

THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

Faculty of Science & Engineering

Technical Specialist (Surface Characterisation / ToF-SIMS)

Salary:	Grade 6 £33,309 to £40,927 per annum, depending on relevant experience
Hours:	35 hours per week
Duration:	Permanent
Location:	University of Manchester – Photon Science Institute, Henry Royce Institute

Enquiries about the vacancy, shortlisting and interviews:

Reporting to: Dr Ben Spencer, Senior Technical Specialist

Email: ben.spencer@manchester.ac.uk

Introduction

The University of Manchester (www.manchester.ac.uk) is one of the largest single-site universities in the UK, with one of the biggest student communities. In total, 25 Nobel Prize winners have worked or studied here and 83% of our research was ranked as 'world-leading' or 'internationally excellent' by the Research Excellence Framework in 2014. Furthermore more than nine out of ten of our recent graduates go straight into employment or continued studies. The Faculty of Science and Engineering (FSE) comprises two multi-discipline Schools; the School of Engineering and the School of Natural Sciences, each led by a Head of School and Head of School Operations. The School of Engineering is made up of four academic departments and the School of Natural Sciences is made up of five academic departments. For more information please visit <https://www.se.manchester.ac.uk/>.

Overall Purpose of the Job

We are seeking an enthusiastic and proactive Technical Specialist to join our dynamic Faculty Technical Operations team, which strives to provide a sector leading technical support for our students and staff. The purpose of this role is:

- Manage complex, specialist scientific instruments and facilities.
- Deliver sector leading training and support for staff, students, and external users.
- Develop techniques and applications for a wide range of advanced materials and chemical research.
- Collaborate with colleagues to deliver excellent technical support across the faculty.

MAIN DUTIES AND RESPONSIBILITIES

Equipment & Operations

- Operate, manage, maintain and service a time-of-flight secondary ion mass spectrometer (ToF-SIMS) that is part of the characterisation suite in Henry Royce Institute for Advanced Materials.
- Operate and maintain ultra-high vacuum systems, gas lines, and use cryogenics for sample preparation.
- Operate and maintain ancillary equipment and sample preparation facilities to ensure work is carried out under optimal conditions.
- Provide measurements as a service for internal colleagues and external clients accessing the instruments, including consultation, quotation, measurement, data analysis and reporting.
- Contribute detailed professional scientific/engineering expertise through highly developed specialist knowledge and skills in a specific field.
- Provide high quality and reliable advice, guidance and training to a range of staff, students, visitors and external customers on your specific area of expertise in support of teaching, research and service provision.
- Apply professional expertise to collect, interpret, evaluate and present data in support of teaching, research and/or operational planning purposes.
- Provide specialist technical input and make recommendations which influence the direction of teaching and/or research operations in your area of specialism.
- Ensure that all experimental requests are delivered in a timely fashion and in line with service performance indicators.
- Develop strong and effective working relationships with colleagues across the University and at all levels of the organisation.
- Ensure cost recovery from research and other internal and external income streams in maximized within your area of specialism.
- Be responsible for the provision of an excellent service, proactively scan the wider environment for changes which may impact on delivery of service and use intelligence gathered to inform operation and planning processes.
- Manage a delegated budget.
- Take ownership for the continuous improvement in your own knowledge, experience and expertise, while freely sharing your knowledge and training others in your area(s) of expertise.
- Be responsive, agile and flexible based on service need across FSE i.e. learn new techniques, support other areas in the Faculty should the need arise, on occasions perform additional duties outside the scope of your role but commensurate with grade.
- Be an active and enthusiastic member of the FSE Technical Operations community.
- Champion a culture of continuous improvement, collaboration, consistency and innovation; and actively engage with change initiatives, leading on specific activities as appropriate.

Governance & Compliance

- Manage and take responsibility for all aspects of health and safety in the workplace within your area of specialism to ensure that the University continues to meet its legislative requirements.
- Liaise with all colleagues and safety advisors to ensure that all equipment is maintained and operated in compliance with the latest regulations e.g. PUWER, PSSR, etc. Maintain up to date knowledge of all relevant legislation.
- Act in accordance with and promote university policies, procedures and requirements at all times, in particular those relating to health and safety; procurement; finance; equality, diversity and inclusion; and information governance
- Make a difference to the life and future of our region by embedding the University's social responsibility goals within the day to day operations of the team
- Maintain a commitment to equality, diversity and inclusion

- Maintain a strong awareness of the Faculty's strategy to deliver world-class research and teaching performance as well as an understanding of how your area of work directly supports the vision and goals of the University.

PERSON SPECIFICATION

Qualifications

- A qualification in a science or engineering related subject area e.g. PhD, degree, HND; or extensive work experience in a relevant technical, engineering and/or scientific role.

Essential

- Experience of secondary ion mass spectrometry.
- Experience of working within a research and development or technical-focused environment.
- Experience of the repair, maintenance or development of ultrahigh vacuum (UHV) apparatus.
- Be recognised as an operational specialist in a specific/relevant technical field.
- A comprehensive knowledge and understanding of the relevant field.
- Ability to apply an in-depth knowledge so as to be a credible point of reference for staff and student enquiries.
- An ability to work both independently and collaboratively as a member of a multi-disciplinary team.
- Experience of working in a customer focused technical environment and delivering an exceptional experimental based service.
- An ability to communicate confidently and effectively with staff from across the University at all levels of the organisation.
- Excellent analytical and problem solving skills with the ability to identify and resolve issues effectively.
- Excellent IT, time management, and oral and written communication skills.
- Ability to work well under pressure.
- An awareness and understanding of all relevant health and safety requirements in the workplace, including the application of specific legislative requirements such as risk assessments, operating procedures and COSHH, etc. in a laboratory environment.
- A flexible approach to work with a willingness to undergo further training and continuous professional development as required.
- A commitment to the University's core values and to the provision of the best possible support to our students, staff and customers.

Desirable

- A PhD or advanced degree.
- Experience of ToF-SIMS and other complimentary surface analysis techniques.
- Experience of managing facilities in a relevant technical field.
- Experience of publishing scientific research in peer-reviewed journals.
- Experience of leading and managing staff, trainees and/or apprentices.
- Experience of managing projects e.g. procurement, equipment installations, etc.
- Budgetary management experience and the ability to manage projects and operations within budget.

Expectations and Success Factors

- To be a proactive team member and treat all colleagues and students with respect in accordance with well-established PS Behaviours.



The University of Manchester

- To be willing to work across organisational boundaries.
- To seek new knowledge and share ideas.
- To be open and responsive to change and innovation.

In-line with the University's terms and conditions, you will be expected to work such hours as are necessary for the proper discharge of your duties and responsibilities, with a notional minimum 35 hours per week through Monday to Friday. There may be occasions when some non-core hours work could be required, however the University operates arrangements to recognise out of hours working and to ensure an appropriate balance between working and non-working time.