

The Ultrafast electron Imaging Laboratory (UeIL), Research Associate opportunity, 2 years, starting June 1, 2022.

Company operating name: University of Waterloo

Business address: 200 University Ave. W., Waterloo, Ontario, N2L 3G1, Canada.

Title of position: Research Associate.

Job Duties: The Ultrafast electron Imaging Laboratory (UeIL) in the Department of Chemistry at the University of Waterloo has an exciting research associate position in the research area of liquid-phase ultrafast structural dynamics. The successful candidate will lead the final stage of development of UeIL liquid-phase time-resolved electron diffraction (FED) setup. Job responsibilities involve possible modifications of the current homemade femtosecond electron source, electron beam optics and high-voltage feedthrough, and setup debugging. The candidate will also design and fabricate the necessary nanofluidic cell system to enable FED experiments in liquid-phase samples. The fabrication of nanofluidic cell carriers is to be performed at the Quantum-Nano Fabrication and Characterization Facility. The position offers opportunities to work on an interdisciplinary research program and to interact with industry partner(s).

Terms of employment: Full-time definite-term contract.

Closing date: Closing date for receiving applications is March 6, 2022.

Contract length: 2 years.

Wage range: \$45,000 to \$55,000 per year depending on qualifications.

Benefits package: Research associate definite-term appointments equal to or greater than two years are eligible to receive the following benefits: pension, dental, extended health, group life, sick leave, long-term disability, and Employee & Family Assistance. For more details about benefits please refer to: <https://uwaterloo.ca/human-resources/support-employees/benefits/benefit-eligibility-and-eligible-dependents>

Location of work: University of Waterloo, main campus at 200 University Ave. W., Waterloo, ON, N2L 3G1, Canada.

Contact information for hiring manager:

German Sciaini

Head of the Ultrafast electron Imaging Lab (UeIL).

Department of Chemistry (C2 room 079)

Member of Waterloo Institute for Nanotechnology (WIN).

Phone: 519 888 4567 ext. 39289

Cellphone: 226 600 9632

Email (preferred): gsciaini@uwaterloo.ca

If you have any questions regarding the position, the application process, assessment process, or eligibility, please contact the hiring manager.

Submission of applications: Applications should be submitted electronically to the following email address: gsciaini@uwaterloo.ca. Please submit a current CV with a cover letter and the contact information of 2-3 referees. We thank all applicants for their interest; however, only those individuals selected for an interview will be contacted.

Skills requirements:

The successful candidate for this position needs to be an enthusiastic and passionate researcher with **at least four (4)** of the following **five (5) essential skills**, which must be supported by publication(s) and/or patent(s):

- Expertise in the design of custom femtosecond electron diffraction (FED) setup(s), including the following internal components: femtosecond electron source(s), high-voltage feedthrough(s), and magnetic lens system(s).
- Expertise in the design, nanofabrication, and implementation of custom nanofluidic cell systems for liquid-phase electron diffraction and electron microscopy measurements.
- Expertise in femtosecond time-resolved techniques and high vacuum techniques.
- Proficiency in the use of *SolidWorks*, *Inventor*, or equivalent computer aided design (CAD) software for the creation of three-dimensional (3D) CAD drawings.
- Proficiency in the use of *the Poisson Superfish code* for the calculation of magnetic and electric fields associated with FED components, and *the ASTRA program* for the simulation and tracking of n-particle (electron) beam properties.

Additional expected skills

- Strong interpersonal and communication (written and verbal) skills to work efficiently in a collaborative team environment.
- Excellent problem-solving skills with attention to detail.
- Ability to multitask effectively, with strong organizational and time management skills.
- Ability to lead and motivate graduate and co-op student(s), and postdoctoral fellows.
- Ability to work safely, effectively, and independently in a lab environment.

Education: PhD in Chemistry, Physics, or other related disciplines from a recognized educational institution.

Work experience: The candidate should have a commendable track record of publications in renowned international journals and/or patents, and a minimum of four (4) years of postdoctoral experience in mentoring undergraduate students, MSc and PhD students.

Schedule: Flexible, 35 hours per week.

Expected start date: June 1, 2022.

The University values the diverse and intersectional identities of its students, faculty, and staff. The University regards equity and diversity as an integral part of academic excellence and is committed to accessibility for all employees. The University of Waterloo seeks applicants who embrace our values of equity, anti-racism and inclusion. As such, we encourage applications from candidates who have been historically disadvantaged and marginalized, including applicants who identify as Indigenous peoples (e.g., First Nations, Métis, Inuit/Inuk), Black, racialized, people with disabilities, women and/or 2SLGBTQ+.

The University of Waterloo acknowledges that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples. Our main campus is situated on the Haldimand Tract, the land granted to the Six Nations that includes six miles on each side of the Grand River. Our active work toward reconciliation takes place across our campuses through research, learning, teaching, and community building, and is centralized within our Indigenous Initiatives Office (<https://uwaterloo.ca/human-rights-equity-inclusion/indigenousoffices>).

The University of Waterloo is committed to accessibility for persons with disabilities. If you have any application, interview, or workplace accommodation requests, please contact German Sciaini, gsciaini@uwaterloo.ca.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

Because of COVID restrictions, travel restrictions, and delays, **we will only consider applications from candidates already residing in Canada. The position requires in-person laboratory work, and the candidate should be able to move to Waterloo.**