

# Fuel Cell Research Laboratory

*fcrel.ca*

Directed by Dr. Erik Kjeang

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## Mitacs PhD Student Fellowship Opportunity: Development of a low-pressure hydrogen storage system based on hydrogen storage nanomaterials

There is an immediate opportunity for a PhD student fellowship supported by the Mitacs Accelerate program to work with the research team in Hydrogen In Motion Inc. (H2M) and Simon Fraser University to conduct research in new generation of materials for hydrogen storage. The PhD program is slated to start in September 2018 although the fellowship term may begin as early as June 1 2018 or as soon as possible.

### Responsibilities:

- Conduct a research project focused on process engineering methods for optimization and production of hydrogen storage nanomaterials at both lab scale and bulk scale.
- Test and analyze hydrogen storage materials using state-of-the-art equipment and measurement tools.
- Carry out experiments on characterization of new materials using advanced spectroscopic and microscopic techniques e.g., SEM (EDX), HRTEM, EELS, XPS, Raman, XRD etc., coupled with physico-chemical methods, e.g., BET, MSP etc., to understand the structure, composition, and properties of the materials.
- Maintain up-to-date knowledge of, critically analyze, and summarize related hydrogen storage materials literature.
- Analyze, interpret and summarize test data.
- Work effectively within a research team of scientists and research engineers to accomplish technical objectives.
- Contribute to the advancement of knowledge on the functional behaviour of nanomaterials-based hydrogen storage systems.

### Requirements:

- Master's and/or Bachelor's degree in chemical engineering, materials science/engineering, chemistry, physics or a related discipline.
- Experience in nano-material synthesis and/or engineering will be a strong asset.
- Proficiency in materials characterization using analytical methods.
- Strong analytical skills.
- Strong hands-on capabilities and aptitudes.
- Ability to work as part of a small team and as an individual researcher in close collaboration with industry.

To apply for this position, please contact Dr. Natalia Kremliaikova via [apcfc@sfu.ca](mailto:apcfc@sfu.ca), by **April 30, 2018**, including a cover letter and resume addressing how you meet and exceed the requirements.

The Mitacs Accelerate program supports recent Master's and Bachelor's graduates to conduct PhD research at Canadian universities in collaboration with the private sector by means of internships. This position is open to Canadian citizens, permanent residents, and international applicants. **Admission to the PhD program at Simon Fraser University is required (visit [www.sfu.ca/dean-gradstudies/future.html](http://www.sfu.ca/dean-gradstudies/future.html)).**