Postdoc Positions in Winnipeg, MB, Canada

I am looking for one or two postdoctoral fellows to join the Schreckenbach research group. I would ask you to please bring this information to the attention of qualified candidates.

General Background

The research is entirely computational/ theoretical in nature. Applicants must have or be close to receiving a Ph.D. in computational/ theoretical chemistry, materials science or a closely related field (preferably within the last 3 years), as well as a strong publication record. It is important that the applicant is capable of independent work. The postdocs will be expected to work independently, but in close collaboration with experimental collaborators (especially position 2), the PI and other group members. They are furthermore expected to provide leadership for more junior members of our research group. There is considerable room for the postdoc(s) to provide vision and give direction to the projects.

Position 1: Description and Specific Requirements

"Computational Modelling of Singlet Fission (SF) Materials in the Context of the Dye-Sensitized Solar Cell (DSSC)"

This is a **one-year** position. It builds on previous work in my group in the area of solar energy conversion. The project aims at exploring the combination of the DSSC paradigm for solar energy conversion with the intriguing effect of SF.

In addition to the general background outlined above, the following specific skills and background are considered *assets*:

Experience in

- Materials modelling;
- Solar energy conversion;
- Dynamics (classical or AIMD);
- Surface studies;
- Excited state calculations.

Position 2: Description and Specific Requirements

"Theoretical Actinide Molecular Science"

This position is pending confirmation of funding. Provided the funding comes through, this is initially a one-year position, with the possibility of renewal. The project builds on existing strengths within my group in the general area of actinide chemistry. Specific projects and overall direction will be determined at a later date but will be partly driven by the projects of our experimental collaborators in the USA. The research will focus particularly on the chemistry of the later actinide elements.

In addition to the general background outlined above, the following specific skills and background are considered *assets*:

Experience in

- Relativistic quantum chemistry;
- Actinide chemistry;
- Multireference methods (such as CAS or DMRG);
- Multi-level/ embedding methods.

The postdoc will likely be required to visit our collaborators and attend conferences in the USA, and hence must be able to obtain the necessary visa or travel documents.

Salary; Start Date

The salary is approximately $38,000 CAD per year plus benefits. The actual start dates are negotiable but I would like the successful applicant(s) to start as soon as possible.

Application:
Interested candidates should send the following material directly to Prof. Georg Schreckenbach (electronic submission requested):

- Cover letter explaining your background in relation to your choice of position (position 1 or 2 or both); please mention where you learned about the positions; describe 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 outlining 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 May 31 2018 and will continue until the position(s) is/ are filled.

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

Environment:
The Schreckenbach research group is 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 780,000 (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 (e.g. hockey) are very 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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