

# PhD in Grid Storage Batteries

Montreal, Canada

The [Sustainable Electrochemical Technologies \(SET\) Lab](#) in Montreal, Canada has an open position for a highly motivated individual to help us create the next generation of grid storage batteries to accelerate the global renewable energy transition. Cost-effective energy storage is now the bottleneck for producing most of the world's energy needs from wind and solar power, and we need your help to overcome this final challenge.

More specifically, this applied project involves developing new battery chemistries and designing diagnostic tools to monitor and identify their failure modes and enable long lasting storage systems for the electrical grid. This research includes close collaboration with local research groups in synthetic chemistry and possible industrial internships. This is a growing and innovative research area with significant publication and intellectual property opportunities. Successful completion of the project will provide the student with a strong understanding of both common and cutting-edge battery testing methods. In addition, the student will have the opportunity to publish and collaborate on related electrochemical technology projects in our lab. Prior experience with batteries is not required.

This project can be tailored to suit applicants who would like to pursue a career in academia or the growing battery industry. Concordia University and the SET Lab are strongly committed to employment equity within its community. We encourage applications from all qualified candidates, including women, members of visible minorities, Indigenous persons, members of sexual minorities, persons with disabilities, and others who may contribute to diversification.

## **Minimum Qualifications:**

Candidates are expected to have the ability to work independently as well as build collaborative relationships to solve challenging problems as part of a team. In addition, evidence of the following is required for applications to be considered:

- Master's degree in physics, chemistry; or chemical, electrical, or materials engineering.
- Excellent organizational, analytical, and problem-solving skills.
- Persistence to overcome research challenges.

**Useful Skills:**

The following experience and skills would also be an asset to the project:

- Experience with peer-reviewed scientific publishing.
- Research experience with electrochemistry or electrochemical systems.
- Working knowledge of organic and analytical chemistry.
- Experience with Python programming language for data analysis.

**Financial Support:** Competitive financial support is offered for these positions.

**Language:** English, with supervisory support also possible in French or Spanish.

**Position Start Date:** May or September 2024

**Deadline to Apply:** March 1<sup>st</sup>, 2024

**Application Instructions:**

Please email Prof. Marc-Antoni Goulet ([marcantoni.goulet@concordia.ca](mailto:marcantoni.goulet@concordia.ca)) with a pdf copy of your CV and transcripts. In your email, please explain why you would like to work on this project and highlight your relevant qualifications and experience.

For information on the PhD programs in Chemical and Materials Engineering, please visit:

<https://www.concordia.ca/academics/graduate/chemical-engineering-phd.html>

For information regarding studying in the vibrant multicultural city of Montreal please visit:

<https://www.concordia.ca/gradstudies/future-students/why-concordia/grad-life.html>