



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Mineral Process Chemistry and Engineering, Faculty of Engineering & Physical Sciences



Salary: Grade 7 (£33,797 - £40,322 p.a.). Due to funding constraints an appointment will not be made above £35,845.

Reference: EPSPE1015

Fixed-term for up to 9 months

We will consider flexible working arrangements

Research Fellow in Mineral Process Chemistry and Engineering

School of Chemical and Process Engineering

Are you an experienced and ambitious researcher looking for your next challenge? Do you have a passion to uncover new methodologies for developing a sustainable approach for mineral processing that is beneficial for environment by reducing waste and saves energy? Do you want to further your career in one of the UK's leading research intensive Universities?

In today's world we heavily rely on earth resources, e.g. minerals for extracting the metal values for manufacturing products that we consume. The processing of minerals is, however, quite demanding in energy, as it often produces wastes which are damaging to the natural habitat. At the University of Leeds, we are committed to developing a sustainable approach for mineral processing which removes/reduces the risk of environment damage. The project aims to provide a sustainable and economically viable, financially competitive process for supporting industry. Our main objective aligns well with the [Sustainable Development Goals](#) of the UN.

You will have a PhD in Chemical or Materials or Mineral Engineering or a directly relevant area of mineral processing/chemical beneficiation, with demonstrable knowledge in the field of minerals science, process engineering, process analysis, mineral analysis, knowledge of high temperature and aqueous phase chemical reaction and separation techniques for mineral value analysis

What does the role entail?

As a Research Fellow, your main duties will include:

- Undertaking detailed chemical analysis of minerals before reaction, process chemistry and products using a range phase analysis and spectroscopy (e.g. XRF, Raman, UV-visible FTIR);
- Designing and engineering methodologies for controlling chemical reaction and processes in pyro and hydrometallurgical conditions;
- Undertaking detailed process mass and heat balance analysis;
- Analysis of the end-of-process and valorisation;



- Working with the sponsors for process development;
- Working and maintaining a safe and collegial environment;
- Leading and supporting independent research and dissemination activities;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- 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;
- 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:

- PhD in Chemical or Materials or Mineral Engineering or a directly relevant area of mineral processing/chemical beneficiation;
- Demonstrable knowledge in the field of minerals science, process engineering, process analysis, mineral analysis, knowledge of high temperature and aqueous phase chemical reaction and separation techniques for mineral value analysis;
- Demonstrable knowledge of modelling of mass and energy balance using the software tools;



- Demonstrable knowledge of mineral characterisation, phase analysis, particle size, electrode-potential and pH characterisation;
- Demonstrate characterisation of materials using spectroscopic techniques;
- Excellent time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure;
- A proven track record of peer-reviewed publications in high impact journals;
- Excellent written and verbal communication skills including presentation skills;
- Proven ability to manage competing demands effectively, responsibly and without close support;
- 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:

[Professor Animesh Jha](#), School of Chemical & Process Engineering

Tel: +44 (0)113 343 2342

Email: a.jha@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 Chemical and Process Engineering](#).

A diverse workforce

The Schools in the Faculty of Engineering & Physical Sciences are proud to have been awarded the Athena SWAN [Bronze or 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

Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our [Working at Leeds](#) information page.

Candidates with disabilities

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.

