UNIVERSITY OF SUSSEX

1 Advertisement

Post Title: Research Assistant in Chemistry and Entomology
School/department: Life Sciences- Evolution, Behaviour and Environment
Hours: full time or part time hours considered up to a maximum of 36.5 hours
Requests for flexible working options will be considered (subject to business need).
Contract: fixed term for 14 months
Reference: 8793
Salary: starting at £30,497 to £32,344 per annum, pro rata if part time
Placed on: 06 June 2022
Closing date: 24 June 2022. Applications must be received by midnight of the closing date.
Expected Interview date: TBC
Expected start date: 1st August 2022

- We wish to appoint a motivated individual as a Research Assistant in chemistry and entomology to work on the use of Metal Organic Frameworks (MOFs) as slow release vectors of semiochemicals in pest control.

- The person will work on a Leverhulme-funded project led by Professor John Spencer (Chemistry) and Professor William Hughes (Evolution, Behaviour & Environment) in the School of Life Sciences. The project is in collaboration with Prof Andy Burrows (University of Bath).

- The work will involve the analysis of pheromone-loaded MOFs, synthesised at Bath, on pest control. The successful candidate will conduct headspace analysis of pheromone levels, investigate effects of the MOFs on the behaviour of leaf-cutting ants and other insects, and synthesise and tailor ligands to maximise MOF-pheromone interactions.

- The successful applicant will have theoretical and practical experience in synthetic organic chemistry and related analytical techniques, educated up to Masters level. A thorough knowledge of organic synthesis, NMR and mass spectrometric characterisation of organic molecules is essential and a good knowledge of entomology is desirable for this post.

Please contact Prof John Spencer (j.spencer@sussex.ac.uk; he/his) or Prof Bill Hughes (william.hughes@sussex.ac.uk; he/his) for informal enquiries.

The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine

and Mathematics (STEMM) at Sussex.

For full details and how to apply see our vacancies page

The University of Sussex values the diversity of its staff and students and we welcome applicants from all backgrounds.

2. The School / Division

Please find further information regarding the school/division at School of Life Sciences

3. Job Description

Job Description for the post of: Research Assistant in Chemistry and Entomology

Department: Chemistry and EBE

Section/Unit/School: School of Life Sciences

Location: Arundel and JMS buildings

Grade: 6

Responsible to: Principal Investigators

PRINCIPAL ACCOUNTABILITIES

1. To observe and assist with individual and/or collaborative research activity and contribute to the production of research outputs for publications.

KEY RESPONSIBILITIES

2. Research, Scholarship & Enterprise

2.1 With support from the Principal Investigator, develop research objectives and contribute to the planning of the research project.

2.2 Conduct research activity under supervision of the Principal Investigator, and in collaboration with others.

2.3 Assist with the analysis and interpretation of research findings and contribute to discussions on conclusions and outcomes.

2.4 Contribute to the writing of reports and other dissemination activities under the supervision of experienced researchers.

2.5 Contribute to the preparation of research ethics and data management strategies, under guidance from the Principal Investigator to ensure compliance with ethical approval and data protection legislation.

2.6 Present information on research progress and outcomes to relevant bodies under the supervision of the Principal Investigator.

2.7 Plan own day-to-day research activity within the framework of the agreed programme.

2.8 Learn about the publication process and contribute to research outputs for publication in monographs or recognised high-quality journals, or performance/exhibition, as appropriate.

2.9 Continually update knowledge and understanding in field or specialism, and engage in professional development.

3. Teaching & Student Support

3.1 Assist in the supervision of student projects and provide guidance to those assisting in the research.

4. Contribution to School & University

4.1 Attend and contribute to relevant School and project meetings.

4.2 Undertake additional duties, as required by the Principal Investigator and/or Head of School.

5. Role-specific duties

5.1 Carry out head-space analysis of volatiles from MOFs and other products.

5.2. Conduct synthesis and tailoring of ligands to maximise MOF-semiochemical interactions.

5.3 Conduct behavioural bioassays of the effects of MOFs with leaf-cutting ants and other insects.

5.4 Analyse results and prepare outputs for reports and publications.

5.5 Maintain cultures of leaf-cutting ants and other insects.

5.6 Look after routine technical maintenance of laboratories.

This Job Description sets out current duties of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.

INDICATIVE PERFORMANCE CRITERIA

- Under the supervision of the Principal Investigators, conduct experiments/research to assist with project aims, with emphasis on training.
- Undertake research by preparing, setting up, conducting and recording the outcomes.
- Manage and analyse data, and prepare written reports and summaries.
- Maintain and store project files and equipment as per health and safety and data regulations.
- As part of career development, contribute to the preparation of journal articles based on the research with support from the Principal Investigator.

4. Person Specification

ESSENTIAL CRITERIA

1. Educated to Masters level, or other equivalent qualification, or relevant level of experience, as appropriate to the discipline (see role-specific criteria below).
2. Good presentation skills, with the ability to communicate effectively, both orally and in writing, with colleagues and external audiences.
3. Ability to work independently (under supervision by the Principal Investigator), and as part of a team.
4. Ability to exercise a degree of innovation and creative problem-solving.
5. Excellent organisational and administrative skills.
6. Ability to prioritise and meet deadlines.
7. Excellent IT skills.

8. Ability to follow guidance of team leaders.

ESSENTIAL ROLE-SPECIFIC CRITERIA

1. Masters degree in chemistry or a related subject

2. Theoretical and practical experience in synthetic organic chemistry and related analytical techniques

3. Thorough knowledge of organic synthesis, NMR and mass spectrometric characterisation of organic molecules

DESIRABLE CRITERIA

1. A good knowledge of entomology

2. Experience of conducting research experiments.