The Department of Chemistry at Saint Mary’s University invites applications for a tenure-track position in Chemistry at the rank of Assistant Professor to commence July 1, 2016. The successful candidate will possess a Ph.D. in Chemistry and will normally have postdoctoral or industrial experience. Applicants with a background in the areas of Materials Chemistry, Green/Sustainable Chemistry, Organic Chemistry or Catalysis are particularly encouraged to apply. The incumbent will have a demonstrated commitment to excellence in teaching, a strong record of research contribution, and a high potential to obtain and retain external research funding. The successful candidate will develop and maintain an innovative, externally-funded research program in his/her field. Primary teaching responsibilities will include undergraduate classroom and lab instruction as well as curriculum development in the areas of Biochemistry and Organic Chemistry. Duties may also include graduate-level teaching. The successful candidate will be expected to play an active role in the administrative life of the Department of Chemistry, the Faculty of Science, and the University in general.

The Department of Chemistry offers a nationally-accredited Bachelor of Science (B.Sc.) degree program in Chemistry (Major and Honours). Undergraduate students are actively involved in faculty research and graduate students are enrolled in the Masters of Science (M.Sc.) in Applied Science Program. As well, the Department is home to the Atlantic Centre for Green Chemistry and has a number of faculty members active in Green/Sustainable Chemistry research. Faculty members in the Department have access to advanced instrumentation, including a new 300 MHz NMR, LC-PDA/ESI-MS, GC-FID/MS, ICP-MS, TGA-MS, GFAAS, SEM/EDX, DSC, FT-IR, single crystal X-ray diffractometer, various spectrophotometers, and potentiostats (CV, ASV, etc.), all with excellent technical support. All laboratories and research spaces in the Department have been recently rebuilt as part of a major renovation of the Science Building.

Saint Mary’s University is a public university with over 7,000 students, offering a variety of undergraduate and graduate degrees. The University is committed to serving the local, regional, national, and international communities, and integrating such activity as part of the learning environment for undergraduate and graduate students. Saint Mary’s has gone through significant renewal in the past decade, with over 250 full-time faculty involved in innovative teaching, research, and service. Interdisciplinary studies are a prominent feature and strength of the University. Saint Mary’s is located in the historic port city of Halifax, Nova Scotia, a vibrant, urban community of over 350,000 people. Halifax is a major educational and economic centre for Atlantic Canada and is home to five universities. It is conveniently located with respect to recreational areas and other major urban centres in Canada and the northeastern United States. For information about the University and the Department of Chemistry, please see our website at www.smu.ca.

Although candidates of all nationalities are encouraged to apply, priority will be given to Canadian citizens and permanent residents (all applicants should clearly indicate their status as a Canadian citizen or permanent resident). Saint Mary’s University is committed to the principles of employment equity.

Applicants should provide a single pdf file or paper copy containing: a) a curriculum vitae, b) a concise research proposal (5 pages, NSERC Discovery Grant format including a section on HQP training), c) a teaching dossier including a statement on teaching philosophy and details on experiences training HQP, and d) contact information for three individuals able to act as referees. Please send complete applications by e-mail (or mail) to:

Robert D. Singer
Chairperson
Department of Chemistry
Saint Mary’s University
Halifax, Nova Scotia B3H 3C3
Email: Robert.Singer@smu.ca

The Selection Committee will begin considering applications immediately with an anticipated start date of July 1, 2016.
Senior Research Associate

Faculty / Division: Faculty of Arts and Science

Department: Chemistry

Specialty: Atmospheric Chemistry

Campus: St. George Campus

Principal Investigator: Professor Jon Abbatt

Description:
Under the general direction of the Principal Investigator, the Senior Research Associate will perform detailed laboratory and field measurements that assess the composition and processing of atmospheric carbonaceous aerosol. This work will be conducted using on-line mass spectrometry techniques including the Aerodyne Soot-Particle Aerosol Mass Spectrometer and Chemical Ionization Mass Spectrometer systems, in combination with other aerosol monitoring equipment. Some emphasis will be given to single particle characterization techniques. As well, the Senior Research Associate will need to analyze past data sets from field studies involving these instruments. The Senior Research Associate will work closely with research collaborators at the University and Environment Canada.

Qualifications:
MINIMUM: PhD and five years post PhD experience conducting experimental laboratory research and field measurements in the relevant field.

EDUCATION:
PhD in Chemistry or Chemical Engineering

EXPERIENCE:
- Five or more years of experience after PhD in the study of atmospheric aerosol chemistry and composition, with a particular focus on both organic and elemental carbon containing particles.
- Extensive experience in both laboratory and field measurements related to atmospheric aerosol science, including participation in large-scale field campaigns
- Advanced knowledge and prior use of analytical techniques used to assess aerosol composition, which must include experience with the Aerodyne Soot Particle Aerosol Mass Spectrometer and Chemical Ionization Mass Spectrometer systems which use a high-resolution time-of-flight mass spectrometer.

SKILLS:
In addition to the required experience above, the candidate must have advanced data analysis skills, such as the use of source-receptor modeling (e.g. PMF), to analyze
complex atmospheric composition data sets. As well, the candidate must have demonstrated experience with the upkeep and repair of high resolution time-of-flight mass spectrometry systems that are used to assess atmospheric composition.

The candidate must have strong communication and interpersonal skills, including prior supervision of graduate student research projects.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from visible minority group members, women, Aboriginal persons, persons with disabilities, members of sexual minority groups, and others who may contribute to the further diversification of ideas.

**Employee Group:** Research Associates  
**Appointment Type:** Continuing  
**FTE:** 100%  
**Anticipated Start Date:** September 1st, 2015  
**Schedule:** Full-time  
**Salary:** Minimum: $48,355  Maximum: $98,157  
**Job Posting:** June 10, 2015  
**Job Closing Date:** We will begin reviewing applications on July 20, 2015 following the posting date, however, the position will remain open until filled.

**Applicants should submit their CV to:**  
Professor Robert Batey, Chair  
Department of Chemistry  
University of Toronto  
email: chair@chem.utoronto.ca
University of Toronto at Scarborough, Toronto, ON (June/2015)

Postdoctoral Fellow in Environmental and In-Vivo NMR Spectroscopy

Environmental NMR Centre, Department of Chemistry, University of Toronto at Scarborough, Toronto, Ontario, Canada

Project Description:

The project will, in collaboration with Bruker BioSpin Corporation and the Ontario Ministry of the Environment and Climate Change develop and assess Environmental NMR applications. This will involve a wide range responsibilities especially exploring (and improving detection limits) across a wide range of NMR technologies including cryoprobes, micro-coils, solids and gel-state NMR, in a range of environmental matrices. In addition, the researcher will oversee the development of in-vivo NMR technologies and applications to elucidate environmental stressors. Of particular importance is to better the understanding of toxic effects from microcystins (toxins from blue-green algae) on living systems.

The Environmental NMR Centre is equipped with a range of Comprehensive Multiphase NMR probes (CMP-NMR) (J. Magn. Reson. 2012; 217:61-76). CMP NMR is a new area of NMR spectroscopy that incorporates solid-state, semi-solids (HR-MAS) and solution-state NMR into a single approach. When applied to an organism in-vivo, all bonds in all phases can be detected providing a high resolution overview of everything in a living system. In terms of static systems, specimen cells have already been developed that feed and oxygenate organisms inside NMR spectrometers permitting them to be studied indefinitely in a non-stressed state.

Background

Often, numerous environmental contaminants are found at low levels which in isolation are non-lethal but combined exhibit toxicities that are difficult to evaluate. In the long term they may be very hazardous to animal, plant and human populations, as their affects are often detected too late, and after physical symptoms become widespread. This project will develop in-vivo NMR that will permit “molecular fingerprinting” approaches that directly measure the changes in a living organism as a direct response to its surroundings. This research aims to develop tools that can answer the key question “Is a particular contaminated environment safe for life?” and understand how and why certain chemicals are toxic. Preliminary results demonstrate the approaches can efficiently and quantitatively assess stress in natural populations months/years before conventional reproduction tests, as-well as explaining the source of the stress and its biochemical implications. Furthermore, such “early warning systems” could potentially being used to predict and permit treatment of disease at its very early stages before symptoms are apparent.

In addition, to monitoring the changes in the organism, specific NMR experiments will also be developed to identify binding sites of anthropogenic contaminants in-vivo. This is made possible due to globally unique hardware developed between the Environmental NMR Center and Bruker BioSpin (leading manufacturer of NMR technology). It is worth mentioning that these approaches have wide spread applicability in general not just for contaminants but understand how any molecule (for example drugs, nutrition) bind in-vivo and thus represent an extremely powerful molecular tool for chemical/biochemical/medical research in general.

The Candidate

The candidate must have a strong background in NMR spectroscopy ideally with expertise in solid-state, HR-MAS and solution-state NMR. Expertise in one area is sufficient as long the
candidate is willing and interested in learning all areas of NMR spectroscopy. The candidate must be open minded and willing to work with very complex in-vivo systems. The candidate should be willing to learn to design novel pulse programs that combine aspects from solution-state and solid-state NMR. Candidates will need to draw upon and integrate a range of concepts including saturation transfer, diffusion editing, cross-polarization dynamics, relaxation filters, isotope filtering with 1-3D NMR spectroscopy to access specific key molecular interactions from within complex matrices. The candidate will have access to a range of state-of-the-art equipment at the Environmental NMR center including prototype multiphase probes, a range of unique micro coil hardware, as well as solid-state, HR-MAS, liquid-state, cryoprobes, micro-imaging, and hyphenated (2D-HPLC-SPE-NMR-MS(Q-q-Tof) NMR spectrometers.

The candidate should have an interest in environmental chemistry and/or willingness to learn key issues in this field. Due to the very technical nature of the project the position is specifically suited to a gifted and open-minded NMR spectroscopist rather than an environmental scientist with NMR experience. The project will be carried out in close collaboration with the Ministry of the Environmental and Climate Change (MOECC). The candidate will be expected to travel to the MOE on occasion, attend meeting and help prepare progress reports. In addition, the candidate, along with the center manager and directors, will be expected to act as a general NMR resource for graduate students, and collaborators in the Environmental NMR Centre, and assist with training, data acquisition, processing and interpretation on projects as required. The Environmental NMR Centre is highly collaborative and such involvement will nearly always result in the post-doctoral fellow becoming a co-author in any research in which they assisted. We expect the candidate lead at least two first author publications per year. Funding is initially available for 1 year but may be extended.

Application

Candidates should send a complete C.V. including a publication list, a statement outlining their suitability and their interest in the position. Candidates should arrange to have 3 references sent directly. Applications without the appropriate references have to be considered incomplete and cannot be considered.

Applications and references should be sent to

Professor André Simpson, FRSC
Director of the Environmental NMR Center
Department of Chemistry
Division of Physical and Environmental Sciences
University of Toronto at Scarborough
1265 Military Trail
Toronto, MIC 1A4
Canada

or e-mailed as a PDF attachment to andre.simpson@utoronto.ca

All complete applications and references will be reviewed upon submission. The position is available immediately and will remain open until filled.
Great Lakes Institute for Environmental Research & the Department of Chemistry and Biochemistry

Assistant, Associate or Professor Position in Environmental Chemistry

The Great Lakes Institute for Environmental Research (GLIER-UW) and the Department of Chemistry and Biochemistry (Chem/Biochem) at the University of Windsor invite outstanding candidates to apply for a Tenure-Track faculty position at any rank (Assistant Professor, Associate Professor, or Professor) based upon qualifications in the area of Environmental Chemistry, commencing as early as January 1, 2016 or soon thereafter. This position is subject to final budgetary approval.

GLIER-UW and Chem/Biochem are research-intensive units in the Faculty of Science with active and vibrant graduate programs based on diverse sources of external funding. The successful candidate will have a joint-appointment with the two units. To learn more about GLIER-UW and Chem/Biochem, please visit our website at http://www.uwindsor.ca/glier and http://www.uwindsor.ca/chemistry.

The successful candidate will be expected to develop an active research program and mentor graduate students in aquatic nutrient chemistry dynamics as related to primary production in aquatic ecosystems and support GLIER-UW’s mission (aquatic resource sustainability with a focus on interacting multiple stressors). Exciting opportunities exist for research on the eutrophication crisis in the lower Great Lakes, while expertise in large-lake nutrient stress in general would be an asset. Expertise and experience in analytical methods development, chemical cycling, bioavailability and modeling and their application to environmental research approaches are considered strong assets. Existing GLIER-UW faculty members work on aquatic environmental processes and issues and have strengths in ecological tracers, fisheries, conservation and evolutionary genetics, invasion biology, ecotoxicology, predictive ecology, biogeochemistry, large-system modeling and nutrient/metal/chemical dynamics.

The ideal candidate must possess a PhD in Chemistry, Biogeochemistry, Environmental Science or Environmental Engineering with background interests in instrumental analyses related to analytical chemistry in environmental systems. Undergraduate teaching duties will be assigned in Chem/Biochem and graduate teaching and supervision duties will be shared within the GLIER-UW graduate program.

In addition, an outstanding record of research productivity, and a willingness to work in a highly collaborative and multidisciplinary research environment is expected. Significant financial resources and dedicated laboratory space are associated with this faculty position. The appointee will have access to state-of-the-art facilities including laboratories for trace organics and metals, heavy and light stable isotopes, applied molecular genetics and genomics/proteomics, toxicology, fish husbandry, GIS, computational simulation modeling, analytical and aqueous geochemistry and microscopy. In addition, a recently successful large infrastructure grant has established new facilities for advanced field and lab research, with particular focus on environmental stressors in the Great Lakes under the broad themes of biogeochemical function, genomics/proteomics and ecosystem tracers.

Applications will include:
- a letter of application, including a statement of citizenship/immigration status
- a detailed and current curriculum vitae
- a two (2) page outline of research interests and accomplishments
- a draft NSERC Discovery Grant research proposal (up to 5 pages)
- letters of support from three (3) referees sent directly to the Director

Only those applicants selected for interview will be contacted. The short-listed candidates may be invited to provide further information in support of their applications. To ensure full consideration, complete an online application located on the job advertisement (http://www.uwindsor.ca/facultypositions) by the deadline date of August 14, 2015, although the position will remain open until filled and applications will be accepted at least until the appointments committee has selected a short-list of candidates.

Questions and Reference Letters to be sent to:
Dr. Daniel Heath, Director, Great Lakes Institute for Environmental Research, University of Windsor
Phone: (519) 253-3000 X 2732, Fax: (519) 971-3616, E-mail: glieri jobs@uwindsor.ca

University of Windsor is a comprehensive research and teaching institution with more than 16,000 students. The University of Windsor is a welcoming community that is committed to equity and supports diversity in its teaching, learning, and work environments. In pursuit of the University’s Employment Equity Plan, members from the designated groups (Women, Aboriginal Peoples, Visible Minorities, Persons with Disabilities, and Members of Sexual Minorities) are encouraged to apply and to self-identify. For accessibility related accommodation, please notify the Employment Coordinator (staff positions) or the Faculty Recruitment Coordinator (faculty-related positions). More general information on the University’s accessibility policy can be found on the Office of Human Rights, Equity & Accessibility website. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

www.uwindsor.ca/facultypositions
Chemistry Golf Tournament

49th Annual Gunning/Lemieux Golf Tournament

This year's tournament will be held on **Thursday, August 13th, 2015**
at the secluded **Dragons Head** 18-Hole, Par 3 golf course for all skill levels.

The format will be *4-Person Best Ball Texas Scramble*. There will be a post-event reception hosted by **Bar-B-Q Acres** catering and an exciting awards presentation to follow. This tournament will includes transportation there and back for 18 holes of golf, dinner, awards, and draw prizes.

Please indicate if you require club rentals or a vegetarian option.

**Registration and Payment deadline is July 31, 2015**

- **Scott Stelck** E3-44 492-3821
- **Laura Pham** E3-44 492-0530

Golf dress code is required. Tournament will proceed rain or shine.

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**Location**

Dragons Head Golf Course  
12240 – 199 Street  
West on Yellowhead to Winterburn Road (215 St) go North and Right at first side road  
Phone: 780-944-4653

**Date and Time**

Thursday, August 13, 2015  
Shotgun Start Tee-off at 1:00 PM

**40 Passenger Yellow School Bus Available for Pick-Up and Return from Chemistry to the Golf Course**

BBQ Dinner starts at 4:30pm  
(Teams and Tee-Times will be posted)

**Cost**

Note: Price is for all Chemistry Staff, Faculty, Grad Student and Post Docs

**Golf** - $30.00 (Includes Golf, Bus Transportation & BBQ Dinner)

**Awards & Prizes**

- Winning Group Score  
- Closest to the pin (men and ladies)  
- Longest putt (open)  
- Door Prizes