

Postdoctoral Research Associate In The Development of Novel Synthetic Boron-based Methodologies

1 JOB DESCRIPTION

Faculty / School or Division: School of Chemistry

Faculty/School or Division Address: School of Chemistry, University of Bristol, Cantock's Close, Bristol, BS8 1TS

Job Family:	Research and Teaching		
Grade/Pathway:	Grade I/Pathway 2	Salary range:	£39,906 - £44,746 per annum
Hours of work:	35 hours/week	Contract type:	Open ended with fixed funding
Work pattern:	Monday – Friday	Vacancy Reference Number: ACAD108745	

1.1 Main Job Purpose

Three postdoctoral positions are available for up to 18 months to work in the Aggarwal Lab (<http://www.chm.bris.ac.uk/org/aggarwal/>) to work on the development of novel synthetic boron-based methodologies.

The three positions are subject to fixed term funding between the following dates:

- 1st January 2027 to 31st December 2027
- 7th January 2027 to 6th January 2028
- 11th January 2027 to 10th June 2028

1.2 Main Statement of Responsibilities

Research Responsibilities

The PDRA will be required to work on multiple projects simultaneously, but their primary responsibility will be on the design and synthesis of complex molecules, and the development of new synthetic methodology using boron chemistry. We will use lithiation-borylation to grow carbon chains as well as larger building blocks to make C-C bonds. The researcher will employ their synthetic expertise to advance the project. The research program will require a deep understanding of the processes involved together with strong grasp of fundamentals of organic synthesis for a successful outcome.

The successful candidate will have excellent opportunities to develop supervisory, written, teaching and organisational skills and therefore this post provides ideal training for a career in industry or academia. Duties may also include helping with the training and supervision of PhD and final year project students. The successful candidate will be accountable to Professor Aggarwal FRS and to Professor Crump as Head of the Organic and Biological Chemistry Section of the School of Chemistry.

Teaching Responsibilities

As this role is a Pathway 2 (Research) role, there are no formally specified teaching duties required of the role-holder. However, other commitments permitting, the role-holder may be given development opportunities to undertake activities such as teaching on Masters and Doctoral programmes and/ or supervising MSc dissertations within the School of XXXX, as appropriate.

1.3 Relationships

Line manager: Varinder Aggarwal

1.4 Job Hazards/Safety Critical Duties (Pre-employment health screening)

N/A

2 PERSON SPECIFICATION

2.1 Relevant Experience, Skills and Knowledge

Essential

- Recent experience in synthetic organic chemistry.
- Be able to plan and execute experimental work involved in organic syntheses successfully and safely with minimal supervision.
- The ability to analyse and optimise experimental results.
- The ability to take accurate and reliable records of work carried out.
- The ability to carry out, interpret and properly record the results of modern spectroscopic techniques, including NMR.
- Familiarity with online database searching e.g. Belstein and Chemical Abstracts for use in the selection and planning of experimental work.

Desirable

- Experience of teaching and training in Higher Education.
- Experience of analytical GC, HPLC and NMR techniques.

2.2 Relevant Qualifications

Essential

- A PhD or near completion, or equivalent research experience in an academic, industrial or clinical setting equivalent to a PhD
- A first degree and PhD in Organic Chemistry.

2.3 Communication and Interpersonal Skills

Essential

- Excellent written and oral communication skills and the ability to educate, interact effectively with and enthuse postgraduate students and post-doctoral colleagues.
- The ability to become part of a team working on the research project and to demonstrate the ability to work at this level, in particular to work supportively in a laboratory environment with junior co-workers as well as other research assistants.
- The ability to present work to other chemists in a clear and concise manner.
- The successful candidate will be asked to submit written reports of their experimental results as required for the information of the supervisor.

2.4 Additional Criteria

Essential

- Academic Record: A body of published work in peer-reviewed learned journals relevant to the advertised post.
- The ability to meet deadlines and excellent organisational skills.

3 CAREER PATHWAY AND OTHER RELEVANT INFORMATION

3.1 Career Pathways

All members of academic staff have a clear career pathway involving a series of levels with distinct role profiles, each with its unique requirements. Each profile sets out what is expected of an academic at the particular level. The role profiles also set out a collection of competencies expected for each level. Promotion to the next level may occur after these competencies have been attained in conjunction with the expectations outlined in the Promotions Process and Academic Promotions Framework (APF) applicable to the role. .

The academic pathways are as follows:

Career Pathway One - academic roles that combine teaching, research and administrative duties.

Career Pathway Two - academic roles focusing on research and associated administrative duties.

Career Pathway Three – academic roles focusing on teaching and associated administrative pathways

This post is located on Pathway Two. Role Summaries setting out what is expected of an academic at each particular profile level on pathway two can be found below. Please note that an appointment may be made at any level of the pathway.

A schematic diagram of the career pathways can be found at <http://www.bristol.ac.uk/hr/grading/academic/>.

The University has two procedures for promotions depending on the level of promotion being applied for as follows:

Promotion up to Senior Lecturer / Senior Research Fellow
Promotion to Associate Professor or Professor

The procedure for Promotion up to Senior Lecturer / Senior Research Fellow describes the process for anyone on the academic career pathways and is based on the concept of readiness as determined with managers using the Academic Promotions Framework (APF). Eligibility for making a case for promotion is subject to:

1. Having a contractual expectation and meeting the performance requirements described in the Promotion up to Senior Lecturer / Senior Research Fellow process
2. Completion of a full year of service following appointment and successful completion of their Initial Service Review (ISR)
3. Meeting the expectations set out in the CREATE policy for those with teaching responsibilities (pathway 1 and 3), e.g. those seeking promotion to Senior Lecturer should achieve and have been formally notified of their Fellowship (ratified outcome) through the University's CREATE scheme before applying

The procedure for Promotion to Professor covers staff for promotion to profile level d2 (Associate Professor) and profile level e (Professor) on all pathways in the [Academic Career Pathway](#) framework.

3.1.1 Role Summaries

Research Associate (Level a)

Role holders at this level are concerned with *assisting* an individual research leader or team to conduct a particular study (or group of studies). They will generally be involved in data generation and/or collection using standard and well-defined methods developed by others. They will be working under close supervision by, and direction from, a more senior researcher, who will be ultimately responsible for the project. This may be the entry level for some staff who are expected to train and/or develop to take on more senior researcher roles. Role holders will be provided with academic and pastoral support within the department (including counselling on realistic career opportunities) and training will be available designed to develop their competences and to prepare them to take on more responsibilities associated with a higher grade.

Senior Research Associate (Level b)

Role holders at this level will be experienced and professional researchers (or have considerable professional experience) and will be specialists in a particular area or methodology, drawing upon knowledge gained from postgraduate research and/or working within a Level a role. They will be *associated* with a particular project (or projects) and will contribute ideas, and/or enhancement of techniques or methodologies. They will be expected to do some writing for dissemination outside the Department. They will still be working under supervision, but will be expected to take significant initiatives in their work and consult with the Principal Investigator over the details of the project. They may, where practical, contribute to the department's teaching, through supervision of projects, overseeing practical classes, or taking small group classes. They will be provided with academic and pastoral support within the department and training will be available designed to develop their competences (including counselling on realistic career opportunities) and prepare them to take on more responsibilities associated with a higher grade.

Research Fellow (Level c)

Role holders at this level will have substantial experience of research (normally not less than six years). They will initiate and take responsibility for some research projects and may be Principal Investigators or, where a Research Council does not permit this, act as though they were Principal Investigators. They will be involved in administration relevant to their projects (e.g. helping to prepare bids for research funding), managing other researchers and monitoring research budgets. They will be expected to be undertaking research individually and/or collectively and to be advancing the state of knowledge and understanding within their particular area of expertise. They will be publishing regularly in high quality outlets. They are likely to provide some teaching support for the department (consonant with the terms of their funding). They will be expected to be establishing a growing reputation within their particular research field and academic discipline and to be developing and demonstrating intellectual independence.

Senior Research Fellow (Level d)

Role holders at this level will have extensive experience in research and research management. They will normally be Principal Investigators, leading collaborative research bids and research teams, or driving forward innovative research themselves. They will be involved in scholastic projects (e.g. editing journals and academic books), and be making a significant leadership and/or management

contribution within their department or the wider university, to be participating in national/international academic networks and conferences. They may be transferring their knowledge through some teaching and/or supervision to undergraduate or graduate students (consonant with the terms of their funding). Role holders at this level will be independent researchers and will have an established national and growing international reputation within their academic discipline generally and research field in particular.

Professorial Research Fellow (Level e)

Role holders at this level will have very extensive experience of research leadership and related management/administration. They will enjoy a wide recognition for their expertise within the academic community internationally (as evidenced by conference invitations, journal editorships, office holding in specialist groupings, associations with appropriate Research Councils etc.). They will have made recognised and significant contributions to the developing knowledge and understanding of their research area. They will already have responsibilities for the creation, initiation, development and overall management of significant research programmes. They will 'profess' their discipline within the Department, as appropriate and consonant with the terms of their funding. They may also carry significant leadership roles within the Faculty or University.