

<b>Job Title:</b>	Research Fellow A
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<b>Responsible to:</b>	Principal investigator
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<b>Responsible for:</b>	Not applicable
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<b>Job Summary and Purpose:</b>
To undertake research in accordance with the specified research project(s) under the supervision of the project leads.

<b>Main Responsibilities/Activities</b>
<p>Generic description: To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, interviews, laboratory experimentation, critical evaluation and interpretation, computer-based data analysis and evaluation or library research.</p> <p>Using initiative and creativity to identify areas for research develop new research methods and extend the research portfolio. Analysing and interpreting results of own research. Write up results and prepare papers for submission to appropriate journals and conferences, and other outputs as required and/or appropriate. Attend appropriate conferences for the purpose of disseminating research results of personal development. The post holder may also contribute to writing bids for research grants and will contribute to collaborative decision making with colleagues in areas of research.</p> <p>Continually update knowledge and develop skills, and translate knowledge of advances in the area into research activity.</p> <p>To plan and manage own research activity in collaboration with others. To carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control.</p> <p>To contribute to teaching in the Faculty by carrying out student supervision and/or demonstrating within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate.</p> <p>The post holder may occasionally be required to supervise more junior research staff.</p>

**Person Specification**

The post holder must have:

A doctoral degree in a relevant discipline (although individuals who have almost completed a doctoral degree may be appointed). Consideration may also be given to individuals who do not hold a doctoral degree but have required skills based on a number of years experience in specified / relevant fields.

The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

**Relationships and Contacts**

Direct responsibility to the principal investigator or academic supervisor. The post holder may be asked to serve on a relevant Faculty committee. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.

**Special Requirements**

To be available to participate in fieldwork as required by the specified research project.

**All staff are expected to:**

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.
- Help maintain a safe working environment by:
  - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand
  - Following local codes of safe working practices and the University of Surrey Health and Safety Policy
- Undertake such other duties within the scope of the post as may be requested by your Manager.

### Addendum

This document provides additional information relating to both specific aspects of the post/faculty and any post specific person specification criteria. The information contained within this document should always be read in conjunction with the accompanying generic Job Purpose.

**Job Title:**

Interdisciplinary Research Fellow in Microbial Sciences

### Background Information/Relationships

We are looking for two full-time post-doctoral research associates, each for two years. We have an exciting interdisciplinary project to tackle ‘forever chemicals’ using ultrasonic and microbial electrochemical technology. Forever chemicals are extremely persistent synthetic chemicals that, even at low levels, may increase cancer risk and cause hormonal disruption and developmental abnormalities.

The project will research a new hybrid sono-bio technology for a subclass of forever chemicals known as PFAS or per- and poly-fluoroalkyl substances. Current methods struggle to fully degrade PFAS, especially when using biological processes alone. While high-frequency ultrasound can completely break down PFAS, it is most effective in certain forms and for high concentrations. The engineering of biological processes, with the application of microbial electrochemical technology, can recover energy and make the process more sustainable. So, by combining high-frequency ultrasound with (electro)microbial action, the sono-bio technology could be a powerful, sustainable solution for the complete breakdown and removal of PFAS from the environment.

The postdoctoral research fellows will work between The School of Chemistry and Chemical Engineering and The School of Biosciences at the University of Surrey (Stag Hill campus).

The post is funded for 24 months. The project start date is in February but later availabilities will be considered. Interviews will take place in mid-January.

### Person Specification

This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role. This is in addition to the criteria contained within the accompanying generic Job Purpose.

Qualifications and Professional Memberships	Essential/ Desirable
PhD in a relevant microbiology, biochemistry, biotechnology, bioremediation, metabolomic discipline, or be near to completion or equivalent experience.  Due to the interdisciplinary nature of the project, we anticipate that applicants may only have experience in a small area relevant to the project. Some example background areas are provided as a guide only.	E
Openness to interdisciplinary research with a willingness to learn	E
Ability to work independently and cooperatively to generate and disseminate research.	E

Commitment to inclusivity	E
Commitment to responsible research and innovation	E
Ability to follow protocols (e.g. written submissions, laboratory safety) when required.	E
<b>Key Responsibilities</b> This document is not designed to be a list of all tasks undertaken but an outline record of any faculty/post specific responsibilities. This should be read in conjunction with those contained within the accompanying generic Job Purpose.	
The post holder will be expected to: <ul style="list-style-type: none"> <li>• Design and implement experiments for microbial degradation of PFAS.</li> <li>• Conduct research of PFAS degradation with microbial electrochemical systems (microbial fuel cells and/or microbial electrolysis cells).</li> <li>• Work collaboratively to integrate ultrasonic treatment with microbial degradation.</li> <li>• Perform metabolic analysis</li> <li>• Use single-cell mass spectrometry for mechanistic understanding.</li> <li>• Assist in the production of intellectual property and/or publications (conference and journal).</li> <li>• Take responsibility for aspects of project management, administration and liaison as required. This will involve collaborating with teams of researchers from diverse backgrounds (Cornelsen, DTU, Waters, University of Surrey) for scientific exchanges and attending regular project meetings and outreach within the UK and national/international conferences</li> <li>• Contribute to broader team activities by actively participating in the regular meetings relevant to the work undertaken.</li> <li>• Engage with literature to inform research practice.</li> <li>• Assist with the supervision of students in the group (postgraduate, undergraduate, and overseas visitors) at the University of Surrey</li> <li>• Work independently, as well as part of a team, throughout the research. They will be required to problem-solve independently and offer solutions to issues as and when they emerge.</li> <li>• To design and implement procedures required to ensure accurate and timely formal reporting against project milestones;</li> <li>• Carry out any other reasonable duty commensurate with the grade and purpose of the post.</li> </ul>	