Welcome to the autumn 2018 issue of FullFlow, the flow chemistry newsletter from Vapourtec, a must-read for all Scientists interested in continuous processing applications and technology.

**Product News**

The Vapourtec Ion electrochemical reactor is NOW available

Vapourtec has developed the Ion electrochemical reactor, a pioneering electrochemical reactor that will lead to more efficient, precise, consistent, and scalable electrochemical synthesis offering potential routes for novel compounds and building blocks together with possible new manufacturing processes.

The Ion is a truly unique reactor watch this video to see inside

The Vapourtec Ion offers a range of exciting features including temperature control and operation under pressurised conditions also having the capability to operate with at least 20 different electrode materials ranging from simple stainless steel through 3 different forms of carbon to exotic materials like boron doped diamond.

Read more
The R-Series can be expanded to eight independently controlled reactor positions

For our Customers with either the most challenging reactions to telescope or who simply require further scale-up capability. The capability of the Vapourtec R-Series system has been further enhanced by enabling fully automated control of up to eight independently controlled reactor positions.

A pressure regulator that can handle particles. One of the exciting features of the SF-10

Solids, particulates, precipitates of any kind can cause a real problem with needle and seat-type back-pressure regulators, causing inconsistent pressure management at best, and blockages at worst. The SF-10 pump uses the Vapourtec V-3 pumps and can run as a precision pressure regulator.
In a recent publication in the Journal of the American Chemical Society, Professor Richard Payne and his group at the University of Sydney have demonstrated a powerful flow technique for building long chain peptides, using the Vapourtec R-Series and a photochemical reactor.

Vapourtec has secured an important strategic distribution agreement for the supply of Flow Chemistry systems with Polish specialist laboratory supplier WITKO. This agreement expands and strengthens Vapourtec’s presence and distribution network across Europe.

Vapourtec’s regular flow chemistry blog has been discussing a range of interesting observations.
made in The Lab while testing and developing Vapourtec’s Ion electrochemical reactor.

commercial possibilities within wider laboratory settings.

**Application Notes**

![Chemical reaction image](image)

**Synthesis of a pharmaceutical intermediate by cross-coupling with non-stabilised diazo compounds**

Aryl-alkyl cross coupling reactions represent one of the most important emerging topics in synthesis, which linked with hitherto difficult to access highly reactive chemical intermediates represent an exciting area for exploitation by flow chemical methods. This application note builds on recently published work by the Group of Professor Steven Ley, Department of Chemistry, University of Cambridge (UK)
International Conference on Micro Reaction Technology – IMRET 2018

15th IMRET will take place in the city of Karlsruhe/Germany from 21-24 October 2018, organised by DECHEMA e.V. with the support of the German ProcessNet Woking Group on Micro Process Engineering, the IMRET Steering Committee, and the International Flow Chemistry Society.

UK Automated Synthesis Forum - UKASF 2018

2018 UK Automated Synthesis Forum is scheduled to take place at AstraZeneca in Macclesfield, on 29th and 30th October 2018. Themes for discussion will include; flash vacuum pyrolysis, DNA encoded libraries, electrochemistry and peptides/solid phase synthesis.

Flow Chemistry Congress 2018

The 7th Flow Chemistry Congress is organised by SELECTBIO on behalf of The Flow Chemistry Society. The date is 12-13 November 2018 at Courtyard by Marriott Miami Downtown/Brickell Hotel, Miami, USA.

10th Symposium on Continuous Flow Reactor Technology for Industrial Applications

The symposium attracts more than 150 delegates from around the world. This year’s conference is located at Ramada Plaza – Milano – Italy from 13-15th November 2018.
**Flow-based biocatalysis: Application to peracetylated arabinofuranosyl-1,5-arabinofuranose synthesis**

Teodora Bavaro (a), Andrea Pinto (b), Federica Dall’Oglio (c), María J. Hernáiz (d), Carlo F. Morelli (e), Paolo Zambelli (b), Carlo De Micheli (c), Paola Conti (c), Lucia Tamborini (c), Marco Terreni (a)

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(b) Department of Food Environmental and Nutritional Science (DeFENS), University of Milan, Via Mangiagalli 25, 20133 Milan, Italy

(c) Department of Pharmaceutical Sciences (DISFARM), University of Milan, Via Mangiagalli 25, 20133 Milan, Italy

**A flow platform for degradation-free CuAAC bioconjugations**

Marine Z.C. Hatit (1), Linus F. Reichenbach (1), John M. Tobin (2), Filipe Vilela (2), Glenn A. Burley (1) & Allan J.B. Watson (3,2)

(1) Department of Pure and Applied Chemistry, University of Strathclyde, 295 Cathedral Street, Glasgow G1 1XL, UK.

(2) Chemical Sciences, Heriot-Watt University, Edinburgh EH14 4AS, UK.

(3) School of Chemistry, University of St Andrews, North Haugh, St Andrews KY16 9ST, UK.
Continuous flow synthesis of a carbon-based molecular cage macrocycle via a three-fold homocoupling reaction

Combining CH functionalisation and flow photochemical heterocyclic metamorphosis (FP-HM) for the synthesis of benzo [1, 3] oxazepines

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* Corresponding authors
Continuous Flow Biocatalysis

Continuous flow biocatalysis
Joshua Britton, Sudpta Majumdar, Gregory A. Weiss
Department of Chemistry, Molecular Biology and Biochemistry, University of California, Irvine, USA

Flow Synthesis of Coumalic Acid and its Derivatization
Laura K. Smith and Ian R. Baxendale
Department of Chemistry, University of Durham, South Road, Durham, DH1 3LE, UK.