



Job title	Research Associate/Fellow: Surface Chemical Analysis (Title will be Associate where an appointment is made before PhD is completed)	Job family and level	Research and Teaching Level 4 (Appointment will be Level 4 career training grade where an appointment is made before PhD is completed)
School/ Department	School of Pharmacy	Location	University Park Campus

Purpose of role

As a Research Fellow you will be part of the Nottingham SIMS Facility team and your main responsibilities will involve the operation of a time-of-flight secondary ion mass spectrometer (ToF-SIMS) to support surface chemical analysis project work within the School of Pharmacy as well as users from other departments. Duties will include the analysis of samples, interpretation of data, collaboration and training others to use the SIMS instruments and perform data analysis. Although focussed upon ToF-SIMS, there will be additional work involving the 3D OrbiSIMS instrument and you will use the SIMS facility instruments to contribute essential surface chemical insights, spanning a range of projects including novel biomaterials for viral, bacterial and fungal control, active biomedical implants and sensors, engineering materials characterization, biological cell and tissue characterisation and pharmaceuticals. You will have a background in chemistry, biology, engineering, physics or pharmacy. The successful candidate will have good interpersonal skills to interact effectively with other researchers to achieve successful management of the facility and training.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	Project support <ul style="list-style-type: none"> Acquisition and interpretation of SIMS spectra, images and depth profile data for users. The users would operate the instrumentation only where appropriate using well defined protocols and under the supervision of the Surface Analysis Research Fellow. 	25%
2	Training <ul style="list-style-type: none"> Training and advising research assistants and postgraduate students in the use of analytical and related equipment. Transferring of instrumental skills and ensure correct and robust procedures are carried out in obtaining data for PhD and other research projects. Providing a range of technical skills and analytical advice to the above projects and training and advice to research workers in the areas of Good Laboratory Practice and in Health and Safety. 	25%
3	Marketing <ul style="list-style-type: none"> Scientific liaison in marketing and procurement of external industrial contracts performed at the University of Nottingham. 	10%

4	<p>Management of financial resources</p> <ul style="list-style-type: none"> ▪ Source and cost specific consumables and smaller equipment with the aim of maximizing the financial resources available. ▪ Forecast project expenses with instrument operation and maintenance costs, to enable academic and financial teams to make quotes or appropriate grant applications and establish budgets. 	10%
5	<p>Maintenance</p> <ul style="list-style-type: none"> ▪ To learn the use, maintenance and optimisation of the SIMS equipment, which is constantly changing and being upgraded, including costing and organising repair by outside agents and controlling the maintenance contract. ▪ Ensure that it is maintained and correctly used to optimise its performance and that, within a mobile workforce, skills are retained within the department. 	15%
6	<p>Outputs</p> <ul style="list-style-type: none"> ▪ Contribute to internal meetings and work in conjunction with the research team to achieve objectives. ▪ Prepare research results for publication, read relevant literature and offer new insights to the research area. ▪ Contribute to dissemination at scientific meetings, resulting in successful outputs. 	15%

Person specification

	Essential	Desirable
Skills/Training	<ul style="list-style-type: none"> ▪ Mass spectrometry data acquisition and analysis using a ToF-SIMS V and OrbiSIMS (IONTOF) instruments. ▪ Ability to undertake project work and make independent decisions. ▪ Good interpersonal skills-communication skills with all levels of staff and students, diplomacy, tact, and patience. ▪ Training skills in equipment use. ▪ Multivariate data analysis skills. ▪ Presentation of scientific data. ▪ Demonstrable commitment to continuing professional development. ▪ Good general scientific understanding enabling a range of disciplines to be taken on as necessary. ▪ Adaptability. There is the need to be constantly learning new skills and to respond quickly to the needs of others. ▪ General administrative skills and computer literacy. 	<p>Experience in one or more of the following:</p> <ul style="list-style-type: none"> ▪ ToF-SIMS and/or OrbiSIMS.data acquisition and/or analysis. ▪ Routine fault-finding and maintenance of surface analysis instrumentation ▪ Skills in surface chemical analysis.
Knowledge and experience	<ul style="list-style-type: none"> ▪ Significant experience in mass spectrometry data analysis. ▪ Present work effectively to a variety of professional and academic audiences at meetings and conferences. ▪ Ability to write high quality reports and high impact papers for publication. 	<ul style="list-style-type: none"> ▪ Experience with tandem mass spectrometry (MS/MS). ▪ First author publications in high impact journals. ▪ Experience in multi-disciplinary teams. ▪ Evidence of working across chemistry/biology/pharmacy/medicine subject boundaries. ▪ Recognition by external peer review (e.g. poster or conference prizes).
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> ▪ Minimum 2.1 (hons) degree in materials science, physics, chemistry, pharmacy (or equivalent). ▪ A PhD (or close to completion) in materials science, physics, chemistry, pharmacy (or equivalent) or in the area of chemical imaging mass spectrometry. 	<ul style="list-style-type: none"> ▪ Industrial experience (e.g. year in industry).



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.



The University is a signatory of the Declaration on Research Assessment (DORA). As such we commit to focus on the scientific content of publications (where requested or provided as part of the recruitment and selection process) as a basis for review of quality, and consideration of value and impact of research conducted, rather than any proxy measures such as Journal Impact Factor.

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:

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| 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

