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**Job Description**

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| **Job title** | Research Associate |
| **Department/School** | Chemistry/Chemical Engineering |
| **Job family** | Education and Research |
| **Grade** | 7 |
| **Reporting to** | Professor Andrew Burrows (Chemistry) and Professor Tina Düren (Chemical Engineering) |
| **Responsible for** | There may be a requirement for:day to day supervision of other staff e.g. technical staff or, co-supervision of doctoral or undergraduate students  |
| **Location** | University of Bath premises  |

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| **Background and context** |
| As part of a Leverhulme Trust grant, the research associate will undertake a programme of research to investigate the uptake of semiochemicals into metal-organic framework materials and their controlled release from these porous materials. The research associate will undertake this project by carrying out a combination of experimental work and modelling studies. The grant involves a collaboration with the University of Sussex, and the research associate will liaise directly with colleagues in Sussex.  |

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| **Job purpose** |
| To provide subject-specific research expertise and undertake specific research work reporting to Professor Andrew Burrows and Professor Tina Düren on a Leverhulme Trust funded project entitled *'The controlled release of semiochemicals from porous materials: a new approach to pest control'*. |

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| **Main duties and responsibilities**  |
|  | Responsible to the PI/CI for:  |
| **1** | Conduct individual research projects as part of a broader collaboration. Contribute to the design and execution of the project e.g. timetabling and meeting project milestones; participating in regular discussions with collaborative partners. Generate, collect and analyse data related to the project using qualitative and/or quantitative techniques. |
| **2** | Writing up results of research and contributing to the publication of results in high-quality peer-reviewed academic literature. |
| **3** | Disseminating results of research project as appropriate to the discipline through activities such as* overseas research visits
* conference presentations
* public engagement activities
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| **4** | Participate in departmental/group meetings and prepare and deliver presentations/seminars to project team, internal and external stakeholders or funders. |
| **5** | Assist with the supervision of postgraduate students and undergraduate project students and the assessment of student knowledge. |
| **6** | Continually update knowledge and understanding in field or specialism to inform research activity. |
| **7** | Identify sources of funding and provide assistance with preparing bids to funding bodies. Develop ability to secure own funding e.g. travel grants.  |
| **8** | Contribute to the development of research objectives and proposals for own or joint research projects, with assistance of a mentor, if required. |
| **9** | Disseminate knowledge of research advances to inform departmental teaching. |
|  | You will from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager. You are required to follow all University policies and procedures at all times and take account of University guidance.  |

**![logo-uob-resize[1]]() Person Specification**

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| **Criteria** | **Essential** | **Desirable** |
| **Qualifications** |  |  |
| A PhD degree in subject area of direct relevance for the project, or equivalent significant relevant experience and professional qualification | √ |  |
| **Experience/Knowledge** |  |  |
| Post-doctoral experience |  | √ |
| Demonstrated significant depth and breadth of specialist knowledge of subject matter to contribute to research programmes and to the development of departmental research activities | √ |  |
| Demonstrated awareness of latest developments in the field of research and in research design | √ |  |
| Demonstrated potential to publish in high quality, peer reviewed journals | √ |  |
| **Skills** |  |  |
| Expertise in organic or inorganic chemical synthesis. | √ |  |
| Expertise in the synthesis and characterization of porous materials |  | √ |
| Expertise in using classical molecular simulation methods such as molecular dynamics and Monte Carlo preferentially with experience in materials modelling |  | √ |
| Expertise in using ab initio methods preferentially with experience in materials modelling |  | √ |
| Expertise in working in a Linux environment and using HPC facilities |  | √ |
| Ability to prepare research proposals, to conduct individual research work and to disseminate results |  | √ |
| Ability to organise and prioritise own workload to meet required deadlines | √ |  |
| Ability to write research reports and to effectively disseminate outcomes | √ |  |
| Excellent oral, interpersonal and written communication skills | √ |  |
| Proficiency in appropriate techniques (as appropriate to discipline) | √ |  |
| Proficiency in IT skills (as appropriate to discipline) | √ |  |
| **Attributes** |   |  |
| Willingness to work on both the experimental and modelling parts of the project. | √ |  |
| Commitment to working within professional and ethical codes of conduct | √ |  |
| Innovation and developing creative solutions  | √ |  |
| Commitment to excellence in research | √ |  |
| Enthusiasm and self-motivation | √ |  |
| Tenacity – working to achieve own and team objectives and to overcome obstacles  | √ |  |
| Ability to be an effective team worker | √ |  |
| Commitment to safe working practices | √ |  |