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PhD position in Geochemistry at the University of Alberta

A funded 4-year PhD position in the Department of Earth and Atmospheric Sciences at the University of Alberta, Edmonton, Canada is available immediately in the group of Prof. Daniel Alessi. The student will conduct doctoral research within the project, “Extraction of valuable metals from wastewater, brine, and acid mine drainage” funded by the Future Energy Systems program (www.futureenergysystems.ca).

The focus of the research program is to develop novel sorbents and processes to extract and concentrate lithium and other potentially valuable metals from industrial wastewater streams. In addition to sorbent development and testing, the PhD student may be involved in downstream processes such as purification of metal concentrate solutions and the generation of high purity metals-containing salts that meet or exceed commercial standards. Extensive training in materials characterization techniques, including but not limited to X-ray diffraction, electron microscopy, synchrotron-based X-ray absorption spectroscopy, and infrared and Raman spectroscopy, will be a core component of the research. The PhD student will be expected to present research results at national and international scientific conferences and prepare manuscripts for publication in reputable peer-reviewed journals.

The Environmental Geochemistry Laboratory at the University of Alberta (www.alessilaboratory.com) was founded in 2013, and hosts a diverse and collaborative group of postdoctoral fellows, graduate, and undergraduate students. Preferred applicants will have a master’s degree in a field such as geochemistry, materials science, environmental or chemical engineering, or materials physics; however, exceptional applicants with bachelor’s degrees will be considered. Applicants should send the following documents to Prof. Alessi by email (alessi@ualberta.ca): (1) a short description of your qualifications and reasons for interest in the position, (2) a curriculum vitae or resume, and (3) the names of 2-3 academic or professional references. Applications received by October 15, 2020 will receive full consideration.