



Project Title: The Physical Organic Chemistry of Non-covalent interactions and Solvent Effects

Research areas: Computational Chemistry, Organic synthesis

A PhD studentship is available in the group of Professor Scott Cockroft, School of Chemistry, University of Edinburgh; <https://www.cockroft.chem.ed.ac.uk>

The studentship is fully funded for 42 months by the University of Edinburgh and covers tuition fees and an annual stipend (starting at £19,237 per annum) for a candidate satisfying EPSRC residency criteria. <https://www.ukri.org/councils/esrc/career-and-skills-development/funding-for-postgraduate-training/eligibility-for-studentship-funding/#contents-list>

Project Summary

Non-covalent interactions are fundamental aspects of almost all chemical and biological processes. Solvent effects coupled with the precise positioning of interacting functional groups may be essential for the astonishing ligand binding affinities observed in biology. The project will involve detailed analysis of the origins of molecular interactions using a computational chemistry and synthetic organic chemistry approach. The applicant or other Cockroft group members (depending on expertise) will synthesise new model compounds to test predictions and fill the gaps in existing theoretical and experimental knowledge.

Applicants should express a keen interest in molecular recognition phenomena. Previous research experience in computational chemistry and/or synthetic chemistry is required. Applicants must be in possession of (or expecting to obtain) a first class or upper-second class degree (or equivalent) in Chemistry or other cognate discipline before the start of the project.

In the first instance, the initial application (including cover letter and CV) should be directed to: Prof. Scott Cockroft, School of Chemistry, University of Edinburgh, David Brewster Road, Edinburgh EH9 3FJ, UK., Email: scott.cockroft@ed.ac.uk

The position will remain open until filled; prompt applications are encouraged.

References

Context-dependent significance of London dispersion, L. A. Gravillier, S. L. Cockroft, *Acc. Chem. Res.*, 2023, DOI: 10.1021/acs.accounts.3c00625

IMPORTANT

Before Submitting your cover letter and CV, please complete the online [School of Chemistry Equality, Diversity and Inclusion Form 2024](#).

The form will automatically generate a unique “Receipt Number” that you MUST include in your cover letter.

Equality and Diversity

The School of Chemistry holds a Silver Athena SWAN award in recognition of our commitment to advance gender equality in higher education. The University is a member of the Race Equality Charter and is a Stonewall Scotland Diversity Champion, actively promoting LGBT equality. The University has a range of initiatives to support a family friendly working environment. See our University Initiatives website for further information. University Initiatives website: <https://www.ed.ac.uk/equality-diversity/help-advice/family-friendly>