Agreement between UP and Oxford will see growth of nanotechnology in SA

by Elise Venter

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Although South Africa has a strong focus on growing nanotechnology-based research, electrochemistry which plays an important role in developing this research have been largely underdeveloped in this country. To improve local skills and knowledge in this field, the University of Pretoria is hosting an interactive workshop on electrochemistry in partnership with the University of Oxford.

The Department of Chemistry of the University of Pretoria and Physical and Theoretical Chemistry Laboratory of the University of Oxford will present the First International (SA-UK Research Network) Workshop on *Electrochemistry for Nanotechnology*.

Date	9 – 10th April, 2008
Venue	CSIR International Convention Centre, Pretoria.
Main speakers	Prof. Richard G. Compton (University of Oxford) Dr Gregory G. Wildgoose (University of Oxford)
Abstract submission	By invitation only (RSVP by 21 January 2008)
Registration	(meals, tea/coffee only): Free (if RSVP by 21 January 2008)

About the workshop

Electrochemistry is well recognized as an important discipline with extraordinary potentials to influence research in nanotechnology. However, electrochemistry is currently one of the least developed subjects in South Africa, a country with strategic interests in tapping into and developing nanotechnological-based research.

The main objectives of this interactive workshop are:

- To explore the various roles that electrochemistry can play in developing nanotechnology research in South Africa, and
- To explore possible areas of collaborations/networking with international experts in electrochemistry and nanoelectrochemistry. This is important to our local researchers working on nanomaterials, who are not electrochemists. It is envisaged that this workshop will help them appreciate how electrochemistry can complement their current research interests and to develop collaborations with electrochemists.

Hence, the workshop is structured such that:

- the international experts will give talks on some of the recent research trends on electro chemistry in nanotechnology; while
- the local researchers will present (summarise) their current (or intended) research in nanomaterials, identifying problems so that we (collectively) can explore possible areas of collaborations with the local and international researchers.

About the main speaker: Prof Richard G Compton

Prof Compton is a researcher of international repute within the field of general electrochemistry and nanoelectrochemistry. He is the founder and Editor-in-Chief of “Electrochemistry Communications” (Elsevier Publishers) which ranks first among the major electrochemistry journals (according to the latest ISI release).

The Compton Group at Oxford (http://physchem.ox.ac.uk/~rgc/home.html) is one the largest and most active research groups in Physical and Theoretical Chemistry, which has been very
influential in developing new methodologies and innovative techniques in nanoelectrochemistry.

An important spin-off company from his research is OxTox Ltd, which develops reliable hand-held drug testing kits for road-side use by police officers in their fight against “drug-driving”.

The Compton group has a prolific history of publishing in high impact peer-reviewed international journals, producing approximately 70 publications per year.

Topics to be covered

We plan to cover the following topics (not exhaustive) during the workshop:

- Electrochemical Synthesis of Nanomaterials
- Electrochemically Labelled Carbon Nanotubes for Drug Delivery
- Combinatorial Electrochemistry with Metal Nanoparticles: Theory and Practice
- Functionalized Carbon Nanotubes for Reagentless Sensors
- Coupled Electrochemical Systems for Enhanced Characterisation at Nanoscaled Dimension (notably multimode scanning probe microscopy with electrochemical capabilities, EC-AFM, EC-STM)
- Nanostructured Electrodes in Biomedical and Environmental Sensing
- Carbon Nanotube and Fullerene Based Electrodes
- Nanostructured Electrodes for Energy Storage and Conversion

- Simulation methods for Nanostructured electrodes: Theory and Practice

For RSVP and more information, please contact the organiser:
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