

Innovate with the NextGenChem Hub

In this edition of Chemicals Northwest Elements magazine, we speak to Martin Gilmore, Head of Partnerships & Business Engagement, Engineering and Physical Sciences at Lancaster University, to find out about research, facilities and collaboration opportunities at Lancaster University available through the NextGenChem Hub for chemistry innovation.

I oversee the NextGenChem Hub and am part of our Faculty of Science and Technology's Partnerships and Business Engagement Team. The Hub offers a blend of targeted workshop activities and bespoke technical and analytical research and development support to boost growth in chemical-using and producing industries - such as aerospace, automotive, energy, applied healthcare, and life sciences sectors.

Our Chemistry Department is at the forefront of teaching and research, with particular strengths in chemical synthesis, physical and analytical chemistry, catalysis, functional materials, surface engineering, and process chemistry. We liaise with all areas of the chemical industry across the UK and beyond, ranging from multinational oil, chemical and pharmaceutical companies, to a host of smaller enterprises producing new and specialised products.

We have partnered with Yordas Group, a leading provider of scientific and global regulatory consultancy services, to co-create a new £4.9M business-support Hub, NextGenChem, to spearhead innovation for 300 Lancashire Small and Medium Enterprises (SMEs) that produce or use chemicals, and develop a model that we can then expand globally.

Together, Lancaster University and Yordas Group present a complimentary range of expertise with a unique industrial insight. With world-leading experts and state-of-the-art facilities and equipment worth over £45M, the NextGenChem Hub is fully equipped to tackle R&D challenges being faced by Lancashire's SMEs over the next three years. We work with

businesses to develop technology solutions, improve products and novel materials using 'next generation' chemistry, offering targeted workshop activities and bespoke technical, analytical research and development support. NGC is part-funded by the European Regional Development Fund.

We launched the Hub in September 2020, following a successful webinar. The NextGenChem team have been working hard to produce a series of online workshops on innovative synthesis, formulation, chemical process development, starting with Life Cycle Assessment, which is available on the NextGenChem Launchpad platform. Coming soon will be 'Innovation through sustainable chemistry', this workshop is aimed at engaging people to understand and begin to implement innovation through sustainable chemistry. We will introduce concepts and examples of sustainable chemistry, tools used to integrate sustainable chemistry into product development and a summary of references to substitution within major global regulations. A brief introduction to alternatives assessments will also be covered.

The kind of collaborative research projects we are working on so far includes improving the sustainability of companies' products by utilising green chemistry and Life Cycle Assessment expertise and using our deep understanding of chemical processes to supporting companies in the healthcare sector to safely and effectively develop their products.

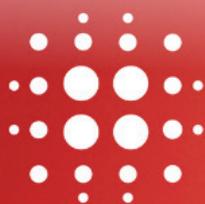
NextGenChem and GISMO are just two of the industry-focussed collaborative research projects at Lancaster University. We also have fully funded programmes for businesses in cyber security and materials science, and collaborate with businesses across the globe through virtual student placements, contract research, facilities access, professional development, and multi-partner collaborative research projects. Our £11.4m cTAP building houses our Chemistry department, and offers co-hosting and laboratory space with state-of-the-art facilities, exclusively for industry collaboration.



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To find out more about the Hub and our wider activities please contact the NextGenChem team, follow us at @Next_Gen_Chem and on LinkedIn, and watch our animation on our website www.nextgenchemhub.org.



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