

# 2014 Seminar Program

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# Catalytic Activation of Renewable Resources for the Synthesis of Fuel (Methanol) and Polymers

## **Prof. Charlotte K. Williams**

Imperial College London (United Kingdom)

### Friday 31st January, 2014. ICIQ Auditorium, 12 p.m.



#### **Professional career**

**Professor Catalysis and Polymer Chemistry** (09/2003-2007:Lecturer, 2007-2010:Senior lecturer, 2010-2012:Reader) *Department of Chemistry, Imperial College London.* 

**Postdoctoral Research Associate** (2002-2003) *Cambridge University* (A.B. Holmes, FRS and R.H. Friend, FRS)

**Postdoctoral Research Associate** (2001-2002) *University of Minnesota,USA.* (W.B Tolman and M.A. Hillmyer)

**Ph.D. Chemistry** (1998–2001) *Imperial College London* (V.C. Gibson, FRS and N.J. Long)

**BSc Chemistry** (1994-1998), Imperial College London, First Class, GSK Prize for Organic Chemistry

Author of 72 research publications (peer-reviewed journals) and an inventor on 2 granted patents, with a further 6 applications in progress.

#### **Research Interests**

Her research interests are polymer synthesis and characterisation, in particular the synthesis of degradable, biocompatible or electroactive materials. Current research interests include:

- Carbon Dioxide / Epoxide copolymerization catalysis (new catalysts, polymers, kinetic/mechanistic investigation, DFT/spectroscopy)

- Lactide and cyclic ester ring-opening polymerization: new catalysts and polymers, specifically iso-selective catalysts for rac-lactide polymerization

- Synthesis of new monomers and polymers from carbohydrates (carbohydrate lactones)
- Catalysts for CO<sub>2</sub> hydrogenation to methanol: colloidal nanoparticles of ZnO/Cu
- Conjugated Polymers and organometallic complexes for applications as the active layer in OLEDs, PV and FETs