



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Application Scientist in Materials Characterisation

Faculty of Engineering and Physical Sciences



Salary: Grade 7 (£38,205 – £45,585 p.a.)

Reference: EPSPE1110

Location: Leeds campus

Closing date: Thursday 22 August 2024

Fixed term for up to 3 years

We are open to discussing flexible working arrangements

Application Scientist in Materials Characterisation, School of Chemical and Process Engineering & Bragg Centre for Materials Research.

Do you have a background in Materials Characterisation? Are you able to develop and support the interactions between Materials Research Facilities and Industry? Do you want to further your career in one of the UK's leading research-intensive Universities? Do you want to work with the Henry Royce Institute?

A variety of multiuser Materials Characterisation Facilities have been established in the Bragg Centre for Materials Research at the University of Leeds. These allow researchers from across the University, the UK academic community and also external industry partners to have access to materials characterisation data and interpretation.

As an Application Scientist in Materials Analysis, you will apply specialist technical expertise to react quickly and flexibly to support complex materials projects from Small to Medium-sized Enterprises (SMEs) and larger industry, and will work in partnership with the Royce Institute. Projects will be primarily based on short-term innovation and consultancy work, including materials characterisation, materials development and problem solving. However, when required, they should be able to contribute to the delivery of more complex multidisciplinary projects. You will also provide specialist research support and advice in materials characterisation, and manage consultancy work with industrial partners.

You will work across the Bragg Centre analytical facilities, including the Royce Versatile Soft X-ray Facilities (VSXF e.g. X-ray Photoelectron Spectroscopy (XPS)) for Surface Chemical Analysis, X-ray Diffraction (XRD), X-ray Fluorescence (XRF), Small/Wide angle X-ray scattering (SAXS/WAXS) and X-ray microcomputed tomography ($X\mu$ CT), the Leeds Electron Microscopy and Spectroscopy (LEMAS) Centre (Scanning and Transmission Electron Microscopy, and Focused Ion Beam Microscopy), and the Scanning Probe Microscopy (AFM/STM) Facilities. As appropriate, you will also access Royce facilities at other partner institutions, and National Facilities (SuperSTEM Daresbury, Nuclear Magnetic Resonance, National Centre for Crystallography, X-ray Tomography, Electron Paramagnetic Resonance, XPS etc.).



What does the role entail?

As an Application Scientist, your main duties will include:

- Framing discussions with industry, leading to the co-creation of technical project plans, and to manage, undertake and deliver these plans in the agreed and required timescales, with the help and guidance of Facility Research technicians and technology and skills specialist (RTP) staff and Technology Platform leads;
- Providing specialist research support and advice in materials characterisation techniques for industry users;
- Interacting with, and providing assistance to, industry users and supporting them in interpretation and analysis of data using specialist software and programmes;
- Working across the various Bragg Analytical Facilities to develop research and data to its full potential, and correlate measurements across different methods in order to deliver both short industrial consultancy projects and, in collaboration with other Application Scientists and RTP staff, to help deliver more complex multidisciplinary and multifaceted projects;
- Connecting across the expertise base within the Royce Institute and University of Leeds and interact with Facility RTPs, Academics, Technology Platform leads and Industry Technical leads, as well as with Royce and Leeds Business Engagement teams and external Research Training Organisations (RTOs);
- Being proactive in learning new skills, methods and techniques, and be flexible in the overall approach with the ability to multi-task where required;
- Where appropriate, accessing Royce facilities at other partner institutions, and also National Facilities (SuperSTEM Daresbury, Nuclear Magnetic Resonance, Crystallography, X-ray Tomography, XPS etc.);
- Managing consultancy work with industrial partners, driving technical developments, providing reports, keeping records and helping administrate access charging for industrial users of the combined facility;
- Constructing project proposal documentation including deliverables, timelines, costs and customer-facing technical reports, as well as internal reporting documents such as invoices, instrument usage tracking and appropriately redacted case studies for use by business engagement and communications teams;



- Providing health and safety inductions to industry users as and when required and operate in accordance with health and safety procedures, hazard, risk, COSHH assessments and local policies and proceed as defined by the Faculty Health and Safety Manager to ensure correct and safe usage of laboratory equipment by yourself, and potentially industry users.

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 an Application Scientist, you will have:

- A PhD in Materials Science, Materials Chemistry, Materials Physics, Engineering or related discipline, OR equivalent industrial experience;
- A broad working knowledge of a wide range of materials characterisation, testing and synthesis techniques, with particular skills in a number of specific and relevant materials characterisation methods, for example X-ray diffraction/scattering, Electron and Ion beam Microscopy, Scanning Probe Microscopy, Surface Chemical Analysis and X-ray microtomography;
- A proven track record in performing measurements and implementing data analysis techniques which have led to the development of materials and/or the solution of materials science problems;
- Experience of working in an analytical facility and with the ability to develop instrumentation and data analysis to the limits of the available instrumentation;
- The ability to contribute to a clear vision for the analytical facilities within the Bragg Centre for Materials Research in terms of developing interactions with Industry, as well as with the Royce Institute;
- Good time management and planning skills, with the ability to meet tight deadlines and manage competing demands effectively without close support;
- A developing track record of peer-reviewed reports to users and publications in international journals;
- Excellent communication skills both written and verbal, and the ability to communicate your research to both industry and academia at project meetings and national and international conferences;
- A proven ability to work well both independently and in a team;



- A strong commitment to your own continuous professional development.

You may also have:

- Experience of dynamic, in-situ environmental or native-state measurements of materials;
- Experience in developing collaborations with industry;
- Experience in delivering training, workshops and lectures to a wider audience, and especially external partners;
- Evidence of liaising and networking with industrial and academic colleagues in the UK to develop new research opportunities;
- Experience in working in TRAC facilities, including charging systems and working with finance managers.

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 Rik Drummond-Brydson](#),

Email: R.M.Drummond-brydson@leeds.ac.uk

Additional information

Please note: If you are not a British or Irish citizen, you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Salary Requirements of the Skilled Worker Visa Route

Please note that this post may be suitable for sponsorship under the Skilled Worker visa route but first-time applicants might need to qualify for salary concessions. For more information, please visit: www.gov.uk/skilled-worker-visa.



For research and academic posts, we will consider eligibility under the Global Talent visa. For more information, please visit: <https://www.gov.uk/global-talent>.

Faculty and School Information

Further information is available on the research and teaching activities of the [School of Chemical and Process Engineering](#), the [Faculty of Engineering & Physical Sciences](#), and the [Bragg Centre for Materials Research](#).

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 disabled candidates, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at hr@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.

