PhD Studentship

Professor Peter O’Connor

**PhD project:** Electronics and Instrumentation Development for Two Dimensional FTICR Mass Spectrometry

**Supervisors:** Professor Peter O’Connor

**Project description:**
One EPSRC funded PhD scholarship is available from October 2012 in the group led by Professor Peter O’Connor on Fourier transform ion cyclotron resonance (FTICR) mass spectrometry. The project involves instrument design and development for FTICR mass spectrometers to enable a two dimensional FTICR experiment which is similar in concept to the two dimensional NMR experiment known as NOESY. The project will involve electronics design for accurate excitation and detection of the cyclotron motion of ions in a high magnetic field followed by detailed analysis of the resulting 2D time-domain data using Fourier transforms. The project will also involve design and development of FTICR mass spectrometry instrumentation including penning traps, ion optics, and vacuum chambers.

**Requirements:**
Applicants should have (or be about to receive) an honours degree (at least II.1 or equivalent and a Master’s degree is preferred) in chemistry, electrical engineering, or physics, and should have an interest in electronics, instrument design, and advanced physical techniques. These studentships provide funding only for UK/EU students.

**How to apply:**
To enquire or visit our laboratories email: p.oconnor@warwick.ac.uk

Please see our websites for more details of the research area:
http://www2.warwick.ac.uk/fac/sci/chemistry/research/oconnor

Details on how to apply formally can be found at http://www.go.warwick.ac.uk/pgapply