



## Base Metals Catalysis for Sustainable Organic Synthesis

**PhD Studentship:** Queen Mary University of London - China Scholarship Council studentship on the development of sustainable catalysis with 3d metals.

**Project Details:** The broad use of scarce noble metals in industrial setups poses a challenge to sustainable catalysis that needs to be tackled with urgency. To provide unique and complementary reactivity modes, this multidisciplinary project will explore the use of base metals, such as cobalt or chromium, which will be provided with rationally designed ligand frameworks. The resulting complexes, based on earth-abundant elements, will be explored in a plethora of catalytic reactions, such as C-H bond functionalization and small molecule activation, and we will study their potential interaction with light.

The PhD applicant will join the [Planas lab](#), a recently established research group with a strong expertise in organometallic synthesis which is based at the [Department of Chemistry](#). The project will involve the synthesis of organic and inorganic compounds, optimization of reaction conditions and isolation of reactive intermediates. Experimental instrumentation will include Schlenk techniques, glovebox manipulation and NMR spectroscopy. The student will have the chance to travel to UK national and international conferences and collaborate with world leading groups from QMUL and abroad.

QMUL is a Russell group university and leading research institution internationally with world class facilities. The PhD student will become part of our Doctoral College which provides training and development opportunities, advice on funding, and financial support for research. Our students have access to a Researcher Development Programme designed to help recognise and develop key skills and attributes needed to effectively manage research, and to prepare and plan for the next stages of their career.

**Requirement:** Applications to the China Scholarship Council (CSC) are invited from outstanding candidates with or expecting to receive the equivalent of a first or upper-second class master's degree in Chemistry. They should have experience or interest in catalysis and organometallic chemistry. We are inclusive, supporting talented students regardless of their background.

### PhD Research Studentship Details

- This studentship is only for CSC PhD applicants.
- Applicant required to start in September 2024.
- The minimum requirement for this studentship opportunity is a good Honours degree (minimum 2(i) honours or equivalent) and MSc/MRes in a relevant discipline.
- If English is not your first language you will require a valid English certificate equivalent to IELTS 6.5+ overall with a minimum score of 6.0 in Writing and 5.5 in all sections (Reading, Listening, Speaking).

### Supervisor Contact Details:

Tel: +44 (0) 2078827549

E-mail: [o.planasfabrega@qmul.ac.uk](mailto:o.planasfabrega@qmul.ac.uk)

<https://www.planaslab.com/>

### Application Method:

To apply for this studentship, directly contact Dr Planas with your CV, cover letter and English IELTS scores. For direct applications follow the instructions detailed on the following webpage:

<https://www.qmul.ac.uk/spcs/phdresearch/>