

Speeding Up the Development of High Performance Polymers

Asynt has supplied Polymer Mimetics (Liverpool, UK)

with a range of synthetic chemistry equipment to exploit novel chemistries to produce a new generation of high-performance polymers.

Polymer Mimetics

is a joint venture between the University of Liverpool, and Scott Bader Company Ltd. building upon a new polymerisation process developed by Professor Steve Rannard from the University's Department of Chemistry. The technology takes widely available chemical building blocks and, in a highly scalable process, transforms them into superior performance polymeric products with the potential to engineer in degradability.



Images: DrySyn Vortex overhead stirrer with hotplate running 3 reactions in parallel

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Dr Paul Findlay,

Chief Technology Officer at Polymer Mimetics said "Since the 1950's less than 10% of the billions of tons of plastic produced worldwide has been recycled – the rest has been sent to landfill or left in the natural environment. Using our new polymerisation technology, we can produce novel polymers to address some of the issues associated with non-degradable materials currently utilized in the personal care, coatings, composites and specialty adhesives markets".



He added

"In setting up a laboratory a key factor influencing our choice of supplier was being able to effectively and safely conduct multiple reactions, on one stirrer hotplate, at the same time enhancing the number of candidate polymers that can be synthesised, tested and ultimately improving the development of degradable polymer products. As some of our polymerisation reactions involve viscous solutions, Asynt's DrySyn Vortex overhead stirrer platform enabled us to efficiently agitate and heat multiple viscous reactions in parallel, under inert atmospheres. We have also appreciated how the efficient heat conductivity of DrySyn heating blocks has aided the efficient preparation of new polymers. From a sustainability and lab safety perspective, using the CondensSyn air condensers for reflux reactions has eliminated high water usage and potential lab flooding issues that come with using standard water condensers".

For further information

on the DrySyn Vortex overhead stirrer for efficient stirring of viscous solutions please visit <https://www.asynt.com/product/drysynvortex/>. For other chemical synthesis products please visit <https://www.asynt.com/products/drysyn-range/> or contact Asynt on +44-1638-781709 / enquiries@asynt.com.

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Asynt Ltd.

Asynt is a leading supplier of affordable products, consumables and services for chemists in industry and academia. With a staff of trained chemists - Asynt can draw upon this in-depth applications knowledge to provide a high level of customer support for its DrySyn Heating Blocks, Controlled Lab Reactors, Synthesis Tools, Evaporators, Circulators, Temperature Control Systems, Vacuum Pumps and Lab Safety Equipment.

Scott Bader

is a global manufacturer of high-performance adhesives, resins, gelcoats and functional polymers. They have committed to becoming a fully sustainable company through their 2036 vision. Polymer Mimetics demonstrates Scott Bader's commitment to work with technology leaders to develop sustainable new technologies.

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