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 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 aqueous metal-ligand complexes in sub-critical and supercritical water using Raman or UV-visible spectroscopy.

Candidates should hold a recent PhD in physical chemistry, analytical chemistry, chemical engineering, or experimental geochemistry. He/she should have with experience in pressure-vessel methods for studying the thermodynamic properties of high-temperature aqueous systems and in chemical thermodynamic modeling. Experience in analytical instrumentation, and/or the use of spectroscopic techniques 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/

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 NSERC/UNENE Senior Research Chair in High Temperature Aqueous Chemistry, awarded to Prof. Tremaine in 2016, which is funded by the Canadian nuclear industry. Access to 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 November 1, 2018, or as soon as possible thereafter, but no later than January 7, 2019.

At the University of Guelph, fostering a culture of inclusion 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 of our Institution.
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