Developing Organic Thin Film Transistor (OTFT) and Organic Electrochemical Transistor (OECT) Based Sensors for Harm Reduction

Principle Investigator:
Benoit Lessard Research Group (www.benoitlessard.com)

The Lessard Research Group believes in equal opportunity and inclusive hiring. We strive to provide a diverse and welcoming environment and encourage people of any background, race, ethnicity, gender, sexual orientation, marital and family status, and belief to apply and become part of our team.

Job description: Illicit substances pose significant harm as their specific composition is often unknown. Criminalization and marginalization compounds these harms by limiting access to the resources required to safely identify and consume these substances. This project builds on the University of Ottawa team’s experience commercializing low-cost point-of-source cannabinoid sensors and expands the scope to include other common street drugs. The partnership will solve the challenge of codification of colour into electrical current for automated chemical identification through the development of an organic electronic sensor. The Lessard group is seeking a Post-doctoral fellow to design and implement organic thin film transistor (OTFT) and organic electrochemical transistor (OECT) based sensors for different drugs. The candidate will be charged with fabrication and characterization of sensors as well as working in a team of chemists and engineers developing emerging materials and chemical probes.

Requirements: We are looking for a PhD in Engineering or Materials Science with a strong device fabrication background.

Desired skills:
- Organic electrochemical transistor (OECT) and/or Organic thin film transistor (OTFT) fabrication and characterization
- Experience with solution processing and physical vapour deposition techniques
- Additional experience with Raman microscopy and Atomic Force microscopy is beneficial

Location: University of Ottawa, Ottawa, Ontario (Living in Ottawa is required)
Start Date: Ideal start date: Jan 2024 (flexible)
Salary: $45,000-$62,000/year (negotiable based on experience with year-to-year increase) + benefits
Duration: 2-year contract

If you are interested in this position, please send a cover letter and CV to benoit.lessard@uottawa.ca