Daresbury Science
& Innovation
Campus

Chemicals and Specialities

Shaping the Future of Science & Innovation

Daresbury Science & Innovation Campus (Daresbury SIC) is an internationally recognised location for hi-tech businesses and leading-edge science. It represents a fundamentally new approach to driving UK competitiveness in global science and innovation. Daresbury SIC was formed by the Northwest Regional Development Agency (NWDA), the Science & Technology Facilities Council (STFC), Halton Borough Council and the research intensive universities of Lancaster, Liverpool and Manchester.

The Campus provides a unique environment for innovation and business growth with knowledge sharing, collaboration and networking, and offers major opportunities to the chemicals and specialities sector for knowledge exchange and the development of collaborative activities.

STFC manages a number of leading edge facilities which are of key importance to the sector. It provides this capability through its large scientific facilities at Daresbury and its sister campus at Harwell in Oxfordshire.

Daresbury Science & Innovation Campus

A National Technology Pool

Daresbury SIC is one of two national Science & Innovation Campuses, the other being Harwell SIC. This pairing, known as the 'dipole', enables any organisation engaging with one Campus to have access to the facilities of both.

STFC's world class facilities, providing ground breaking applications for the analysis of chemical structures, are: the Diamond Light Source – the UK's leading synchrotron; ISIS, the world's leading pulsed neutron and muon source; the National Centre for Electron Spectroscopy and Surface Analysis (NCESS), the Medium Energy Ion Scattering Facility (MEIS), and the world's most resolving electron microscope, SuperSTEM.

And with the increasing importance of computational chemistry, STFC applies its major computational science capabilities in molecular and mesoscale modelling and simulation.

Daresbury SIC's focus for future development in the chemicals sector is the Knowledge Centre for Materials Chemistry. Launched in 2009 it will provide a single point of contact for companies of all sizes to access a substantial range of facilities and expertise in applied materials chemistry in four leading academic institutions at Bolton, Liverpool and Manchester Universities and the Science & Technology Facilities Council.

Technology Exchange

The facilities and services of STFC, managed by its leading research groups active in a number of chemicals related areas, can be accessed through its knowledge transfer organisation STFC Innovations Ltd, which progresses individual projects through various business models to the point of implementation as commercial licences or spin-out companies.

Science & Technology Facilities Council

STFC Innovations Ltd

www.daresburysic.co.uk/sectors/chemicals

A Leading Location

Daresbury SIC occupies a key strategic position in the North West of England with the region being home to the UK's largest and most extensive cluster of chemical companies, generating in excess of £10 billion in sales and representing 20% of the entire UK chemical industry.

The Campus is ideally positioned to engage with partners that are active in meeting the requirements of the sector. Key amongst these is Chemicals Northwest, the industry-led chemical cluster support organisation funded by the Northwest Regional Development Agency (NWDA). It is a membership organisation that supports and promotes over 650 chemical companies in the region. Chemicals Northwest's key activities focus on: Skills – equipping our current and future workforce with 21st century skills; Sustainable Development – advancing sustainable working methods in the industry; Innovation – focusing industry and academic research to create the materials of the future; and Image – promoting the benefits of the chemicals industry to all.

Did you know?

Dr John Walker, a user of the Protein Crystallography facility at Daresbury, was awarded the Nobel Prize for Chemistry for his studies of energy generation in cells.

Daresbury Science & Innovation Campus

Working in Partnership

Central to the Campus' mission is addressing technological challenges through a collaborative approach. A broad spectrum of research includes: a project with INEOS Chlor to improve its production of methyl chloride; studies into polymers and consumer healthcare products; and even the use of synchrotron radiation to improve the quality of a well known brand of chocolate. Through partners such as Chemicals Northwest the Campus looks to further build on this activity.

Chemicals northwest

From Large Facilities to Commercial Science

The concentration of hi-tech business around government funded science facilities produces a climate of innovation bringing the benefits of STFC's global network to the local level and opening up major opportunities for the chemicals sector.

The ALICE prototype particle accelerator at Daresbury SIC will produce intense light which can be used to probe physical processes at the atomic level, useful in characterising chemical and biological intermediates stemming from oxidation/reduction reactions. Such facilities along with the Campus' growing commercial ecosystem enable experts in various scientific fields to commercialise world leading technologies.

A Growing Hi-tech Community

Through STFC and stakeholder universities, Daresbury SIC supports successful collaborations with other research councils, universities, charities and small businesses, with the aim of creating the best possible climate for growing chemicals businesses and bringing rapid solutions to practical and commercial challenges. As a result of this, over three quarters of tenant companies collaborate with each other or the Campus' higher education stakeholders.

This has helped secure over £20 million of private sector investment since the Campus was launched. Companies have successfully launched products through high street vendors, signed major contracts with the NHS, expanded operations internationally, secured grant funding and won major international awards for innovation.

www.daresburysic.co.uk/sectors/chemicals

Laboratories

Among the facilities offered on the Daresbury campus are its multidisciplinary laboratories with associated business incubators. These include a wet chemistry and materials laboratory which is fully equipped and functional for chemical preparation. Analytical user facilities include a surface science and imaging laboratory, an instrumentation laboratory, high performance liquid chromatography and X-ray diffraction, as well as a long list of other leading equipment.

The main users of these laboratories are academic researchers, hi-tech start up companies and other organisations needing access to scientific and analytical instruments; this mixed economy of users provides unique opportunities for cross-fertilisation of ideas.

Daresbury Science & Innovation Campus

The Future for Daresbury SIC

Daresbury SIC will continue to be a key location for chemicals organisations, principally through the Knowledge Centre for Materials Chemistry which will provide a national centre of expertise to drive innovative, multi disciplinary research and knowledge transfer for companies of all sizes. Added to this is a £65 million government contribution which will finance world leading centres in computational science and detector systems which will further support the Campus' capabilities in computational chemistry.

Architects' visual of Hartree Computational Science Centre

Business at the Heart of Science

The Campus is home to almost 100 hi-tech businesses, ranging from small start-ups to strategic units of large multi-national corporations, and offers high quality office space alongside its multidisciplinary laboratory facilities and associated chemicals business incubators.

Business support facilities and accommodation within the Daresbury Innovation Centre provide:

- A recognised research & development focused environment with an STFC account manager and links to a wide network of research intensive universities
- In addition to the wet chemistry and materials laboratory, a fully equipped biosciences laboratory as part of a range of scientific business incubator facilities
- Opportunities for technological and commercial collaboration, and fast access to commercial and academic contacts through a hi-tech focused ecosystem
- Excellent transportation links
- Tailored business support and connections to major funding streams
- A spacious rural location in Cheshire

For further information please contact

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Putting Business at the Heart of Science