

Posting Date: April 14, 2022

University of Toronto
Faculty of Applied Science and Engineering
Department of Chemical Engineering & Applied Chemistry

JOB POSTING – POSTDOCTORAL ASSOCIATE (2 openings)

Area of Research: Development of High-Pressure Reverse-Osmosis Membranes

Description of Duties: The labs of [Jay Werber](#), [Patrick Lee](#), and [Jason Hattrick-Simpers](#) are seeking to hire two postdoctoral associates to work on the design principles and properties of high-pressure reverse-osmosis membranes. The project is funded by NSERC with SUEZ Water and Technology Solutions as an industrial partner. The two postdocs will work as part of an interdisciplinary team of ~6 students/postdocs, all studying porous membranes, pore structure, and membrane design. The postdocs will be co-advised by two or three of the collaborating PIs, ensuring a variety of opportunities for new knowledge. Additionally, work will be done in the beautiful downtown Toronto campus, offering postdocs the opportunity to live in a vibrant, multi-cultural city and work in a world-class university.

In particular, our goal is to synthesize membranes capable of robust operation at pressures up to 150 bar, which will enable the purification of waters with high total dissolved solids (TDS), a major need in water treatment. Topics for the postdoctoral associates may include:

- Transport behavior in membranes at high TDS and high pressures
- Compression resistance of porous structures
- Reverse-osmosis membrane fabrication
- Robotics-enabled high-throughput synthesis of porous materials

Salary: \$55,000 CAD annually

Required Qualifications: Successful candidates will have a PhD in chemical engineering, mechanical engineering, environmental engineering, materials science, or a related field. Previous experience with membrane synthesis, membrane transport, mechanics of porous polymers, polymer science, nanotechnology, and/or robotics/high-throughput experimentation will be highly beneficial. Excellent communication skills and team-oriented mindsets are critical.

Application Instructions

Applications should be emailed to Prof. Jay Werber (jay.werber@utoronto.ca) with the subject line: Postdoc Application. Your email should include your CV, a list of 3 references, and address (1) why are you interested in this position? and (2) how will this opportunity help you reach your career goals?



Expected start date: As soon as possible. However, delays are possible and exceptional candidates who are still finishing their PhD studies are encouraged to apply.

Term: One year with renewal for a 2nd year available depending on mutual happiness

FTE: 100%

Closing date: May 15, 2022

The normal hours of work are 40 hours per week for a full-time postdoctoral fellow (pro-rated for those holding a partial appointment) recognizing that the needs of the employee's research and training and the needs of the supervisor's research program may require flexibility in the performance of the employee's duties and hours of work.

Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the CUPE 3902 Unit 5 Collective Agreement. This job is posted in accordance with the CUPE 3902 Unit 5 Collective Agreement.

The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ2S+ persons, and others who may contribute to the further diversification of ideas.