PhD Studentship
Dr Adrian Chaplin

PhD project: Organometallic chemistry of transition metals in unusual oxidation states
Supervisor: Dr Adrian Chaplin
Funding availability: EU/UK (Funded)
Deadline: 24th February 2017

Project description:
The project will involve exploring the organometallic chemistry of low coordinate transition metal complexes in a range of oxidation states, supported by elaborate phosphine and N-heterocyclic carbene ligands. The fundamental structure and reaction chemistry of these species will be explored, with a focus on the activation of nitrogen (e.g. Mo, W) and/or alkanes (e.g. Pd, Pt) using paramagnetic derivatives. Practical work will involve ligand orientated organic synthesis, electrochemical measurements, and the manipulation and characterisation of reactive organometallic metal species under an inert atmosphere. A range of characterisation techniques will be employed in both solution (e.g. NMR and EPR spectroscopy, cyclic voltammetry) and the solid-state (e.g. X-ray diffraction). Leading reference from the group: Angew. Chem. Int. Ed. 2016, 55, 3754 – 3757.

Further information about the Chaplin group can be found at: http://go.warwick.ac.uk/chaplingroup

Requirements:
The studentship provides 3.5 years of funding for UK/EU students, starting October 2017. Applicants should have or be about to receive an honours degree (at least II.1 or equivalent) in chemistry. Practical experience in synthetic organometallic chemistry is highly desirable. A working knowledge of electrochemical methods (e.g. cyclic voltammetry) would also be beneficial.

How to apply:
Enquiries are welcomed and applications should be directed as soon as possible (with a CV) to Dr Adrian Chaplin (a.b.chaplin@warwick.ac.uk).
Details on the formal application procedure can be found at http://www.go.warwick.ac.uk/pgapply