

Job Title: Knowledge Transfer Partnership Associate – Chemical Engineer
Salary: Up to £35,000 per annum
Department: School of Chemistry
Hours/Contract: Full-time and fixed-term for 24 months until 31 August 2027
Job Family: Teaching and Research
Job Reference: 11921

This is an exciting opportunity for a postgraduate or PhD in chemical engineering to work on SFXRay Ltd.'s challenge of introducing circularity in their manufacturing process. The role involves working collaboratively and independently as part of a research team to embed a pilot recycling plant, scale up operations, and produce high-quality research to support SFXRay at their site in Belfast. The project will deliver a sustainable product that will greatly enhance the circular economy. Ultimately, the project will support SFXRay's research and development team to embed new knowledge into the company that will increase competitiveness and profitability. The role is part funded by the UK's Innovation agency, Innovate UK and the successful applicant will be employed by the University of Leicester, but working on site at SFXRay's premises in Belfast. The role is a Knowledge Transfer Partnership (KTP) and the successful applicant will be the associate delivering on a pre-agreed plan of work to develop circularity in barrier materials.

About the Company partner: SFX Ray Ltd

SFX Ray Ltd is a privately-owned business based in the charming and creative city of Belfast. The company manufactures Aprons and related protective garments to the highest specification and standards. The company has recently acquired 3,000ft² additional space to develop the recovery facility proposed in this KTP. The company sells to the NHS and private medical providers in local and global markets. It is proud to be designing and manufacturing in the UK.

About Knowledge Transfer Partnerships (KTPs)

For 50 years, KTPs have been helping businesses innovate for growth. They do this by connecting businesses that have an innovation idea with the expertise to help deliver it. A KTP could be the perfect launchpad for you, helping enhance your career by managing a challenging project central to a business's strategic development and long-term growth. You'll 'own' your own project, linked to both a university and a business whose experienced teams will provide you with full support. Applying academic knowledge to a real-world challenge, this is a chance to deliver impact and shape your career, opening doors within both academia and industry.

As a KTP Associate, the post will offer the following benefits:

- A budget for training and personal development of £2,000 per year (in addition to salary).
- Management training and mentoring by an Innovate UK KTP Adviser.
- An interesting and challenging role, with exposure to a variety of stakeholders.
- Full access to university resources to complete the project



- World-leading Academic and Company project supervision, with project support by a dedicated KTP Office.

Role Purpose

To have specific responsibilities within an innovative research programme aimed at overcoming SFXRay Ltd's challenge of introducing circularity into their business. The role involves working collaboratively and independently as part of a research team to embed a pilot recycling plant, scale up operations, and produce high-quality research to support SFXRay Ltd's strategic aim of achieving circularity.

Main Duties and Responsibilities

Research and Innovation:

- Capture and analyse data on material recovery, process efficiency and costs
- Conduct market research textile disposal and recycling profitability.
- Analysis of the material properties and sustainability via techno-economic and life cycle assessments. Inform design-to-recycle conversations with customers.
- Collaborate with the academic team to design the pilot plant
- Write chemical safety, waste management and risk assessments
- Embed the new pilot facility and recovery process into SFX Ray's Belfast premises
- Benchmark the efficiency of the recovery processing

Professional Development:

- Duties and opportunities to engage in work that support your own professional development.
- Attendance at conferences and events as required
- Attendance at 2 KTP residential courses at Ashorne Hill, Warwickshire.

Impact and Knowledge Exchange:

- Network and contribute to the maintaining and furthering of the wider research and technology
- innovation programme and research area
- Media and impact case study support
- Provide promotional materials to the SFXRay sales team
- Leadership and Citizenship:
- Guidance to other team members both design and product innovation staff and students.
- Pro-actively build networks and collaborations.
- Providing mentoring and coaching to Early Career Researchers and research students

Internal and External Relationships

The post is based at the premises of SFXRay Ltd in Belfast, UK. The post-holder will be directly supervised by a Company Supervisor on a daily basis and will also receive mentoring from the Academic Supervisor – Dr Jake Young - as required by the post. The post-holder will be responsible for ensuring that appropriate information exchange is maintained between SFXRay Ltd and the University of Leicester.



Planning and Organising

The post-holder will be project managing the work plan as defined in the grant application with specific tasks and outputs. You will transfer knowledge from the academic lead to SFXRay:

- Setting up a pilot recovery facility
- Technoeconomic analysis
- Design for Recycle
- Scaling up and commercialising metals recovery

In addition, the post-holder will also be required to complete a more detailed action plan (e.g.: including a Gantt or Critical Path Network, and risk assessment) and adapt the plan as the project progresses.

The associate will report progress on the project weekly and every 4 months will attend a Local Management Committee of all stakeholders that includes the funder Innovate UK.

Qualifications, Knowledge and Experience

Essential

- PhD or good level MChem or equivalent in chemical engineering *
- Project management, time and organisational skills
- Evidence of proven analytical problem-solving capability *
- Expertise in managing and overseeing large-scale laboratory devices

Skills, Abilities and Competencies

Essential

- Willingness and ability to work with internal and external stakeholders*
- Evidence of continued development of subject expertise*
- Excellent communication skills – written and verbal evidenced by the ability to communicate complex information *
- Evidence of working effectively as part of a team and the ability to work independently *
- Working towards independence and ability to be involved in collaborative research*
- Evidence and commitment to Continuous Professional Development (CPD) for yourself, and encourage commitment to learn and develop in others*

Desirable

- Experience in setting up pilot processes as part of a doctorate or similar experiences in industry
- Experience in techno-economic analysis

****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 encouraged to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We encourage all staff as citizens to work flexibly across the University if required. If supporting these activities is likely to affect your workload, please speak to your line manager in the first instance

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.

