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| <b>Job Title:</b>      | Research Associate  |
| <b>Grade:</b>          | 7   |
| <b>Salary:</b>         | £38,205 to £44,263 per annum pro rata                     |
| <b>Department:</b>     | Chemistry   |
| <b>Hours/Contract:</b> | Full time or job share, fixed term contract for 24 months |
| <b>Job Family:</b>     | Teaching and Research                                     |
| <b>Job Reference:</b>  | 10550   |

### Role Purpose

Elements such as Co, Ni, Au, PGMs, REE, Se and Te are found throughout devices such as mobile phones, batteries, solar cells, magnets, printed circuit boards and fuel cells. Their rarity coupled with their high value makes them important elements to recycle.

This project will investigate novel methods for recycling materials trying to develop selective dissolution and recovery methods as well as working with manufacturers on device design to make them easier to recycle. This includes aspects such as reversible adhesives and design for disassembly. The project will use a variety of green solvent systems and dissolution methods such as electrocatalysis to delaminate layered structures such as printed circuit boards and battery electrodes. The project will also use life cycle analysis and technoeconomic analysis to assess the impact of the techniques developed compared to conventional technology.

### Main Duties and Responsibilities

#### Research

- To undertake sample preparation, testing and analysis using a variety of electrochemical, thermal, mechanical, spectroscopic and microscopic techniques. Working with other members of the team to prioritise experiments.
- To contribute to the development of the choice of techniques, critiques, approaches, models and methods
- Management of all laboratory facilities to ensure efficient progress towards project goals and compliance with Health and Safety regulations.
- In agreement with the line manager, liaise with project collaborators to progress the research
- To lead in writing up research findings for dissemination amongst the research team and broader international community, and develop ideas and contributions for future grants, technical outputs.
- To represent the research group by disseminating results/findings at national and international conferences and broader community.
- To contribute to research outputs as a co-author to journal articles, technical papers, monograph, book chapter.
- To provide guidance to other staff and students (involved in the research programme).





- To actively seek opportunities to carry out multi-disciplinary research with other research groups at the University or stakeholders external to the University, with the approval of the Principal Investigator (PI).

### Professional Development

- Duties and opportunities to engage in work that support your own professional development.

### Impact and Knowledge Exchange

- Network and contribute to the maintaining and furthering of the wider research programme and research area
- To contribute to industry collaborations
- To consult effectively on own specialism directly with people external to the University
- To engage positively and pro-actively in research impact

### Leadership and Citizenship

- Guidance to other team members both research staff and students
- Pro-actively build networks and collaborations.
- Providing mentoring and coaching to Early Career Researchers and research students.

### Internal and External Relationships

Frequent (at least weekly) meetings with PI and relevant research associates/researchers to decide priorities and tasks to meet project goals.

3-weekly reporting (written and telecon) to partners.

3-6 monthly meetings with partners.

### Planning and Organising

Day to day management of undergraduates as well as own workload to ensure project keeps on schedule.

In collaboration with PI plan the development of the project, including budgeting, on timescales from weeks to months.

### Qualifications, Knowledge and Experience

#### Essential

- PhD or equivalent in appropriate discipline \*
- Knowledge/Experience relating to recycling technology critical metals





- Some experience of management of a laboratory and the supervision and support of students.\*

**Desirable**

- Experience of writing scientific papers
- Experience of developing and protecting IP for the University and industrial partners.

**Skills, Abilities and Competencies**

**Essential**

- Analytical and technical/scientific problem solving capability.\*
- Well-developed understanding of Health and Safety regulations and procedures
- Ability to work well with and motivate a team\*
- Ability to prioritise and work to deadlines

**Desirable**

- Good oral and written communication skills
- Leadership skills

***\*Criteria to be used in shortlisting candidates for interview***

**Reason for Fixed Term Contract**

The reason for the fixed term contract is stated in section 1.9 in the summary of contractual terms in your contract of employment.

**Criminal Declaration**

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

**Supporting University Activities**

As a University of Leicester citizen, you are expected to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We expect all staff as citizens to work flexibly across the University if required.

**University Values**

**Inclusive** - We are diverse in our makeup and united in ambition. Our diversity is our strength and makes our community stronger.





**Inspiring** - We are passionate about inspiring individuals to succeed and realise their ambitions. We challenge our community to think differently, to get involved, and to constantly embrace new ideas.

**Impactful** - As Citizens of Change we will generate new ideas which deliver impact and empower our community

## Equity and Diversity

We believe that equity, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equity support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equity, diversity and inclusion.

