

## Job Description

### Research Associate

<b>Salary:</b>	Grade 7
<b>Contract:</b>	Full time, fixed term
<b>School/Department:</b>	School of Chemistry and Forensic Sciences
<b>Location:</b>	Canterbury/Medway Campus
<b>Responsible to:</b>	Dr Helena J. Shepherd

### Job purpose

Applications are invited for a Post-Doctoral Research Associate (PDRA) post in the School of Chemistry at the University of Kent. The work will involve developing sustainable synthetic routes for the synthesis of molecular spin crossover materials for applications in solid state cooling.

This is a 2-year post as part of the European Innovation Council's Clean and Efficient Cooling Pathfinder Challenge. The work will be supervised by Dr Helena J. Shepherd and undertaken at the Canterbury campus of the University of Kent. There will be opportunities for short research exchanges with collaborators across Europe. More detail about research in the Shepherd Group and a list of relevant publications can be found here: <https://www.kent.ac.uk/chemistry-forensic-science/people/1029/shepherd-helena>

### Key accountabilities

- Devising and optimising sustainable synthetic pathways for spin crossover materials including both ligand and transition metal complex synthesis
- Identifying and evaluating candidate materials through literature research
- Working with collaborating laboratories across Europe to achieve shared goals
- Disseminating results to the consortium and wider scientific community through publications and conference presentations
- Participating in commercialisation training and activities as part of the wider pathfinder challenge consortium

### Key duties

The following are the main duties for the job. Other duties, commensurate with the grading of the job, may also be assigned from time to time.

- Carry out the research as documented in the project proposal, following a research plan agreed with the project principal investigator, to deliver the specific aims of the grant.
- Organise and manage a programme of laboratory work with reference to the research project work-plan, deliverables and milestones, outlined in the grant.
- Maintain accurate records of work and carry out archiving of data and software.
- Attend meetings with PI and collaborators to report on progress.
- Prepare written reports on progress for PI and collaborators.
- To supply active spin crossover materials to collaborators for further characterisation and processing.
- To help supervise other lab members e.g. PhD students technically and academically.
- Undertake personal professional development activities as appropriate to career stage.

## Internal & external relationships

- Internal:** Regular collaboration will be required with Dr Shepherd as well as other PDRAs, PhD and MSc students in the Shepherd Group, as well as wider interactions with other members of the School of Chemistry and Forensic Science, including weekly group meetings.
- External:** External collaboration is expected with research groups across Europe, including both online meetings and the possibility of longer (2-4 week) in-person research visits.

## Health, safety & wellbeing considerations

This job involves undertaking duties which include the following health, safety and wellbeing considerations:

- Regular use of Screen Display Equipment
- Working with machinery
- Working with chemicals (inc. requirement to wear latex gloves and inc. work with CO<sub>2</sub> or N<sub>2</sub> gasses)
- Scientific hazards (experiments/lasers etc.)
- Working with radiation

## Person specification

The person specification details the necessary skills, qualifications, experience or other attributes needed to carry out the job. Applications will be measured against the criteria published below.

Selection panels will be looking for clear evidence and examples in an application, or cover letter (where applicable), which back-up any assertions made in relation to each criterion.

### Essential Criteria:

- PhD degree awarded/soon to be awarded in a relevant area of chemistry or relevant experience (A)
- Practical experience in organic and/or inorganic synthetic chemistry (A, I, T)
- Experience in characterisation techniques such as X-ray diffraction and spectroscopy (A, I, T)
- Experience in summarising and presenting results (A, T)
- Good interpersonal skills and ability to communicate technical information (I, T)
- Good organisational and technical laboratory skills (A, I, T)
- Ability to take direction, follow protocols and pick up techniques quickly (I)
- Ability to set up experiments with due care and attention (A, I)
- Good IT skills and competency with numerical data and data processing (A, I)
- Confident and safe worker, individually (within training parameters) and as part of a team (I)
- Enthusiasm for learning new technical skills (I)
- Good written communication skills (A)
- Firm commitment to achieving the University's vision and values, with a passion for a transformative student experience and multidisciplinary, impactful research (I)
- Commitment to deliver and promote equality, diversity and inclusivity in the day to day work of the role (I)

### Desirable Criteria:

- Track record of publication of research articles in high quality journals (A)
- Track record of presentations at national and international conferences (A)
- Experience in supervision or management of research projects (A, I)
- Ability to generate new research ideas (A, I)
- A commitment to your own continuous professional development (A, I)

*Assessment stage: A - Application; I - Interview; T - Test/presentation at interview stage*