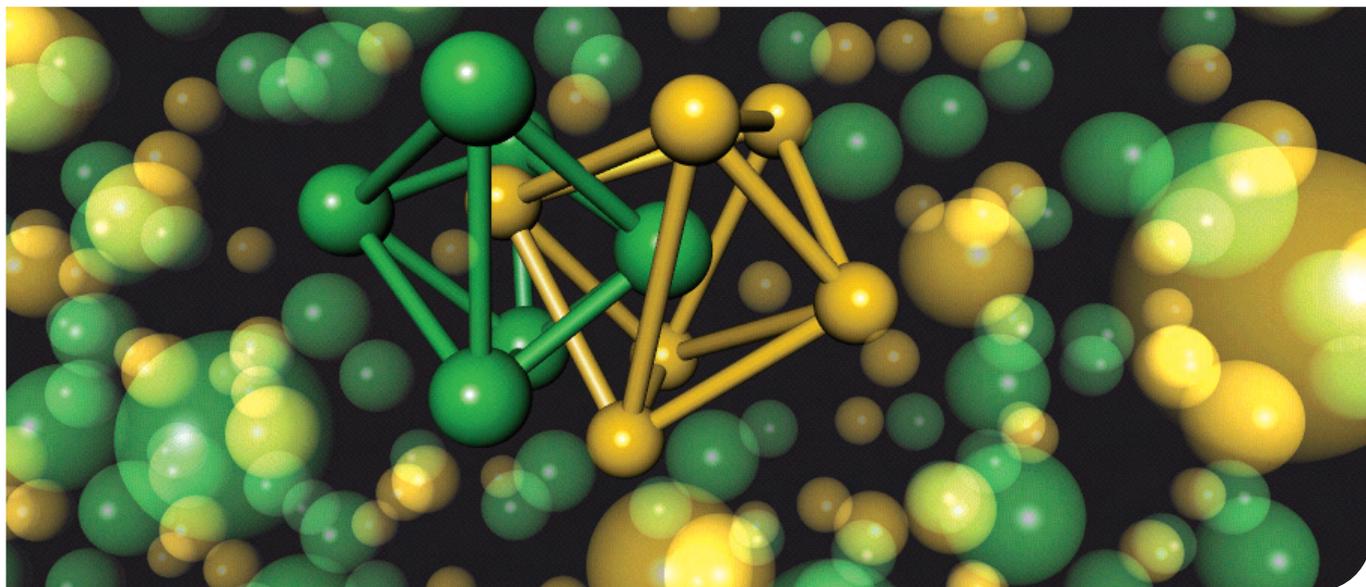


# Chemistry



*Our newly-founded Department of Chemistry, the first chemistry department to open in 50 years, builds on Lancaster University's strong track record of chemistry-related research. 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 research activities, which have direct applications across the chemical industry and a variety of sectors.*

## Access Expertise

- Analytical chemistry and spectroscopy
- Chemical biology and soft-matter
- Chemical engineering
- Chemical theory and chemical computation
- Condensed matter
- Energy materials, catalysis and sustainable chemistry
- Environmental chemistry
- Nuclear chemistry
- Supramolecular and structural chemistry
- Synthetic chemistry

## Forming Partnerships

Organisations can access our expertise through five types of collaborative partnership:

- Collaborative research
- Commercialisation of intellectual property
- Professional training
- Student engagement
- Facilities for research and development

## Benefits of Collaboration

- Access unique knowledge and technologies
- Work with us to develop new products and processes
- Tap into our global network
- Access a range of options for engaging student resources

"We chose to work with Lancaster's Chemistry Department because we know Professor Fielden and we are excited about the team he is putting together, coupled with Lancaster's proven and on-going commitment to working with SMEs it was an easy choice to make. The collaboration will benefit our business by resulting in a world beating sensor that we can couple with our existing electronics to grow the business to the next stage."  
Mike Riding, Managing Director, Process Instruments Limited.



Dr Mark Rushforth, Head of Business Partnerships and Enterprise

### Working in Partnership

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.

We have relationships with the Chemistry Innovation Knowledge Transfer Network, Nuclear Research Institute, The Lloyd's Register Educational Trust, DEFRA, and the UK Centre for Ecology and Hydrology.

We are using these relationships and our established reputation in chemistry related research across the university e.g. in Engineering, Physics and the Lancaster Environment Centre, (the largest group of environmental researchers of its kind), to ensure our research has a demonstrable impact on society and the economy.

We work as part of a wider multidisciplinary team across Science and Technology at Lancaster. Our colleagues have expertise in advanced manufacturing, the demand and supply of energy, environmental sciences, health and human development, information and communication technologies, mathematics and statistics, quantum technology, and security and protection sciences.

### Partnership Examples

- Viability and proof of concept of a new, safe, high-yielding and practical methodology for the synthesis of drug-like molecules for a global pharmaceutical company, which could be used in drug discovery and development processes, reducing environmental impact
- Collaboration with a water quality business to develop a new, sensitive low cost sensor capable of measuring solids in liquids to improve water quality and efficiency of water treatment
- Proof of concept assessment of experimental methods of high efficiency crystalline silicon solar cells for a large international corporation
- The manufacture of a novel film with superior physical properties over current commercial films for the horticultural crop plastic cladding market
- Harnessing the advantages of additive manufacturing '3D printing' technologies to trial different materials and create highly complex medical fluidic devices that are simpler, quicker and cheaper to manufacture

### Route to Access

"As Head of Business Partnerships and Enterprise for Physical Sciences I manage and facilitate business collaboration in physics, chemistry and engineering. We have an experienced team that provides the interface between our researchers and industry.

"We have a broad knowledge base and many routes to collaboration, helping each business find the specific solutions they need.

"This is an exciting new time for chemistry at Lancaster and we are keen to develop partnerships with external organisations to shape our research portfolio for the future. Please contact me for more information."

**Dr Mark Rushforth**  
Head of Business Partnerships and Enterprise

### For further information contact:

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