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An Interest Group of the Royal Society of Chemistry  
Charity Registration No. 207890

## NMR Discussion Group Spring Meeting

### ***In Situ* Monitoring by NMR: what is it all about?**

Date of meeting: Thursday 17<sup>th</sup> March 2016

Meeting venue: Room A101, Department of Chemistry  
University of York  
Heslington  
York, YO10 5DD

Dear Member,

The NMR Discussion Group would like to invite you to the 2016 Spring Meeting, which will be held at the Department of Chemistry, University of York. Over the last few years, the use of *in situ* monitoring by NMR, both at low field and high field strengths, has proven to be of significant value in many disciplines. The technique is rapidly advancing through active investigation for use in applications which include pharmaceutical development, process chemistry, catalysis, molecular biology and chemical extraction from porous media. Correspondingly, hardware and associated software are continually being developed to address the requirements which have emerged through the application of NMR for monitoring a range of different systems at the molecular level. This one-day meeting will be of interest to NMR spectroscopists who are actively involved in either the development or application of NMR based *in situ* monitoring, but also the meeting will be of particular value to spectroscopists who would like to learn more about the potential of the technique in this discipline. Equally, process chemists/engineers or molecular biologists may find the programme to be of interest.

In addition to presentations from international leading practitioners of *in situ* monitoring by NMR, there will be sufficient opportunity to meet the principal vendors of hardware and software, who

have agreed to sponsor the event. By implication, the meeting will allow insights with respect to the future direction of the technologies.

The meeting will take place on **Thursday 17<sup>th</sup> March** at the easily accessed University of York.

A campus map of the University of York is shown below, with an arrow indicating the location of the Department of Chemistry. Alternatively, a full campus map showing the location of the venue is available on the University of York website using the web link below.

<http://www.york.ac.uk/media/abouttheuniversity/maps/heslington-west-map.pdf>

Full details of how to get to the University of York, including links by air, rail and coach, can be obtained using the link below. For delegates who choose to drive, the SATNAV code for the main campus is YO10 5DD and the most convenient car park is 'Campus North', as indicated on the map below. Should this car park be full or unavailable, the 'Campus Central' car park is also convenient for accessing the Department of Chemistry. <http://www.york.ac.uk/about/maps/>

If you would like to attend the event, please complete the on-line registration form via the link available on <http://www.nmrdg.org.uk> or via the link on the RSC website.

Registration will close on **Friday 4<sup>th</sup> March 2016** and the standard fee is £60.00. However, if you are a student or retiree, then a concessionary rate of £40 will apply (Retirees are advised to register as a student to qualify for the concessionary rate, quoting 'NMR DG' if requested to supply the name of a supervisor). For further information, please do not hesitate to send an E-mail to [info@nmrdg.org.uk](mailto:info@nmrdg.org.uk).

Yours sincerely,

Dr Stephen Byard - NMR DG Secretary



# **NMR Discussion Group**

## **Spring 2016 Meeting**

### ***In Situ Monitoring by NMR: what is it all about?***

Thursday 17<sup>th</sup> March 2016

**Department of Chemistry, University of York, Heslington, York, YO10 5DD, UK**

**Morning session chair: Dr Michael Bernstein, Mestrelab, UK**

10.00 – 10.25 Registration and refreshments

Introduction and welcome

**David Foley, Pfizer USA**

Understanding chemical reactions in a process development environment using NMR

**Simon Duckett, University of York**

Harnessing hyperpolarisation for *in situ* NMR monitoring

**Simon Watson/Flavien Susanne, GSK**

Benchtop NMR - Reaction kinetics in the pharmaceutical industry

**Ulrich Hintermair, University of Bath**

Reaction monitoring by FlowNMR - New insights into homogeneous catalysis

Buffet Lunch, refreshments and vendor displays

**Afternoon session chair: To be determined,**

**Guy Lloyd Jones, University of Edinburgh**

Two B or not two B, and other mix-ups

**Richard Hopkinson, University of Oxford**

Using NMR to characterise the production, metabolism and functions of formaldehyde in biological systems

**Michael Maiwald, BAM Federal Institute for Materials Research and Testing**

First steps towards field integration of benchtop NMR spectroscopy for online monitoring and process control

Closing remarks

16.30 - Refreshments and departure

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