

# Warwick Chemistry Departmental Seminar



**Professor Charlotte Williams**

University of Oxford

Thursday 29 November

4.00 pm, Physics Lecture Theatre, Science Concourse

## **“Switchable Catalysis: from Monomer Mixtures to Multi-Block Polymers”**

The lecture will present a method to use a single catalyst to build up multi-block polymers starting from mixtures of different monomers. The polymers comprise polyester, carbonate and ether blocks. The catalyst is controlled, or switched, between distinct mechanistic cycles during the reaction – a process which is both under thermodynamic and kinetic control. The lecture will present the experimental evidence supporting the switchable catalysis and the characterization details for the resulting block polymers. The preliminary application options as thermoplastic elastomers, shape memory materials or colloidal self-assembled structures will be presented.

### **Biography**

Charlotte Williams is Professor of Inorganic Chemistry at Oxford University. Her research group work on problems in polymerization catalysis and polymers produced from renewable resources such as plants or carbon dioxide. Charlotte gained her BSc and PhD (Gibson and Long) from Imperial College London and worked as a postdoctoral researcher at University of Minnesota (Hillmyer and Tolman) and Cambridge (Holmes and Friend). She began as an independent academic life 2003 at Imperial College London and moved to Oxford in 2016.