

Candidate Information

Position:	Research Fellow
School/Department:	School of Mathematics and Physics
Reference:	24/111855
Closing Date:	Monday 27 May 2024
Salary:	£37,841 per annum
Anticipated Interview Date:	Monday 17 June 2024
Duration:	12 months

JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of MAIS project research team assisting in the development of research proposals and the planning and delivery of the research activity specifically development and testing of new instruments for Mass Analysis In-Situ (MAIS). New instruments are being developed to monitor gases from different environments including industrial plasma processing units.

The post is a critical role, and as such, successful applicants will have responsibilities in independent research, planning, day to day lab management and industrial collaborations.

MAJOR DUTIES:

1. Undertake research and development work under supervision of Dr Tom Field within the MAIS research team.
2. Contribute to the design, development, testing and refinement of the new instruments for in-situ mass analysis.
3. Carry out analyses, critical evaluations, and interpretations of experimental data and the literature.
4. Produce high quality research outputs consistent with project aims and commensurate with career stage. This will include collaborating and co-authoring with PI and project team (as appropriate) on outputs. It will also include engagement with industrial collaborators and preparation of technical notes on the performance of the new instruments.
5. In consultation with the project team, promote research milestones and outputs at national and international conferences and trade shows.
6. Assist grant holder in the preparation of funding proposals and applications to external bodies.
7. Carry out occasional educational supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
8. Undertake supplementary duties relevant to the success of the project including administrative duties and additional training and development activities as required.

ESSENTIAL CRITERIA:

1. Normally have or be about to obtain a PhD (or equivalent) in a relevant area. Relevant areas include Physics and Chemistry, but are not limited to these two areas (NB: 'About to obtain' is normally defined as within 3 months of application date).
2. Specific, relevant research experience to include:
 - Analyses, critical evaluations, and interpretations of experimental data.
 - Ability to work effectively as part of a research team in the development and promotion of the research theme.

3. At least two of the criteria listed below:
Experience of working with:
 - Mass spectrometry
 - Electron beams/guns
 - Vacuum systems
 - Electronics
 - Computer programming
 - Data analysis/processing
 - Instrument building/CAD modelling
 - Development of vacuum apparatus / instruments
4. Experience of in the areas of:
 - Molecular physics
 - Chemical physics
 - Physical Chemistry
 - Instrument development and/or Technology Transfer
5. Ability to contribute to broader management and administrative processes, such as engagement with industrial partners.
6. Practical problem solving skills, independence of thought and initiative.
7. Ability to assess and organise resources.
8. Ability to communicate complex information in English effectively in oral and written format.
9. Ability to build relationships to develop internal and external networks.
10. Commitment to continuous professional development.

DESIRABLE CRITERIA:

1. Experience of working with:
 - Mass spectrometry
 - Electron beams/guns
 - Vacuum systems
 - Electronics
 - Computer programming
 - Data analysis/processing
 - Instrument building/CAD modelling
 - Development of vacuum apparatus / instruments
2. Experience of in the areas of:
 - Molecular physics
 - Chemical physics
 - Physical Chemistry
 - Instrument development and/or Technology Transfer
3. Strong publication record commensurate with stage of career.

ADDITIONAL INFORMATION:

Please note it is expected that the successful candidate must be available to start no later than 1st August 2024.