

1 Advertisement

Post Title: Postdoctoral Research Fellow in Organometallic Chemistry x 2

School/department: School of Life Sciences - Chemistry

Hours: Full-time hours considered up to a maximum of 1.0 FTE.

Requests for flexible working options will be considered (subject to business need).

Location: Brighton, United Kingdom

Contract: fixed term for 36 months

Reference: 21045 / 21046

Salary: starting at £36,333 to £43,155 per annum, pro rata if part-time.

Placed on: 26 June 2023

Closing date: 26 July 2023. Applications must be received by midnight of the closing date.

Expected interview date: To be confirmed.

Expected start date: 01/10/2023 or as soon as possible thereafter.

- Following the award of an EPSRC standard grant to Prof. Richard Layfield, a Postdoctoral Research Fellow position is available for an outstanding chemist to undertake research in the field of lanthanide and actinide organometallic chemistry. The project will entail the design, synthesis and measurement of new f-element organometallic complexes in low oxidation states. Two positions are available, both of which last for up to 36 months and are available from 1st October 2023.
- The ideal candidate will have, or should be close to completing, a PhD or equivalent in synthetic organometallic/coordination chemistry. Expertise in the synthesis and structural characterization of air-sensitive compounds (including glove-box techniques) are essential. The successful applicant will have experience in experimental aspects of small-molecule structure determination by X-ray crystallography, from crystal growth to preparation of data for publication. Experience of solution-phase NMR spectroscopy is advantageous, and you should ideally have experience of ligand synthesis. The successful applicant will also demonstrate a willingness to learn about magnetic property measurements and associated data analysis techniques. You should be capable of working under your own initiative and leading a small research team consisting of PhD and undergraduate research students. Excellent communication and organizational skills are therefore required.

Please contact Professor Richard Layfield by email (R.Layfield@sussex.ac.uk) for informal inquiries.

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.

“Please note that this position may be subject to [ATAS clearance](#) if you require visa sponsorship.”

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.

Please note: The University requires that work undertaken for the University is performed from the UK.

2. The School / Division

Please find further information regarding the school/division at <http://www.sussex.ac.uk/lifesci/chemistry/>

3. Job Description

Job Description for the post of: Postdoctoral Research Fellow

Department: Chemistry

Section/Unit/School: School of Life Sciences

Location: University of Sussex main campus

Grade: 7

Responsible to: Professor R. Layfield, Professor of Inorganic Chemistry

- Following the award of an EPSRC standard grant to Prof. Richard Layfield, a Postdoctoral Research Fellow position is available for an outstanding chemist to undertake research in the field of synthetic organometallic chemistry applied in f-block chemistry. The project will entail the design, synthesis and measurement of new low-valent f-element organometallic compounds, aiming for the oxidation state +1. Two positions are available, both of which last for up to 36 months and are available from 1st October 2023.
- The ideal candidate will have, or should be close to completing, a PhD or equivalent in synthetic organometallic/coordination chemistry. Expertise in the synthesis and structural characterization of air-sensitive compounds (including glove-box techniques) are essential. The successful applicant will have experience in experimental aspects of small-molecule structure determination by X-ray crystallography, from crystal growth to preparation of data for publication. Experience of solution-phase NMR spectroscopy is advantageous, and you should ideally have experience of ligand synthesis. The successful applicant will also demonstrate a willingness to learn about magnetic property measurements and associated data analysis techniques. You should be capable of working under your own initiative and leading a small research team consisting of PhD and undergraduate research students. Excellent communication and organizational skills are therefore required.

4. Person Specification

You will develop synthetic routes to a range of new single-molecule magnets and will subsequently study their properties using a range of techniques. Training in unfamiliar techniques will be provided. You will be resourceful and pro-active in developing your skills in new areas.

During the project, you will:

- Aid the development of research objectives for this project.
- Prepare manuscripts for publication.
- Continually update your knowledge and understanding of SMMs and organometallic chemistry.
- Translate knowledge of advances in the subject area into research activity.
- Communicate complex information, orally, in writing and electronically.

- Participate in collaboration networks.
- Manage your own research and administrative activities, with guidance if required.
- Attend and contribute to relevant meetings.
- Be involved in the supervision of student projects.
- Assist in the development of student research skills.
- Use new research techniques and methods.
- Use initiative and creativity to identify areas for research, develop new research methods and extend the research portfolio.
- Critically analyze and interpret research data and draw conclusions on the outcomes.
- Plan and manage your research activity, seeking guidance when necessary.
- Be aware of the risks in the work environment and their potential impact on your work and that of others.

PERSON SPECIFICATION

Essential for both positions:

- Have a PhD in a relevant area of synthetic inorganic/organometallic chemistry, or be close to obtaining such a qualification;
- A strong working knowledge of synthetic organometallic and/or coordination chemistry, including Schlenk techniques and glove-box use;
- Working knowledge of the determination of molecular structures using X-ray crystallography, and you should have a working knowledge of solution-phase NMR spectroscopy;
- Excellent communication and interpersonal skills;
- Excellent time management and organizational skills;
- Ability to work independently and as part of a team, including external collaborators;
- Ability to liaise confidently and effectively with a range of individuals;
- Flexible approach to dealing with research problems as they arise;
- Willingness to learn and develop new research skills and transferable skills;
- Ability to present in both written and oral publications;
- Ability to meet deadlines;
- Strong journal publication record, with emphasis on quality and not quantity;
- The ability to evaluate complex data;
- Ability to contribute to broader management and administrative processes;
- Ability to assess and organize resources, including lab management;
- Understand equal opportunity issues as they may impact on areas of research content.

Desirable for both positions:

- Experience of magnetic property measurements;
- Theoretical simulations of coordination compounds or molecular magnets, or a willingness to acquire these skills following appropriate training.