

Quantiam Technologies Inc., is one of Canada's leading private sector technology companies operating in Deep Tech in the Cleantech, Energy, Chemicals-Petrochemical and Defense sectors. Quantiam has amongst the best private sector R&D laboratories in Canada, working at the leading edge of Advanced Materials, Surface Science, Nanotechnology, Catalysis and Advanced Manufacturing with an annual R&D operating budget of ~\$5M. **We are currently seeking candidates passionate about cleantech to join our Advanced Energy Materials team and take a lead role in a Facility Pilot Plant demonstration of our Green Methanol technology.**

Position Title: Senior Research Professional/Principal Professional

Competition #: 7000-29

Compensation: \$90,000 - \$118,000/yr (depending on experience); 40-hour work week; comprehensive competitive Benefits package; Group RRSP with matching Deferred Profit-Sharing Plan.

Experience: 7-10+ years related hands-on experience.

Education: Ph.D. or M.Sc. in Chemical Engineering

Closing Deadline: Until Filled

Brief Job Description:

- **Scale-Up & Process Design:** Translate laboratory-scale heterogeneous catalysis reactions and processes into operational pilot-scale processes. Participate in the design of pilot plants, including establishing process design basis, development of process options and optimization of selected design.
- **Data Collection & Modeling:** Participate in developing design of experiments for pilot plant operation. Supervise and monitor test runs, gather operational data, and use process simulation software (e.g., Aspen Plus, gPROMS) to optimize yields. Develop kinetic and reactor models using pilot plant data and scale-up the catalyst performance to commercial scale reactors.
- **Troubleshooting:** Identify and resolve mechanical, chemical, and operational bottlenecks during pilot plant operations.
- **Safety & Compliance:** Ensure all pilot plant operations meet Environmental, Health, and Safety (EHS) and quality standards.
- **Technology Transfer:** Prepare Standard Operating Procedures (SOPs) and batch records to hand off successful pilot processes to junior team members.
- **Pre-Commercialization Activities:** Assist with development of technoeconomic analyses and modelling the economics and environmental benefits of commercial scale deployment scenarios.

Skills/Work Experience Required:

- **Process Engineering:** Strong previous R&D experience in heterogeneous catalysis process scale-up for transforming captured carbon dioxide into high value products in the Carbon Capture Utilization and Storage (CCUS), clean fuels, or methanol industries is desired, including moving from lab scale (TRL 4-5) to pilot scale (TRL 7-8), and beyond.
- **Digital/Computer:** Fluent in process simulation software use (e.g. ASPEN, gPROMS). Ability to create compelling data visualization and analysis. Strong skills with Microsoft Office Suite (Word, Excel, PowerPoint). Ability to develop and troubleshoot code for automation and analysis via MATLAB, LabVIEW, Python etc. is nice to have.
- **Quality of Work:** Must adhere to the highest standards of quality, reliability, and safety on all deliverables. Strong attention to detail and flexible approach to work responsibilities.
- **Fluent in English:** Excellent verbal and written communication skills.
- **Must have Strong Productivity:** Able to plan and prioritize workload and use time effectively to advance projects.
- **Quality of Work:** Must adhere to the highest standards of quality, accuracy, reliability, and safety.
- **Analytical & Critical Thinking:** Aptitude for solving complex, undefined problems under uncertainty.
- **Communication:** Capacity to present complex technical data clearly to non-technical stakeholders and executives. Fluency in English required, and you must have excellent verbal and written communication skills.

Behavioural Skills Required:

- **Must have strong work ethic:** You set an example by exemplifying personal accountability, reliable productivity, attendance, and punctuality.
- **Well-developed interpersonal skills:** Understand and adhere to written and verbal instructions.
- **Able to accept constructive feedback professionally.**
- **Initiative and Motivation:** Must be a self-starter and be highly self-motivated, able to work efficiently and independently as well as in a team.
- **Team player:** You understand and respect the roles and contributions of each team member.
- **Positive attitude:** Patient under pressure. Your behaviour affects that of everybody around you in a positive way.
- **Customer orientated:** You provide quality customer service to internal and external clients.
- **Mutual Respect for your co-workers.**

We thank all applicants in advance for their interest. Please forward to Human Resources a resume and cover letter in one (1) Word document or PDF document including competition number to: E-mail:

careers@quantiam.com