



Flexible ammonia synthesis technology for energy storage

The FASTER project aims to revolutionise the energy storage industry by validating the performance, techno-economic feasibility, and environmental impact of mild temperature NH_3 synthesis, boosting the decentralized production of green ammonia as energy and hydrogen vector.

Dear reader,

Welcome back to the FASTER newsletter, where we share the latest updates and key developments from the project.

*In this issue, we highlight **recent milestones and collaborative activities**, including our annual consortium meeting, the expansion of the partnership with new expertise, and growing engagement with sister projects and wider European initiatives. Together, these efforts reflect FASTER's ongoing commitment to advancing innovative solutions and strengthening the role of ammonia in the clean energy transition.*

We hope you enjoy the read!

Consortium Meeting in Cardiff

On 15th and 16th January 2026, the FASTER partners convened in Cardiff for the project's annual Consortium Meeting, hosted at the **Translational Research Hub of Cardiff University**. The gathering marked an important milestone, concluding the **first year of project activities**.

Over the course of the meeting, partners reviewed the **progress achieved so far**, discussed key results, and aligned priorities for the next phase of the project. The sessions provided a valuable opportunity to **exchange insights, address challenges, and further strengthen collaboration** across the consortium.

The meeting also reinforced the importance of **continued synergy** among partners, as FASTER moves forward in developing innovative solutions in the field of sustainable energy.

Looking ahead, the consortium remains committed to advancing the project's core objective: enhancing the potential of ammonia as an energy carrier to support more sustainable energy access and improved generation efficiency across Europe.



CERTH joins the FASTER consortium

The FASTER project is pleased to welcome the **Centre for Research and Technology Hellas (CERTH)** as a **new partner** in the consortium in the framework of the WIDERA programme.

CERTH is a leading research centre in Greece, at the forefront of basic, applied, and technological research addressing today's societal challenges. Within CERTH, the **ARTEMIS Laboratory** brings strong expertise in **membrane technologies, catalytic reactor design**, as well as **process modelling, simulation, optimisation, and assessment**.

By joining FASTER, CERTH will contribute to advancing the ammonia value chain through the **development and validation of a flexible NH_3 cracking process based on membrane reactor technology**. This work will play a key role in improving efficiency and operational flexibility, while complementing and extending the current project activities.

Their involvement represents an important step towards completing the full **“power-to-hydrogen-to-ammonia-to-hydrogen” pathway**, further strengthening FASTER's ambition to unlock ammonia's potential as a sustainable energy carrier.



CERTH

CENTRE FOR RESEARCH & TECHNOLOGY HELLAS

Strengthening Collaboration Across Horizon Europe Projects

FASTER continues to strengthen collaboration with sister initiatives working towards a shared vision of a sustainable and climate-neutral energy system.

In recent months, the project has engaged in exchanges with Horizon Europe sister projects, including **ILIMITED**, as well as with representatives from the **CAIPIRINH3A** project and the **LCER** programme. These interactions offered a valuable opportunity to better understand each other's approaches and identify potential areas of collaboration.

Discussions with CAIPIRINH3A and LCER partners focused in particular on the role of ammonia in the energy transition, highlighting its potential as a key enabler of sustainable energy systems. The exchange with ILIMITED also marked an important first step in exploring synergies

across topics such as energy systems integration, clean technologies, and flexibility solutions.

These dialogues underline the importance of collaboration in addressing shared challenges. By aligning efforts and exchanging knowledge, FASTER and its sister initiatives aim to maximise the impact of their activities and contribute to Europe's energy transition.

The consortium looks forward to continuing these exchanges and developing concrete opportunities for collaboration.



Webinar on Green Ammonia Energy

FASTER recently joined forces with **1 Cube BV** and a strong network of EU-funded initiatives — **AMBHER, ANDREAH, APOLO, CAIPIRINH3A, and MEASURED** — to co-organise a dynamic **workshop dedicated to advancing green ammonia and hydrogen solutions**.

The event, held in Eindhoven and online, brought together a diverse audience of experts, industry stakeholders, and policy representatives, creating a stimulating environment for exchange, discussion, and new connections across the sector.

Workshop

Green Ammonia Energy:
Intensified production, conversion and separation

This workshop highlights breakthroughs in intensified ammonia synthesis, advanced hydrogen and ammonia storage materials, and membrane-based ammonia cracking. It also showcases emerging clean power and combustion systems that position ammonia as a key enabler of energy and transport decarbonisation.

01 April 2026
09:00 - 17:00 CET
Aristo Eindhoven, NL
also streaming online

Free workshop
Space Limited

**ONE WEEK LEFT!
REGISTER NOW!**

Organized by (in alphabetical order):

AMBHER AndreaH APOLO CAIPIRI_{NH₃A} FASTER MEASURED

Clean Hydrogen Partnership
Funded by the European Union
CUBE

FASTER was represented by its coordinator, **Prof. Jimmy Faria** (University of Twente), who contributed to the panel discussion with a presentation on ***“Dynamic synthesis and cracking of ammonia as energy vector.”***

This joint initiative highlights the value of collaboration in accelerating innovation and strengthening the role of ammonia and hydrogen in Europe’s clean energy transition.

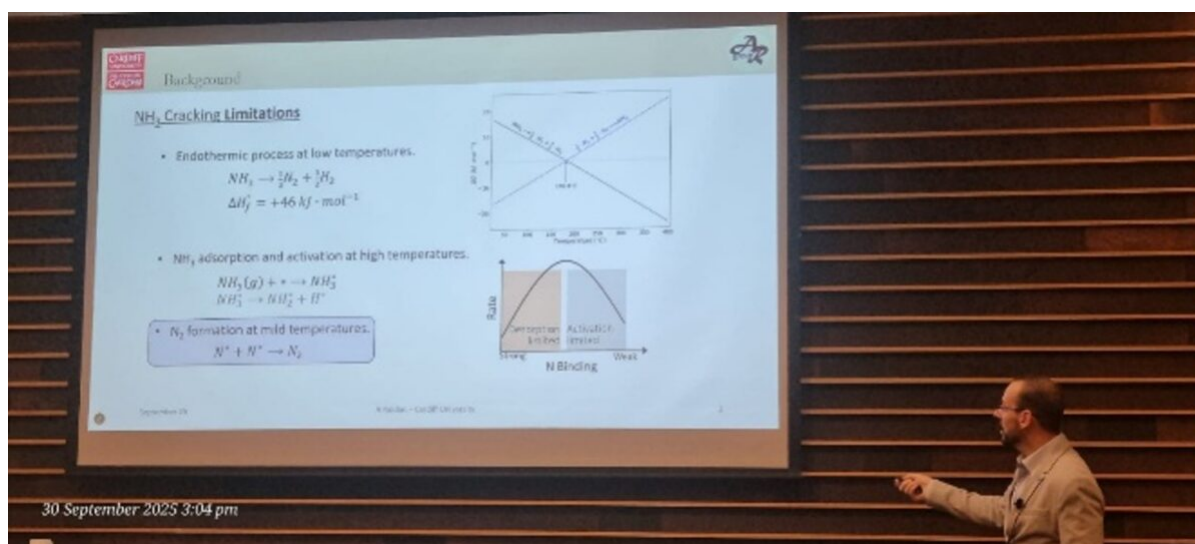




Events **FASTER** representatives attended

Alberto Roldan Martinez from the **University of Cardiff** participated in the **4th Symposium on Ammonia Energy, held in Minneapolis (USA)** from 28th September to 2nd October 2025, where he delivered a presentation entitled ***“Unlocking the Catalytic Potential for Ammonia Cracking: Clusters vs. Particles”***.

The symposium, hosted by the University of Minnesota, is a leading international forum that brings together researchers and industry experts to discuss advances in ammonia as a sustainable energy carrier, with a particular focus on production, storage, transport, and end-use applications such as power generation and off-highway transportation. The event featured plenary talks, technical sessions, poster presentations, and dedicated workshops, fostering collaboration and knowledge exchange across academia and industry.



Prof. Jimmy Faria from University of Twente was invited as guest speaker in the **Instituto de Tecnología Química (ITQ)** in **Valencia** (Spain) where he presented the **FASTER** project. He introduced the general concept of the project and the most recent results on the cracking on ammonia as energy vector. The seminar was attended by scientists and students from the institute working in the field of sustainable chemistry and energy vectors. This visit included also key discussions with the host institute to extend the cooperation between the research conducted in the project and the ITQ. From these discussions the team at University of Twente and ITQ submitted a proposal for the EU back in April of this year on ammonia cracking using exsolved catalysts.

Technical advancements

A **new catalytic material** based on metal oxynitrides has been developed at the University of Twente (NL) in cooperation with the team at Cardiff University. The material shows excellent activity at moderate temperatures in the absence of any metal functionalities. This represents a major milestone for the project.

In the next few weeks, the team at Politecnico di Milano will develop a system for testing the temperature swing ammonia absorption. This will serve to test the models of adsorption that are required for the prototyping of the final system. The team at Demcon Suster has started the design of the reactor and the next steps towards a final conceptual engineering will be ready before summer.

Want to keep up with the latest updates, milestones, and insights from the FASTER project?

Check out our [website](#) and follow us on [LINKEDIN](#) and [Bluesky](#).

Best regards,

The FASTER Project Team

For any enquiries, please don't hesitate to contact us at j.a.fariaalbanese@utwente.nl , we would be happy to hear from you!



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