Postdoctoral Position, University of Manitoba, Canada

We are looking for postdoctoral fellow to join a dynamic collaborative research program in organic electronics as soon as possible, and we would ask you to please bring this information to the attention of qualified candidates.

Research project and expectations:
"*Computational Modeling of Polymer-Based Redox Memory Structures*".
This is a new and exciting project that involves close collaboration between the *Freund* group where novel redox memory structures (see *Chem. Comm.* **2012**, *48*, 9409) are synthesized, built and tested, and the *Schreckenbach* group that is responsible for the actual modeling. The proposed research involves modeling of the devices at different length scales, ranging from the molecular level up to device-scale, coarse-grain models. The goal is to arrive at fundamental understanding of elementary processes in these systems and predict the impact of these processes on the ultimate implementation of these structures in large-scale integrated circuits. The postdoc will be expected to work independently, but in close collaboration with the experimental side of the research. He or she is furthermore expected to provide leadership for more junior members of our research groups. There is considerable room for the postdoc to provide vision and give direction to the project. The position is initially for one year with the possibility of renewal based on the availability of funding.

Background:
The applicant must have a Ph.D. in computational/ theoretical chemistry/materials science or a closely related field, as well as a strong publication record. It is important that the applicant is capable of independent work. Extensive experience in quantum-chemical modeling of materials is required for this position. Knowledge of areas such as quantum mechanics, solvation models, surfaces, programming experience, or dynamics methods are assets.

Salary; Start Date:
This is initially a one-year position, with the possibility of renewal for a second year depending on funding. The salary is approximately $36,000 CAD per year plus benefits. The actual start date is negotiable but we would like the successful applicant to start as soon as possible.

Application:
Interested candidates should send the following material directly to Georg Schreckenbach (electronic submission requested):
- Cover letter explaining your background in relation to the current position; please mention where you learned about the position; explain your career goals in connection to the position; for applicants whose native language is not English, please comment on your English-language skills also;
- Curriculum Vitae;
- List of Publications;
- One-page document explaining previous research achievements;
- Names and contact details of at least two referees;
- Any other documents that you deem relevant.

The review of applications will begin after June 5, 2013, and will continue until the position is filled.

Research groups:
The research of the **Schreckenbach group** is focused on developing density functional theory (DFT) based methods and applying them to study molecules, materials and their properties. For more details, please contact us directly or refer to the group web pages at:
http://home.cc.umanitoba.ca/~schrecke/

The research of the Freund group includes a focus on polymer-based electronics with an emphasis on redox memory. Freund works in close collaboration with researchers in the Department of Electrical and Computer Engineering (ECE) who are designing CMOS technologies that will be used as a platform for our composite redox systems.
http://home.cc.umanitoba.ca/~mfreund/

Environment:

Our research groups are part of the Department of Chemistry at the University of Manitoba in Winnipeg. The University of Manitoba (http://www.umanitoba.ca/) is the largest university in the province of Manitoba and among Canada's major research universities. It has an undergraduate student population of about 25,000, and about 4,000 graduate students. The Chemistry Department (http://www.umanitoba.ca/chemistry/) is one of the largest departments in the University of Manitoba, yet it keeps a friendly and collaborative atmosphere. Recently, the department has undergone a period of renewal and growth.

Winnipeg (http://www.winnipeg.ca/) is a prairie city with a population of approximately 730,000 (metro area). Its people come from various ethnic backgrounds, and are generally friendly and welcoming. Cultural amenities include ballet, theatre, symphony, ethnic festivals, and museums, and professional sports teams are popular. Winnipeg is a safe city. It is located close to good outdoor recreational activities with a wide variety of lakes, beaches and wilderness areas within an easy drive of the city.

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