Newcastle University PhD Studentship award

Title
ABO₃ Perovskites for hydrogen production

Value of award
100% of International tuition fees paid

Number of awards
1

Start date and duration
September 2019 for 3 years

Application closing date
8th February 2019

Overview
Perovskite oxides such as (La,Sr)(Co,Fe)O₃ have been investigated as cathode materials for fuel cells as well as oxygen carrier/transport materials in non-electrochemical processes. We have previously investigated the performance and stability of such perovskites in a working reactor for hydrogen production through water-gas shift, using advanced techniques such as variable temperature high resolution neutron diffraction (at HRPD, Rutherford Appleton Laboratory) and multiple campaigns with operando synchrotron XRD (at ESRF, Grenoble).

The current project aims to design, develop and optimise SrFeO₃ based perovskite materials and other, related structures for use in redox reactions over different ranges of oxygen partial pressures.

For more information on this project, please contact us.

Sponsor
Faculty of Science Agriculture and Engineering and Chinese Scholarship Council (CSC)

Name of supervisor(s)
Professor Ian Metcalfe, School of Engineering
Dr Wenting Hu, School of Engineering

Eligibility Criteria
You must be a citizen and permanent resident of the People’s Republic of China at the time of application.
You should have an upper-second-class Honours degree or higher or international equivalent, in Chemical Engineering, or a related subject.
If English is not your first language, you should have IELTS 6.5 or equivalent.
You must also have the potential for performing original research.
How to apply
You must apply through the University’s online postgraduate application system. Apply here. To do this please ‘Create a new account’. All relevant fields marked with a red asterisk must to be completed.

The following information will help us to process your application. You will need to:
• Insert the programme code 8030F in the programme of study section
• Select PhD Chemical Engineering – Chemical Engineering as the programme of study
• Insert the studentship code CSC1819 in the studentship/partnership reference field
• Attach a covering letter and CV. The covering letter must state the title of the studentship, quote reference code CSC1819 and state how your interests and experience relate to the project
• Attach degree transcripts and certificates and, if English is not your first language, a copy of your English language qualifications

Contact
Professor Ian Metcalfe (ian.metcalfe@newcastle.ac.uk); Dr Wenting Hu (wenting.hu@newcastle.ac.uk)