University of Nottingham
UK | CHINA | MALAYSIA

Role profile

Job title	Research Associate/Fellow in Photocatalysts Mapping using Super-resolution Electron Microscopy	Job family and level	Research and Teaching Level 4/4A
School/ Department	Chemistry	Location	School of Chemistry, University Park

Purpose of role

The successful applicant will be responsible for data/image acquisition, analysis and interpretation and for using this information to design efficient heterogeneous photocatalytic processes. This will involve working on the synthesis and characterisation of heterogeneous photocatalysts, performing photocatalytic reactions and working closely with the project partners (at Manchester and York) to get the required training.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	**Project management and research** ▪ Independently plan and execute a research program studying the mechanisms of light-induced reactions and the conditions under which photocatalysts are activated or deactivated. ▪ Co-ordinate with other members of the team and work collaboratively ▪ Meet agreed deadlines. ▪ Keep accurate records of your research (lab books, images, spectra etc). ▪ Provide monthly reports of project progress ▪ Maintain an up-to-date knowledge of the relevant literature in your field of study. ▪ Prepare high quality experimental supporting information and manuscripts compatible with submission of the resulting work to high impact journals ▪ Liaise with project partners and academic collaborators as appropriate and identify and develop opportunities for further research and funding.	80 %
2	**Administration** ▪ Manage your own administrative activities. ▪ Complete administrative tasks from your line manager.	5 %
3	**Supervision** ▪ Provide research leadership, supervision, and guidance to other lab members, students, and support staff. ▪ Take responsibility for the safe running of the research laboratory.	10 %
4	**Dissemination** ▪ Disseminate and publish research findings (individually or in collaboration with colleagues).	5 %

	▪ Write research papers for internationally refereed journals and present results at national and international conferences.	
5	**Other** You may be asked to perform other duties occasionally which are not included above, but which will be consistent with the role. For example, you may be asked to contribute to the research culture and environment by participating in school-wide meetings, teaching inorganic chemistry in the School, or supporting the preparation of proposals for research grants.	

Person specification

	Essential	Desirable
Skills	▪ Demonstrated experience in heterogeneous catalysis including synthesis of solid materials, materials characterisation (e.g. TEM, XPS, IR, Raman), performance of bench scale catalytic processes under inert atmosphere. ▪ Excellent communication and written skills in English suitable for the preparation of scientific publications in world-class journals and presentation of research and international conferences. ▪ Proven ability to work flexibly as part of a team. ▪ Be well-organized and self-motivated, with the ability to manage the day-to-day running of a research project, to identify research objectives for both you and others, and meet research deadlines. ▪ Ability to foster a supportive, creative research culture and commitment to learn from others.	▪ Experience in heterogeneous photocatalysis ▪ Ability & experience to play a leading role in mentoring and supervision of co-workers and less experienced researchers in a research group. ▪ Ability to generate own research ideas and lead a project.
Knowledge and experience	▪ Knowledge of current research and theory in the field of heterogeneous catalysis. ▪ Expertise in materials characterisation techniques (TEM, SEM, XPS, Raman, IR, ICP, etc) and data analysis. ▪ Publication record consistent with career stage to include top five scientific achievements within the last four years. This can include publications in international peer-reviewed journals, patents, major pieces of yet unpublished work, prizes awarded or previous success in gaining external funding. ▪ Demonstrated ability to learn new skills and instrumentation.	▪ Experience in heterogeneous photocatalysis ▪ Experience in synthetic organic chemistry. ▪ Experience with one or more of the following experimental techniques: NMR, reaction kinetics analysis, X-ray diffraction.

Qualifications, certification and training (relevant to role)	▪ PhD in chemistry or a closely related discipline • Candidates whose PhD is close to final award will be considered	
Statutory, legal or special requirements	• To take 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.	

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