

Pyrochemical Research Laboratory

Project lead: Prof. Andrew Mount



THE UNIVERSITY
of EDINBURGH

The Pyrochemical Research Laboratory (PRL) is an open-access national user facility, established to provide academic, public, and private sector organisations with access to state-of-the-art equipment to support world-leading research in molten salt pyrochemical processing.

The laboratory consists of a suite of interconnected controlled atmosphere dry-boxes. These are equipped with the necessary furnaces, cell systems, potentiostats and other equipment for characterisation, required for research into, and development of, each of the essential elements of pyrochemical reprocessing at the laboratory scale.

There is flexibility in the configuration of the PRL, with users able to request individual modules to demonstrate the feasibility of individual components of pyrochemical reprocessing. Alternatively the entire facility may be utilised to demonstrate a complete pyrochemical process, including monitoring and analysis.

Access to the PRL facility is facilitated by the lab manager, Dr Justin Elliott (Justin.Elliott@ed.ac.uk) who can provide advice and guidance on utilising facility equipment to meet your research needs.

Aims of the PRL

The University of Edinburgh established the PRL facility, in partnership with the

Department of Energy and Climate Change (DECC now BEIS), and it is affiliated with the National Nuclear User Facility (NNUF). The PRL facility is unique in providing the facilities to develop and demonstrate integrated pyrochemical reprocessing of nuclear fuel, using fuel-relevant non-radioactive compositional mixtures at laboratory scale, along with the required process monitoring.

The PRL facility is therefore a unique research capability, providing hands-on user access to state-of-the-art equipment and instrumentation, utilising medium scale inventories, enabling the UK to deliver internationally competitive R&D.

Capabilities and Equipment

The PRL facility has four interconnected but individually bookable glove boxes, each tailored to a given stage of a pyroprocessing system with associated equipment.

Please consult <http://www.prl.chem.ed.ac.uk/capabilities-and-equipment> for more details.



Contact details

Please email Justin.Elliott@ed.ac.uk to discuss your potential project.

Availability

Up-to-date information about availability, in light of the COVID situation, is available at <https://www.nnuf.ac.uk/prl>.