

Job Details

Job Title:	Postdoctoral Research Assistant	
School:	School of Physics and Astronomy	
Reports to:	PPRC Group Leader	
Grade:	4	Full Time
Appointment period:	Fixed Term, 12 months	
Current Location:	Mile End	

Job Context

The Particle Physics Research Centre (PPRC) and Centre for Condensed Matter and Materials Physics (CCMMP) at QMUL are developing organic semiconductor-based radiation detectors. This position is on the interface between the two research groups and is focused on the development of a proof of concept demonstrator of a multi-channel device, building on our existing work on the fabrication of bulk heterojunction P3HT:PCBM detectors for photon and alpha detection.

Job Purpose

The successful candidate will, under the supervision of the Principal Investigator, work on design, fabrication and testing of multichannel organic semiconductor-based radiation detectors using PPRC and CCMMP facilities.

Main Duties & Responsibilities

The post holder will:

1. Design substrates for multi-channel devices.
2. Characterise the properties of organic semiconductor components used for the project, to ensure a detailed understanding of the quality of materials is recorded.
3. Fabricate bulk heterojunction organic semiconductor diodes on the substrates.
4. Test devices with a NdYAG laser to validate photoconduction response, and identify yield of functional diodes.
5. Work with other members of the CCMMP and PPRC groups on testing devices with radioactive sources.
6. Fully document results through internal reports and internal presentations (made to the QMUL research group and external stakeholders).
7. Prepare reports of appropriate research results for public presentation through meetings, seminars and conferences. Contribute to writing papers summarising research findings for publication in peer-reviewed journals (of high international standing where possible). Contribute to other reports as required.
8. Maintain appropriate databases, keeping accurate written and computerised records and to ensure that these records are stored in a secure place, conforming to the group data management plan, and to maintain confidentiality of all electronically stored personal data in line with the provisions of the Data Protection Act and GDPR.
9. Undertake literature and database searches for the research project, and to be able to interpret and present the findings of the literature searches and advise the research teams appropriately regarding potential projects as required.

Main Duties & Responsibilities

10. Keep up to date with subject related and professional issues, in particular, developments in the specific subject area.
11. Comply with relevant College policies and regulations with due regard to financial matters, harassment, equal opportunities, public interest disclosure, health and safety, intellectual property and patenting, data protection or any other rules, regulations or codes binding on the member of staff.
12. Participate in the College Appraisal Scheme (QMPAS) and demonstrate a commitment to continuing professional development.
13. To show a professional attitude to matters of timekeeping, communication, laboratory hygiene, organisation and safety, and to observe and to take an active role in fulfilling all statutory health and safety regulations.
14. Acknowledge and comply with confidentiality and non-disclosure agreements required to participate in the work undertaken by the QMUL team to ensure IP protection.

For this role, post-holders will be expected to work flexibly in order to achieve project demands, travel to external laboratories as required, work with radioactive sources in a controlled environment and show commitment to health and safety in the workplace. They should be self-motivated, hardworking, exhibit a collegial disposition, and demonstrate a willingness to learn new skills.

The above list of responsibilities is not exhaustive and the jobholder may be required to undertake other duties commensurate with the level of the role, as reasonably requested by their line manager.

This job description sets out the duties of the post at the time it was drawn up. Such duties may vary from time to time without changing the general character of the duties or level of the responsibility entailed. Such variations are a common occurrence and cannot in themselves justify a reconsideration of the grading of the post.

This table lists the essential and desirable requirements needed in order to perform the job effectively. Candidates will be shortlisted based on the extent to which they meet these requirements.

Requirements		Essential / Desirable	How Assessed
Qualifications	PhD in experimental physics or equivalent experience in a relevant field.	Essential	A
Knowledge, Skills and Experience	Ability to programme in C++, Python or LabView.	Desirable	A&I
	Ability to develop VIs using LabView	Desirable	A&I
	Experience with fabricating and testing organic electronic devices	Essential	A&I
	Experience with data analysis using Excel, or more advanced data science tools	Essential	A&I
	Appropriate publication records	Desirable	A
	Developed hardware skills	Essential	I
	Good communication skills	Essential	I
	Ability to proficiently document results and work done.	Essential	I
	Ability to organise and prioritise own work and organise research within the project timetable	Essential	I
	Effective team working	Essential	I
	Strong analytical skills	Essential	I
	Understanding of the research process	Desirable	I

Essential/Desirable:

E = Essential: Requirements without which the job could not be done.

D = Desirable: Requirements that would enable the candidate to perform the job well.

How Assessed:

A = Application

I = Interview

OM = Other Means (e.g. presentation, test, etc.)