Molten Salts in Nuclear Technology Laboratory

PI: Dr Clint Sharrad

The University of Manchester
Dalton Nuclear Institute

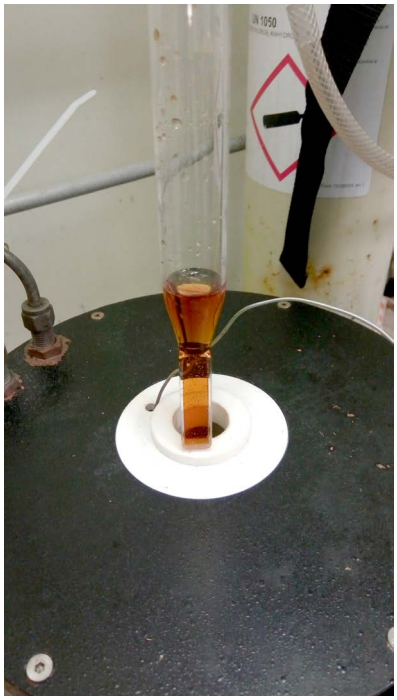
UCL

THE UNIVERSITY of EDINBURGH

The University Of Sheffield.

Dalton Cumbrian Facility

© University of Manchester. Image courtesy of Dalton Nuclear Institute



Np(IV) in molten LiCl-KCl eutectic

Image courtesy of Hugues Lambert and Clint Sharrad – University of Manchester

The MSNTL aims to provide a molten salt R&D capability for studying fluoride salts in nuclear systems within the UK for the first time:

- Enabling the UK's expertise in chloride salts from pyroprocessing research to alternative salt systems in order to explore expanding research areas such as Molten Salt Reactor technologies.
- Providing an interdisciplinary hub for molten salts research with radioactive materials.

Equipment to include

- Numerous materials corrosion test rigs
- Gravity-fed molten salts flow loop
- Molten salts irradiation test rig
- High temperature column for dynamic ion exchange studies with molten salts
- Bespoke gloveboxes and supporting infrastructure for handling molten salts with radioactive material
- Supporting furnaces of various types
- TGA/DSC coupled with GC-MS
- High temperature rheometers
- Potentiostats
- Various existing spectroscopic and electrochemical kit.

Network of locations

- Prime hub in the **Centre for Radiochemistry Research** (University of Manchester) for medium active to "hot" work
- University of Edinburgh for low active work, also linking with the **Pyrochemical Research Laboratory**
- **Dalton Cumbrian Facility** for radiation studies
- Input from UCL and University of Sheffield.

Contact details

Please email **clint.a.sharrad@manchester.ac.uk** to discuss your potential project.

Availability

The Molten Salts in Nuclear Technology Laboratory is currently under development. Please consult **https://www.nnuf.ac.uk/molten-salts-nuclear-technology-laboratory** for the latest information.