



Organisation name and website: University of Edinburgh (UEDIN), https://www.ed.ac.uk/	
General Description	The University of Edinburgh is one of the largest and most successful universities in the UK with an international reputation as a centre of academic and research excellence.
Scientific group of reference	Primary Supervisor Dr Katriona Edlmann is the Chancellor's Fellow in Energy in the School of Geosciences at the University of Edinburgh. She currently serves as Specialist Adviser for The House of Commons Scottish Affairs Committee Hydrogen and Carbon Capture in Scotland inquiry and on the UK Government Department for Energy Security and Net Zero (DESNZ) Hydrogen Advisory Council. She is currently supervising 3 PhD students whose research focuses on the geological storage of hydrogen, atmospheric impacts of hydrogen emissions and risk-based analysis.
Key Research Facilities, Infrastructure and Equipment	The Applied Geoscience and Hydrogen Laboratory, which is a member of the European Carbon Dioxide Capture and Storage Laboratory Infrastructure (ECCSEL), (https://www.ed.ac.uk/geosciences/about/facilities/all/applied-geoscience). The facilities combine state of the art experimental multiphase flow rigs and X-ray Microtomography pore scale imaging to study multiphase flow and reactive transport during hydrogen storage. Pre and post rock analysis is achieved using a suite of analysis techniques including SEM, XRD, XRF, ICP-MS, the electron probe, and any of three ion microprobes.
Involvement in Research and Training Programmes	1.H20202 HyUsPRE: (Oct 2021-Dec 2023) Grant agreement ID: 101006632. Edlmann is a project Co-I and work package lead. 2.H2020 PilotSTRATEGY: (April 2021-March 2026). Grant agreement ID: 101022664. Edlmann is a project co-investigator. 3.UK EPSRC HyStorPor: (Sept 2019- August 2023) Grant Agreement ID: EP/S027815/1 Co-I and work package lead. 4.US National Science Foundation, Partnership for International Research and Education (PIRE): Four networks for Geologic Hydrogen Storage (Jan 2023-Dec 2026), Co-Investigator. 5.EU H2020 FracRisk: (June 2015-May 2018). Grant Agreement ID: 636811. Assistant coordinator and work package lead.
Publications/datasets/ softwares/ Innovation Products/ other achievements	1.“Enabling large-scale hydrogen storage in porous media – the scientific challenges. Energy Environ. Sci.” https://doi.org/10.1039/D0EE03536J 2.“Geological Hydrogen Storage: Geochemical Reactivity of Hydrogen with Sandstone Reservoirs” https://doi.org/10.1021/acsenergylett.2c01024 3.“Pore-scale imaging of hydrogen displacement and trapping in porous media” https://doi.org/10.1016/j.ijhydene.2022.10.153 “Thermodynamic and transport properties of hydrogen containing streams” https://doi.org/10.1038/s41597-020-0568-6 4.“Relative Permeability of Hydrogen and Aqueous Brines in Sandstones and Carbonates at Reservoir Conditions.” https://doi.org/10.1029/2022GL099433