

Job title	Postdoctoral Research Associate/Fellow in DNP- enhanced Solid-state NMR Spectroscopy	Job family and level	Research and Teaching Level 4 Training Grade/ Level 4
School/ Department	Chemistry	Location	School of Chemistry, University Park Campus

## Purpose of role

The purpose of this role is to carry out high-quality EPSRC-funded research in the laboratory of Dr Jeremy Titman into the techniques and applications of dynamic nuclear polarization (DNP) enhanced nuclear magnetic resonance (NMR) spectroscopy. Specifically, the role involves research to design new DNP sample preparation approaches to address problems with reliability and reproducibility and to demonstrate high-impact applications of DNP using the state-of-the-art instrumentation available at the Nottingham DNP MAS NMR Facility.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	To conduct high-quality research into DNP-enhanced solid-state NMR spectroscopy and to provide research leadership, including expert supervision of both graduate and undergraduate students. Specifically, to design new DNP sample preparation approaches to address problems with reliability and reproducibility and to demonstrate high-impact applications of DNP to materials, according to a research programme recently funded by EPSRC.	70%
2	To assist with the preparation of high-quality research communications compatible with their submission to high-impact scientific journals.	15%
3	To liaise with project partners at Johnson Matthey and L'Oréal to identify and develop opportunities for further research.	10%
4	To perform occasional duties not included in the above, but appropriate to the grade and consistent with the role.	5%

## Person specification

	Essential	Desirable	
Skills	<ul> <li>Excellent research skills in solid- state NMR spectroscopy, including experiment design, pulse programming, spectrometer operation etc.</li> <li>Demonstrated ability to assist with the preparation of high-quality research communications suitable for submission to high-impact scientific journals.</li> <li>Demonstrated ability to build effective interactions and collaborations with others, both internally and externally.</li> <li>Excellent written, verbal and presentation skills.</li> <li>Excellent organisational and motivational skills and an ability to manage and complete projects on time.</li> </ul>	<ul> <li>Excellent research skills in DNP-enhanced solid-state NMR, including experiment design, sample preparation, instrument operation etc.</li> <li>Ability to foster a research culture in others through enthusiasm and commitment.</li> <li>Ability to play a leading role in mentoring less-experienced researchers in a research group.</li> </ul>	
Knowledge and experience	<ul> <li>Proven experience in high-quality research in solid-state NMR spectroscopy.</li> <li>Proven experience in high-quality research in applications of solid-state NMR to materials.</li> <li>A good publication record of this research in international peer-reviewed journals.</li> </ul>	<ul> <li>Experience in high-quality research in DNP-enhanced solid- state NMR spectroscopy.</li> <li>Experience in supervision of other research workers.</li> </ul>	
Qualifications, certification and training (relevant to role)	<ul> <li>A PhD (or expected PhD award by early-2020) in physics or physical chemistry with a focus relevant to the role.</li> <li>Training in the use of solid-state NMR instrumentation</li> </ul>	<ul> <li>Training in the use of DNP- enhanced solid-state NMR instrumentation.</li> </ul>	
Statutory, legal or special requirementsTo 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.			



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

