

Heterogeneous Catalysts for Sustainable Industry

25 November 2019

This event was co-organised between the RSC Industrial Physical Chemistry Group and the RSC Applied Catalysis Group.

The event was an industry focussed workshop sponsored by BYK Additives and Instruments, Johnson Matthey and Micrometrics. The goal of the seminar was to promote current and next generation heterogeneous catalysts in the development of greener and more sustainable chemical production processes.

As the World shifts to a more environmentally-friendly future, processes and reagents the chemical industry has depended upon for years are increasingly under scrutiny. This situation offers opportunities to improve and be cleaner whilst still providing customers with the high quality they are used to.

Such challenges encompass, amongst other things, finding alternatives to traditional homogeneous heavy metal based catalyst systems to identifying new methods for processing sustainable feedstock. Heterogeneous catalysts already offer significant benefits such as catalyst/product separation, reuse and recyclability, which opens the door for them to be the basis for environmentally benign products.

Scientific leaders in the field Dr Xiaolei Fan (The University of Manchester), Dr Thomas Chamberlain (University of Leeds) and Dr Samuel Pattison (Cardiff University) were invited from academia to provide theory and present their pioneering work developing the next generation heterogeneous catalysts and catalyst supports. Noted industrialists Dr Marco Kennema (BASF), Dr Nicolas Bats (Johnson Matthey) and Dr Paul Murray (Catalyst Consulting Ltd.) gave insights into industry designing new catalysts and optimising current catalyst technologies, while also providing examples of chemical processes suitable for enhancing with sustainable heterogeneous catalysts.

The event was well attended by industry with delegates coming from companies such as Zeiss, Cranfield, BP, Invista, Koura and many more, whose feedback was universally positive. Dr Claire Rees (Koura) praised the “*high quality speakers*” and that she hoped that these events would “*continue [...] in the future as the area of heterogeneous catalysis relevant to industry [was] an area often neglected at catalysis conferences*”. Dr Philip Hughes (Johnson Matthey) exclaimed his surprise “*at the efficiency of clay catalysts compared to homogenous acid catalysts in dehydration reactions*”.