

Greater Innovation for Smarter Materials Optimisation

In this edition of Chemicals Northwest Elements magazine, we speak to Lancaster University's Dr Alex Robson, Senior Research Associate and one of three Greater Innovation for Smarter Materials Optimisation (GISMO) Innovation Fellows. We find out more about chemistry and surfaces and coatings expertise at the University and how their specialist business engagement staff facilitate collaboration between businesses and researchers through the funded research and development and webinars GISMO provides.

As an Innovation Fellow, my role is to liaise with companies, academics and business partnership teams to help diagnose problems and challenges, identify how we can support businesses and apply our research, and to develop and deliver projects, whether in the lab myself or by supporting others. My focus is on the Surfaces and Coatings theme within GISMO and this aligns closely with my background in materials analysis, surface science and coating development.

We can help companies to develop new, functional coatings for products, analyse and characterise materials and surfaces, aid with identification of issues in processes and suggest solutions to these, and develop prototypes and proof of concept studies. We have comprehensive in-house materials engineering development, testing and computational modelling facilities for hard engineering materials through to soft biomaterials. We can manipulate materials over a large range of length scales from nanometres (e.g. small organic molecules) to metres (e.g. composites materials for buildings). Our researchers are world-leaders in the manipulation of surfaces, and technology developed by our researchers has underpinned products sold globally.

Some examples of current and previous collaborations with companies include developing prototype patterned hydrophobic coatings, using surface and cross-sectional analysis techniques to aid product development and quality control, and helping to develop application notes for equipment manufacturers. I am part of an award-winning Partnerships and Business Engagement team at Lancaster University's Faculty of Science and Technology,

where I work as an Innovation Fellow for GISMO, one of the University's suite of collaborative research and development projects for businesses. GISMO is part funded by the European Regional Development Fund and has a particular focus on working with companies in Cheshire & Warrington. We have had organisations from across the globe join our seminars, and can also bring in our wider Partnerships and Engagement Team to facilitate collaborations with organisations from outside Cheshire, and tap into a variety of funding streams.

GISMO links directly to Lancaster University's Materials Science Institute, a community of over 200 researchers working with businesses to provide cutting-edge ideas and solutions in the use, design and manufacture of materials. The project has been designed to help businesses find new materials; test and develop products, processes and ideas; trial new technologies; develop and build prototypes; and understand developments in materials science. GISMO has three main themes which correspond to research strengths at Lancaster University: Additive Manufacturing, Chemicals and Hydrogen and Surfaces and Coatings.

We have a large team of people here at Lancaster University who have a lot of experience in working with both businesses and researchers, and part of our job is to work out how we can help and build successful partnerships, so I urge you to get in touch and join us at one of our seminars to find out more.

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GISMO

To find out more about our surface coatings work at Lancaster University, contact alex.robson@lancaster.ac.uk or see www.smarter-materials.co.uk. You can also keep up to date with our work by following us @GISMolancs and on LinkedIn.



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