UNIVERSITY OF ALBERTA

Postdoctoral researcher in accelerated carbonation of mine tailings and brines

Commitment to diversity:

The University of Alberta is committed to an equitable, diverse, and inclusive workforce. We welcome applications from all qualified persons. We encourage women; First Nations, Métis and Inuit persons; members of visible minority groups; persons with disabilities; persons of any sexual orientation or gender identity and expression; and all those who may contribute to the further diversification of ideas and the University to apply.

The Opportunity:

We invite applications for **one postdoctoral position** in environmental mineralogy and geochemistry in the Environmental Economic Geology Laboratory (https://eeglgeochemistry.co) at the University of Alberta. The successful applicant will conduct laboratory studies and field pilots for carbonation of mine tailings and waters generated by the minerals and energy industries. The goal of this work is to develop and implement novel solutions for carbon negative mining.

We are seeking a motivated and creative postdoctoral colleague to develop laboratory- and field-based trials for accelerated carbonation of (1) hard rock mine tailings and (2) waters produced by oil and gas extraction.

The successful candidate will have opportunities to conduct fieldwork and experiments on campus and at operating mines. The postdoctoral researcher will become part of a dynamic research team led by Dr. Siobhan (Sasha) Wilson with opportunities for inter-laboratory collaboration and exchanges.

Institutional information:

The University of Alberta is located in Edmonton, Canada near the Rocky Mountains. It is one of Canada's largest post-secondary institutions, and the Department of Earth & Atmospheric Sciences (EAS), with more than 55 faculty, is one of its largest and highest impact Earth Science departments. Geobiology, biogeochemistry and resource geology are signature strengths in EAS, which has superb in-house analytical facilities for research in these fields (https://www.ualberta.ca/earth-atmospheric-sciences/).

Qualifications:

The successful candidate will have a Ph.D. or equivalent degree in Earth sciences or a closely allied field. They will be independent, creative thinkers, and team players who can work across fields and with industry partners as part of a large, interdisciplinary group. Fluent English is required for the position and a full driver's licence is beneficial. The candidate must be technically capable in the laboratory and have experience doing fieldwork in mining environments and/or remote localities. Experience conducting field-based experiments is highly advantageous.

Candidates should have superior skills in one or more of: clay mineralogy, quantitative X-ray diffraction, isotope geochemistry, aqueous geochemistry, electron and X-ray imaging techniques including synchrotron-based techniques, soil geochemistry including field-based monitoring, carbonate sedimentology, geomicrobiology, resource geochemistry, mine site remediation, and carbon mineralization.

Terms of appointment:

The initial appointments will be for a period of 1 year, with the possibility of renewal based on performance and funding availability. Salary is dependent on experience of the candidate. Healthcare benefits and 4 weeks of paid leave are provided as part of the terms of employment.

How to apply:

Review of applications will begin on 22 June 2022 until the position is filled. The successful candidate will be expected to commence work by August 2022 or thereabouts. Applications should consist of (1) a short cover letter addressed to the hiring committee that outlines how the candidate fulfills the requirements of the position, (2) a full CV, (3) a 1−2 page letter of research interests that aligns with the project, and (4) a list of contact information for no less than 3 referees. Applications should be sent as a single PDF to sawilson@ualberta.ca. Queries about this opportunity should be sent to the same email address.