

PhD Positions Available - Li-ion Battery Materials

@Materials Engineering, McGill University

HydroMET Group of Professor G. P. Demopoulos¹ and the Energy Materials Theory Research Group of Professor Kirk H. Bevan²

We are looking for two PhD students to work on development of new high energy density cathode materials in Li-ion batteries. The first position is focuses on experimental work (synthesis and characterization) and the second one on computational materials design.

PhD position 1: The student will undertake synthesis of targeted cathode materials with hydro/solvo/thermal/mechanochemical methods and perform comprehensive characterization (including operando at Canadian Light source) and electrochemical analysis. Previous experience in advanced characterization methods and electrochemical analysis methods will be an asset.

PhD position 2: The student will undertake computational materials design work applying atomistic and electronic structure modelling methods to evaluate advanced doping strategies that enhance Li-ion storage and charging/diffusion properties. Previous experience in computational materials research and familiarity with electrochemical energy materials will be an asset.

MSc graduates in Chemistry, Physics, Chemical Engineering or Materials Science & Engineering with relevant background are encouraged to apply. Exceptional BSc/BEng graduates may be considered too.

If interested, please send (emails are given below) your CV and transcripts (unofficial copies are fine) to Prof. Demopoulos (for Position 1) or Professor Bevan (for Position 2).
Emails: George.demopoulos@mcgill.ca; kirk.bevan@mcgill.ca

1. <https://www.mcgill.ca/materials/people-0/faculty/george-p-demopoulos/research-interests>
2. <https://www.physics.mcgill.ca/~bevankh/BevanGroup/research.html>