

Project Title: *Electrode Fabrication and Electrochemical Characterization of Carbon-Based Materials for Lithium-Ion Batteries*

Project Description:

We are seeking a motivated and hands-on Master of Engineering (MEng) student to join our research team in the development and testing of advanced anode materials for lithium-ion batteries. This project focuses on the fabrication and electrochemical evaluation of electrodes using various carbon-based materials, including graphite and its modified forms.

The selected student will gain experience in:

- Electrode formulation and fabrication techniques (e.g., slurry casting, calendaring, drying)
- Materials processing and characterization of carbon-based anode materials
- Electrochemical testing and analysis (e.g., cyclic voltammetry, EIS, charge-discharge cycling)
- Data interpretation for assessing energy storage performance

Preferred Background:

- MEng student in Materials Science, Mechanical Engineering, Chemical Engineering, or related field
- Experience or interest in electrochemistry, energy storage, or nanomaterials
- Strong organizational skills and interest in experimental lab work

This is an excellent opportunity to apply your engineering skills to real-world challenges in energy storage. You will be part of a multidisciplinary team, work in a dynamic research environment, and contribute to the development of next-generation lithium-ion battery technologies.

Start date: Summer/Fall 2025

Research Area: Advanced Manufacturing, Mechanics and Materials

Please submit your CV and a single paragraph describing your interest in the project in one file within a single email to Prof. Hani Naguib (hani.naguib@utoronto.ca) and Dr. Sara Taromsari (sara.taromsari@mail.utoronto.ca).