Faculty Position in Epitaxial Heterostructures and Next-Generation Electronic and Photonic Devices

The Department of Electrical & Computer Engineering (ECE) at the University of Waterloo invites applications for a Tenure-Track Assistant Professor in the area of Nanomaterials and Devices for Electronics and Photonics, with an anticipated start date of September 1, 2027.

A founding partner of the University of Waterloo Nanotechnology Engineering undergraduate and graduate programs, the ECE department is one of the largest engineering departments in Canada. Our graduates are highly sought out all around the world for their exceptional technical training and abilities. The department is home to the QNC-MBE Facility (https://uwaterloo.ca/molecular-beam-epitaxy) as well as the Giga-to-Nanoelectronics Centre (https://uwaterloo.ca/giga-to-nanoelectronics-centre), and is an active partner in the Quantum-Nano Fabrication and Characterization Facility (https://uwaterloo.ca/guantum-nano-fabrication-and-characterization-facility), enabling research that spans the synthesis, growth, processing, fabrication and characterization of nanoscale and epitaxial materials and devices for electronics, optoelectronics and photonics, and their utilization in commercial applications.

We are looking for an emerging scholar to establish and lead an internationally recognized research program spanning molecular-beam epitaxy, semiconductor materials, and next-generation photonic, optoelectronic, electronic, and quantum devices. The successful candidate will become an active scientific member of the QNC-MBE Facility, contributing to its operation and long-term development while building an independent program that connects advanced epitaxial materials and heterostructures with innovative device concepts, fabrication, characterization, and demonstration.

The QNC-MBE Facility currently supports 111-V arsenide- and antimonide-based epitaxy and was purpose-built with infrastructure and space for future expansion into complementary epitaxial materials and heterostructure platforms. Such expansion could form part of the successful candidate's longer-term research vision. Complementary laboratory capabilities in device development, specialized characterization, or related areas may also be established, while extensive shared nanofabrication and characterization infrastructure is available through QNFCF and G2N.

The successful candidate will be expected to build a vigorous, externally funded research program with a strong device component, attract outstanding graduate students and postdoctoral researchers, and foster collaborations across Waterloo and with academic and industry partners nationally and internationally. The University of Waterloo has a generous, inventor-owned intellectual-property policy and encourages entrepreneurial activities by its students and faculty.

Candidates must demonstrate a strong commitment to research excellence, high-quality teaching, and effective graduate student supervision and mentorship. The successful candidate will be expected to teach courses at the undergraduate and graduate levels related to electronic materials and devices.

Applicants must hold a PhD in Electrical Engineering, Engineering Physics, or a closely related discipline. Candidates must demonstrate substantial expertise and a strong research record in both MBE growth and semiconductor device physics and engineering, supported by high-quality scholarly publications. Clear evidence of significant independent research accomplishments and intellectual leadership, commensurate with career stage, is required, together with an ambitious research vision and strong potential to attract competitive external funding.

The successful applicant is required to have an engineering license for practice (full) or teaching (limited) in Canada, or to apply for a Canadian engineering license within the first year of joining the University. Due to program accreditation requirements, all new faculty members are required to obtain the license within five years of initial appointment at the University of Waterloo and maintain it during their employment at the University.

The salary will be based on the qualifications, rank hired, and experience of the candidate, and can be expected to be typically ranging from $120,000 to $160,000, annually. Appointments are normally made at the rank of Assistant Professor; however, exceptional candidates may be considered for appointment at the rank of Associate Professor or Professor. In recognition of outstanding qualifications and experience, a salary above the stated range may be considered for exceptionally strong candidates.

Interested candidates should submit: a cover letter, a curriculum vitae, a research statement, a statement of teaching philosophy and goals, selected publications (maximum four), and the names of at least three references to https://ofas.uwaterloo.ca/. Applications received by **January 2, 2027** will be given full consideration. However, applications will continue to be reviewed until the position is filled.

The university is committed to leadership in technology-enabled learning. It is a vibrant community built around teaching excellence and scholarship in teaching, with direct and active institutional support through its Centre for Teaching Excellence and resources deployed in the faculties and departments. There is a strategic commitment to research-enhanced, technology-enhanced, and entrepreneurship-enhanced learning. The University of Waterloo excels at experiential learning via the world's largest post-secondary co-operative education program. For the past two decades, the University of Waterloo has been frequently recognized in a national reputation survey of universities as 'best overall', 'most innovative', and producing 'leaders of tomorrow'.

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/indigenousinitiatives).

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, Metis, Inuit/Inuk), Black, racialized, people with disabilities, women and/or 2SLGBTQ+.

The University of Waterloo is committed to accessibility for persons with disabilities. If you have any application, interview, or workplace accommodation requests, or if you have any questions regarding the position, the application process, assessment process, or eligibility, please contact the recruitment committee via Brenda McQuarrie at bmcquarr@uwaterloo.ca.

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

Three reasons to apply: https://uwaterloo.ca/faculty-association/why-waterloo.