



UNDERSTANDING PFAS EMISSIONS FROM PEM FUEL CELLS AND WATER ELECTROLYSERS



Dear reader, welcome to the UPeM community!

And welcome to our first UPeM newsletter!

On the 1st of March 2026, the UPeM project officially started.

UPeM, which stands for 'Understanding existing PFAS emissions in water electrolyzers and fuel cell systems through quantitative measurement techniques', is a 30-month project that will investigate whether hydrogen fuel cell systems and electrolyzers cause PFAS emissions and from what components these emissions originate.

For this, the UPeM consortium will develop standardised sampling and analysis procedures for all in- and outstreams of electrolyzers and fuel cells, including liquids, gasses and aerosols, that are produced or used by these systems. Based on the findings, UPeM will provide producers, users, and policy makers involved in the hydrogen field with accurate information on PFAS emissions and recommendations on how to minimise or mitigate them for fuel cells and electrolyzers.

The UPeM consortium consists of 11 partners and 1 affiliated entity from France, Germany, Spain, the United Kingdom, the Netherlands and South Korea.

Best regards,
The UPeM team

Introducing UPeM

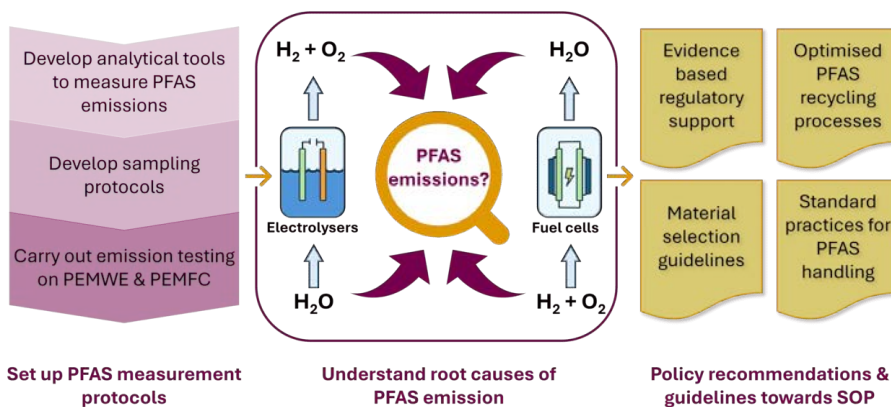
Thanks to their unique physical and chemical properties, PFAS-containing materials have been produced on commercial scale since the 1950s for a wide range of usages. PFAS persist in the environment and human body, and are linked to cancer, immune dysfunction, and hormonal disruption.

The deployment of proton-exchange membrane water electrolyzers (PEMWE) and fuel cells (PEMFC) is required to enable the zero (CO₂) emission goals. However, these PEMWE and PEMFC systems still rely on PFAS-type materials due to the lack of alternatives with comparable performance. It has therefore become a priority to elucidate the extent of PFAS-emissions resulting from the use of PEMWE or PEMFC systems.

To reach this goal, UPeM was created. UPeM will develop analytical tools to measure PFAS emissions, establish a robust methodology for sampling of all PEMWE and PEMFC in- and outstreams and subsequently carry out emission testing of PEMFC and PEMWE systems in operation to quantify PFAS release. This will allow to better understand the root cause(s) of PFAS release.

Ultimately, UPeM will provide i) standard operation procedures (SOP) for analysing PFAS release and handling, validated with industry actual use-cases, ii) recommendations for material selection and for proper usage of PEMWE and PEMFC, iii) mitigation strategies including filtering and operational/control strategies as well as strategies on the type of membranes to use for minimising PFAS release. Combined, UPeM will provide evidence based regulatory support and improved PFAS recycling processes to minimise or remove any potential PFAS emissions from PEMWE or PEMFC systems.

Understanding existing PFAS emissions in water electrolyzers and fuel cell systems through quantitative measurement techniques



If you are interested in finding out more about the UPeM project, make sure to check out our project.

Scroll through the website and explore:

- The [project overview](#)
- Interesting [News and Events](#) related to UPeM
- The [partners](#)

Want to get in contact? Fill out the contact form [here](#) and follow us on [LinkedIn](#)!

News

UPeM kicks off!

On the 28th and 29th of April 2026, the UPeM consortium gathered at the CEA research facilities in Grenoble, France, for the project kick-off meeting.

During this two-day General Assembly, the partners had the opportunity to meet each other in person and exchange the first samples for testing. Fruitful discussions were also held on starting up the project and project decisions were taken, including the selection of our project logo.

The Kick-off meeting ended with a tour of the CEA facilities in which the consortium had the chance to visit various research labs including the membrane and MEA production facilities and the aerosol analysis labs.

At the end of the meeting, the whole consortium was very excited to start work on the project. A big thank you to CEA for hosting us in Grenoble.



First project deliverables submitted

The UPeM project has completed its first deliverables.

D1.1 – Project Management Plan provides an overview for all partners on the project's organisational structure, important bodies within the consortium and rules and guidelines on communication within the project.

D1.2 – Data Management Plan describes the procedures in acquiring, handling and storing project data in line with EU open science recommendations such as the FAIR (Findable, Accessible, Interoperable, Reusable) principle.

Finally, D6.1 – DCE plan provides the projects dissemination, communication and exploitation approach.

All deliverables can be found [here](#) on the project website.

Project Partners



Consortium

UPeM brings together a multidisciplinary consortium of eleven project partners and one affiliated partner from Spain, France, Germany, United Kingdom, South Korea and the Netherlands.

Want to know more about the people working on the UPeM project?
Then you can get to know the partners [here](#) and follow us on [LinkedIn](#)!



Facts and Figures

Acronym: UPeM	Duration: 30 months	Start date: 1st March 2026	EC Funding: €1.999.930,-
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