Postdoctoral research position available in microfluidics and whole-cell catalysis with applications in alternative energy and chemical synthesis

Help kickstart an exciting area of natural chemistry using microflow systems in the Greener group

Group mandate

We are developing a new class of lab-on-a-chip platforms to study whole-cell catalysis. Our goal is to replace synthetic materials with living ones, such as bacterial biofilms, to help chemistry evolve towards a radically sustainable model. Our highly customized approach to lab-on-a-chip includes integrated functional elements such as electrodes, sensors and membranes.

Other program areas include spectroscopic diagnostics of viral infections, such as COVID-19 and development of an environmental sensing toolbox consisting of microbes.

Group details

We are located in Quebec City, one of the most beautiful and affordable cities in North America. Our group is situated in the Department of Chemistry but consists of chemists, biologists, engineers, and physicists. People who excel in our group mix rigour and curiosity in equal parts. Our lab contains modern equipment including microscopy, spectroscopy, and electrochemistry. We also have our own in-house microfabrication facilities.

Project: Funding source and research goals

Our group has been selected by the Natural Sciences and Engineering Research Council of Canada to accelerate our research program in the following three themes: (i) Kinetic studies of bacterial catalysis, (ii) higher performing microfluidic microbial fuel cells, and (iii) new characterization tools for next-generation biocatalysis. We need a highly motivated post-doc to help ramp up one or more themes in this ambitious research program.

Interested candidates

1. Verify that you have the following experiences and skills
   - a PhD degree in a research area relevant to our research program project
   - a strong background in at least two of the following areas: microbiology, vibrational spectroscopy, electrochemistry, microfluidics, and chemical kinetics
   - good experience managing research projects and writing for high-quality research journals

2. Apply for a position with our group by submitting your application package!
Application package

To apply, submit the following to Professor Greener (jesse.greener@chm.ulaval.ca)

1. a statement detailing your research interests, prior experience and fit for the position (2 pages),
2. a detailed CV, including names and contact information for two references,
3. a short statement (0.5 page) describing your thoughts on equity and inclusion in the work place and your previous experience working with a diverse group of co-workers,
4. a short personal statement (0.5 page) giving your views on climate change, energy and how your research career plan may address these or similar pervasive problems,
5. your preferred start date and whether you have any immigration hurdles to clear in your application.

Be sure that the beginning of your email title contains the phrase: “Postdoctoral candidate for microfluidics and whole-cell catalysis”. Please do not send large attachments.

Applications that do not follow these instructions might not be considered.

Applications will be considered as they are received and until positions are filled. The start date is flexible, but September 2020 is preferred.

Additional information: We are dedicated to equity, diversity and inclusion (EDI) in our group, so we strongly encourage women and racialized candidates to apply. The successful candidate should have a strong capacity for written English and be able to contribute to the laboratory well-being through mentorship and community spirit.

Further information

The initial duration of this position is 1 year with renewal based on performance. This position is funded in line with the NSERC post-doctoral fellowship pay scale, and holders of this fellowship will be eligible for top-up funding. You can find more information about our research themes, the group, and our publications on our website. Please contact Professor Greener directly if you have any questions.