

Research Role Profile

Job Title:	Research Fellow (1A)
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Responsible to:	Dr Constantina Lekakou
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Responsible for:	Not applicable
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Job Summary and Purpose:
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

Main Responsibilities/Activities
<p>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 to 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>

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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.

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Addendum to Role Profile

Job Title:	Research Fellow (1A)
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Job Summary and Purpose:

This information sheet should be read in conjunction with the accompanying generic Research RA1A Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:

This is a post for the EPSRC/ISCF project on High Power Batteries, aiming at increasing the power density of batteries with already high energy density and make them safe during operation at high currents during both charge and discharge. The post will be shared between two Departments at the University of Surrey: the Materials Group in the Department of Mechanical Engineering Sciences and the Electrochemical Group in the Department of Chemistry (at a nominal ratio of 2:1, respectively).

Main Responsibilities/Activities

1. Carry out experimental work to functionalise nanomaterials.
2. Carry out experimental work to manufacture coating-type electrodes, battery cells (of small and large size), carry out electrochemical testing of cells and material characterisation.
3. Analyse the results and contribute own ideas and initiative to develop high power batteries.
4. Maintain and update experimental facilities and order consumables as needed by the project according to the project budget.
5. Write reports on different parts of the project work and annual reports.
6. Organise, participate and give out presentations at project meetings to funder representatives (EPSRC, BEIS, ISCF) and Industrial Advisory Board.
7. Maintain confidentiality and respect the policy for confidentiality before patent applications.
8. Write and publish research papers in high reputation/high impact journals.
9. Give presentations at international conferences.

Person Specification

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The post holder must have:

1. A first degree in Engineering, Chemistry or Physics; and a PhD or an EngD or equivalent work experience in the areas of materials science and engineering or electrochemical devices.
2. Experience in material functionalisation, material and nanomaterial processing, coating manufacturing, electrochemical device (battery, supercapacitor or hybrid) fabrication and electrochemical testing.
3. Excellent experimental skills and experience in maintaining argon glovebox and carrying out experimental work in a glovebox.
4. Microstructural material characterisation and physical material characterisation (e.g. using SEM); chemical characterisation (e.g. using FTIR and Raman techniques).
5. Excellent record of publications of research papers in high reputation and high impact journals.

Relationships and Contacts

The post will be shared between two Departments at the University of Surrey: the Materials Group in the Department of Mechanical Engineering Sciences, and the Electrochemical Group in the Department of Chemistry (at a nominal ratio of 2:1, respectively).

The academic staff responsible for this project are:

Dr Tina Lekakou from Mechanical Engineering Sciences; email: C.Lekakou@surrey.ac.uk

Professor Bob Slade from Chemistry; email: r.slade@surrey.ac.uk