3 PhD Studentships in Homogenous Catalysis with Earth-Abundant Metal Catalysts

As part of our recently launched Prosperity Partnership 'drEAMcat - Earth-Abundant Metal Catalysis in the Production of Pharmaceutical Drugs', three fully funded 4-year PhD studentships are available to start in September 2026 in a collaborative project led by Prof. Robin Bedford, Prof. Natalie Fey and Dr Alastair Lennox in the School of Chemistry at the University of Bristol and Dr James Douglas from AstraZeneca.

Palladium-catalysed transformations are used extensively in the production of active pharmaceutical ingredients (APIs), but there is a growing need to replace unsustainable platinum group metal catalysts with more sustainable Earth-abundant metal alternatives, such as those based on iron or nickel. The drEAMcat Prosperity Partnership is a large multi-centre collaborative project, involving the University of Bristol, AstraZeneca and Labman, which has been established to tackle this long-standing challenge.

To achieve this, drEAMcat will combine the development of new homogeneous first-row transition metal catalysts and their application to synthesis, with mechanistic investigations, high-throughput experimentation, automation, computation and the application of digital chemistry approaches. The PhD students' research will be aligned with the project's core aims and will appeal to ambitious chemists with a passion for homogeneous catalysis and synthesis, especially those who are keen to develop and implement one or more of the complementary research skills described above. These highly collaborative PhDs will each provide the students with excellent experience of industrial chemistry, including a short-term placement at AstraZeneca, Macclesfield, UK.

Candidate Requirements

Applicants must have obtained, or be about to obtain, a First or Upper Second Class UK first degree, or the equivalent qualifications gained outside the UK, in chemistry or in a related discipline (biochemistry, biogeochemistry, environmental sciences).

How to Apply

Please make an online application for this project at the following page How to apply | Study at Bristol | University of Bristol.

Funding

A full studentship will cover UK tuition fees, a training support fee and a stipend (£20,780 p.a. in 2025/26, updated each year) for 4 years.

Getting in Contact

We encourage you to make an informal enquiry to chem-pg-admissions@bristol.ac.uk if you have any queries or would like to discuss project.