

Job Description and Selection Criteria

Job title	Cluster Facility Technician
Division	Mathematical Physical and Life Sciences
Department	Physics
Location	Clarendon Laboratory / Robert Hooke Building
Grade and salary	Grade 7: £36,024 - £44,263 per annum
Hours	Full time 37.5 hours per week
Contract type	Fixed-term for 2 years, with potential for extension.
Reporting to	Dr Jin Yao
Vacancy reference	174564
Additional information	Closing date – midday (UK time) on 16 September 2024

The role

The National Thin-Film Cluster Facility for Advanced Functional Materials is a multi-million-pound EPSRC funded project with contributions of the Oxford University John Fell Fund and the Physics Department of the University of Oxford. It is a collaboration between the University of Oxford, University of Cambridge, University of Loughborough and Imperial College London and was opened in November 2022. It serves a large and further growing community of researcher from Oxford and beyond. At the core of this facility is a bespoke large vacuum deposition system consisting of several interconnected, but independent deposition chambers (thermal, sputter, ALD) for the fabrication of multilayer structures of organic semiconductors, inorganic and hybrid perovskites, metals, transparent conducting oxides etc. The facility engineer is Dr Jin Yao and the co-directors of the facility are Profs Henry Snaith and Moritz Riede (all Oxford Physics).







174564 Project and Facilities Engineer JD.docx

The role will provide primarily technical, but also some administrative support to facility engineer for the day-to-day operation of this national facility.

Responsibilities

- Support the delivery of a high standard thin-film deposition service to academic collaborators, commercial institutions and local users:
 - Support the smooth day-to-day running of the facility, in particular, running the various experiments at the facility, ensuring equipment is functioning and monitoring and ensuring sufficient stock as necessary,
 - Help to maintain equipment, including arranging cleaning of components, loading evaporation sources, performing quality checks and monitoring the "health" of the facility e.g. via tracking samples, and contributing to the general cleanliness and upkeep of the facility space,
 - o Fabricate samples based on recipes provided by users,
 - Identify and analyse engineering problems which arise during the facility operation and develop solutions as needed with the cluster engineer,
 - Help to develop, and routinely review, system operating procedures for use by both facility users and support staff,
 - Help to develop and implement a training packages for visitors, colleagues and students using the facility,
 - Provide a second point of reference in addition to the cluster engineer for less experienced team members,
 - Keep a database of materials and samples up to date,
 - Keep up to date with and advise on matters relating to Good Laboratory Practice (GLP), Health and Safety, COSHH sheets and other regulations relevant to the post.
 - Work closely with departmental support staff, e.g. mechanical & electrical workshops, stores and building services to meet with the facility needs.
- Support for organising, prioritising and planning time and resources for the facility:
 - Maintain a web-based booking request system for the facility and check submitted experiments against capabilities of the facility,
 - Support the different experiments running at the facility, in particular the schedule optimisation for maximising reliability and throughput,
 - o Communicate effectively with all facility users to promote its optimal use,
 - Ensure smooth and transparent technical communication between key facility users, including industry partners, and team working in the facility,
 - Maintain a database of facility use for diagnostic purposes.
 - Support to log facility instrumental records with describing issues, solutions and status.

Hazard-specific / Safety-critical duties

This job includes the following hazards or safety-critical activities which will require successful pre-employment health screening through our Occupational Health Service before the successful candidate will be allowed to start work:

- Working at heights
- Lone Working
- Driving on University business
- Regular manual handling
- Work with any substance which has any of the following pictograms on their MSDS:



• Travel outside of Europe or North America on University Business

Selection criteria

Essential

- A completed level 3 engineering apprenticeship, a level 3 mechatronics maintenance technician apprenticeship, a Bachelor of Science/Engineering (honours) or relevant other relevant training
- Excellent team working skills
- Experience of working laboratory environment
- Technical experience with complex equipment
- Experience working with hazardous chemicals, developing risk assessments and COSHH sheets
- Ability to troubleshoot problems with experiments and arrive at an appropriate solution
- Strong attention to detail, with the ability to organise samples and record results in a clear and organised fashion
- Good IT skills including a knowledge of standard Office products (e.g. MS Office, Excel, LibreOffice)
- Ability to organise own work load and take initiative as appropriate
- Excellent knowledge of health and safety regulations in a laboratory environment, and to follow & ensure strict safety procedures and safety checks.
- Excellent time management and organization skills
- Excellent communication skills in an interdisciplinary and international environment both written and verbal
- Excellent Excel skills for helping to maintain time and booking sheets
- English proficiency, incl. required technical vocabulary

Desirable

- PLC control experience
- Excellent knowledge of design and visualisation software such as Autodesk Inventor, FreeCAD, OpenSCAD or similar
- Expertise in working on a high vacuum/ultra-high vacuum deposition system.
- Experience in working in multidisciplinary teams

About the University of Oxford

Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford's researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, while providing all our staff with a welcoming and inclusive workplace that enables everyone to develop and do their best work. Recognising that diversity is our strength, vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cuttingedge. Oxford is one of Europe's most entrepreneurial universities and we rank first in the UK for university spin-outs, and in recent years we have spun out 15-20 new companies every year. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford. For more information, please visit www.ox.ac.uk/about/organisation.

Department of Physics

Oxford Physics is one of the largest and most eminent departments in Europe – pursuing forefront research alongside training the next generation of leaders in Physics.

With an academic staff of over one hundred our activities range from fundamental particles to the furthest reaches of the universe to manipulating matter on an atomic scale. Oxford physicists are probing new ways to harness solar energy, modelling the Earth's atmosphere to predict the future climate, exploring computation on the quantum scale and executing calculations that reveal the fundamental structure of space and time.

Sub-department

The post-holder will be based in the Condensed Matter Physics sub-department, which is one of the six sub-departments that together make up the Department of Physics; these are Astrophysics, Atomic and Laser Physics, Atmospheric, Oceanic and Planetary Physics, Condensed Matter Physics, Particle Physics and Theoretical Physics, with a seventh function (Central Physics) providing administrative and technical support to these sub-departments. Members of all sub-departments take part in research, teaching and matters such as examinations, discussion of syllabi, lectures and liaison with undergraduates and postgraduate students.

Members of the Condensed Matter Physics sub-department carry out world-leading research in a wide range of areas and include in the context of this Thin-Film Cluster and the group of Co-Investigators in particular advanced functional materials like organic, hybrid (perovskite), metal oxide and metal-chalcogenide semiconductors, organic and metal oxide dielectrics, transparent conducting metal oxides and metals. The facility will be unique world-wide and place the UK at the centre of the development of next-generation materials and devices for applications in energy, photonics and electronics.

Athena Swan Charter

The Department of Physics holds a silver Athena Swan award to recognise advancement of gender equality: representation, progression and success for all.

Mathematical, Physical & Life Sciences Division

The Mathematical, Physical and Life Sciences (MPLS) Division is one of the four academic divisions of the University of Oxford.

The MPLS Division's 10 departments and 3 interdisciplinary units span the full spectrum of the mathematical, computational, physical, engineering and life sciences, and undertake both fundamental research and cutting-edge applied work. Our research addresses major societal and technological challenges and is increasingly focused on key interdisciplinary issues. We collaborate closely with colleagues in Oxford across the medical sciences, social sciences and humanities, and with other universities, research organisations and industrial partners across the globe in pursuit of innovative research geared to address critical and fundamental scientific questions.

For more information please visit: http://www.mpls.ox.ac.uk/

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How to apply

Applications are made through our e-recruitment system and you will find all the information you need about how to apply on our Jobs website <u>https://www.jobs.ox.ac.uk/how-to-apply</u>.

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

As part of your application you will be asked to provide details of two referees and indicate whether we can contact them now.

You will be asked to upload a CV and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your skills and experience. This may include experience gained in employment, education, or during career breaks (such as time out to care for dependents)

Please upload all documents as PDF files with your name and the document type in the filename.

All applications must be received by **midday** on the closing date stated in the online advertisement.

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing departments.

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments)

If you need help

Application FAQs, including technical troubleshooting advice is available at: <u>https://staff.web.ox.ac.uk/recruitment-support-faqs</u>

Non-technical questions about this job should be addressed to the recruiting department directly <u>recruitment@physics.ox.ac.uk</u>

To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

Please note that you will receive an automated email from our online recruitment portal to confirm receipt of your application. **Please check your spam/junk mail** if you do not receive this email.

Important information for candidates

Pre-employment screening

Please note that the appointment of the successful candidate will be subject to standard preemployment screening, as applicable to the post. This will include right-to-work, proof of identity and references. We advise all applicants to read the candidate notes on the University's preemployment screening procedures, found at:

www.ox.ac.uk/about/jobs/preemploymentscreening/.

Important information for candidates

Data Privacy

Please note that any personal data submitted to the University as part of the job application process will be processed in accordance with the GDPR and related UK data protection legislation. For further information, please see the University's Privacy Notice for Job Applicants at: <u>https://compliance.admin.ox.ac.uk/job-applicant-privacy-policy</u>. The University's Policy on Data Protection is available at: <u>https://compliance.admin.ox.ac.uk/data-protection-policy</u>.

The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for very senior research posts at **grade RSIV/D35 and clinical equivalents E62 and E82**, which with effect from 1 October 2023 will be 30 September before the 70th birthday. The justification for this is explained at: <u>https://hr.admin.ox.ac.uk/the-ejra.</u>

For **existing** employees on these grades, any employment beyond the retirement age is subject to approval through the procedures: <u>https://hr.admin.ox.ac.uk/the-ejra.</u>

There is no normal or fixed age at which staff in posts at other grades have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

Equality of opportunity

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Benefits of working at the University

Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, travel discounts, and a variety of professional development opportunities. Our range of other employee benefits and discounts also includes free entry to the Botanic Gardens and University colleges, and discounts at University museums. See <u>https://hr.admin.ox.ac.uk/staff-benefits</u>

University Club and sports facilities

Membership of the University Club is free for all University staff. The University Club offers social, sporting, and hospitality facilities. Staff can also use the University Sports Centre on Iffley Road at discounted rates, including a fitness centre, powerlifting room, and swimming pool. See www.club.ox.ac.uk and https://www.sport.ox.ac.uk/.

Information for staff new to Oxford

If you are relocating to Oxfordshire from overseas or elsewhere in the UK, the University's Welcome Service website includes practical information about settling in the area, including advice on relocation, accommodation, and local schools. See <u>https://welcome.ox.ac.uk/</u> There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependants. See <u>https://staffimmigration.admin.ox.ac.uk/visa-loan-scheme</u>

Family-friendly benefits

With one of the most generous family leave schemes in the Higher Education sector, and a range of flexible working options, Oxford aims to be a family-friendly employer. We also subscribe to the Work+Family Space, a service that provides practical advice and support for employees who have caring responsibilities. The service offers a free telephone advice line, and the ability to book emergency back-up care for children, adult dependents and elderly relatives. See https://hr.admin.ox.ac.uk/my-family-care

The University has excellent childcare services, including five University nurseries as well as University-supported places at many other private nurseries.

For full details, including how to apply and the costs, see https://childcare.admin.ox.ac.uk/

Disabled staff

We are committed to supporting members of staff with disabilities or long-term health conditions. For further details, including information about how to make contact, in confidence, with the University's Staff Disability Advisor, see https://edu.admin.ox.ac.uk/disability-support

Staff networks

The University has a number of staff networks including the Oxford Research Staff Society, BME staff network, LGBT+ staff network and a disabled staff network. You can find more information at https://edu.admin.ox.ac.uk/networks

The University of Oxford Newcomers' Club

The University of Oxford Newcomers' Club is an organisation run by volunteers that aims to assist the partners of new staff settle into Oxford, and provides them with an opportunity to meet people and make connections in the local area. See <u>www.newcomers.ox.ac.uk</u>.