DMEX and LFCR jointly propose a

Post-doctoral position (M/F) “Novel approach for in-situ Lithium recovery – a case study using time-resolved X-ray tomography” (100%)

Project summary

This project aims to drastically reduce the quantity of water used in the production of lithium thanks to innovative flow control at the pore scale. Real lithium containing rocks will be integrated in a tailor-made test cell, enabling to reproduce the field conditions in the lab. Various flow control strategies will be tested and the flow paths inside the porous rock will be observed in real time thanks to time-resolved X-ray tomography. The effluent will be analyzed using ICPMS, hence allowing to quantify the impact of the control strategy on the recovery efficiency.

This work, linked to reactivity in porous media and multiphase flows, is part of a panel of ongoing projects in partnership with various industrial and academic partners.

Desired profile

We are looking for a highly motivated, communicative person with interest and background in the proposed research project.

- The candidate should hold a PhD degree in physics, engineering or a similar discipline. Prior experience with experimental research is a must. Prior experience with X-ray tomography, ICPMS or data analysis is not mandatory, but does strengthen your application. Some technical skills can come in handy when setting up the experiment. Knowledge on reactive flow in porous media under reservoir conditions is an asset.
- The candidate should have the ability to effectively perform independent research. On the other hand he/she should also possess the necessary verbal and written communication skills to collaborate effectively in a team environment and to communicate his/her research to the broader public.
- Fluency in English is required. Knowledge of French is an asset.

Location an practical aspects

The successful applicant will be hosted by UPPA at the DMEX Centre for X-ray Imaging (http://imagingcentre.univ-pau.fr/). He/she will work under the supervision of P. Moonen (DMEX) and P. Creux (LFCR) and will collaborate closely with C. Pecheyran (IPREM) for the analysis of the effluent. The position is limited to 12 months. The envisaged starting date is February 12th 2024 but can be altered in mutual agreement. The net salary depends on your personal situation (because of taxes) but is typically around 2100-2200 euros/month.

Applications

Interested candidates should electronically submit their CV and cover letter as well as the names and contact information of two references to P. Moonen and P. Creux (peter.moonen@univ-pau.fr, patrice.creux@univ-pau.fr). Any other way of applying will not be considered. We consider until a suitable candidate has been identified.