

**JOB DESCRIPTION**

**Postdoctoral Researcher in Rational Design Synthetic Chemistry and Electrochemistry, Department of Chemistry**  
**Vacancy Ref: A3549**

<b>Job Title:</b> Research Associate	<b>Present Grade:</b> 6
<b>Department/College:</b> Chemistry	
<b>Directly responsible to:</b> Dr Kathryn Toghill	
<b>Supervisory responsibility for:</b> Part responsible for some PhD students and project students	
<b>Other contacts</b>	
<b>Internal:</b> Dr John Hardy	
<b>External:</b>	
<b>Major Duties:</b>	
<b>Research:</b>	
<ol style="list-style-type: none"> <li>1. To design, synthesize and fully characterize electrochemically active inorganic and organic compounds with specific electron donating properties.</li> <li>2. Evaluate a range of heterogeneous and homogeneous catalysts with the donor solutions, supporting and directing the work of other group members where interests overlap.</li> <li>3. Undertake diagnostic electrochemical experiments, such as voltammetry, impedance spectroscopy and dynamic kinetic methods. Must be able to effectively and accurately analyse the data generated.</li> <li>4. Design and improve bulk electrolysis static and flow cell experiments. Includes the fabrication and installation of suitable electrochemical flow cell testing systems and the use of gas diffusion electrodes.</li> </ol>	
<b>Leadership:</b>	
<ol style="list-style-type: none"> <li>5. To supervise project students and PhD students.</li> <li>6. To contribute to the day-to-day running of the physical/analytical laboratory, including the upkeep of safety documentation.</li> <li>7. Participate in regular project meetings with colleagues at Lancaster and prepare and present talks, posters and reports to disseminate the results of these studies, externally and internally.</li> <li>8. Preparation of journal papers for publication of project findings.</li> <li>9. Contribute to writing research proposals that build on the expertise developed in this project.</li> </ol>	