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| Last updated: | 03/11/2024 |  |  |  |  |

**JOB DESCRIPTION**

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| Post title: | **Research Fellow in Semiconductor Photophysics** | | |
| Standard Occupation Code: (UKVI SOC CODE) | 2119 - Natural and social science professionals | | |
| School/Department: | School of Physics & Astronomy | | |
| Faculty: | Faculty of Engineering and Physical Sciences | | |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research pathway | | |
| Posts responsible to: | Dr Silvia Motti | | |
| Posts responsible for: | No line management responsibility | | |
| Post base: | Office-based/Non Office-based (see job hazard analysis) | | |

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| Job purpose |
| To conduct research aiming to understand the vibrational properties of perovskite semiconductors. To contribute to the wider research activities related to the grant under supervision of the award holder. To provide support to PhD students in the research group and to contribute to the development and maintenance of the experimental capabilities in the research laboratory. |

| Key accountabilities/primary responsibilities | | % Time |
| --- | --- | --- |
|  | To develop and carry out an area of personal research and collaborate/work on original research tasks with colleagues both at Southampton and in other institutions. | 60 % |
|  | Regularly disseminate findings by taking the lead in preparing publication materials for referred journals, presenting results at conferences, or exhibiting work at other appropriate events. | 10 % |
|  | Support the preparation of future bids for research funding. | 5 % |
|  | Carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control. | 5 % |
|  | Assist with supervision of PhD students and undergraduate project students. | 5 % |
|  | Carry out occasional undergraduate supervision or demonstrating duties within own area of expertise, under the direct guidance of a member of departmental academic staff. | 5 % |
|  | Promote the work of the group to the general public where appropriate. | 5 % |
|  | Any other duties as allocated by the line manager following consultation with the post holder. | 5 % |

| Internal and external relationships |
| --- |
| Direct responsibility to holder of research award or academic supervisor (Dr Silvia Motti).  May be expected to provide guidance and supervision to postgraduate students. May undertake complementary teaching activities for undergraduate students. May be asked to serve on a relevant School/Department committee, for example research committee.  Collaborators/colleagues in other work areas and institutions. |

| Special Requirements of the Role |
| --- |
| To attend national and international conferences for the purpose of disseminating research results.  *Applications for Research Fellow positions will be considered from candidates who are working towards or nearing completion of a relevant PhD qualification. The title of Research Fellow will be applied upon successful completion of the PhD. Prior to the qualification being awarded the title of* ***Senior Research Assistant*** *will be given.* |

**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable |
| Qualifications, knowledge and experience | Hold a PhD degree or equivalent qualification (or close to completion) in Physics, Chemistry, or Material Science.  Experience in laser spectroscopy.  Experience conducting scientific research, evidenced by achievements such as peer-reviewed publications. | Experience in perovskite semiconductors, including fabrication, processing, and characterisation.  Programming and computing skills for data analysis. |
| Planning and organising | Able to organise own research activities to deadline and quality standards. |  |
| Problem solving and initiative | Able to develop understanding of complex problems and apply in-depth knowledge to address them.  Able to develop original techniques/methods. |  |
| Management and teamwork | Work effectively in a team, understanding the strengths and weaknesses of others to help teamwork development. |  |
| Communicating and influencing | Communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audience  Able to present research results at group meetings and conferences  Able to write up research results for publication in leading peer-viewed journals  Work proactively with colleagues in other work areas/institutions, contributing specialist knowledge to achieve outcomes |  |
| Other skills and behaviours | Understanding of and compliance with relevant Health & Safety requirements.  Behave respectfully towards colleagues and students.  Demonstrate a positive attitude towards equality, diversity, and inclusion. |  |
| Special requirements | Able to attend national and international conferences to present research results |  |

**Version Control**

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| Job description author | Silvia Motti | | |
| Evaluated by | Job Evaluation Panel | Date evaluated: |  |
| Career Pathway: |  | Unique Reference Number: |  |
| Amended: | Yes/No | Date amended: |  |
| Amendment author: | Name – Job Title |  |  |
| Re-evaluated: | Yes/No | Date re-evaluated: |  |

**JOB HAZARD ANALYSIS**

**Is this an office-based post, with routine hazards?**

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| --- | --- |
| Yes | This is an office-based post with routine office hazards (eg: use of VDU), no further information needs to be supplied. Do not complete/remove the section below. |
| Partly | This is an office-based post with some non-routine hazards (eg: contact with the public and/or shift work). Please complete the analysis below. |
| No | This is a non office-based post and has some hazards. Please complete the analysis below. |

**HIRING MANAGER**

Please complete this section as accurately as possible to ensure the safety of the post-holder.

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| **ENVIRONMENTAL EXPOSURES** | **Occasionally**  (<30% of time) | **Frequently**  (30-60% of time) | **Constantly**  (> 60% of time) |
| Outside work |  |  |  |
| Extremes of temperature (eg: fridge/ furnace) |  |  |  |
| ## Potential for exposure to body fluids |  |  |  |
| ## Noise (greater than 80 dba - 8 hrs twa) |  |  |  |
| ## Exposure to hazardous substances (eg: solvents, liquids, dust, fumes, biohazards). Specify below: | Yes, in research laboratories with appropriate control measures |  |  |
| Frequent hand washing |  |  |  |
| Ionising radiation |  |  |  |
| **EQUIPMENT/TOOLS/MACHINES USED** | | | |
| ## Food handling |  |  |  |
| ## Driving university vehicles(eg: car/van/LGV/PCV) |  |  |  |
| ## Use of latex gloves (prohibited unless specific clinical necessity) |  |  |  |
| ## Vibrating tools (eg: strimmers, hammer drill, lawnmowers) |  |  |  |
| **PHYSICAL ABILITIES** | | | |
| Load manual handling |  |  |  |
| Repetitive crouching/kneeling/stooping |  |  |  |
| Repetitive pulling/pushing |  |  |  |
| Repetitive lifting |  |  |  |
| Standing for prolonged periods |  |  |  |
| Repetitive climbing (ie: steps, stools, ladders, stairs) |  |  |  |
| Fine motor grips (eg: pipetting) |  |  |  |
| Gross motor grips |  |  |  |
| Repetitive reaching below shoulder height |  |  |  |
| Repetitive reaching at shoulder height |  |  |  |
| Repetitive reaching above shoulder height |  |  |  |
| **PSYCHOSOCIAL ISSUES** | | | |
| Face to face contact with public |  |  |  |
| Lone working |  |  |  |
| ## Shift work/night work/on call duties |  |  |  |

## - HR will send a full PEHQ to all applicants for this position. Please note, if full health clearance is required for a role, this will apply to all individuals, including existing members of staff.