ROLE PROFILE

Job Title
Research Associate/Fellow (Fixed-term)

School/Department
GSK Carbon Neutral Laboratories, School of Chemistry

Job Family and Level
Research & Teaching Level 4
(Appointment will be Level 4 Career training grade where an appointment is made before PhD has been completed)

Contract Status
This full-time, fixed-term post is available as soon as possible for a period of 28 months

Hours of Work
Full-time

Location
GSK Carbon Neutral Laboratories for Sustainable Chemistry, Jubilee Campus, University of Nottingham, Nottingham, NG7 2TU

Reporting to
Prof Simon Woodward

Purpose of the New Role
To aid Prof Simon Woodward (SW) in the preparation of new types of cyclic aromatic compounds proposed on the basis of DFT computation studies in 2016-17 (by SW). The proposed compounds are predicted to have electronic properties compatible with their future use in organic electronic devices, but this programme will focus only on routes to their efficient synthesis and their characterisation. The core elements of the programme involve the preparation of key organic precursors and the assembly of these into the final cyclic structures using the techniques of contemporary organic synthesis. Samples of the new cyclic aromatics will be characterised by the normal techniques of organic chemistry and by microscopy (under taken by SW’s co-investigator Dr Michael Fay).

Main Duties and Responsibilities

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<th>Preparation of the key organic fragments (obtained in high purity) necessary for the new cyclic targets and their modification to the final desired structures.</th>
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<td>Preparation of accurate, high quality, experimental supporting information suitable for high quality international chemistry journals (e.g. with IF ≥10).</td>
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<td>3</td>
<td>To work effectively and productively with a very small team (SW and one other co-worker) on the synthetic chemistry need to move the project forward rapidly.</td>
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<td>Provide (pure) samples to academic collaborators interacting with SW on this project.</td>
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<td>5</td>
<td>Provide support, guidance and co-supervision to undergraduate and/or postgraduate co-workers in the SW group.</td>
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<td>6</td>
<td>To provide intellectual input in to the scientific papers and other outputs of the programme.</td>
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Knowledge, Skills, Qualifications and Experience

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<th>Qualifications/Education</th>
<th>Essential</th>
<th>Desirable</th>
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<td>An existing PhD (or projected PhD award in early 2019) in synthetic organic chemistry.</td>
<td>Experience in organic materials chemistry (synthesis).</td>
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<td>Demonstrated excellence of productivity and quality in synthetic organic chemistry in tight</td>
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### Skills/Training

Excellent skills in contemporary organic synthesis including: the synthesis and purification of organic compounds on mg to multi-gram scales, an ability to use air and moisture sensitive reagents and catalysts effectively, an ability to characterise and deduce the structures of complicated molecular architectures through modern spectroscopic techniques (primarily 1 and 2D NMR and MS). Skill in bringing samples to analytical purity.

Experience in the preparation of detailed high quality experimental and spectroscopic data 'write ups' forming the backbone supporting information to research (journal) publications.

Ability to build effective interactions and collaborations with others, both internally and externally.

Not vital but any skill sets of additional utility in the characterisation of organic electronic molecules (for example one or more of: DFT computation, cyclic voltammetry, E or T microscopy, thin film preparation/characterisation, etc.) would potentially find use in the project.

Ability to foster a research culture and commitment to learn in others through enthusiasm, commitment and excitement in science.

### Experience

Proven ability to conduct high quality research in synthetic organic chemistry.

A publication record in international peer-reviewed journals commensurate with stage of career.

Well organized and self-motivated with the ability to manage and complete projects on time.

Experience in co-supervision of other research co-workers.

### Personal Attributes

Flexibility.

Ability to work independently and as part of a multicultural team.

### Statutory/Legal

To take reasonable care for the health and safety of yourself and of other persons who may be affected by your acts or omissions at work in accordance with the Health and Safety at Work Act 1974, EC directives and the University’s Safety, Health and Environment Policies and procedures and to cooperate with the University on any legal duties placed on it as the employer.

### Additional Information

Details of the Woodward research group can be seen at: [https://www.nottingham.ac.uk/~pczsw/SWGroup/](https://www.nottingham.ac.uk/~pczsw/SWGroup/)

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*The University of Nottingham strongly endorses Athena SWAN principles, with commitment from all levels of the organisation in furthering women’s careers. It is our mission to ensure equal opportunity, best working practices and fair policies for all.*
Applicants will be considered on an equal basis, subject to the relevant permission to work in the UK as defined by the requirements set out by UK Visas and Immigration. Please visit https://www.gov.uk/government/organisations/uk-visas-and-immigration for more information.

Informal enquiries may be addressed to Prof Simon Woodward (simon.woodward@nottingham.ac.uk). Please note that applications sent directly to this email address will not be accepted.