

## FULLFLOW

## Winter Newsletter

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Welcome to the Winter 2025 issue of FullFlow, the flow chemistry newsletter from Vapourtec, a must-read for all scientists interested in continuous processing applications and technology. Read on to find out the latest product news, new publications using the Vapourtec flow chemistry systems, and upcoming events.

## Product News

## NEW High temperature fixed bed reactor



Vapourtec's new high temperature fixed bed reactor has a stainless steel or Hastelloy reactor contained within a thermally insulated housing. The reactor can be rapidly heated to any temperature between ambient and 250 °C. New applications made possible include, work-up of high value petroleum products, continuous flow hydrogenations, hydration reactions over a fixed bed and high temperature click chemistry, amongst others.

[Learn More](#)

## SF-10+ heated laboratory pump



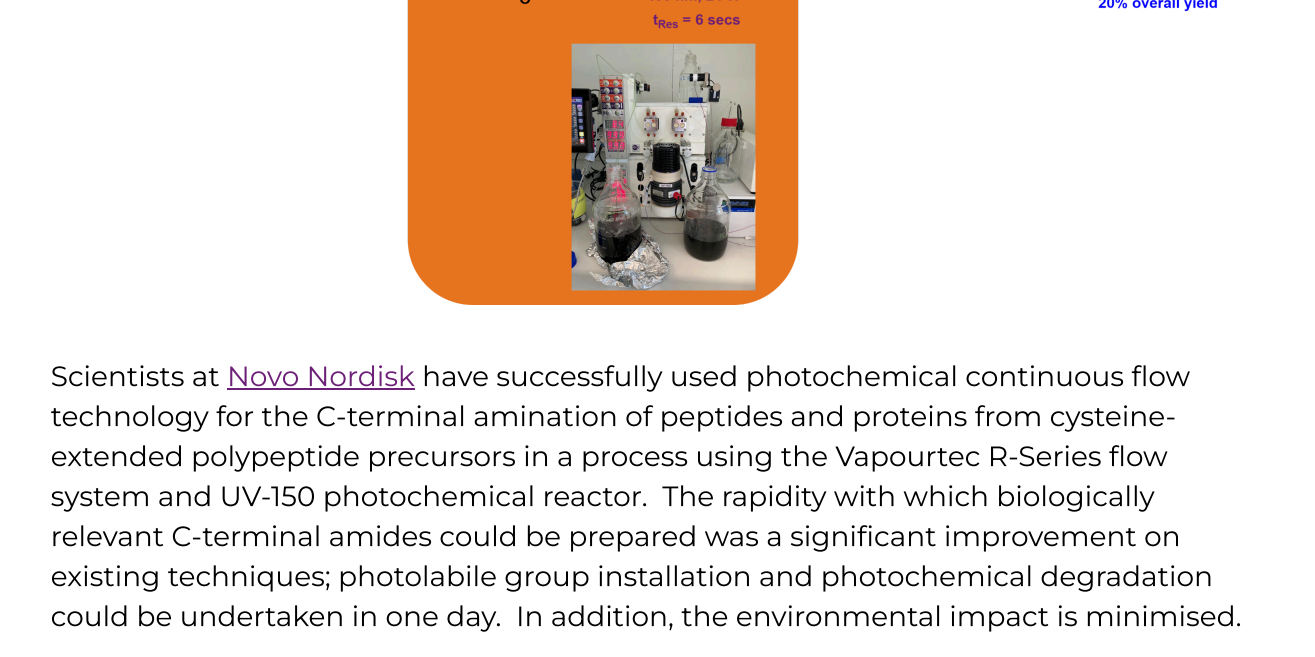
The **SF-10+** builds on the capabilities of Vapourtec's revolutionary **SF-10 pump**, now with temperature control between ambient and 80 °C with inlet and outlet tubes heated to the same temperature. The SF-10+ pump gives access to a host of additional application areas.

[Learn More](#)

## Latest News

## New Case Study:

The Trant Team at the University of Windsor

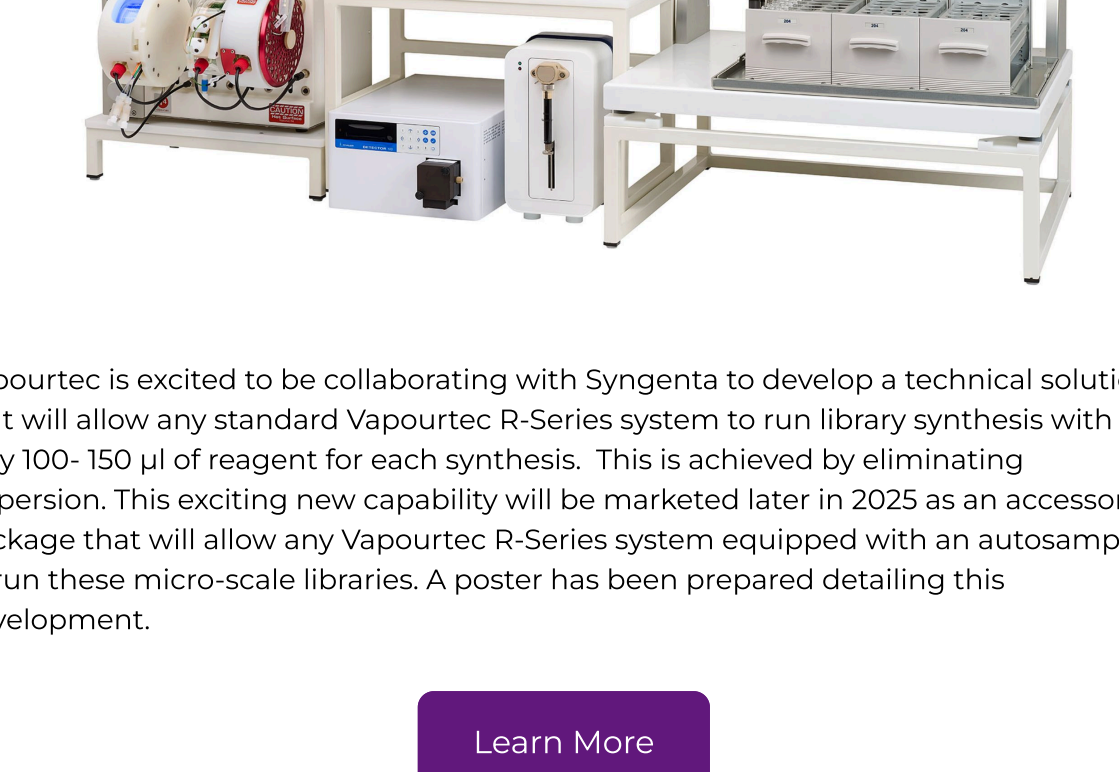


Vapourtec and [the Trant Team](#) from the University of Windsor are working together towards improving the efficiency of [solid-phase peptide synthesis \(SPPS\)](#) by using Fast Flow SPPS. This partnership aims to enhance the synthesis of peptides and small proteins using sub-stoichiometric amounts of amino acids without compromising purity nor synthesis time.

[Learn more](#)

## New Nature paper:

Photochemical functionalisation of peptides and proteins

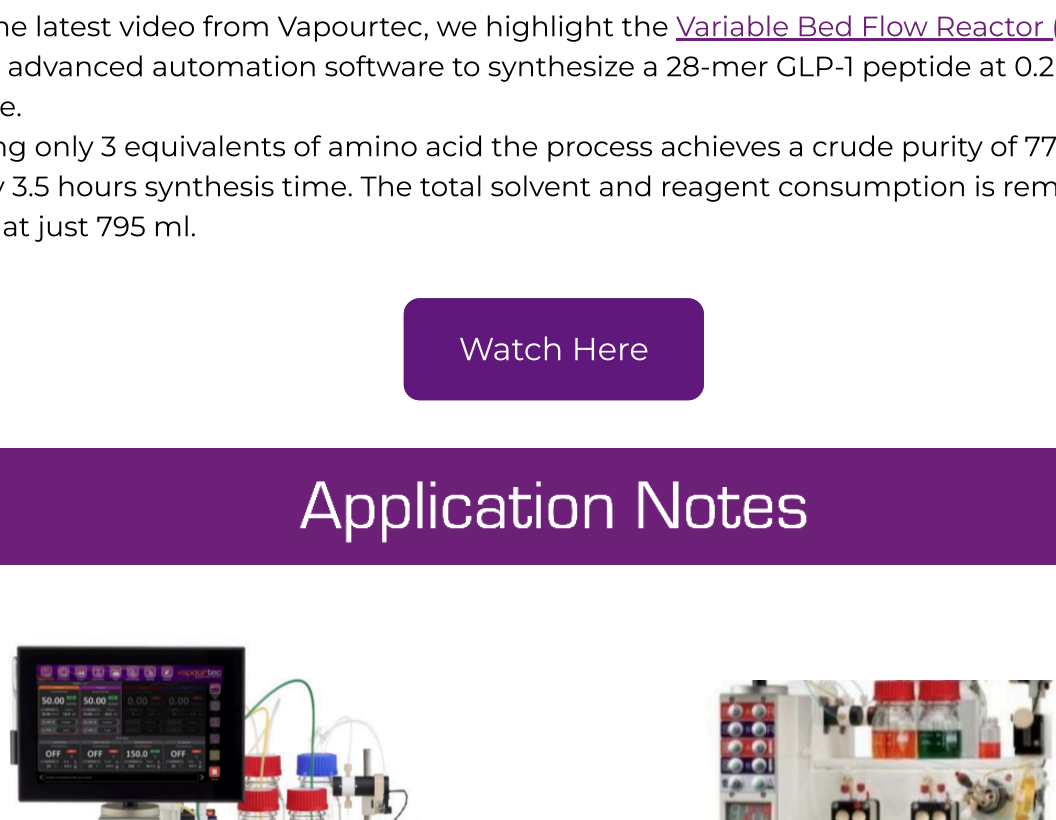


Scientists at [Novo Nordisk](#) have successfully used photochemical continuous flow technology for the C-terminal amination of peptides and proteins from cysteine-extended polypeptide precursors in a process using the Vapourtec R-Series flow system and UV-150 photochemical reactor. The rapidity with which biologically relevant C-terminal amides could be prepared was a significant improvement on existing techniques; photolabile group installation and photochemical degradation could be undertaken in one day. In addition, the environmental impact is minimised.

[Learn More](#)

## New Poster:

Microscale High-Throughput Synthesis in Continuous Flow

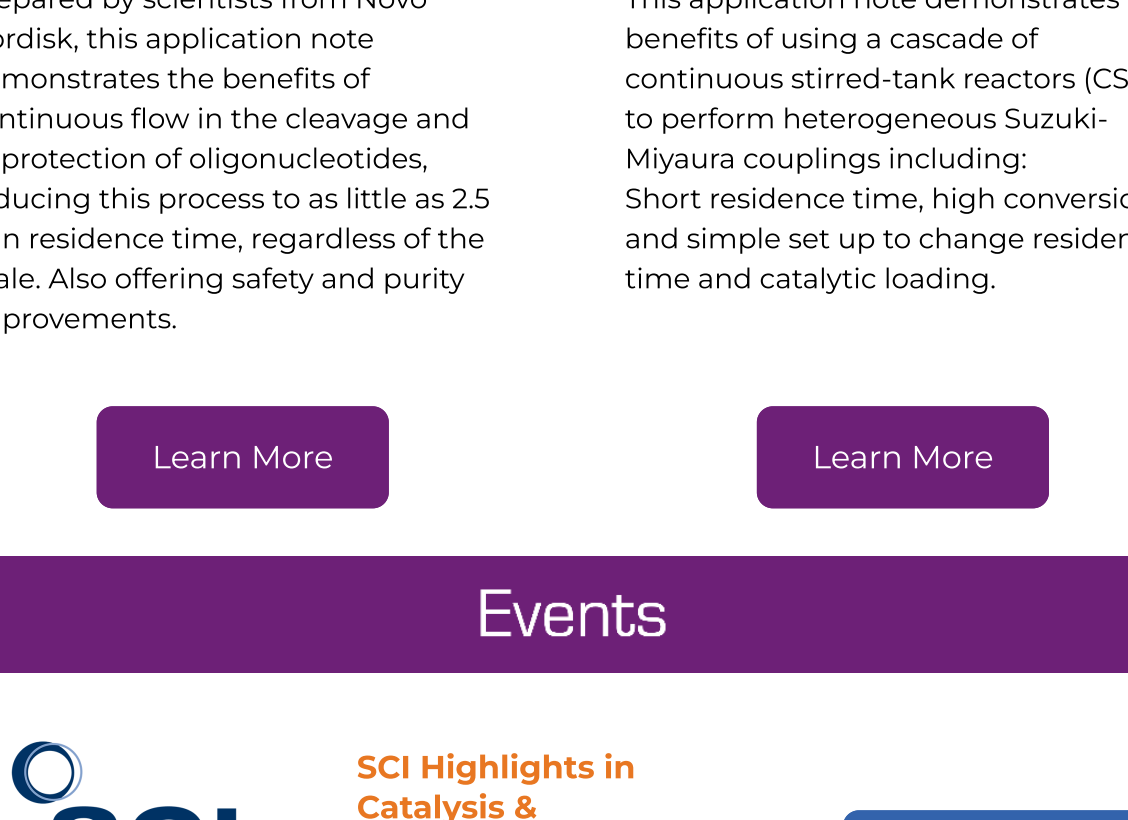


Vapourtec is excited to be collaborating with Syngenta to develop a technical solution that will allow any standard Vapourtec R-Series system to run library synthesis with only 100-150 µl of reagent for each synthesis. This is achieved by eliminating dispersion. This exciting new capability will be marketed later in 2025 as an accessory package that will allow any Vapourtec R-Series system equipped with an autosampler to run these micro-scale libraries. A poster has been prepared detailing this development.

[Learn More](#)

## New Videos:

Variable Bed Flow Reactor (VBFR)



In the latest video from Vapourtec, we highlight the [Variable Bed Flow Reactor \(VBFR\)](#) and advanced automation software to synthesize a 28-mer GLP-1 peptide at 0.2 mmol scale. Using only 3 equivalents of amino acid the process achieves a crude purity of 77% in only 3.5 hours synthesis time. The total solvent and reagent consumption is remarkably low at just 795 ml.

[Watch Here](#)

## Application Notes



## Application Note 78:

Cleavage of oligonucleotides in continuous flow

Prepared by scientists from Novo Nordisk, this application note demonstrates the benefits of continuous flow in the cleavage and deprotection of oligonucleotides, reducing this process to as little as 2.5 min residence time, regardless of the scale. Also offering safety and purity improvements.

[Learn More](#)

## Application Note 79:

Suzuki-Miyaura coupling using CSTRs

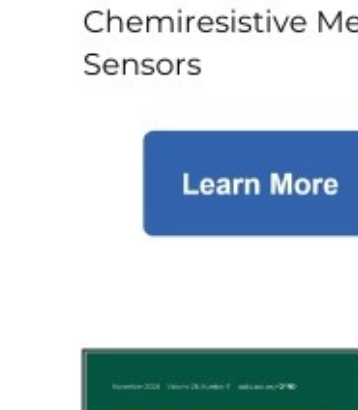
This application note demonstrates the benefits of using a cascade of continuous stirred-tank reactors (CSTR) to perform heterogeneous Suzuki-Miyaura couplings including: Short residence time, high conversion and simple set up to change residence time and catalytic loading.

[Learn More](#)

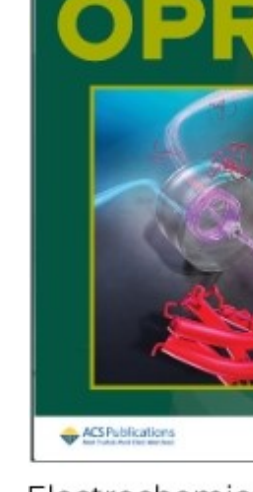
## Events



**SCI Highlights in Catalysis & Photo/Electro-chemistry**  
11th - 12th February  
London - UK  
Attending - Dr Manuel Nuño

[Find out more](#)

**ACS Spring 2025**  
23rd - 27th March  
California - USA  
Attending - Ali Deuchars

[Find out more](#)

**Flow Chemistry Europe**  
3rd - 4th April  
Malaga - Spain  
Attending - Dr Manuel Nuño & Duncan Guthrie

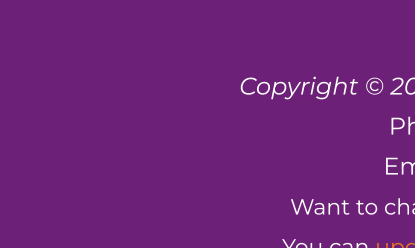
[Find out more](#)

**Bristol Synthesis Meeting**  
8th April  
Bristol - UK  
Attending - Dr Manuel Nuño & Naomi Lawson

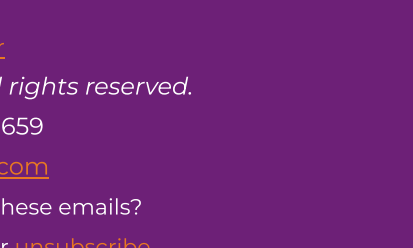
[Find out more](#)

## Publications

Below are 6 compelling publications selected from the 50+ publications citing Vapourtec in recent months. To view all publications citing Vapourtec, [click here](#)



Metal-free photocatalytic cross-electrophile coupling enables C1 homologation and alkylation of carboxylic acids with aldehydes

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Magnetic framework composites via continuous flow syntheses for CO2 capture

[Learn More](#)

Continuous Flow Chemistry and Bayesian Optimization for Polymer-Functionalized Carbon Nanotube-Based Chemiresistive Methane Sensors

[Learn More](#)

Structurally Diverse Nitrogen-Rich Scaffolds via Continuous Photo-Click Reactions

[Learn More](#)

Electrochemical Cyclopropanation of 1,3-Dialkyl Bromides

[Learn More](#)

Monitoring and controlling zeolite synthesis via reactor-based solutions: a fed-batch strategy

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