

Position Description – Research Associate in Chemistry

Updated 7 March 2025

POSITION DETAILS	
College	College of Science and Engineering
Organisational Unit	Institute for Nanoscale Science and Technology
Supervisor	Matthew Flinders Professor in Chemistry
Classification	Research (Academic) Level A
Employment Type	Fixed-term, full-time

POSITION SUMMARY
The Research Associate will undertake research in Molecular Science and Technology under the direction of Professor Michelle Coote. In working with Chief Investigator Coote and research team, the incumbent will assist in leading the design and execution of computational chemistry research. The incumbent may assist in leading students involved in the research Project, according to the University's policies, practices and standards.

UNIVERSITY EXPECTATIONS AND VALUES
All staff at Flinders are responsible for understanding their obligations and responsibilities as set out in the University's code of conduct and are expected to: • demonstrate commitment to the University's values of Integrity, Courage, Innovation, Excellence and the underlying ethos of being Student Centred; • contribute to the efficient and effective functioning of the team or work unit in order to meet the University's objectives. This includes demonstrating appropriate and professional workplace behaviours, providing assistance to team members if required and undertaking other key responsibilities or activities as directed by one's supervisor; • promote and support an inclusive workplace culture which values diversity and embraces the principles of equal opportunity; • perform their responsibilities in a manner which reflects and responds to continuous improvement; and • familiarise themselves and comply with the University's Work Health and Safety, Injury Management and Equal Opportunity policies.

KEY POSITION RESPONSIBILITIES

The Research Associate in Chemistry is accountable for:

- Assisting in leading the Project by collaborating with the Project Research Team to successfully deliver project milestones and Key Performance Indicators.
- Contribute to the planning and execution of research by offering new ideas, reviewing relevant literature and other sources of information, actively participating in the production of data and attending seminars, meetings and conferences.
- Some administrative functions primarily connected with the research group such as setting up supercomputer connections for new students, overseeing the group's high performance computer cluster and maintaining the group's scripts for submitting and processing computational chemistry jobs.
- Contributing to the coordinating, planning and executing the project tasks required to collaborate with industry partners.
- Contributing to ethical, high quality and innovative research and evaluation through activities such as scholarship, quality publication, external grant acquisition and presentations that aligns with the College areas of research strength and focus.
- Assisting principal supervisors with supervision of postgraduate students.
- Establishing and maintaining collaborations within the University, and at State, national and international levels in order to improve research outputs, patents and publications.
- Some out of hours work (including weekends) as well as rural SA, interstate and overseas travel, may be required.
- Any other responsibilities in line with the level of the position as assigned by the Supervisor and/or the University.

A National Police Certificate which is satisfactory to the University will be required by Flinders University before the successful applicant can commence in this position.

KEY POSITION CAPABILITIES

- Completion of a PhD in Chemistry or significant progress towards completion of a PhD in Chemistry
- Demonstrated experience performing quantum mechanical (QM) calculations and multi-scale modelling (e.g. QM/MM) using standard computational chemistry software. Experience using the results of such calculations in mechanism discovery and catalyst design is also essential. A strong theoretical background in physical, organic and organometallic chemistry is also desirable.
- Demonstrated emerging research experience in terms of publications and presentations at a national and/or international level in a relevant field.
- Demonstrated ability to deliver project targets on time.
- Demonstrated well-developed interpersonal skills and the capacity to collaborate and engage with diverse stakeholders and industry partners.
- Demonstrated ability to critically review the literature in relevant fields.
- Demonstrated ability to undertake collaborative research and establish and maintain effective relationships with staff and industry.
- Demonstrated excellent oral and written communication skills in an academic environment.