



Hydrometallurgy and Environment Group

Robert. M. Buchan Department of Mining

Queen's University, Kingston ON

www.hydrometallurgy.ca

MSC AND PHD OPENINGS

The Hydrometallurgy and Environment Group at Queen's University has several immediate positions for **Ph.D.** and **Master's** students.

In order to be considered for the Ph.D. positions, the candidate ideally should have a Master's degree in materials or chemical engineering or chemistry, with a strong background in engineering, or chemistry or electrochemistry. Master's candidates ideally are the graduates of Chemical Engineering, Metallurgical Engineering departments or similar fields.

Interested? Please send your resume to Dr. Ahmad Ghahreman: ahmad.g@queensu.ca.

Details of the Projects: sponsored by the largest Canadian and International Mining Companies, the research projects will focus on the *bacterial extraction of gold* from gold ores, as well as *design and engineering of novel reagents* for gold extraction. The projects are interdisciplinary as those include the chemical and electrochemical processing, bio-reaction studies, kinetics and thermodynamics studies, etc. Followings are the highlights of the projects:

- Thiosulfate gold leaching process: recently commercialized by Barrick Gold Corp, thiosulfate gold leaching (TGL) is said to be the future of the environmentally-friendly gold extraction processes. However currently only 1 plant in the world operates the TGL process. We want to see more TGLs around ... with this project, we want to take the TGL process to the next level!
- Gold bioleaching: Did you know some type of bacteria can solubilize gold? We are excited to take those bacteria from the nature to the industry! Come join us!
- Arsenic immobilization: Mining activities have been producing large mass of arsenic around the world. Arsenic is a nasty element, and extremely toxic! We are currently developing a process to put an end to the arsenic problem! Contact us if you want to hear more...

Positions to start May or September 2018. Contact:

Prof. G.: ahmad.g@queensu.ca

Visit us: www.hydrometallurgy.ca

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