

If you have an opportunity you would like to bring to the catalysis community or a challenge you would like to discuss with experts, the Hub may be able to help.

A major priority for the Hub has been to develop the UK catalysis community and to promote wider interactions within the UK and internationally. To achieve these aims we have organised a regular series of conferences and workshops as well as contributing to other UK and international conferences and discussions.

The Catalysis Hub runs two conferences per year for members of the Hub and for the wider catalysis community. These conferences showcase catalysis research, focusing on the work of the Hub. Speakers include researchers from The Catalysis Hub and internationally renowned speakers and industrialists who cover a range of topics including biocatalysis, homogeneous and heterogeneous catalysis, reaction engineering and industrial catalysis.

The Hub aims to facilitate the development of new approaches and techniques in catalytic science as well as developing a new generation of researchers. To this end the Hub has organised a number of topical workshops and events. Workshops on techniques are aimed at existing users, to inform the catalysis community about advanced spectroscopy and analysis techniques that can be used in catalysis and to disseminate new opportunities for analysis. Workshops have included Laser techniques, EPR, Neutrons, Working at the bio-chemo interface, Solar fuels, Emissions Control and Advanced Characterisation of Materials.

Case Study: Neutrons for Catalysis



Front Cover PCCP Themed issue

In association with ISIS the Hub held a workshop on, “Neutron Techniques in Catalysis” in Nov 2014. There were a mix of delegates from industry and academia, with over fifty attendees. This helped to provide training and knowledge transfer to members of the catalytic community who may previously not have used neutrons, leading to a range of new users including Johnson Matthey, Academics from Southampton University and UCL.

Following this workshop scientists from ISIS, The Catalysis Hub and Johnson Matthey proposed and led a special issue of PCCP edition, “Neutron scattering in catalysis and energy materials” which has led to a large increase in the use of neutron techniques for catalysis. Particularly notable has been the rapid growth in the use inelastic neutron scattering (INS) for *in situ* spectroscopy and Quasi Elastic Neutron Scattering (QENS). Small angle scattering probing molecular transport, surface speciation and confined liquid structures for a range of catalytic systems. Following this workshop, researchers from the hub in collaboration with researchers at ISIS have demonstrated the ability of neutrons to probe liquid phase reactions *in-situ* obtaining time-resolved structural measurements within the pores of a catalyst which

is of key importance in reactions such as methanol to gasoline and methanol to olefins.

Workshops and events have included include Catalysis for Water, Clean Transport, Events with Innovate UK, Lasers including the FELIX Laboratory and free electron lasers, and Catalysis Conferences. We also run meetings with other networks to encourage new collaborations and proposals, e.g Solar Fuels Network, C*Change - South Africa, LiKat- Germany.

If you have an event that may be of interest to the catalysis community, or you want to involve the catalysis community in a new proposal or technique or would like to stimulate discussions on a specific opportunity or challenge, please come and talk to us. For more information visit our website: www.ukcatalysishub.co.uk or email the Events Manager: Corinne Anyika on anyikaC@cardiff.ac.uk. Information on The Catalysis Hub mailing list can be found on the website <http://www.ukcatalysishub.co.uk/contact-us>.

