me, RISE offered such an opportunity. I can assert that this is an amazing role."

Read the full interview here.

#### SWEETHY showcased at EFCF 2025

From July 1–4, 2025, the SWEETHY project was presented at the European Electrolyser and Fuel Cell Forum (EFCF) in Lucerne, Switzerland.

Held at the KKL Luzern, EFCF serves as a platform for sharing recent developments in hydrogen technology, fuel cells, and electrolysis. The conference brings together academic and industry representatives to discuss ongoing research and practical applications.

Project partners <u>CNR</u>, <u>ProPuls</u> and <u>IC</u> took part in the event. ProPuls hosted a booth (B22), where SWEETHY test cells and the intermediate SWEETHY 5-cell stack were displayed. Brochures with information about the project were also available at the booth.

The booth attracted a steady stream of visitors and interest from participants across the research and innovation community.

The project was mentioned in several presentations, including talks by Michel Prestat (IC) and Ulrich Rost (ProPuls).

Thank you to everyone who visited the booth. It was a valuable opportunity to connect and share updates on the SWEETHY project at EFCF 2025.





# Sister projects

The SWEETHY project will cluster its activities and collaborate with other projects in direct seawater electrolysis funded under the same call (HORIZON-JTI-CLEANH2-2024). The aim of this clustering is to align communication and dissemination efforts among the projects. We are organizing our very first joint symposium. Stay tuned for more information coming soon.

#### **ASTERISK**

ASTERISK aims to integrate seawater treatment with green hydrogen production using a PGM-free anion exchange membrane (AEM) electrolyser.

## **HySEas**

HySEas develops direct seawater electrolysis using a Bipolar Membrane Water Electrolyser (BPMWE) combining cation and anion exchange layers with a water dissociation catalyst.

#### Sea4Volt

<u>Sea4Volt</u> aims to develop a novel lowtemperature Anion Exchange Membrane (AEM) electrolyser for efficient, selective, and durable operation using direct seawater under a slight pH gradient.

#### ANEMEL

The <u>ANEMEL</u> project aims to develop efficient electrolysers powered by renewable energy.

Click here to read more about the sister projects on our website.











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