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fullflow from Vapourtec

Welcome to the summer 2019 issue of FullFlow, the flow chemistry newsletter from Vapourtec, a must-read for all scientists interested in continuous processing applications and technology.

Product News

New high powered LEDs are now available for the UV-150

Over recent years many research groups have demonstrated the unique ability of LED light sources to excite a photocatalyst and effect valuable and selective chemical transformations. In many published continuous flow photochemical reactions throughput has been limited by available photons. Vapourtec now present an LED light source as a drop-in replacement for the UV-150 that has more than double the photon output compared with the

Vapourtec Ion opening doors for new research in electrochemistry

The new Vapourtec ion is now beginning to be featured in exciting publications:

Flow Electrochemical Cyclizations via Amidyl Radicals: Easy Access to Cyclic Ureas

Continuous-Flow Electrochemical Generator of Hypervalent Iodine Reagents: Synthetic Applications

Efficient Flow Electrochemical Alkoxylation of Pyrrolidine-1-Carbaldehyde

standard lamp.

Read more

Read more

The UV-150 2020 Edition

In preparation for 2020 Vapourtec have improved their ground breaking UV-150 photochemical reactor. The 2020 edition features improvements such as, easier switching from cooled to heated conditions, improved solid handling capabilities and the exciting addition of high powered LEDs.

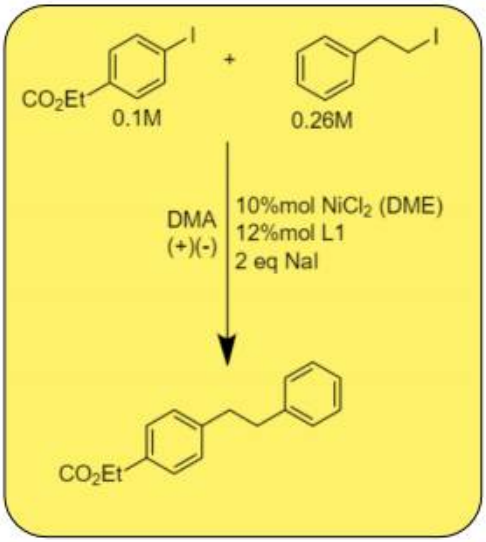
Read more

Vapourtec's unique heterogeneous reactor comes into the spotlight

Vapourtec now present a unique packed-bed photo-reactor designed for illuminating a fixed bed of an immobilized photo catalyst. This reactor is already appearing in exciting publications and is now finally coming into the spotlight as it joins the Vapourtec product line.

Read more

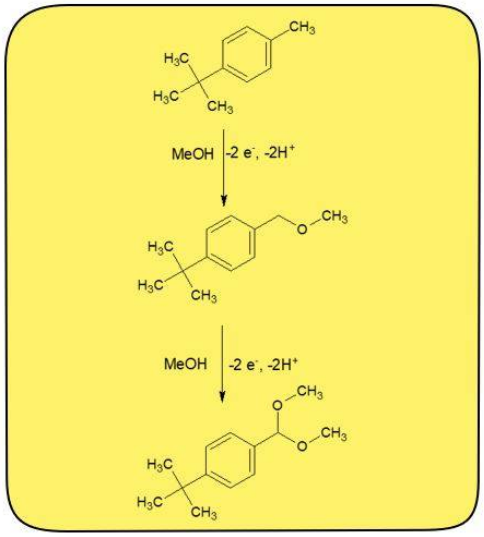
Application Notes



Electrochemical pathway for cross coupling of organic halides - Csp2-Csp3 bonding

This application note is prepared from work undertaken by New Path Molecular Research Ltd. This research project uses the Vapourtec Ion electrochemical reactor for the reductive cross-electrophile coupling of organic halides, constructing a Csp2-Csp3 bond. After optimization of this key reaction, the desired product was afforded in a yield of 81%.

Read more



Direct electrochemical oxidation of 4- tert-butyltoluene

This application note demonstrates the use of the Vapourtec Ion electrochemical reactor for the direct oxidation of 4-tert-butyltoluene into 4-tert-butyl benzaldehyde dimethyl acetal. After optimization of this key reaction, the desired product was afforded in a yield of 88%.

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Events

ACS Chemistry for Life®

Flow Chemistry Society Annual Conference
Flow Chemistry India 2019 SEP 12 SEP 13 Mumbai

ACS National Meeting & Expo – Chemistry & Water: San Diego, 25th - 29th August 2019

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Flow Chemistry India 2019: Mumbai, 12th - 13th September 2019

Read more

Continuous Flow Reactor Technology for Industrial Applications: Glasgow, 21st - 23rd October 2019

Read more

Journées de Chimie Organique – JCO 2019: Palaiseau, 29th - 31st October 2019

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Publications

Batch Versus Flow Lithiation-Substitution of 1,3,4-Oxadiazoles: Exploitation of

Efficient Flow Electrochemical Alkoxylation of Pyrrolidine-1-Carbaldehyde

Unstable Intermediates

Jeff Y. F. Wong, John M. Tobin, Filipe Vilela and Graeme Barker*

Institute of chemical sciences, Heriot-Watt University, Riccarton, Endinburgh, UK

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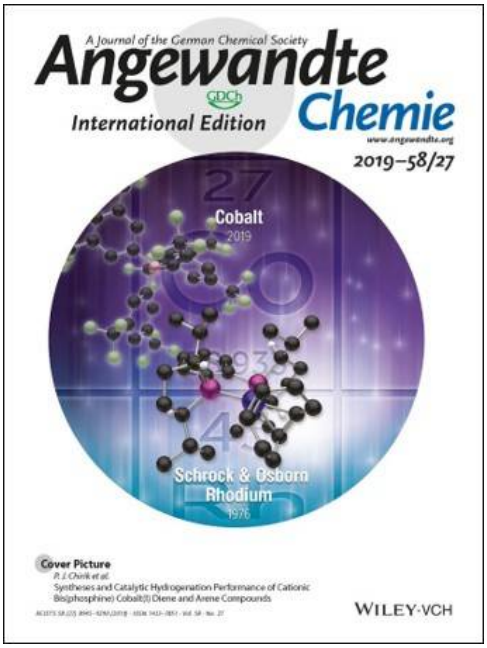

Visible light-promoted Fe-catalyzed Csp2-Csp3 Kumada cross-coupling in flow

Xiao-Jing Wei[a], Irini Abdiaj[b], Carlo Sambiagio[a], Chenfei Li[c], Eli Zysman-Colman[c], Jesús Alcázar*[b], Timothy Noël*[a]

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[a] School of Chemistry, Cardiff University, Park Place, Cardiff, CF10 3AT, UK

[b] Vapourtec Ltd., 21 Park Farm Business Centre, Bury St Edmunds, IP28 6TS, UK

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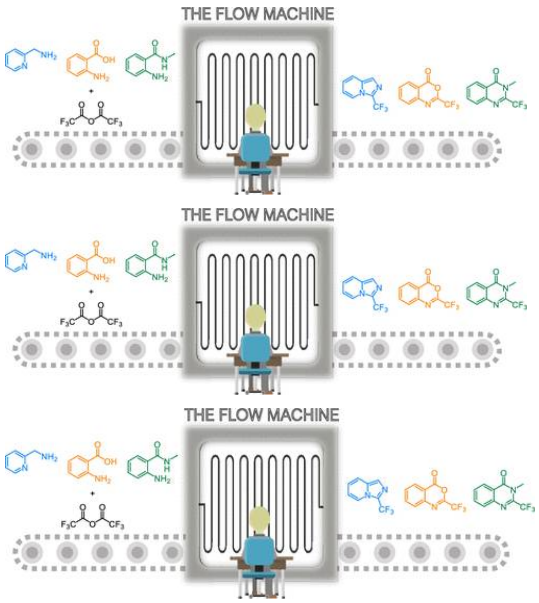

A Novel and Efficient Continuous-Flow Route To Prepare Trifluoromethylated N-Fused Heterocycles for Drug Discovery and Pharmaceutical Manufacturing

Lara Amini-Rentsch[1,2], Ennio Vanoli[2], Sylvia Richard-Bildstein[1], Roger Marti[2], Gianvito Vilé[1]

[1] Idorsia Pharmaceuticals Ltd., Chemistry Technologies & Lead Discovery, Department of Drug Discovery Chemistry, Hegenheimermattweg 91, CH-4123 Allschwil, Switzerland

Development Jannsen-Cilag, S.A. Jarama 75A, 45007 Toledo (Spain)

[c] Organic Semiconductor Center, EaStCHEM School of Chemistry University of St Andrews, St Andrews, Fife, KY16 9ST (UK)

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[2] University of Applied Sciences Western Switzerland (HES-SO), Haute Ecole d'Ingénierie et d'Architecture de Fribourg, Institute of Chemical Technology, 80 boulevard de Pérolles, Fribourg, Switzerland

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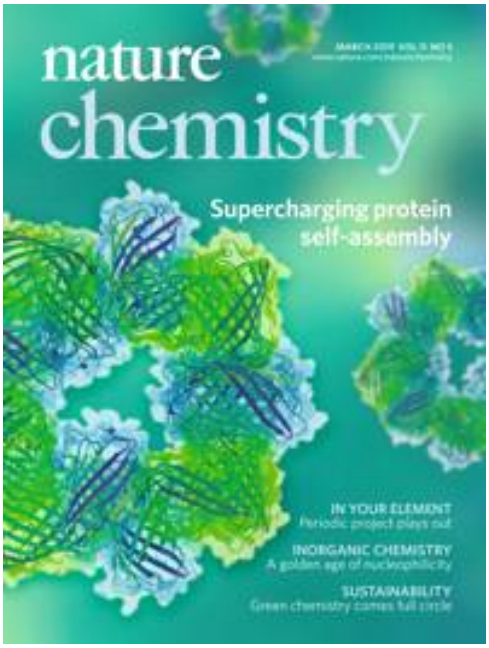

Practical and regioselective amination of arenes using alkyl amines

Alessandro Ruffoni[1], Fabio Juliá[1], Thomas D. Svejstrup[1], Alastair J. McMillan[1], James J. Douglas[2] & Daniele Leonori[1*]

[1] School of Chemistry, University of Manchester, Manchester, UK.

[2] Early Chemical Development, Pharmaceutical Sciences, IMED Biotech Unit, AstraZeneca, Macclesfield, UK.

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A flow platform for degradation-free CuAAC bioconjugation

Alessandro Ruffoni[1], Fabio Juliá[1], Thomas D. Svejstrup[1], Alastair J. McMillan[1], James J. Douglas[2] & Daniele Leonori[1*]

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