

Chemistry Department/School of Science

## Research Associate Porous materials and Lithography

Job Ref: REQ250361

**As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.**

*School of Science/Chemistry Department*

### Project Description

A project funded by Leverhulme Trust titled: "The road towards the integration of synthetic porous materials in electronic devices" is starting in June 2025. The project will synthesized the first porous materials that are compatible with state-of-the-art lithographic techniques. This high-risk high reward project is looking for a motivated Research Assistant with experience in organic synthesis and preferable (although not necessary) in lithography.

### Job Description

**Job Grade:** Specialist and Supporting Academic Grade 6

The project is at the intersection of porous materials and lithography, aiming to develop novel methods for patterning porous structures. Porous materials, such as hydrogen-bonded organic frameworks (HOFs), are characterized by their high surface area and tuneable pores, making them ideal for applications like gas separation, catalysis, and energy storage. Lithography, encompassing techniques like photolithography and thermal scanning lithography, enables precise patterning at micro- and nanoscale, crucial for microelectronics and nanotechnology. The integration of these fields could lead to patterned porous materials with enhanced functionality, new smaller and more sensitive electronic sensors]

### Job Duties

- To become familiar with literature in porous materials and lithography
- To develop new multifunctional porous materials that can be deposited on surface and nanopatterned
- To analyse data from techniques such as NMR, TGA, DSC, SEM, BET
- Be responsible for conducting the day to day running of the project.
- To formulate detailed plans for the project based on broad guidance from the project team.
- To feed back to the project team on progress, to make recommendations for next steps.
- Write up regular progress reports and present outcomes to all Investigators and Collaborators.
- To support the project team by enhancing relationships with existing collaborators and by assisting the establishment of relationships with new collaborators.
- To write research papers suitable for publication in high quality academic journals.
- To attend and contribute to conferences.
- Engage in training programmes in the University (or elsewhere) that are consistent with the needs and aspirations of the project and those of the Department.

## Points To Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

## Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equity & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Belonging and Inclusion, where appropriate, Recruitment and Selection.

## Organisational Responsibility

Reports to Antonio Fernandez

## Person Specification

Your application will be reviewed with respect to meeting the essential and desirable criteria listed below.

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

### Essential Criteria

Area	Criteria	Stage
Experience	Background in Organic Synthesis	1
	Authoring original work for academic journal papers, conference papers or technical reports	1
Skills and abilities	Excellent written and oral communication skills	1
	Self-motivated with ability to meet deadlines	3
	Excellent interpersonal, and organisational skills	3
	Ability to write project reports and make technical presentations to industrial and academic research groups	3
	Knowledge of relevant Health & Safety issues	3
Training	Demonstrate evidence of having undertaken further training	3
Qualifications	PhD (or near completion) in Chemistry or related field	1

Other	Commitment to observing the University's Equal Opportunities policy at all times.	3
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### Desirable Criteria

Area	Criteria	Stage
Experience	Ideally (although not necessary), experience in lithography	3
	Developing proposals for funding from external agencies	3
	Working in a high-quality academic research environment	1
	A strong publication track record	1
	Further project specific skills	3
Other	Travel / Able to travel Independently / Working patterns	1

### Conditions of Service

The position is FULL TIME and FIXED TERM for 2 years. Salary will be on Specialist and Support Academic Grade 6, £35,116- £45,413 per annum, at a starting salary to be confirmed on offer of appointment.

The appointment will be subject to the University's Terms and Conditions of Employment for STAFF GRADES 6 AND ABOVE, details of which can be found [here](#).

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which can be found [here](#).

The University offers a wide range of employee benefits which can be found [here](#).

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: <http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html>)

In addition, the University is supportive, wherever possible, of flexible working arrangements. We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>