Postdoctoral Fellowship in Hydrothermal Chemistry/Geochemistry

Department of Chemistry, College of Engineering and Physical Sciences

Temporary full-time from January 2, 2018 to December 31, 2020

Hiring #: 2017-0433

Applications are sought for a postdoctoral fellow to conduct experimental research on the structure and stability of aqueous species in high temperature aqueous solutions using state-of-the-art pressure-vessel and spectroscopic techniques. Our current program includes projects to examine hydrothermal solution chemistry in areas of mission-oriented basic research related to the Canadian nuclear energy sector:

- Experimental pressure vessels studies of phase relations and solubility
- Thermochemical modeling and database development
- Characterization of metal-ligand complexes solutes in sub-critical and supercritical water using Raman or UV-visible spectroscopy.

Candidates should hold a recent PhD in physical chemistry, analytical chemistry or experimental geochemistry, with experience in pressure-vessel methods for studying solubility, speciation and/or phase relations in high-temperature aqueous solutions, and in chemical thermodynamic modeling of hydrothermal systems. Experience in using spectroscopic techniques with high pressure optical cells would be an asset.

Professor Peter Tremaine
Department of Chemistry, University of Guelph
Guelph, Ontario, Canada, N1G 2W1
Web-site: http://tremaine.cs.uoguelph.ca/ [1]

Applications and expression of interest may be sent to:
Dr. Jenny Cox: Laboratory Manager and Senior Research Associate
E-mail: coxj@uoguelph.ca

This research will take place as part of the newly created NSERC/UNENE Senior Research Chair in High Temperature Aquatic Chemistry, awarded to Prof. Tremaine in 2016, which is funded by the Canadian nuclear industry. Access to a wide range of state-of-art thermochemical, spectroscopic, electrochemical and surface analytical methods, and first-rate machine and electronic shops is provided by the Hydrothermal Chemistry Laboratory, and the Department of Chemistry.

The starting date is January 2018, or as soon as possible thereafter.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

At the University of Guelph, fostering a culture of inclusion [2] is an institutional imperative. The University invites and encourages applications from all qualified individuals, including from groups that are traditionally underrepresented in employment, who may contribute to further diversification
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of our Institution.

**Posting Date: 2017 08 30**
**Closing Date: Until Filled**

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