



Post-doctoral researcher in processing, extraction, separation and valorization of critical and strategic elements

Background and overview: Critical and strategic elements (CSE) include elements such as rare earth elements (REEs), lithium, graphite, antimony, cobalt and copper. Given their growing importance, the development of advanced processes that allow their responsible exploitation, particularly in hydrometallurgy, is an important subject. Thus, the person sought will join the research teams of Professors Jean-François Boulanger and Lucie Coudert to address themes including:

- Upgrading REEs from primary and secondary sources by hydrometallurgical means
 - Pre-separation of REEs in preparation for solvent extraction steps.
 - Recovery of REEs from apatite by-products or mine effluents.
- The person will also be required to develop or collaborate in research projects related to the valorization of other CSEs, in particular through the supervision of highly qualified personnel (PhD, MSc and BSc interns).

Location: The successful candidate will ideally be based at the Institute for Research on Mines and the Environment (RIME), specifically at the Rouyn-Noranda campus of the Université du Québec en Abitibi-Témiscamingue (UQAT). The work will also be supported by a team of specialized professionals. The RIME focuses on finding environmentally sustainable solutions for the lifecycle of mines. This project will be funded by funds from NSERC and the FRQNT.

Financial support: A minimum salary of \$60,000 per year is offered, plus benefits.

Profile sought: A completed or soon-to-be completed PhD in the field of hydrometallurgy, metallurgical or process engineering, chemical engineering or chemistry or other field deemed relevant. A good record of scientific publications is required. Must be independent and have good teamwork skills and an ability for student supervision. Fluency in programming process simulators or knowledge of spectrometry (ICP-AES) for REE analysis will be considered as assets.

Duration : 1-year contract, starting in August 2024 or later.

To apply: Send 1) cover letter, 2) CV (with publications), 3) university transcripts 4) names and contact details of two referees. The position will be open until it is filled and priority given to applications received before **June 21, 2024**. Send your complete application to jean-francois.boulanger@uqat.ca and lucie.coudert@uqat.ca.

Jean-François Boulanger, Eng., Ph.D., Professor, Phone: 418-262-5271

Lucie Coudert, Ph.D., Professor, Phone: 819-762-0971 ext. 2572



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