

## PhD Vacancy – Hydrogen Sonoelectrocatalysis

### Clean Hydrogen Labs of Prof. Bruno G. Pollet

*Prof. Pollet is UQTR's Full Professor of Chemistry and one of the world leaders in Hydrogen Energy and Sonoelectrochemistry - [https://en.wikipedia.org/wiki/Bruno\\_Georges\\_Pollet](https://en.wikipedia.org/wiki/Bruno_Georges_Pollet)*

### Sonochemistry and Sonocatalysis Research Labs of Dr. Prince Nana Amaniampong

*Dr. Amaniampong is CNRS' Research Scientist and holder of the prestigious ERC Starting Grant on Sonocatalysis - <https://www.amaniampong-researchgroup.com/>*

We are looking for a highly motivated PhD student in the field of Sonoelectrocatalysis with a major interest in Electrochemistry and Electrocatalysis. The PhD candidate should have a degree in Chemistry, Physics, or closely related fields, with an outstanding profile to work on the project focusing on the development of new and improved hydrogen generation for the next generation of alkaline water electrolyzers.

#### Main tasks

- Development of a sonoelectrochemical reactor.
- Electrochemical characterisation (CV, LSV, CA, CP, EIS etc.).
- Use of voltammetry, amperometry, RDE, RRDE, low temperature electrolyser test stands etc.
- Physical characterisation techniques (TEM, SEM, BET, XRD, Raman etc.).
- Analytical characterisation techniques (GC, ultra-fast speed camera, etc.).

#### Professional characteristics

- Professional.
- Good timekeeping.
- Observing and meeting deadlines.
- Eye for details.
- Team-player.
- The successful candidate should be enthusiastic, highly motivated, disciplined and willing to work both independently and with other researchers.
- Reading and responding to communications from the supervisory team and other members of the University.
- Taking responsibility for their own career development.
- The applicant should be a problem solver and results driven.

- The applicant should have good project management skills as well as an excellent command of English, both written and verbal as she/he will be expected to write research articles and deliver her/his findings at inter(national) conferences.
- High motivation for pursuing a PhD within 3 years.
- Ability to show initiative and work independently.
- Excellent skills in spoken and written English.

#### Other requirements

- Writing papers, patents and presenting the results at conferences.
- Writing progress reports.
- Excellent skills in spoken and written English.
- French language skills desirable but not essential.
- Project Management Certificate desirable but not essential.
- Excellent organisational skills and team player.
- Health and Safety Certificate desirable but not essential.
- High motivation for pursuing a PhD within 3 years.
- Willing to travel internationally.
- Must submit a final PhD thesis at the end of the studies.

#### **We offer**

- Exciting and stimulating opportunities in a strong international academic environment.
- An open and inclusive work environment with dedicated colleagues.

This 3-year PhD position is full funded by UQTR through the “NSERC Canada Research Chair in Clean Hydrogen”. The position includes a stipend of \$20,000/year. Possibilities to spend some time at the Sonochemistry and Sonocatalysis Research Labs of Dr. Prince Nana Amaniampong in Poitiers, France.

#### **About the application**

A cover letter (addressed to: Professor Bruno G. Pollet – [bruno.pollet@uqtr.ca](mailto:bruno.pollet@uqtr.ca)), a CV (inc. a list of publications), copies of diplomas and certificates, and 3 letters of reference.

#### **Application deadline**

Open until filled.



### Other information

A variety of Master's and Doctorate programs offered at Université du Québec à Trois-Rivières (UQTR) by departments of Biochemistry, Chemistry, Physics and Forensic Science, Electrical Engineering and Mechanical Engineering are; Masters in Science: Energy and Materials (1731), Doctorate in Science: Energy and Materials (1732), Masters: Electrical Engineering (3824), Doctorate: Electrical Engineering (3739).