



Job title	Research Associate/ Fellow	Job family and level	Research and Teaching Level 4 (Appointment will be Level 4 Career training grade where an appointment is made before PhD has been completed)
School/ Department	School of Chemistry	Location	University of Nottingham, University Park

Purpose of role

Our research group is based in a series of laboratories in the Chemistry Building on the University Park Campus. Currently we have a range of projects focussed on developing the use of continuous photochemistry, electrosynthesis and thermal chemistry in multi-step processes to make complex molecules of value to the pharmaceutical and fine chemicals industries on a > 1 kg scale. This is being achieved by use of novel reactors designed and built in Nottingham. The purpose of this role is to provide expertise in synthetic chemistry to underpin the chemical aspects of these projects and particularly to demonstrate and explore the potential of totally new reactor designs for photo- and electro-chemistry. The successful candidate will need to have skills in organic synthesis and the characterisation of the reaction products. The postholder will report to Professor Mike George. The position will be offered on a fixed-term contract initially for twelve months to start as soon as possible. The hours of work will be full-time (36.25 per week).

The post will involve lab-based research, based in Nottingham, The successful candidate will have a first degree in chemistry and have or be in the process of obtaining a related PhD and a track record of successful research. They will be computer literate with strong communications skills and a proven ability to work as part of a multidisciplinary team. They will be excited by variation rather than repetition and gain satisfaction from finding ways they can contribute to the success of these cutting-edge projects. Specific skills needed are experience in synthetic chemistry, photochemistry, electrochemistry and product characterization techniques including NMR and X-ray crystallography. Experience in advanced reactor development would be desirable.

The person appointed will join a multidisciplinary team working at the University of Nottingham in Chemistry and Engineering The projects are led by Professor Mike George also involves Professor Sir Martyn Poliakoff (Chemistry).

The post will involve lab-based research, based in Nottingham

The successful candidates will carry out the following duties:

- Undertake the development of new flow chemistry methodologies as directed by Professor Mike George.
- Prepare high quality supporting information for publications resulting from the project.

- Have a proven track record of excellence in synthetic chemistry
- Have excellent organisational, communication and team working skills.

d	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	To develop research objectives and proposals for own and/or collaborative research area.	15%
2	To plan and conduct research using recognised approaches, methodologies and techniques within the research area.	25%
3	To analyse and illuminate data, interpret reports, evaluate and criticise texts and bring new insights to research area.	10%
4	To write up research work for publication and/or contribute to the dissemination at national/international conferences, resulting in successful research outputs.	5%
5	To identify opportunities and assist in writing bids for research grant applications. Prepare proposals and applications to both external and/or internal bodies for funding, contractual or accreditation purposes.	5%
6	To build relationships with both internal and external contacts in order to exchange information, to form relationships for future collaborations and identify potential sources of funds and/or opportunities for collaboration.	5%
7	To co-ordinate the operational aspect of research networks, for example, arranging meetings and updating web sites etc and contribute to collaborative decision making with colleagues in area of research.	5%
8	To provide support, guidance and supervision to other staff, where appropriate in own area of expertise.	5%
9	To supervise undergraduate and/or postgraduate students projects, fieldwork and placements, as appropriate. To participate in the assessment of student knowledge and co-supervise projects at Masters level.	5%

10	To collaborate with academic colleagues on areas of shared interest for example, course development, collaborative or joint research projects.	5%
11	To plan and manage own research activity and resolve problems, if required, in meeting own/team research objectives and deadlines in collaboration with others.	5%
12	To utilise and contribute to organising research resources and facilities, laboratories and workshops as appropriate.	5%
13	To make a contribution to teaching, for example through laboratory demonstrations, lectures to postgraduate workshops and/or delivery of Level 1 modules.	5%

Person specifications

	Essential	Desirable
Skills	<ul style="list-style-type: none"> ▪ Excellent skills in contemporary synthetic chemistry : Photochemistry, electrochemistry, and product characterisation techniques, the synthesis and purification of organic and inorganic compounds on mg to multi-gram scales, an ability to use air and moisture sensitive reagents and catalysts effectively, an ability to characterize and deduce the structures of complicated molecular architectures through modern spectroscopic techniques (primarily 1 and 2D NMR spectroscopy, mass spectrometry and X-Ray crystallography). ▪ Skill in bringing samples to analytical purity. ▪ A publication record in international peer-reviewed journals commensurate with stage of career. ▪ Experience in flow chemistry; the development of photochemical or electrosynthetic reactions or preferably both. ▪ Well organised and self-motivated with the ability to manage and complete projects on time. 	<ul style="list-style-type: none"> ▪ Experience in co-supervision of other research co-workers. ▪ Excellent written, verbal and presentation skills
Knowledge and experience	<ul style="list-style-type: none"> ▪ Some practical experience of applying the specialist skills and approaches and techniques required for the role. ▪ Experience in the preparation of detailed high quality experimental and spectroscopic data 'write ups' forming the backbone supporting information to research (journal) publications. ▪ Research at least at postgraduate level. 	<ul style="list-style-type: none"> ▪ Experience of developing new approaches, models, techniques or methods in research area. ▪ Experience of co-supervision with other research co-workers. ▪ Experience in advanced reactor development.
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> ▪ Hold a PhD (or be close to completion) in synthetic chemistry. or the equivalent in professional qualifications and experience in research area. 	



The University of Nottingham is focused on embedding equality, diversity and inclusion in all that we do. As part of this, we welcome a diverse population to join our work force and therefore encourage applicants from all communities, particularly those with protected characteristics under the Equality Act 2010.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
- Taking ownership** Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
- Forward thinking** Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
- Professional pride** Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
- Always inclusive** Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others



