



Postdoctoral Fellow (PDF) / PhD Positions: Atomic-Scale Protein Mapping on Biomaterials

Description

We are seeking an individual for a PDF or PhD position to work on an exciting project involving atomic-scale protein mapping on biomaterials at McMaster University. The ideal applicants should be interested in advancing their knowledge in state-of-the-art characterization techniques while contributing to cutting-edge research in the interdisciplinary fields of biomaterials and microscopy. A range of facilities with sophisticated instruments are available at McMaster including the Canadian Centre for Electron Microscopy, the Centre for Advanced Light Microscopy, and the Biointerfaces Institute, among others. The position will be through the Department of Materials Science and Engineering or the School of Biomedical Engineering under the supervision of Dr. Kathryn Grandfield and Dr. Kyla Sask. The project has initial funding from the New Frontiers in Research Fund – Exploration (NFRF-E) program.

Responsibilities

- Complete literature reviews of relevant research areas, prepare reports and manuscripts
- Establish project plans, milestones, timelines and organize time to manage effectively
- Design and perform experiments with troubleshooting as necessary
- Collect data, analyze and summarize appropriately
- Interact with others in lab groups and within other labs, fostering collaborations
- Prepare summaries and present research findings at meetings, conferences and in manuscripts

Requirements

- PhD or Master's degree in engineering (biomedical, materials, chemical, mechanical or similar) or science/health science (physics, biochemistry or similar)
- Exceptional organizational skills with ability to prioritize effectively
- Hands-on lab skills combined with analytical and critical thinking abilities
- Excellent documentation skills with attention to detail
- Strong interpersonal skills including verbal and written communication
- Ability to work independently as well as in a multidisciplinary team environment

Assets

Experience with the following will be considered strengths:

- Advanced microscopy experience (atom probe tomography (APT), SEM, TEM, FIB-SEM)
- Material preparation and analysis, surface modification, coatings, other
- Surface characterization techniques (AFM, XPS, FTIR, and/or others)
- Biological / protein assays and/or labelling (immunoassays, ELISAs, proteomics and/or others)

Apply

Interested candidates should submit a cover letter and CV to Kyla Sask and Kathryn Grandfield by email: ksask@mcmaster.ca and kgrandfield@mcmaster.ca with the subject line: "Atomic Scale Protein Mapping Position". Please apply as soon as possible. Interviews with potential candidates will begin immediately but applications will be accepted until the position is finalized. Thank you to all applicants, but only those selected for an interview will be contacted.



Additional Details about Engineering at McMaster

McMaster University has a large, attractive campus, the interior of which is open only to pedestrians and cyclists, and is at the western end of Lake Ontario. The University is minutes from downtown Hamilton, a city rich in history and culture with a vibrant arts community. Nearby recreational and conservation attractions include Cootes Paradise, the Bruce Trail, the Niagara Escarpment, the Waterfront Trail, and the Royal Botanical Gardens. Surrounded by spectacular nature and unique neighbourhoods, Hamilton is ideally located halfway between Toronto and Niagara Falls.

The Faculty of Engineering at McMaster University has a reputation for innovative programs, cutting-edge research, leading faculty, and aspiring students. It has approximately 180 faculty members, along with close to 4,500 undergraduate and 1,000 graduate students. The Faculty of Engineering promotes a nurturing and inclusive environment where opportunities are made available for personal growth and professional development.

