

Innovate and Collaborate with Lancaster University

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.

Over 11,000 Partnerships

“Here at Lancaster University, The Times and The Sunday Times International University of the Year 2020, we have always welcomed the challenges that business provide us. I work in our Faculty of Science and Technology and facilitate business collaboration in chemistry, physics and engineering as part of an award-winning partnerships and engagement team at Lancaster. Our team is embedded alongside our researchers and has assisted over 11,000 businesses. We have a thriving business community on our 560-acre parkland campus, hosting over 110 businesses since 2005. We liaise with all areas of the chemical industry, ranging from multinational oil, chemical and pharmaceutical companies, to a host of smaller enterprises producing new and specialised products.

Expanding team of Researchers

“We have an expanding team of researchers at the forefront of their fields, and an extensive array of new instrumentation and equipment to support our innovation activities. Our research strengths are in chemical synthesis, physical and analytical chemistry, catalysis, functional materials, surface engineering, and process chemistry. Current research projects include development of solar energy storage coatings for electric vehicles combining materials design, synthesis and advanced molecular characterisation.

Expanding set of facilities

“Our £11.4m cTAP building offers managed office accommodation and laboratory space exclusively for industry collaboration, ideally suited to start-up companies, Small and Medium Enterprises (SMEs) and R&D teams from established companies. What sets the facility apart is the £7m investment in equipment, across four suites, with dedicated experimental officers whose role is to collaborate with industry in unlocking the potential of the equipment in improving processes and creating new products. Our Nuclear Magnetic Resonance (NMR) suite includes some of the most powerful solid state NMR devices in the UK, currently used to analyse biological samples and identify smart materials for energy storage. We also have powerful state-of-the-art nanofabrication devices, capable of 3D printing complex structures down to nanoscale, and Infrared

and Raman micro-spectroscopic facilities to examine chemical molecular structures.

Funding available

“We facilitate a wide variety of interdisciplinary collaborative research projects, which include over £30m investment from Europe via structural funding to work with SMEs, and projects funded by the Government’s £725m Industrial Strategy Challenge Fund. Right now, we are seeking new partners to work with on exciting innovative projects. There are lots of ways for organisations to collaborate, from student placements, contract research, facilities access, professional development to multi-partner collaborative research projects. We have a team of professionals working with businesses who we match with the right expertise and resources from across the University and our wider partner network. We also have seed funding available for technical support and access to specialist instrumentation through a range of Impact Accelerator Awards (IAA), with around £10,000 of funding available per company. At various points throughout the year we also announce calls for co-funded applications for projects that are supported by up to £25,000 from the IAA matched in cash by external partners.

NEXT GEN CHEM

“We work with businesses to develop technology solutions, improve products and novel materials using ‘next generation’ chemistry. We focus on present and future innovation needs within five areas- catalysis, chemical processes, polymers, sustainable chemicals, and chemical engineering. We offer targeted workshops and bespoke technical, analytical research and development support. Our ambition is to make Lancaster University a hub for ‘next generation chemistry’ where businesses from across the globe can co-develop new products, formulations and chemical processes.

SMART Materials

“The Materials Science Institute at Lancaster is a community of over 200 academic and research staff, working with businesses to provide cutting-edge ideas and solutions in the use, design and manufacture of materials. We can help businesses find new materials for products, test and develop products, processes and business ideas, trial new technologies and processes, develop and build prototypes, and understand developments in materials science. We can improve the performance of surfaces and coatings, chemicals and chemistry in products and processes and also develop capabilities in additive manufacturing.

Find out more about our research, facilities, and collaboration projects at www.lancaster.ac.uk/sci-tech/business