

FULL FLOW

Summer 2022 Newsletter

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Welcome to the summer 2022 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, recent application notes, and upcoming events.

[Product news](#) | [Publications](#) | [Application notes](#) | [Events](#)

Product News

vapourtec
precision flow chemistry**R-Series API Software**

Provides a Seamless Integration
of the Flow Chemistry System into
the AI Laboratory of the Future

Stage 3 of the R-Series software with OPC UA

Following on from the release of the R-Series software in March 2021, Vapourtec are happy to announce the release of the R-Series API software package. This software enables the use of OPC-UA as the system/AI interface, allowing the integration of an external algorithm or AI to monitor and automate reactions, make decisions, and perform calculations based on feedback from the flow chemistry system and connected devices.

A “closed loop” optimisation platform can be established using the API as the connectivity library. This is an exciting development that will provide seamless integration of the flow chemistry system into the AI laboratory of the future.

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Publications

Below are 6 recent publications selected from the 100+ published citing Vapourtec since the last newsletter. To view all publications citing Vapourtec, [click here](#).



Evaluation of unexpected protecting group removal in solid-phase peptide synthesis – quantified using continuous flow methods

Victoire Laude, Manuel Nuño, Roger C. Moses, Duncan Guthrie

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Continuous slurry plug flow Fe/ppm Pd

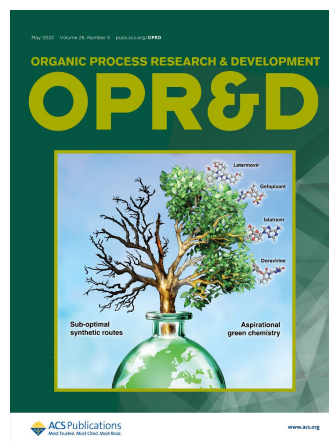


Synthesis of energetic materials in continuous flow

Kyprianou, D., Rarata, G., Emma, G., Diaconu, G., Vahcic, M. and Anderson, D.

Flow chemistry and the synthesis of energetic materials, EUR 31010 EN, Publications Office of the European Union, Luxembourg, 2022

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Continuous Processing of Concentrated Organolithiums in Flow Using Static and Dynamic Spinning Disc Reactor Technologies

Ulrich Wietelmann^a, Johannes Klösener^a, Peter Rittmeyer^a, Stefan Schnippering^a, Henk Bats^b, Wouter Stam^b

^aAlbemarle Germany GmbH, Industrial Park Hoechst, D-65926 Frankfurt am Main, Germany

^bFlowid, Achtseweg Zuid 157C, NL-5651 GW Eindhoven, The Netherlands

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nanoparticle-catalyzed Suzuki–Miyaura couplings in water utilizing novel solid handling equipment

Alex B. Wood^a Scott

Plummer^b Richard I.

Robinson^b Marie Smith^c Jim

Chang^c Fabrice Gallou^d Bruce H.

Lipshutz^a

^aDepartment of Chemistry and Biochemistry, University of California, Santa Barbara, CA 93106, USA

^bGlobal Discovery Chemistry – Chemistry Technology Group, Novartis Institutes for Biomedical Research, 250 Massachusetts Avenue, Cambridge, MA 02139, USA

^cGenomics Institute of the Novartis Research Foundation, 10675 John J Hopkins Dr., San Diego, CA 92121, USA

^dNovartis Pharma AH, CH-4057 Basel, Switzerland

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Technological Innovations in Photochemistry for Organic Synthesis: Flow Chemistry, High-Throughput Experimentation, Scale-up, and Photoelectrochemistry

Laura Buglioni^{a,b} Fabian

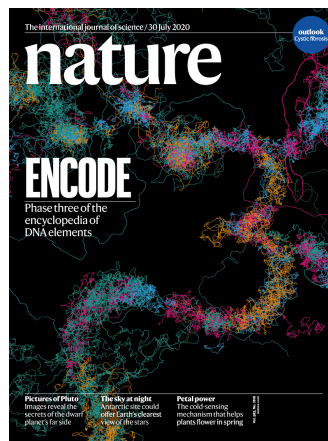
Raymenants^a Aidan Slattery^a Stefan

D. A. Zondag^a Timothy Noël^a

^aFlow Chemistry Group, van 't Hoff Institute for Molecular Sciences (HIMS), Universiteit van Amsterdam (UvA), Science Park 904, 1098 XH, Amsterdam, The Netherlands

^bMicro Flow Chemistry and Synthetic Methodology, Department of Chemical Engineering and Chemistry, Eindhoven University of Technology, Het Kranenveld, Bldg 14—Helix, 5600 MB, Eindhoven, The Netherlands

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Cobalt-electrocatalytic HAT for functionalization of unsaturated C–C bonds

Samer Gnaim^a, Adriano Bauer^a, Hai-Jun Zhang^a, Longrui Chen^a, Cara Gannett^b, Christian A. Malapit^c, David E. Hill^d, David Vogt^c, Tianhua Tang^c, Ryan A. Daley^a, Wei Hao^a, Rui Zeng^b, Mathilde Quertenmont^e, Wesley D. Beck^c, Elya Kandahari^d, Julien C. Vantourout^a, Pierre-Georges Echeverria^e, Hector D. Abruna^b, Donna G. Blackmond^a, Shelley D. Minter^c, Sarah E. Reisman^d, Matthew S. Sigman^c & Phil S. Baran^a

^aDepartment of Chemistry, The Scripps Research Institute (TSRI), La Jolla, CA, USA

^bDepartment of Chemistry and Chemical Biology, Cornell University, Ithaca, NY, USA

^cDepartment of Chemistry, University of Utah, Salt Lake City, UT, USA

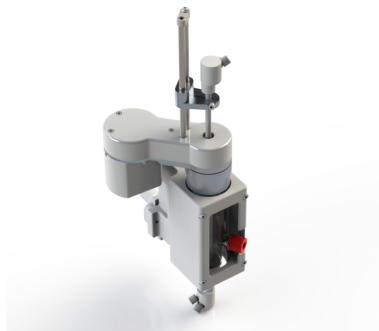
^dThe Warren and Katharine Schlinger Laboratory for Chemistry and Chemical Engineering, Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, USA

^eMinakem Recherche, Beuvry-la-Forêt, France

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Application Notes



Application Note 72: Cleaving peptides in flow

In this application note, we demonstrate how safe, fast and reliably a peptide is cleaved from a resin in continuous flow. Different cleavage conditions were evaluated using Glucagon-like peptide-1 (GLP-1) as an example peptide. By using the Variable Bed Flow Reactor (VBFR), the packing density of the resin was controlled throughout the reaction, minimising dilution and eliminating channelling of reagents.

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Application Note 73: Use of CSTR for biphasic reaction scale up

[Vapourtec](#) has teamed up with UK-based reactor manufacturer [Stoli Chem](#) to demonstrate a new range of continuous stirred tank reactors with Vapourtec. The capabilities of this reactor setup are demonstrated by the results obtained in a scaled-up biphasic Steven's oxidation reaction yielding 1.4 kg/day.

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Events

36th EPS

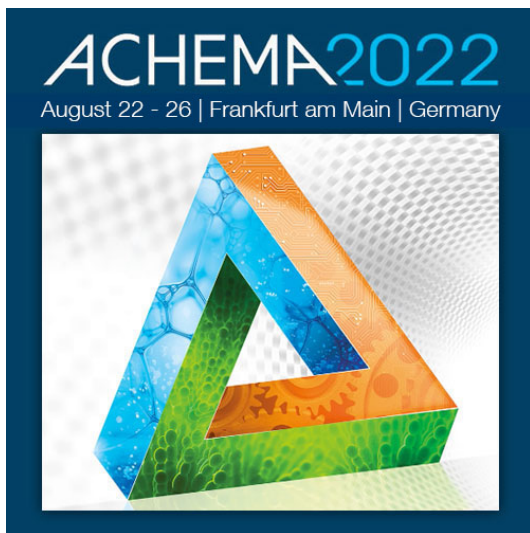
European Peptide Symposium

12th IPS

International Peptide Symposium

Sitges

Barcelona
August 28 - September 2
2022



ACHEMA

22nd – 26th August 2022

Frankfurt am Main – Germany

Modern, interactive and always up to date: With a unique range of topics, exciting focal topics and new event formats, the world's leading trade show for the process industries brings together experts, decision makers and trendsetters from all over the world.

[Find out more >>>](#)

36th EPS European Peptide Symposium | 12th IPS International Peptide Symposium

28th August – 2nd September 2022

Sitges – Spain

The 36EPS scientific committee has set out to assemble an exciting program with a broad range of topics covering, among others, advances in peptide chemistry and structure, bioactive peptides and their therapeutic applications, and peptide biomaterials, nanotechnology and delivery.

[Find out more >>>](#)



13th Edition CFRT – Continuous Flow reactor Technology for Industrial Applications

28th September – 29th September 2022

Graz – Austria

The 13th edition of the CFRT will be held in Graz (Austria) on September 28-29, 2022. In addition, there will be a half-day hands-on course on September 27th. This



Lorentz Center Workshop on Photocatalysis

17th October – 20th October 2022

Leiden – Netherlands

Winners of the 2021/22 Chemistry Competition of the Lorentz Center and the Royal Netherlands Chemical Society were Sonja Pullen – University of Amsterdam, Line Næsberg – WWU Münster & Sebastian Beil – Stratingh Institute for Chemistry. The organizers are young PI's

world-renowned symposium is Teknoscienze's annual technical conference in the flow chemistry field and provides opportunity to engage with industrial key players.

[Find out more >>>](#)

and all have a strong background in the different areas of the topic. We congratulate the winners and we look forward to attending this high quality workshop with them in October.

[Find out more >>>](#)



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