

## POSTDOCTORAL POSITION IN PHYSICS WITH ROBERT WOLKOW

### Atom-scale devices built on Silicon surfaces

Robert Wolkow has an opening for a postdoctoral researcher with expert knowledge of low temperature, ultra-high vacuum, atom-resolving, scanning tunneling microscopy and atomic force microscopy.  
([www.robertwolkow.com](http://www.robertwolkow.com))

Our primary target is a revolutionary platform for electronic devices – understanding and controlling matter at the atom-scale to enable revolutionary ICT devices. The postdoctoral researcher will extend our current knowledge of atom-scale devices built on silicon surfaces - both classical and quantum aspects are progressing. This academic work has direct connections to emerging applications and as a result, PhDs and students departing from our group have readily secured desirable jobs afterwards (academic, Google, D-Wave, QSi to list some).

The ideal candidate will have the following demonstrated qualifications:

- PhD in Physics or Chemical Physics or equivalent;
- Extensive experience in atom resolving ultra high vacuum scanning tunneling or atomic force microscopy;
- A demonstrated publication record of STM/AFM studies on semiconductor surfaces;
- Proficiency in LabVIEW and Python;
- Experience necessary to operate our atomic force and scanning tunneling microscopes and the associated ultra-high vacuum devices to perform expert level, atom-resolved measurements.

Responsibilities will include:

- design and conduct experiments related to the STM/AFM analyses of silicon surfaces;
- perform complete analysis of the results and prepare presentations, reports and publish papers on the findings;
- design and build automated data collection, instrument control, and research solutions;
- supervision of graduate and undergraduate students;
- contribute to setting research directions and assist in establishing research methods, data evaluation protocols and standards.

The position will be based at the University of Alberta. Our labs are state of the art and we offer a flexible and supportive working environment with competitive wages.

#### **To Apply:**

Candidates without UHV scanned probe experience should not apply.

Applicants should briefly state their research experience pertaining to qualifications above, include a detailed CV, and kindly arrange to have three letters of reference forwarded to:

Dr. Robert Wolkow  
[rwolkow@ualberta.ca](mailto:rwolkow@ualberta.ca)

#### **Closing date:**

Position will remain open until filled

All qualified candidates are encouraged to apply. We thank all applicants for their time and effort but only those selected for an interview will be contacted. Applicants may be considered for future vacancies.

*The University of Alberta offers appointments on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities and Aboriginal persons.*