

## PhD Position in Environmental Microbiology: Bioleaching

Vale Living with the Lakes Centre (VLWLC), Laurentian University, Sudbury, ON

The VLWLC is an interdisciplinary research and monitoring institute that prides itself on the strong culture of collaboration and science communication it has established. The award-winning building houses the well-equipped laboratories of governmental, industrial and university scientists. Consequently, the institute is an incubator of new ideas and approaches for the advancement of environmental science.

The Centre is looking for motivated candidates to work on the following project, under the direct supervision of Nadia Mykytczuk, NOHFC Industrial Research Chair in Biomineralization, Bioremediation and Science Communication. The project constitutes the Elements of Biomineralization Network, a national research consortium and \$4 million initiative funded by the Ontario Ministry of Research and Innovation. It is comprised of academic and industry partners including but not limited to the Universities of Toronto, Waterloo and British Columbia, CSIRO Australia, Hatch, Mirarco, Glencore and the Centre for Excellence in Mining Innovation.

**Project:** Given the advantageous nature of bioleaching over current smelting (metal-extraction) practices, the Mykytczuk lab is interested in developing *in situ* passive heap leaching technology in Northern Climates. Note that similar technology may also be used for long-term passivation (bioremediation) of AMD from mine waste piles. Hence, developed IP will be broadly applicable.

**Description:** Please note that this is a **funded** position; external scholarships are an asset but not necessary for consideration of applicants.

Student will be primarily involved in

- Developing, managing and sampling from a pilot-sized operation (first of its kind locally);
- Measuring microbial activity/function in the leaching process
- Characterize the hydrology, geochemistry and microbial leaching rates of heap substrates

### Preferred competencies:

- Experience in, and/ or ability to, conduct fieldwork in all weather types;
- Past experience in DNA extraction, quantification and PCR from microbial cultures;
- Past experience in, or a general understanding of, conducting metagenomic analyses;
- Experience with the safe handling of potentially hazardous materials.

### Requisite qualifications:

- An MSc in geochemistry, environmental engineering, environmental science, geology/ hydrogeology, microbiology or equivalent; OR
- A relevant background in the same with or without industry experience;
- Demonstrated ability to work effectively in a multi-disciplinary team.

**Apply:** Interested candidates should submit electronic copies of

- An updated CV
- A 1-page statement of interest

- Copies of recent transcripts
- TOEFL score (if international applicant)
- Contact information of 2 referees

Applications are due to Dr. Nadia Mykytczuk (nx\_mykytczuk@laurentian.ca) by 5 pm EST on July 1, 2017. Please cite 'PhD Applicant- Heap leaching' in the subject of your email, and ensure the attachment of all documents in PDF format to the same email.

**Position details:**

- Start date: September 2017 / January 2018.
- Duration: 4 years

**Links:**

- VLWLC: <http://www3.laurentian.ca/livingwithlakes/>
- Mykytczuk Lab: [https://laurentian.ca/faculty/nx\\_mykytczuk](https://laurentian.ca/faculty/nx_mykytczuk)

*Laurentian University is committed to employment equity and strongly encourages applications, which may include self-identification in a covering letter, from aboriginal persons, women, persons with disabilities and visible minorities. It will, therefore, provide accommodation in accordance with the Ontario Human Rights Code at any stage of the recruitment process.*