



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Molten Salt Corrosion within Low Carbon Energy Systems, Faculty of Engineering and Physical Sciences



Salary: Grade 7 (£35,333 – £42,155 p.a.) Due to funding restrictions, an appointment will not be made higher than £37,474 p.a.

Reference: EPSME1124

Closing date: Thursday 02 February 2023

Fixed-term for 12 months

We are open to discussing flexible working arrangements

Research Fellow in Molten Salt Corrosion in Low Carbon Energy Systems, Institute of Functional Surfaces, School of Mechanical Engineering.

Are you an ambitious researcher looking for your next exciting challenge? Do you have a background in materials science and corrosion? Do you want to further your career in one of the UK's leading research-intensive Universities?

This post is for an EPSRC funded research project in collaboration with an international industrial partner, Sulzer Ltd. Sulzer Ltd is a global leader in flow equipment; particularly high-performance pumps used renewable and low carbon energy generation systems that uses molten salts as heat transfer and storage medium; concentrated solar power systems and molten salt reactors. This project will provide the research fellow an exciting opportunity to lead an exciting research project with potential for generating significant outputs and industrial impact and supported by an exciting research team and industrial partners.

You will hold a PhD degree (or have submitted your thesis before taking up the role) in material science or corrosion science/engineering or a closely allied discipline. You will also have significant experience in high temperature corrosion research preferably related to chemically aggressive environments.

What does the role entail?

As a Research Fellow, your main duties will include:

- Leading the development of experimental methodology for simulating complex metal – molten salt interactions encountered in molten salt energy systems;
- Driving the delivery of molten salt corrosion related research in collaboration with colleagues and industrial sponsors;
- Working collaboratively with colleagues and industrial partners to promote the findings from this project;
- Working collaboratively with colleagues and industrial partners to explore and develop scope of work for follow up projects;
- Generating and pursuing independent and original research ideas in the appropriate subject area;



- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own work;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow, you will have:

- A PhD degree (or have submitted your thesis before taking up the role) in material science or corrosion science/engineering or a closely allied discipline;
- Significant experience in high temperature corrosion research preferably related to chemically aggressive environments;
- Experience of developing bespoke experimental methods for complex metal - molten salt interactions at high temperatures;
- An ability to develop creative approaches to problem solving;
- Good time management and planning skills, with the ability to meet tight deadlines, manage competing demands and work effectively under pressure without close support;
- A developing track record of peer-reviewed publications in high impact factor journals;
- Excellent written and verbal communication skills including presentation skills;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development.



You may also have:

- Experience of pursuing external funding to support research.

How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised [closing date](#).

Contact information

To explore the post further or for any queries you may have, please contact:

[Dr Frederick O. Pessu](#), Lecturer in Corrosion Science and Engineering

Tel: +44 (0) 1133437635

Email: F.O.Pessu@leeds.ac.uk

Additional information

Faculty and School Information

Further information is available on the research and teaching activities of the [Faculty of Engineering & Physical Sciences](#), and the [School of Mechanical Engineering](#).

A diverse workforce

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Engineering and Physical Sciences we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Engineering and Physical Sciences are proud to have been awarded the Athena SWAN [Silver](#) Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our [equality and inclusion webpage](#) provides more information.



Working at Leeds

We are a campus-based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

Information for disabled candidates

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

