

Postdoctoral Fellow in Circular Economy and Environmental Modeling

This fully funded, two-year position is part of a collaborative multi-group project exploring enzyme and microbe-based bioprocesses to enable a circular plastics economy. The Postdoctoral Fellow (PDF) will perform novel research and help mentor a team of graduate and undergraduate students to build out an exciting research theme within Open Plastic: Circular Economy and Environmental Modeling.

Research Project: apply technoeconomic analysis (TEA), life cycle assessment (LCA), process modeling, and data science to investigate the economic feasibility and environmental sustainability of various circular plastics scenarios for industry sectors (e.g., fresh produce packaging). Collect relevant data from industry and municipal partners for integration into these models, and prepare peer-reviewed publications and presentations based on this research.

Additional duties: the PDF will have ample opportunities to assist the principal investigators in supervising graduate and undergraduate research theses. The PDF will have opportunities to contribute to other projects in the lab and consortium if desired, as well as to develop novel research directions to be taken with them upon leaving the group.

Required Qualifications: PhD or equivalent degree in chemical engineering, industrial engineering, operations research or a related field. Proficiency in LCA (e.g., SimaPro, openLCA) as evidenced by peer-reviewed publications. Strong track record of peer-reviewed publications and presentations at international research conferences.

Preferred Qualifications: Technoeconomic analysis research experience and process modeling. Experience working with waste management and recycling systems. Excellent communication skills and an interest in collaborating with a multi-disciplinary team of scientists and engineers. Experience supervising graduate students.

Employment Equity: Queen's University invites applications from all qualified individuals. We are committed to employment equity and diversity in the workplace and welcome applications from women, visible minorities, Aboriginal peoples, persons with disabilities, and LGBTQ2+ persons. We have a track record of supporting all our employees, including our Accommodation in the Workplace Policy, and will provide support in recruitment processes for applicants with accessibility needs. If you require accommodation during the application process, please contact Dr. Laurence Yang at laurence.yang@queensu.ca.

Open Plastic is a Queen's University-led interdisciplinary research consortium focused on harnessing microbial technologies to drive a shift towards a zero-plastic waste future. More information:

- <https://www.queensu.ca/gazette/stories/rethinking-our-approach-tackling-plastic-waste>
- <https://openplastic.com>

Application Deadline

1 May 2022

Department of Employment

Chemical Engineering

Supervisors

Prof. Laurence Yang
Prof. James McLellan

Start Date

1 July 2022 preferred. Flexible.

Duration of Appointment

Initial appointment is 1-year with the expectation of an extension for a second year.

Remuneration

\$48k/year plus benefits.

To Apply

Apply using the form at <https://forms.gle/sauuAX9MfsEc4oNJ6>, also accessed via the **Apply Now** button at <https://biosyscompute.com/career.html>.

More information on postdoctoral fellows at Queen's: <https://www.queensu.ca/postdoc/home>