

JOB DESCRIPTION

Ref: A3283

<p>Job Title: Research Associate in Heterogeneous Catalysis</p>	<p>Present Grade: 6</p>
<p>Department/College: Engineering Department</p>	
<p>Directly responsible to: Dr Xiaodong Wang</p>	
<p>Supervisory responsibility for: None</p>	
<p>Internal contacts: Other members of the Engineering Department, particularly academics, researchers and students in related fields both within the Engineering Department and in other departments.</p> <p>External Contacts: Collaborative partners in the project: University of Aberdeen Tianjin University Industrial partner</p> <p>Rsearchers, students and academics in other universities with relevant interests.</p>	

Major Duties:

1. To undertake research activities necessary to produce a system of hybrid heterogeneous (photo) and enzymatic catalysis for chemical synthesis, including catalytic materials and reactor system development.
2. To study heterogeneous and photo-catalytic regeneration of NAD(P)H cofactor and enzymatic chemical synthesis relying on NAD(P)H, respectively.
3. To undertake inorganic and biological catalysis integration with optimisation.
4. To develop analytical methods for product analysis and characterisation methods for catalyst and mechanism understanding.
5. To test the developed systems within Lancaster University, as well as at locations in the UK and China, possibly the US.
6. To work flexibly both at Lancaster and at the sites of the international collaborators where required.
7. To write articles for peer-reviewed journals, in collaboration with their supervisor and the colleagues in the research team.
8. To contribute to the making of presentations at national and international conferences and to funding bodies (both internal and external) or exhibit work at other appropriate events.
9. To bring to the attention of their supervisor and/or the industrial collaborators any areas of potential intellectual property value that may be deemed protectable under patent law, confidentiality or copyright law.
10. To make significant efforts to become up-to-speed with the literature associated with this topic of research and to remain current in this regard.