

# Lab for Fuel Cell and Green Energy

## Location

ERC 3023 & 3003

## Management

Director:

- Xianguo Li ([xianguo.li@uwaterloo.ca](mailto:xianguo.li@uwaterloo.ca); x36843)

Tour operator:

- Aaron Pereira ([a4pereira@uwaterloo.ca](mailto:a4pereira@uwaterloo.ca); x38719)

## Users

- Prof. Li's graduate students (mechanical engineering)
- Post-Docs (mechanical/chemical engineering)
- Undergraduate students from fuel-cell course (under heavy supervision)
- Visiting Scholars
- Exchange students

## Research

- Green Energy As a Whole
- PEM Fuel Cell
- Lithium Ion Batteries
- Bio Diesel for Automotive Purpose
- Gasoline for Automotive Purpose
- Fuel Cell for Automotive Purpose

## Lab Capability

- Materials Integration
- Materials Characterization
- Device Testing
- Process Development
- Circuit Design & Fabrication
- Prototype

## Selected Projects

- GAPT (green auto powered train)
- Auto 21

## Equipment

- Bio Diesel High Pressure Fuel Injection System
- 3 Axis Computer Controlled Spray Apparatus
- Diffusion Measurement System
- Standard Porosimeter 3.1
- High Speed Visualization

- G20 Fuel Test Cell Station
- Midsize Fuel Test Cell Station
- Environment Chamber
- Stack Fuel Test Cell Station
- Through Plane Thermal Conductivity Measurements

## Supporting Partners

- ORF
- NSERC
- CFI?
- GAPT
- Auto 21?

## Access Rights

- Access restricted to Prof. Li's Group
- **Industry Contracts**
  - Will not operate lab equipment
  - Measurement testing: hire lab personnel
  - Fees will vary
- **Process**
  - Contact Prof. Li for project details and cost