Department of Chemistry

PhD Studentship
Professor Sébastien Perrier

**PhD project:**  Functional Nanostructured Polymeric Materials  
**Supervisors:**  Professor Sébastien Perrier

**Project description:**
PhD Studentships are available from October 2013 to join the group of Professor Sébastien Perrier as part of its move to the University of Warwick (UK). These studentships will be based in the Department of Chemistry at the University of Warwick, with the opportunity to travel to Monash University, Australia, and work at the Monash Institute for Pharmaceutical Sciences (MIPS).

Our research focuses on the synthesis of macromolecules with highly controlled and pre-determinable structures using modern polymer and organic synthetic methods. We exploit supramolecular interactions to organise these molecules into nanostructured materials, for applications in nanomedicine (e.g. drug delivery, vaccines, antimicrobial materials), nanotechnology (e.g. components for optoelectronic applications), materials science (e.g. rheology modifiers) or chemistry (polymerisation catalysts, processes, etc.). The following projects are available:

- Peptide / polymer conjugates nanotubes, for application in nanomedicine, as drug delivery vector and ion channels.
- Core shell nanoparticles for application either in nanomedicine as drug delivery vehicles or in photonic materials.
- Hyperbranched polymers for application either in catalysis or in nanomedicine.
- Protein mimics; the design of sequentially defined polymers that reproduce the functionality and 3D folding of proteins.

**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, Materials Sciences, Biochemistry or other relevant discipline.

These scholarships are fully funded (fees and stipend included) and are open to UK or EU nationals only. Duration is for 3 1/2 years starting October 2013.

**How to apply:**
Enquiries and informal applications should include a CV and be made as soon as possible to Sébastien Perrier at sebastien.perrier@sydney.edu.au.
Details on how to apply formally can be found at [http://www.go.warwick.ac.uk/pgapply](http://www.go.warwick.ac.uk/pgapply)