

PhD in Materials Chemistry: Electrochemical Carbon Dioxide Capture

Applications are invited for a 3.5-year PhD studentship based in the Department of Chemistry at the University of Cambridge. The student will be supervised by Dr Alexander Forse, and the project will develop electrochemical systems for carbon dioxide capture.

Research in the Forse group centres around the development of new materials for climate change mitigation. "Electrochemical carbon dioxide capture" is an emerging strategy for capturing carbon dioxide at source, and offers an energy-efficient means to prevent carbon dioxide emissions. The overarching aims of this PhD project are to understand the mechanisms of electrochemical carbon dioxide capture, and to design improved devices.

Day to day, the project will involve electrode synthesis/fabrication, electrochemical gas adsorption experiments, data analysis and interpretation, with opportunities to carry out in situ NMR spectroscopy measurements. The successful applicant will benefit from access to state-of-the-art gas adsorption instruments, potentiostats, NMR spectrometers and wet-lab space, as required for this project.

Applicants should have or shortly expect to obtain a first or upper second-class degree from a UK university, or an equivalent standard from an overseas university, in a relevant subject such as chemistry. Practical experience of materials chemistry, or electrochemistry, or solid-state NMR spectroscopy would be beneficial, but in no way essential.

The studentship provides a maintenance grant of £18,622 per year, and tuition fees at the UK/home rate. Non-UK applicants will be considered if they are able to fund the overseas fees differential, or if they are awarded a suitable scholarship. Full details of the University's entrance requirements and scholarships are specified on the following link: www.postgraduate.study.cam.ac.uk.

To apply, please submit an application through the University Applicant Portal: www.postgraduate.study.cam.ac.uk/courses/directory/pcchpdpch for the course "PhD in Chemistry", naming Dr Alexander Forse as potential supervisor. Applications should be submitted by 5th December to be considered.

Interviews will take place in early January. For any queries about this studentship, please contact Dr Forse by email at acf50@cam.ac.uk.

We strongly encourage you to apply if you are interested, and we are keen to see as many applications as possible from BAME applicants, women, applicants with diverse gender identities, and other underrepresented groups. We encourage good work-life balance, and accommodate flexible working arrangements.