



HyDRA Newsletter #2

We are delighted to share the second edition of the HyDRA newsletter. This newsletter offers an overview of the latest updates, activities, and dissemination efforts. All major updates, results, and official project information are available on our [website](#) and [LinkedIn](#).

HyDRA Recent Updates

The HyDRA consortium has successfully completed its first reporting period to the Clean Hydrogen JU, including the project's first review meeting. This marks an important milestone and provides an opportunity to reflect on the progress achieved across the project.

Among the key results so far is the publication of an open database covering 134 porous reservoir gas storage sites across Europe. HyDRA has also received 21 formation water samples and 34 rock samples from European reservoirs for microbial, geological and biogeochemical investigations. Microbial hydrogen conversion has been observed in eight of the 21 formation water samples investigated to date, providing important insights into processes that may affect hydrogen storage underground. The project is now integrating laboratory results into reactive-transport and reservoir-scale models to better predict potential hydrogen losses and support future site screening and storage optimisation.

In parallel, the consortium is finalizing individual sampling reports, which will be shared with the participating SSOs. These reports summarize key findings from the sampling activities and support the continued exchange of knowledge between the project and its stakeholders.

Looking ahead, an SSO Workshop is planned for later this autumn, bringing project partners and SSOs together to exchange insights, discuss findings and identify next steps.



HyDRA's project coordinator, Prof. Martin Fernø from UiB, will share midway insights from the HyDRA project at the upcoming CSSR Open Webinar Series 2026, exploring current progress, key challenges, and lessons learned from research into underground hydrogen storage.

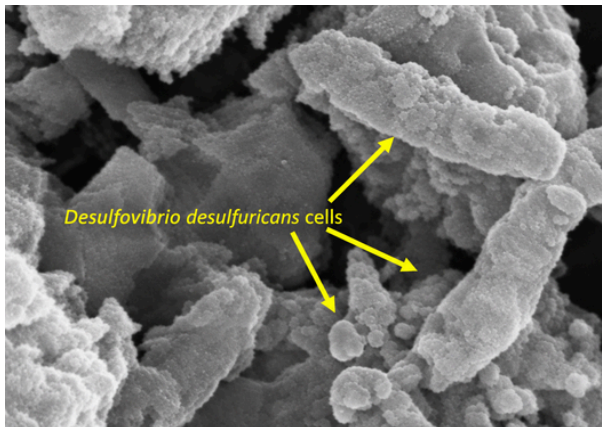
Title: Storing Hydrogen Underground:
Midway Insights from the HyDRA Project

Date & time: 2 October 2026, 09:00-10:00 CEST

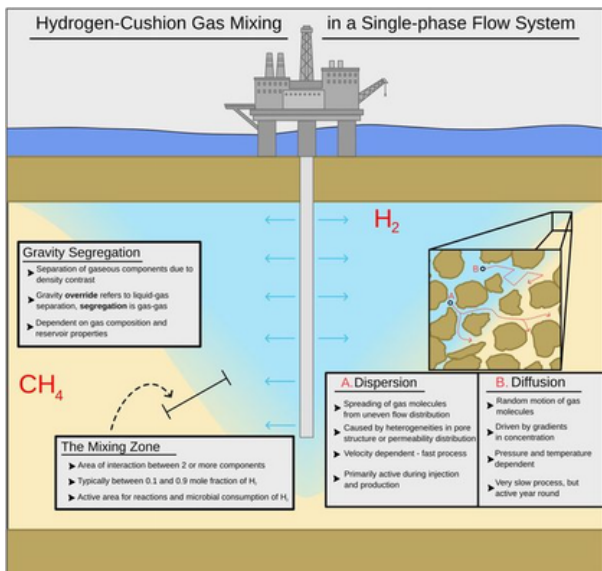
[🔗 Register here: https://lnkd.in/e_ggEvby](https://lnkd.in/e_ggEvby)

HyDRA's Research Activities

Below are selected notable developments from HyDRA's recent research activities.



The HyDRA project is making important progress in understanding how hydrogen behaves when stored underground in porous rock reservoirs. Through a combination of geological data collection, laboratory investigations and modelling, the project is building knowledge that can support the assessment and optimisation of future underground hydrogen storage sites across Europe. [Read more.](#)



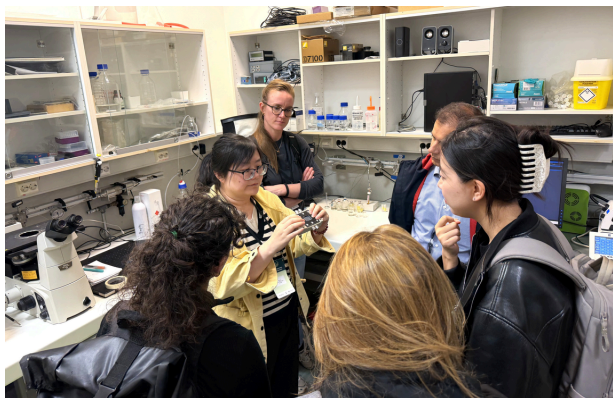
The HyDRA project has published four master's theses, a new peer-reviewed publication "Field-Scale Dispersion between Hydrogen and Cushion Gas in Underground Hydrogen Storage and Co-Relation with Gravity Segregation," and an openly available database bringing together geological data from 134 porous reservoir gas storage sites across Europe. The database includes information on parameters such as depth, temperature, pressure, lithology, porosity, and permeability. [Read more.](#)



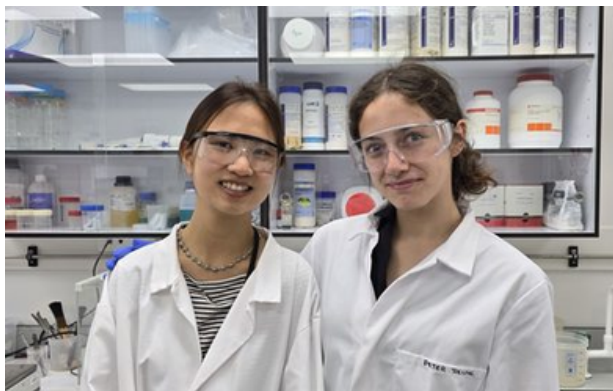
Dr. Peter Rendel from ESNZ participated in a New Zealand senior research leaders' delegation to Europe led by The Ministry of Business, Innovation and Employment (MBIE). HyDRA is now featured in MBIE's 10-Year Science Investment Plan. Dr. Rendel represented HyDRA at numerous events, including an international research collaboration summit hosted by the UK Research Office (UKRO). [Read more.](#)



Prof. Alexis Templeton from the University of Colorado Boulder, also a member of HyDRA's External Expert Advisory Board, held a technical workshop for the consortium on the topic "Investigating Hydrogen Production and Consumption in Actively Hydrating Rocks."



Several members of the HyDRA consortium gathered in Bergen, Norway, in connection with the 5th International Summer School on Underground Hydrogen Storage (UHS). The gathering also provided an opportunity for visitors to meet with HyDRA researchers at the University of Bergen and received guided tours of the laboratories. [Read more.](#)



The HyDRA project has welcomed several new team members from around the world, including Dr. Matteo Selci, Dr. Martina Cascone and Dr. Giuseppa Anzelmo to UNINA; Dr. Nawras Ghanem to BGR; Dr. Raymond Mushabe to TUC; James Raine and Natasha Tran to ESZN. Read more about our new members [here](#) and [here](#).

HyDRA Outreach Activities

HyDRA members have engaged in numerous outreach activities throughout the year, including partner visits, dissemination at scientific conferences, science fairs, webinars, and presentations at local, national and international level. Below are some selected highlights.



HyDRA has officially launched its introductory video. You can watch it on HyDRA's [website](#) or [LinkedIn](#). The video was produced by UiB with support from ESZN.



Dr. Petra Bombach (ISO) presented an overview of HyDRA's progress and key results at the 5th International Summer School on Underground Hydrogen Storage (UHS) in Bergen, Norway.



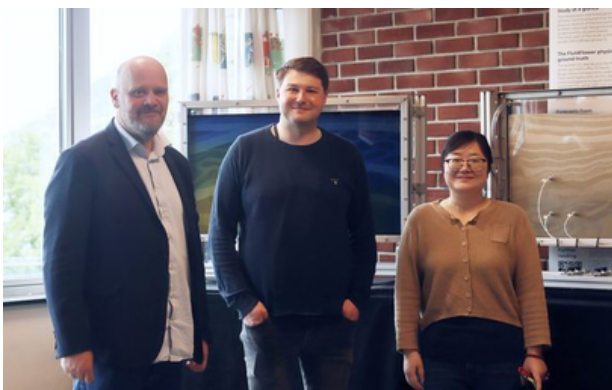
Dr. Birger Hagemann (TUC), Dr. Eike Marie Thaysen (CSIC-IDAEA), Dr. Na Liu (UiB), Dr. Chaojie Cheng (KIT), and Dr. Anja Dohrmann (BGR) attending InterPore 2026 in Nantes, France.



Dr. Nawras Ghanem (BGR), Dr. Birger Hagemann (TUC), Dr. Petra Bombach (ISO), Dr. Anja Dohrmann (BGR), Dr. Chaojie Cheng (KIT), and Dr. Martin Krueger (BGR) attended the DGMK e.V. event: Geoenergy Systems and Subsurface Technology in Münster, Germany.



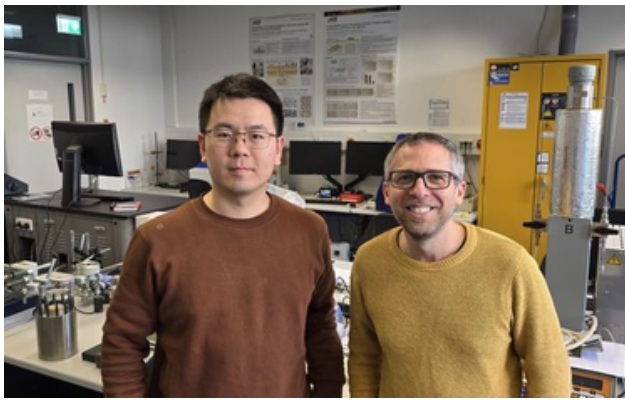
PhD student Frank Viveros Acosta (UiB) presented his HyDRA research at the hydrogen event HySchool Days 2026 in Oslo, Norway.



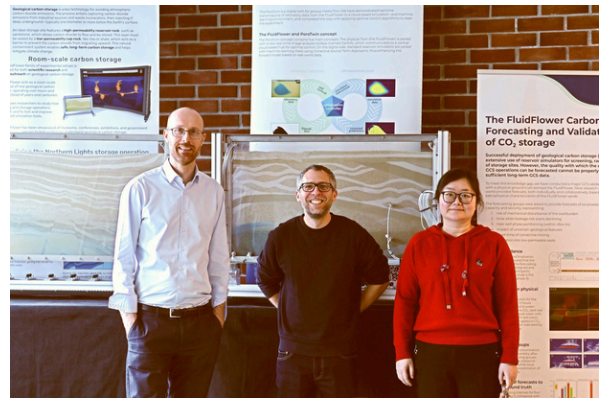
Prof. Geir Ersland and Dr. Na Liu welcomed Dr. Sebastian Hogeweg (Uniper) at UiB.



Dr. Josep Soler and Dr. Jordi Cama with Dr. Peter Rendel (ESNZ) at CSIC-IDAEA.



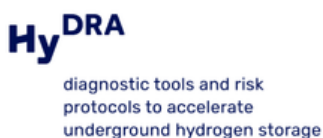
Dr. Chaojie Cheng with Dr. Peter Rendel (ESNZ) at KIT.



Prof. Martin Fernø and Dr. Na Liu with Dr. Peter Rendel (ESNZ) at UiB.

HyDRA Project Consortium

- **BGR** (Federal Institute for Geosciences and Natural Resources)
- **ESNZ** (Earth Sciences New Zealand)
- **IDAEA-CSIC** (Institute of Environmental Assessment and Water Research at Spanish National Research Council)
- **ISO** (Isodetect GmbH)
- **KIT** (Karlsruhe Institute of Technology)
- **TUC** (Clausthal University of Technology)
- **UEDIN** (University of Edinburgh)
- **UiB** (University of Bergen)
- **UNINA** (University of Naples Federico II)



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