Flow Chemistry Publications

The following (non-exhaustive) list of papers shows peer reviewed work that has been published using the Vapourtec R-Series and E-Series flow chemistry systems. As new work is continually published, please check on our website for updates.

In-line purification: A key component to facilitate drug synthesis and process development in medicinal chemistry
Nopphon Weeranoppanant[1,2*], Andrea Adamo[3*]
[1] Department of Chemical Engineering, Faculty of Engineering, Burapha University, 169 Longhard Bangsaen Road, Muang, Chonburi 02131, Thailand
[2] School of Biomolecular Science and Engineering, Vidyasirimedhi Institute of Science and Technology (VISTEC), Wangchan Valley 555 Moo 1 Payupnai, Wangchan, Rayong 21210 Thailand
[3] Zaiput Flow Technologies, 300 Second Avenue, Waltham, Massachusetts 02451, United States
https://pubs.acs.org/doi/abs/10.1021/acsmedchemlett.9b00491

Use of Immobilized Amine Transaminase from Vibrio fluvialis under Flow Conditions for the Synthesis of (S)-1-(5-Fluoropyrimidin-2-yl)-ethanamine
Riccardo Semproli [a] , Gianmarco Vaccaro [a,b] , Erica E. Ferrandi [c], Marta Vanoni [c], Teodora Bavaro [a], Giorgio Marrubini [a], Francesca Annunziata [b], Paola Conti [b], Giovanna Speranza [d] , Daniela Monti * [c] , Lucia Tamborini *[b], Daniela Ubiali *[a]
[a] R. Semproli, G. Vaccaro, Dr. G. Marrubini, Dr. T. Bavaro, Prof. D. Ubiali, Department of Drug Sciences, University of Pavia, Viale Taramelli 12, I-27100 Pavia, Ital
[b] G. Vaccaro, F. Annunziata, Prof. P. Conti, Prof. L. Tamborini, Department of Pharmaceutical Sciences, University of Milano, Via Mangiagalli 25, I-20133 Milano, Italy
[c] Dr. E. E. Ferrandi, M. Vanoni, Dr. D. Monti, Istituto di Scienze e Tecnologie Chimiche "Giulio Natta" (SCITEC) – CNR, Via Bianco 9, I-20131 Milano, Italy
[d] Prof. G. Speranza, Department of Chemistry, University of Milano, Via Golgi 19, I-20133 Milano, Italy
https://onlinelibrary.wiley.com/doi/abs/10.1002/cctc.201902080

Continuous Flow Enables Metallaphotoredox Catalysis in a Medicinal Chemistry Setting: Accelerated Optimization and Library Execution of a Reductive Coupling between Benzylic Chlorides and Aryl Bromides
Zachary G. Brill,*† Casey B. Ritts, † Umar Faruk Mansoor, Nunzio Sciammetta
Department of Discovery Chemistry, MRL, Merck & Co., Inc., 33 Avenue Louis Pasteur, Boston, MA 02115 USA.
https://pubs.acs.org/doi/10.1021/acs.orglett.9b04117

Continuous Flow Synthesis of Methyl Oximino Acetoacetate: Accessing Greener Purification Methods with Inline Liquid-Liquid Extraction and Membrane Separation Technology
René Lebl, Trevor Murray, Andrea Adamo, David Cantillo, C. Oliver Kappe
https://pubs.acs.org/doi/abs/10.1021/acssuschemeng.9b05954

Cellulose fast pyrolysis for platform chemicals: assessment of potential targets and suitable reactor technology
Anurag Parihar, Sankar Bhattacharya
Department of Chemical Engineering, Monash University, Clayton, VIC, Australia
https://onlinelibrary.wiley.com/doi/abs/10.1002/bbb.2066

Continuous and green microflow synthesis of azobenzene compounds catalyzed by consecutively prepared tetrahedron CuBr
Hong Qin[a,1], Chengkou Liu[a,1], Niuniu Lv[a], Wei He[a], Jingjing Meng[a], Zheng Fang[a], Kai Guo[ab]
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[b] State Key Laboratory of Materials-Oriented Chemical Engineering, Nanjing Tech University, Nanjing, 211816, China
https://www.sciencedirect.com/science/article/abs/pii/S0143720819321138

Safe and Scalable Continuous Flow Azidophenylselenylation of Galactal to Prepare Galactosamine Building Blocks
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Department of Biomolecular Systems, Max Planck Institute of Colloids and Interfaces, Am Mühlenberg 1, 14476 Potsdam, Germany
Department of Chemistry and Biochemistry, Freie Universität Berlin, Arnimalle 22, 14195 Berlin, Germany

https://pubs.acs.org/doi/10.1021/acs.oprd.9b00456?goto=supporting-info

A Practical Method for Continuous Production of sp3-Rich Compounds from (Hetero)Aryl Halides and Redox-Active Esters
Dr. Eiichi Watanabe [a], Dr. Yiding Chen [b], Oliver May [b], Prof. Steven V. Ley [*b]
[a] New Path Molecular Ltd. Building 580, Babraham Research Campus, Cambridge (UK)
[b] Department of Chemistry, University of Cambridge, Lensfield Road, Cambridge (UK)
https://onlinelibrary.wiley.com/doi/abs/10.1002/chem.201905048?af=R

Metal-Free Visible-Light-Mediated Hydrotrifluoromethylation of Unactivated Alkenes and Alkynes in Continuous Flow
Anne-Laure Barthelemy, Guillaume Dagousset, Emmanuel Magnier
Institut Lavoisier de Versailles, UMR 8180, Université de Versailles-Saint-Quentin, 78035 Versailles Cedex, France
https://onlinelibrary.wiley.com/doi/abs/10.1002/ejoc.201901252

Stereospecific Amination of Mesylated Cyclobutanol in Continuous Flow
Matthieu Tissot, Jérôme Jacq, Patrick Pasau
UCB Biopharma SPRL, Avenue de l'industrie, 1420 Braine l'Alleud, Belgium
https://pubs.acs.org/doi/abs/10.1021/acs.oprd.9b00381

Stereospecific Amination of Mesylated Cyclobutanol in Continuous Flow
Matthieu Tissot, Jérôme Jacq, Patrick Pasau
UCB Biopharma SPRL, Avenue de l'industrie, 1420 Braine l'Alleud, Belgium
https://pubs.acs.org/doi/abs/10.1021/acs.oprd.9b00381

A new formulation for symbolic regression to identify physico-chemical laws from experimental data
Pascal Neumann[ab], Liwei Cao [bc], Danilo Russo[b], Vassilios S. Vassiliadis[b], Alexei A. Lapkin[bc]
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[c] Cambridge Centre for Advanced Research and Education in Singapore, CARES Ltd., 1 CREATE Way, CREATE Tower #05-05, 138602 Singapore, Singapore
https://www.sciencedirect.com/science/article/pii/S1385894719328256

Real-Time Monitoring of Solid-Phase Peptide Synthesis Using a Variable Bed Flow Reactor
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https://pubs.rsc.org/en/Content/ArticleLanding/2019/CC/C9CC08421E#!divAbstract

Electroorganic Synthesis under Flow Conditions
Mohamed Elsherbini, Thomas Wirth
School of Chemistry, Cardiff University, Main Building, Park Place, Cardiff CF10 3AT, United Kingdom
https://pubs.acs.org/doi/abs/10.1021/acs.accounts.9b00497

Lilly Research Award Program (LRAP): A Successful Academia–Industry Partnership Model in the Context of Flow Chemistry for Drug Discovery
Mateos, Carlos
https://www.ingentaconnect.com/contentone/scs/chimia/2019/00000073/00000010/art00003

In situ non-invasive Raman spectroscopic characterisation of succinic acid polymorphism during segmented flow crystallisation
Anuradha R. Pallipurath[a], Pierre-Baptiste Flandrin[a], Lois E. Wayment[a, b, c], Chick C. Wilson[a, b], Karen Robertson[a]
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https://pubs.rsc.org/en/content/articlelanding/2019/me/c9me00103d#!divAbstract

Microfluidic synthesis of fatty acid esters: Integration of dynamic combinatorial chemistry and scale effect

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[b] State Key Laboratory of Materials-Oriented Chemical Engineering, Nanjing Tech University, Nanjing 210009, PR China
https://www.sciencedirect.com/science/article/pii/S1385894719321242

Development of a continuous flow synthesis of propranolol: tackling a competitive side reaction
Sonia De Angelis[1, 2], Paolo Celestini[3], Rosa Purgatorio[1], Leonardo Degennaro[1, 2], Gabriele Rebuzzini[3], Renzo Luisi[1, 2], Claudia Carlucci[1, 2]
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[3] COSMA S.p.A, Ciserano Italy
https://link.springer.com/article/10.1007/s41981-019-00047-8

Photochemical flow synthesis of 3-hydroxyazetidines
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https://onlinelibrary.wiley.com/doi/abs/10.1002/cptc.201900188

Flow nanoprecipitation of size-controlled D-leucine nanoparticles for spray-drying formulations
Bruno Cerra, Gabriele Mosca, Maurizio Ricci, Aurélie Schoubben and Antimo Gioiello
https://pubs.rsc.org/en/content/articlelanding/2019/re/c9re00242a/unauth#!divAbstract

Visible-Light-Mediated Cross-Couplings and C–H Activation via Dual Photoredox/Transition-Metal Catalysis in Continuous-Flow Processes
Soo Dong Kim, Jonghyun Lee, Nam-Jung Kim, Boyoung Park
Kyung Hee University, Department of Pharmacy, Kyungheedaero 26, 02447 Seoul, Republic of Korea
https://onlinelibrary.wiley.com/doi/pdf/10.1002/ajoc.201900354

A flow platform for degradation-free CuAAC bioconjugation
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]
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https://www.nature.com/articles/s41467-018-06551-0

Batch Versus Flow Lithiation-Substitution of 1,3,4-Oxadiazoles: Exploitation of Unstable Intermediates Using Flow Chemistry
Jeff Y. F. Wong, John M. Tobin, Filipe Vilela and Graeme Barker*
Institute of Chemical Sciences, Heriot-Watt University, Edinburgh EH11 4AS, Scotland, UK.
https://onlinelibrary.wiley.com/doi/abs/10.1002/chem.201902917

A Photoredox Coupling Reaction of Benzylboronic Esters and Carbonyl Compounds in Batch and Flow
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https://pubs.acs.org/doi/full/10.1021/acs.orglett.9b02307

Heumann Indole Flow Chemistry Process
Cynthia Crifar, Fenja Leena Dücker, Sacha Nguyen Thanh, Vanessa Kairouz, William D. Lubell
https://pubs.acs.org/doi/abs/10.1021/acs.joc.9b01516

Integrated plug flow synthesis and crystallisation of pyrazinamide
C. Daniel Scott,[a] Ricardo Labes,[b] Martin Depardieu,[c] Claudio Battilocchio,[b] Matthew G. Davidson,[a] Steven V. Ley,[b] Chick C. Wilson[ad] and Karen Robertson*[c]
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https://pubs.rsc.org/en/content/articlelanding/2018/re/c8re00087e#!divAbstract

Conjugated porous polymers for photocatalytic applications

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https://pubs.rsc.org/en/content/articlelanding/2016/ta/c6ta07697a#!divAbstract

In-Flow Flash Nanoprecipitation of Size-Controlled D-Leucine Nanoparticles for Spray-Drying Formulations

Bruno Cerra, Gabriele Mosca, MaurizioRicci, Aurélie Schoubben, and Antimo Gioiello
Department of Pharmaceutical Sciences, University of Perugia, Via del Liceo 1, I-06122 Perugia, Italy

https://chemrxiv.org/articles/In-Flow_Flash_Nanoprecipitation_of_Size-Controlled_D-Leucine_Nanoparticles_for_Spray-Drying_Formulations/8074508

The Role of Single-Atom Catalysis in Potentially Disruptive Technologies

Mario Pagliaro
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https://www.sciencedirect.com/science/article/pii/B9780128190883000028

A Simple and Efficient Flow Preparation of Pyocyanin a Virulence Factor of Pseudomonas Aeruginosa

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https://onlinelibrary.wiley.com/doi/full/10.1002/ejoc.201900526

Electrophilic Bromination in Flow: A safe and Sustainable Alternative to the Use of Molecular Bromine in Batch

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https://www.mdpi.com/1420-3049/24/11/2116/htm

Microfluidic process intensification for synthesis and formulation in the pharmaceutical industry

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https://www.sciencedirect.com/science/article/pii/S0255270118315927

Continuous flow chemo-enzymatic Baeyer-Villiger oxidation with superactive and extra-extra stable enzyme/carbon nanotube catalyst: an efficienct upgrade from batch to flow

Anna Szelwicka[a], Przemysław Zawadzki[b], Magdalena Sitko[a], Sławomir Boncel[c], Wojciech Czardybon[b], Anna Chrobok*[a]
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https://pubs.acs.org/doi/full/10.1021/acs.oprd.9b00132

Synthetic route design of AZD4635, an $A_{2A}R$ antagonist

Mairi M. Littleson*[†], Andrew D. Campbell[†], Adam Clarke[†], Mark Dow[†], Gareth Ensor[†], Matthew C. Evans[†], Adam Herring[†], Bethany A. Jackson[†], Lucinda V. Jackson[†], Staffan Karlsson[‡], David J. Klauber[†], Danny H. Legg[§], Kevin W. Leslie[†], Štefan Moravcĭk[‡], Chris D. Parsons[§], Thomas O. Ronson[†], Rebecca E. Meadows[†]
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https://pubs.acs.org/doi/full/10.1021/acs.oprd.9b00171

Continuous flow knitting of a triptycene hypercrosslinked polymer

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https://pubs.rsc.org/en/content/articlelanding/2019/cc/c9cc03731d#!divAbstract

Transaminase-catalyzed continuous synthesis of biogenic aldehydes

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https://onlinelibrary.wiley.com/doi/abs/10.1002/cbic.201900356

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

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https://pubs.acs.org/doi/10.1021/acs.iecr.9b01906

Flow Hydrodediazoniation of Aromatic Heterocycles

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https://www.mdpi.com/1420-3049/24/10/1996

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

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School of Chemistry, Cardiff University, Main Building, Park Place, Cardiff, CF10 3AT UK

https://onlinelibrary.wiley.com/doi/full/10.1002/anie.201904379

Definitive screening designs for multistep kinetic models in flow

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https://pubs.rsc.org/en/content/articlelanding/2019/re/c9re00180h/unauth#!divAbstract

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

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https://onlinelibrary.wiley.com/doi/abs/10.1002/anie.201906462

Experimental Methods in Chemical Engineering: Micro-Reactors

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https://onlinelibrary.wiley.com/doi/abs/10.1002/cjce.23525

Continuous Flow Synthesis of Highly Substituted Tetrahydrofurans

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https://onlinelibrary.wiley.com/doi/abs/10.1002/ejoc.201900421

Peroxidation of 2-oxindole and barbituric acid derivatives under batch and continuous flow using an eco-friendly ethyl acetate solvent
Moreshwar B. Chaudhari,[a] Nirmala Mohanta,[a] Akanksha M. Pandey,[a] Madhusoodhanan Vandana,[b] Krishanpal Karmodiya[b] and Boopathy Gnanaprakasam*[a]
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https://pubs.rsc.org/en/content/articlelanding/2019/re/c9re00068b/unauth#!divAbstract

Rapid and Multigram Synthesis of Vinylogous Esters under Continuous Flow: An Access to Transetherification and Reverse Reaction of Vinylogous Esters
Nirmala Mohanta, Moreshwar B. Chaudhari, Naveen Kumar Digrawal, Boopathy Gnanaprakasam*****
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https://pubs.acs.org/doi/abs/10.1021/acs.oprd.9b00067

Continuous manufacturing – the Green Chemistry promise?
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Department of Chemical Engineering, MIT, 77 Massachusetts Avenue, Cambridge, MA 02139-4307, USA
https://pubs.rsc.org/en/content/articlepdf/2019/gc/c9gc00773c

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]
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[2] Early Chemical Development, Pharmaceutical Sciences, IMED Biotech Unit, AstraZeneca, Macclesfield SK10 2NA, UK
https://www.nature.com/articles/s41557-019-0254-5#Sec216

The Influence of Residence Time Distribution on Continuous-Flow Polymerization
Marcus H. Reis, Travis P. Varner, Frank A. Leibfarth*
Department of Chemistry, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA
https://chemrxiv.org/articles/The_Influence_of_Residence_Time_Distribution_on_Continuous_Flow_Polymerization/7726166

Additive manufacturing of photoactive polymers for visible light harvesting
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[c] Department of Chemical Engineering, Loughborough University, Loughborough, UK
https://www.sciencedirect.com/science/article/pii/S1876610219306034

Modeling and Design of a Flow-Microreactor-Based Process for Synthesizing Ionic Liquids
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https://pubs.acs.org/doi/full/10.1021/acs.oprd.8b00436

Synthesis of a Renewable Macrocyclic Musk: Evaluation of Batch, Microwave, and Continuous Flow Strategies
Émilie Morin[§], Johann Sosoe[§], Michaël Raymond[§], Benjamin Amorelli[†]*, Richard M. Boden[†], and Shawn K. Collins*[§]
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https://pubs.acs.org/doi/abs/10.1021/acs.oprd.8b00450

Bioprocess Intensification Using Flow Reactors: Stereoselective Oxidation of Achiral 1,3-diols with Immobilized Acetobacter Aceti

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https://www.mdpi.com/2073-4344/9/3/208/htm

Reversible chemoselective transetherification of vinylogous esters using Fe-catalyst under additive free conditions

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https://pubs.rsc.org/en/content/articlelanding/2019/ob/c9ob00307j/unauth#!divAbstract

Investigation of a Weak Temperature–Rate Relationship in the Carbamoylation of a Barbituric Acid Pharmaceutical Intermediate

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Rapid and Multigram Synthesis of Vinylogous Esters under Continuous Flow: An Access to Transetherification and Reverse Reaction of Vinylogous Esters

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Protection-Group-Free Synthesis of Sequence-Defined Macromolecules via Precision λ-Orthogonal Photochemistry

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Decarboxylative Intramolecular Arene Alkylation Using *N*-(Acyloxy)phthalimides, an Organic Photocatalyst, and Visible Light

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

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https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0037-1611772

Efficient Flow Electrochemical Alkoxylation of Pyrrolidine-1-Carbaldehyde

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Overcoming Water Insolubility in Flow: Enantioselective Hydrolysis of Naproxen Ester

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http://scholar.google.co.uk/scholar_url?url=https://www.mdpi.com/20734344/9/3/232/pdf&hl=en&sa=X&d=4927449594359372866&scisig=AAGBfm1jTkGZDwbCoVIolsHeAX8_NVEueQ&nossl=1&oi=scholaralrt

A solid-supported arylboronic acid catalyst for direct amidation

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https://pubs.rsc.org/en/content/articlelanding/2019/cc/c8cc09913h/unauth#!divAbstract

Visible Light-Promoted Beckmann Rearrangements: Separating Sequential Photochemical and Thermal Phenomena in a Continuous Flow Reactor

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https://onlinelibrary.wiley.com/doi/abs/10.1002/ejoc.201900231

A Consolidated and Continuous Synthesis of Ciprofloxacin from a Vinylogous Cyclopropyl Amide

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Emerging Trends in Flow Chemistry and Applications to the Pharmaceutical Industry

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Towards a Scalable Synthesis of 2-Oxabicyclo[2.2.0]hex-5-en-3-one Using Flow Photochemistry

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Continuous flow processing as a tool for the generation of terpene-derived monomer libraries

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https://pubs.rsc.org/en/content/articlelanding/2019/re/c8re00237a#!divAbstract

Rapid Photochemical Reaction Studies under Continuous-flow Conditions in the Vapourtec UV-150 Reactor-A Technical Note

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https://www.ingentaconnect.com/contentone/ben/coc/2018/00000022/00000025/art00006

Enabling synthesis in fragment-based drug discovery by reactivity mapping: photoredox-mediated cross-dehydrogenative heteroarylation of cyclic amines

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https://pubs.rsc.org/en/Content/ArticleLanding/2019/SC/C8SC04789H#!divAbstract

Enhanced mixing of biphasic liquid-liquid systems for the synthesis of *gem*-dihalocyclopropanes using packed bed reactors

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https://link.springer.com/article/10.1007/s41981-018-0026-1

Deprotection of N-Boc Groups Under Continuous Flow High Temperature Conditions

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A Laser Driven Flow Chemistry Platform for Scaling Photochemical Reactions with Visible Light

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https://pubs.acs.org/doi/10.1021/acscentsci.8b00728

De novo design of organic photocatalysts: bithiophene derivatives for the visible-light induced C-H functionalization of heteroarenes

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Integrating reactive distillation with continuous flow processing

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Enabling tools for continuous-flow biphasic liquid-liquid reaction

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https://pubs.rsc.org/en/content/articlelanding/2018/re/c8re00230d/unauth#!divAbstract

High-Throughput Template-Free Continuous Flow Synthesis of Polyaniline Nanofibers

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A Continuous Flow Strategy for the Facile Synthesis and Elaboration of Semi-Saturated Heterobicyclic Fragments
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https://onlinelibrary.wiley.com/doi/abs/10.1002/ejoc.201801684

Continuous Flow Chlorination of Alkenyl Iodides Promoted by Copper Tubing
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https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0037-1610398

Continuous flow palladium-catalyzed trifluoromethylthiolation of C-H bonds
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https://link.springer.com/article/10.1007/s41981-018-0023-4

Continuous preparation for rifampicin
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https://link.springer.com/article/10.1007/s41981-018-0017-2

Using Carbon Dioxide as a Building Block in Continuous Flow Synthesis
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https://onlinelibrary.wiley.com/doi/abs/10.1002/adsc.201801228

Chemoselective Synthesis of Amines from Ammonium Hydroxide and Hydroxylamine in Continuous Flow
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https://pubs.acs.org/doi/abs/10.1021/acs.joc.8b02387

Enantiospecific cyclization of methyl N-(tert-butoxycarbonyl)-N-(3-chloropropyl)-D-alaninate to 2-methylproline derivative via 'memory of chirality' in flow
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https://link.springer.com/article/10.1007/s41981-018-0022-5

Mg-Catalyzed OPPenauer Oxidation—Application to the Flow Synthesis of a Natural Pheromone
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https://www.mdpi.com/2073-4344/8/11/529

Dehydration of an Insoluble Urea Byproduct Enables the Condensation of DCC and Malonic Acid in Flow
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https://pubs.acs.org/doi/abs/10.1021/acs.oprd.7b00375

Self-Sufficient Flow-Biocatalysis by Coimmobilization of Pyridoxal 5'-Phosphate and ω-Transaminases onto Porous Carriers
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https://pubs.acs.org/doi/10.1021/acssuschemeng.8b02672

A Convergent Continuous Multistep Process for the Preparation of C4-Oxime-Substituted Thiazoles

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Additive Free Fe-Catalyzed Conversion of Nitro to Aldehyde under Continuous Flow Module

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Recent Advances in Photodecarboxylations Involving Phthalimides

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http://www.publish.csiro.au/CH/CH18220

C–H functionalisation of aldehydes using light generated, non-stabilised diazo compounds in flow†

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https://pubs.rsc.org/en/content/articlehtml/2018/cc/c8cc06202a

Catalytic Static Mixers for the Continuous Flow Hydrogenation of a Key Intermediate of Linezolid (Zyvox)

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https://pubs.acs.org/doi/abs/10.1021/acs.oprd.8b00153

Photoinduced Palladium Negishi Cross-Coupling Through Visible Light Absorption of Palladium-Organozinc complexes

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https://onlinelibrary.wiley.com/doi/abs/10.1002/anie.201808654

Three-component assembly of multiply substituted homoallylic alcohols and amines using a flow chemistry photoreactor

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Mild Homologation of Esters via Continuous Flow Chloroacetate Claisen Reactions

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https://www.ncbi.nlm.nih.gov/pubmed/30290045

Regioselective Chlorination of Quinoline Derivatives via Fluorine Mediation in a Microfluidic Reactor
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https://onlinelibrary.wiley.com/doi/full/10.1002/slct.201802925

Continuous flow synthesis of a carbon-based molecular cage macrocycle *via* a three-fold homocoupling reaction
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https://pubs.rsc.org/en/content/articlelanding/2015/cc/c5cc05181a#!divAbstract

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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https://www.sciencedirect.com/science/article/pii/S1359511318302484

Continuous Flow Photochemical Benzylic Bromination of a Key Intermediate in the Synthesis of a 2-Oxazolidinone
Y Chen, O de Frutos, C Mateos, JA Rincon, D Cantillo, C Olivier Kappe
https://onlinelibrary.wiley.com/doi/abs/10.1002/cptc.201800114

Native Chemical Ligation–Photodesulfurization in Flow
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https://pubs.acs.org/doi/10.1021/jacs.8b03115

Continuous flow biocatalysis
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http://pubs.rsc.org/en/content/articlelanding/2018/cs/c7cs00906b/unauth#!divAbstract

Reductive aminations using a 3D printed supported metal(0) catalyst system
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https://link.springer.com/article/10.1007/s41981-018-0013-6

Flow Synthesis of Coumalic Acid and its Derivatization
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https://pubs.rsc.org/en/content/articlelanding/2018/re/c8re00116b#!divAbstract

Combining CH functionalisation and flow photochemical heterocyclic metamorphosis (FP-HM) for the Combining CH functionalisation and flow photochemical heterocyclic metamorphosis (FP-HM) for the synthesis of benzo [1, 3] oxazepines
Jasraj S. Babra, Andrew T. Russell, Christopher D. Smith, Yuxiong Zhang
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https://www.sciencedirect.com/science/article/pii/S0040402018306148

Studies toward the scaling of gas-liquid photocycloadditions
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https://onlinelibrary.wiley.com/doi/full/10.1002/cptc.201800098

Photooxygenation in an advanced led-driven flow reactor module: Experimental investigations and modelling
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https://www.sciencedirect.com/science/article/abs/pii/S0255270118304355

P-121: Successive and scalable synthesis of highly stable Cs_4PbBr_6 perovskite microcrystal by microfluidic system and their application in backlight display
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https://onlinelibrary.wiley.com/doi/abs/10.1002/sdtp.12305

Self-sustaining closed-loop multienzyme-mediated conversion of amines into alcohols in continuous reactions
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School of Chemistry, University of Nottingham, Nottingham, United Kingdom
https://www.nature.com/articles/s41929-018-0082-9

Dichlorophenylacrylonitriles as AhR Ligands displaying selective breast cancer cytotoxicity in vitro

Jennifer R Selective Oxidation of Sulfides in Flow Chemistry

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https://onlinelibrary.wiley.com/doi/abs/10.1002/cmdc.201800256

Combining C-H functionalisation and flow photochemical heterocyclic metamorphosis (FP-HM) for the synthesis of benzo[1,3]oxazepines
Jasraj S. Babra, Andrew T. Russell, Christopher D. Smith, Yuxiong Zhang
Department of Chemistry, University of Reading, Whiteknights, Reading, RG6 6AD, UK
https://www.sciencedirect.com/science/article/pii/S0040402018306148

Multistep Continuous-Flow Processes for the Preparation of Heterocyclic Active Pharmaceutical Ingredients
Romaric Gérardy, Jean-Christophe M. Monbaliu
Center for Integrated Technology and Organic Synthesis, Department of Chemistry, University of Liège, Liège, Belgium
https://link.springer.com/chapter/10.1007/7081_2018_21

Flow Chemistry Approaches Applied to the Synthesis of Saturated Heterocycles
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https://link.springer.com/chapter/10.1007/7081_2018_16

An efficient benzoxaborole one-pot synthesis by SiliaCat DPP-Pd heterogeneous catalysis using diboronic acid
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https://onlinelibrary.wiley.com/doi/abs/10.1002/adsc.201800262

Total Synthesis of Neomarchantin A: Key Bond Constructions Performed Using Continuous Flow Methods
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https://pubs.acs.org/doi/10.1021/acs.orglett.7b01127

In situ epoxide generation by dimethyldioxirane oxidation and the use of epichlorohydrin in the flow synthesis of a library of β-amino alcohols
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http://rsos.royalsocietypublishing.org/content/5/4/171190

Safe Use of Hazardous Chemicals in Flow
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https://link.springer.com/chapter/10.1007/7081_2018_17

Photochemical Synthesis of Heterocycles: Merging Flow Processing and Metal-Catalyzed Visible Light Photoredox Transformations
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https://link.springer.com/chapter/10.1007/7081_2018_20

Flow Chemistry as a Drug Discovery Tool: A Medicinal Chemistry Perspective
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https://link.springer.com/chapter/10.1007/7081_2018_24

Copper mediated, heterogeneous, enantioselective intramolecular Buchner reactions of α-diazoketones using continuous flow processing
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Functionalization of Heteroarenes Under Continuous Flow
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https://link.springer.com/chapter/10.1007/7081_2018_22

Photoredox Iridium–Nickel Dual-Catalyzed Decarboxylative Arylation Cross-Coupling: From Batch to Continuous Flow via Self-Optimizing Segmented Flow Reactor
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A combination of flow and batch mode processes for the efficient preparation of $mGlu_{2/3}$ receptor negative allosteric modulators (NAMs)
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https://www.sciencedirect.com/science/article/pii/S004040201830351X

On-demand synthesis of organozinc halides under continuous flow conditions
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https://www.nature.com/articles/nprot.2017.141

Generation of Diversity Sets with High sp3 Fraction Using the Photoredox Coupling of Organotrifluoroborates and Organosilicates with Heteroaryl/Aryl Bromides in Continuous Flow
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Vertex Pharmaceuticals Inc., 50 Nothern Avenue, Boston, Massachusetts 02210, United States.
https://www.ncbi.nlm.nih.gov/pubmed/29281285

Iron-Catalyzed Batch/Continuous Flow C-H Functionalization Module for the Synthesis of Anticancer Peroxides
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http://pubs.acs.org/doi/abs/10.1021/acs.joc.7b02854

Selective *N*-monomethylation of primary anilines with dimethyl carbonate in continuous flow
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https://www.sciencedirect.com/science/article/pii/S0040402017312346

Continuous flow multistep synthesis of α-functionalized esters via lithium enolate intermediates
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https://www.sciencedirect.com/science/article/pii/S004040201731222X

A concise flow synthesis of indole-3-carboxylic ester and its derivatisation to an auxin mimic
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https://www.beilstein-journals.org/bjoc/articles/13/251

Synthesis, physicochemical properties, and biological activity of bile acids 3-glucuronides: Novel insights into bile acid signalling and detoxification
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https://www.sciencedirect.com/science/article/pii/S0223523417310401

Conjugated polymers via direct arylation polymerization in continuous flow: minimizing the cost and batch-to-batch variations for high-throughput energy conversion
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Recent advances of microfluidics technologies in the field of medicinal chemistry
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http://www.sciencedirect.com/science/article/pii/S0065774317300192

Sustainable flow synthesis of a versatile cyclopentenone building block

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Auto-tandem catalysis: Pd(II)-catalysed dehydrogenation/oxidative Heck of Cyclopentane-1,3-diones

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http://onlinelibrary.wiley.com/doi/10.1002/chem.201704442/pdf

Exploring effects of intermittent light upon visible light promoted water oxidations

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http://pubs.rsc.org/en/content/articlepdf/2017/se/c7se00304h

Telescoped continuous flow generation of a library of highly substituted 3-thio-1,2,4-triazoles.

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http://pubs.rsc.org/en/content/articlehtml/2017/re/c7re00125h

Targeting a mirabegron precursor by BH_3-mediated continuous flow reduction process

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http://www.sciencedirect.com/science/article/pii/S0920586117306739

In situ preparation and consumption of O-Mesitylsulfonylhydroxylamine (MSH) in continuous flow for the amination of pyridines

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https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0036-1588799

Highly efficient oxidation of amines to aldehydes with flow-based biocatalysis

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Novel polystyrene-immobilized chiral amino alcohols as heterogeneous ligands for the enantioselective Arylation of Aldehydes in Batch and Continuous Flow Regime

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http://www.sciencedirect.com/science/article/pii/S0920586117305771

An efficient and green pathway for continuous Friedel-Crafts acylation over α-Fe_2O_3 and $CaCO_3$ nanoparticles prepared in the microreactors

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http://www.sciencedirect.com/science/article/pii/S1385894717314845

A nanoporous graphene analog for superfast heavy metal removal and continuous-flow visible-light photoredox catalysis

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http://pubs.rsc.org/en/content/articlelanding/2017/ta/c7ta05534j#!divAbstract

A novel micro-flow system under microwave irradiation for continuous synthesis of 1, 4-dihydropyridines in the absence of solvents via Hantzsch reaction

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http://www.sciencedirect.com/science/article/pii/S1385894717314444

Methanolysis of epoxidized soybean oil in continuous flow conditions

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http://www.sciencedirect.com/science/article/pii/S0926669017305125

Visible-light-induced trifluoromethylation of highly functionalized arenes and heteroarenes in continuous flow

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https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0036-1588527

Continuous preparation and use of dibromoformaldoxime as a reactive intermediate for the synthesis of 3-bromoisoxazolines

Claudio Battilocchio, Francesco Bosica, Sam M. Rowe, Bruna Lacerda Abreu, Edouard Godineau, Matthias Lehmann, and Steven V Ley

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Chemoenzymatic synthesis in flow reactors: a rapid and convenient preparation of captopril

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http://onlinelibrary.wiley.com/doi/10.1002/open.201700082/full

Preparation of polyfunctional diorgano-magnesium and - zinc reagents using in situ trapping halogen-lithium exchange of highly functionalized (hetero)aryl halides in continuous flow

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http://onlinelibrary.wiley.com/doi/10.1002/anie.201706609/full

Flow assisted synthesis: a key fragment of SR 142948A
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http://onlinelibrary.wiley.com/doi/10.1002/ejoc.201700904/full

Singlet oxygen oxidations in homogeneous continuous flow using a gas–liquid membrane reactor
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http://pubs.rsc.org/en/content/articlehtml/2017/re/c7re00053g

A convenient, mild and green synthesis of NH-sulfoximines in flow reactors
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http://onlinelibrary.wiley.com/doi/10.1002/ejoc.201700850/full

A Continuous flow method for the desulfurization of substituted thioimidazoles applied to the synthesis of new etomidate derivatives
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http://onlinelibrary.wiley.com/doi/10.1002/ejoc.201700833/full

High throughput photo-oxidations in a packed bed reactor system
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http://www.sciencedirect.com/science/article/pii/S0968089617313627

Phase separation macrocyclization in a complex pharmaceutical setting: application toward the synthesis of Vaniprevir
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Grignard Reagents on a Tab: Direct Magnesium Insertion under Flow Conditions
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Co-production of HMF and gluconic acid from sucrose by chemo-enzymatic method
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http://www.sciencedirect.com/science/article/pii/S1385894717310586

Efficient synthesis of 5-(chloromethyl) furfural (CMF) from high fructose corn syrup (HFCS) using continuous flow processing
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http://pubs.rsc.org/en/content/articlelanding/2017/re/c7re00039a/unauth#!divAbstract

Barbier continuous flow preparation and reactions of carbamoyllithiums for nucleophilic amidation
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Polymer-supported photosensitizers for oxidative organic transformations in flow and under visible light Irradiation

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http://pubs.acs.org/doi/abs/10.1021/acscatal.7b00888

Direct valorisation of waste cocoa butter triglycerides via catalytic epoxidation, ring-opening and polymerisation

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http://onlinelibrary.wiley.com/doi/10.1002/jctb.5292/full

Hydrogen sulfide chemistry in continuous flow: Efficient synthesis of 2-oxopropanethioamide

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Automating multistep flow synthesis: approach and challenges in integrating chemistry, machines and logic

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https://www.beilstein-journals.org/bjoc/articles/13/97/i/2

Utilizing on- and off-line monitoring tools to follow a kinetic resolution step during flow synthesis

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http://onlinelibrary.wiley.com/doi/10.1002/mrc.4494/full

Flow Synthesis of Cyclobutanones via [2+2] Cycloaddition of Keteneiminium Salts and Ethylene Gas

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Continuous Flow α‑Arylation of N,N‑Dialkylhydrazones under Visible-Light Photoredox Catalysis

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http://pubs.acs.org/doi/ipdf/10.1021/acs.orglett.7b00117

Utilization of flow chemistry in catalysis: New avenues for the selective synthesis of Bis(indolyl)methanes

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http://www.sciencedirect.com/science/article/pii/S0040402017301588

Continuous-flow synthesis of highly functionalized imidazo-oxadiazoles facilitated by microfluidic extraction
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http://www.beilstein-journals.org/bjoc/content/pdf/1860-5397-13-26.pdf

Preparation of Forced Gradient Copolymers Using Tube-in-Tube Continuous Flow Reactors
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http://onlinelibrary.wiley.com/doi/10.1002/mren.201600065/full

A Continuous Flow Synthesis and Derivatization of 1,2,4-Thiadiazoles
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http://www.sciencedirect.com/science/article/pii/S0968089617300901

Self-optimisation and model-based design of experiments for developing a C–H activation flow process
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http://www.beilstein-journals.org/bjoc/single/articleFullText.htm?publicId=1860-5397-13-18

Diels–Alder reactions of myrcene using intensified continuous-flow reactors
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http://www.beilstein-journals.org/bjoc/single/articleFullText.htm?publicId=1860-5397-13-15

Active Site-Mapping of Xylan-Deconstructing Enzymes with Arabinoxylan Oligosaccharides Produced by Automated Glycan Assembly
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http://onlinelibrary.wiley.com/doi/10.1002/chem.201605902/full

Mixed-Linkage Glucan Oligosaccharides Produced by Automated Glycan Assembly Serve as Tools to Determine the Substrate Specificity of Lichenase
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Improving the throughput of batch photochemical reactions using flow: Dual photoredox and nickel catalysis in flow for C(sp^2) C(sp^3) cross-coupling
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http://www.sciencedirect.com/science/article/pii/S096808961631495X

Synthesis of Cycloalkyl Substituted 7-Azaindoles via Photoredox Nickel Dual Catalytic Cross-Coupling in Batch and Continuous Flow
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Acridinium-Based Photocatalysts: A Sustainable Option in Photoredox Catalysis
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Halogenation of organic compounds using continuous flow and microreactor technology
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http://pubs.rsc.org/en/content/articlelanding/2017/re/c6re00186f/unauth#!divAbstract

Application of the Photoredox Coupling of Trifluoroborates and Aryl Bromides to Analog Generation Using Continuous Flow
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Design and Development of Pd-catalyzed Aerobic N-Demethylation Strategies for the Synthesis of Noroxymorphone in Continuous Flow Mode
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γ-Glutamyl-dipeptides: Easy tools to rapidly probe the stereoelectronic properties of the ionotropic glutamate receptor binding pocket
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http://www.sciencedirect.com/science/article/pii/S0040402016311693

Expedited access to thieno[3,2-*c*]quinolin-4(5*H*)-ones and benzo[*h*]-1,6-naphthyridin-5(6*H*)-ones *via* a continuous flow photocyclization method
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http://pubs.rsc.org/-/content/articlelanding/2016/ob/c6ob02279k#!divAbstract

A benchtop NMR spectrometer as a tool for monitoring mesoscale continuous-flow organic synthesis: equipment interface and assessment in four organic transformations
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http://pubs.rsc.org/en/content/articlelanding/2016/ra/c6ra19662d#!divAbstract

BODIPY-based conjugated microporous polymers as reusable heterogeneous photosensitisers in a photochemical flow reactor
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http://pubs.rsc.org/en/content/articlelanding/2016/py/c6py01393g#!divAbstract

Reformatsky and Blaise reactions in flow as a tool for drug discovery. One pot diversity oriented synthesis of valuable intermediates and heterocycles
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http://pubs.rsc.org/en/content/articlelanding/2016/gc/c6gc02619b#!divAbstract

Visible light activation of Boronic Esters enables efficient photoredox C(sp^2)–C(sp^3) cross-couplings in flow
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Engineering chemistry: integrating batch and flow reactions on a single, automated reactor platform
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http://pubs.rsc.org/en/content/articlelanding/2016/re/c6re00160b#!divAbstract

Triphenylphosphine-grafted, RAFT-synthesised, porous monoliths as catalysts for Michael addition in flow synthesis
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http://dx.doi.org/10.1016/j.reactfunctpolym.2015.09.008

Ethyl Lithiodiazoacetate: Extremely Unstable Intermediate Handled Efficiently in Flow
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A facile hybrid 'flow and batch' access to substituted 3,4-dihydro-2*H*-benzo[*b*][1,4]oxazinones
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http://pubs.rsc.org/is/content/articlelanding/2016/ob/c6ob01153e#!divAbstract

Continuous flow biocatalysis: production and in-line purification of amines by immobilised transaminase from *Halomonas elongata*
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http://pubs.rsc.org/en/content/articlelanding/2017/gc/c6gc01780k#!divAbstract

A laboratory-scale continuous flow chlorine generator for organic synthesis
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Continuous processing and efficient in situ reaction monitoring of a hypervalent iodine (III) mediated cyclopropanation using benchtop NMR spectroscopy
Batool Ahmed-Omer, Eric Sliwinski, John Paul Cerroti, Steven V Ley
http://pubs.acs.org/doi/abs/10.1021/acs.oprd.6b00177?journalCode=oprdfk

Aryl amination using ligand-free Ni(II) salts and photoredox catalysis
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http://science.sciencemag.org/content/early/2016/06/22/science.aag0209

Catalytic Chan-Lam coupling using a 'tube-in-tube' reactor to deliver molecular oxygen as an oxidant
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http://www.beilstein-journals.org/bjoc/single/articleFullText.htm?publicId=1860-5397-12-156

An approach to the synthesis of 4-aryl and 5-aryl substituted thiazole-2(3H)-thiones employing flow processing
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http://pubs.rsc.org/en/content/articlelanding/2016/ra/c6ra15488c#!divAbstract

Flow carbonylation of sterically hindered ortho-subsituted iodoarenes
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Exploring flow procedures for diazonium formation
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http://www.mdpi.com/1420-3049/21/7/918/htm

Catalytic macrocyclization strategies using continuous flow: formal total synthesis of ivorenolide A
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http://pubs.acs.org/doi/abs/10.1021/acs.joc.6b01500

Delivering enhanced efficiency in the synthesis of α-diazosulfoxides by exploiting the process control enabled in flow
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http://www.akademiai.com/doi/abs/10.1556/1846.2016.00013

Continuous-flow synthesis and derivatization of aziridines through palladium-catalyzed C(sp^3)–H activation
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Metal-free borylation of electron-rich aryl(pseudo)halides under continuous-flow photolytic conditions
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http://pubs.rsc.org/en/content/articlelanding/2016/qo/c6qo00109b#!divAbstract

Difluorocarbene addition to alkenes and alkynes in continuous flow
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A simple setup for transfer hydrogenations in flow chemistry
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A scalable and operationally simple radical trifluoromethylation
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http://www.nature.com/ncomms/2015/150810/ncomms8919/full/ncomms8919.html

Photoactive and metal-free polyamide-based polymers for water and wastewater treatment under visible light irradiation
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Biodiesel synthesis using integrated acid and base catalysis in continuous flow
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The generation of a library of bromodomain-containing protein modulators expedited by continuous flow synthesis
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http://onlinelibrary.wiley.com/doi/10.1002/ejoc.201600222/abstract

An efficient etherification of *Ginkgol biloba* extracts with fewer side effects in a micro-flow system
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Fine chemical syntheses under flow using SiliaCat catalysts
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http://pubs.rsc.org/en/content/articlelanding/2016/cy/c6cy00038j#!divAbstract

Continuous-flow synthesis of 2H-azirines and their diastereoselective transformation to aziridines

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Continuous flow magnesiation or zincation of acrylonitriles, acrylates, and nitroolefins. Application to the synthesis of butenolides
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Continuous flow photo-initiated RAFT polymerisation using a tubular photochemical reactor
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Continuous-flow photochemistry: a need for chemical engineering
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Efficient metal-free photochemical borylation of aryl halides under batch and continuous-flow conditions†
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Continuous flow photochemistry as an enabling synthetic technology: synthesis of substituted-6(5*H*)-phenanthridinones for use as poly (ADP-ribose) polymerase inhibitors
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Controlled generation and use of CO in flow†‡
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The solid copper-mediated C-N cross-coupling of phenylboronic acids under continuous flow conditions
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Visible-light photoredox catalysis using a macromolecular ruthenium complex: reactivity and recovery by size-exclusion nanofiltration in continuous flow†
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Integrating multicomponent flow synthesis and computational approaches for the generation of a tetrahydroquinoline compound based library

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The expanding utility of continuous flow hydrogenation

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Highly efficient and safe procedure for the synthesis of aryl 1,2,3-triazoles from aromatic amine in a continuous flow reactor

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http://www.sciencedirect.com/science/article/pii/S0040403910013675

Studies of a diastereoselective electrophilic fluorination reaction employing a cryo-flow reactor

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http://community.dur.ac.uk/i.r.baxendale/papers/Chimia2008.62.162.pdf

A novel internet-based reaction monitoring, control and autonomous self-optimization platform for chemical synthesis

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Thermolysis of 1,3-dioxin-4-ones: fast generation of kinetic data using in-line analysis under flow

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Continuous heterogeneously catalyzed oxidation of benzyl alcohol in a ceramic membrane packed-bed reactor

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Automated glycan assembly of xyloglucan oligosaccharides
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http://pubs.rsc.org/en/content/articlelanding/2016/ob/c5ob02226f/unauth#!divAbstract

Continuous flow Buchwald–Hartwig amination of a pharmaceutical intermediate†
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http://pubs.rsc.org/is/content/articlehtml/2016/re/c5re00048c

An efficient continuous flow process for the synthesis of a non-conventional mixture of fructooligosaccharides
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http://www.sciencedirect.com/science/article/pii/S0308814615008808

Dynamic flow synthesis of porous organic cages
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http://pubs.rsc.org/en/content/articlelanding/2015/cc/c5cc07447a#!divAbstract

Continuous photochemistry: the flow synthesis of ibuprofen *via* a photo-Favorskii rearrangement
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http://pubs.rsc.org/en/content/articlelanding/2016/re/c5re00037h/unauth#!divAbstract

Making ends meet: flow synthesis as the answer to reproducible high-performance conjugated polymers on the scale that roll-to-roll processing demands
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http://onlinelibrary.wiley.com/doi/10.1002/aenm.201401996/full

Amination of aryl halides and esters using intensified continuous flow processing
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http://www.mdpi.com/1420-3049/20/10/17860/htm

An integrated flow and microwave approach to a broad spectrum protein kinase inhibitor
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http://pubs.rsc.org/en/content/articlelanding/2015/ra/c5ra09426g#!divAbstract

Light-induced C-H arylation of (hetero)arenes by in situ generated diazo anhydrides
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http://onlinelibrary.wiley.com/doi/10.1002/chem.201502357/abstract?userIsAuthenticated=false&deniedAccessCustomisedMessage=

Photodecarboxylative benzylations of *N*-methoxyphthalimide under batch and continuous-flow conditions
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http://www.publish.csiro.au/?paper=CH15356

A short multi-step flow synthesis of a potential spirocyclic fragrance component
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http://onlinelibrary.wiley.com/doi/10.1002/ceat.201500255/suppinfo

Flow synthesis of 2-methylpyridines via α-methylation
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http://www.mdpi.com/1420-3049/20/9/15797/htm

The development of a short route to the API ropinirole hydrochloride
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http://pubs.rsc.org/en/content/articlelanding/2015/ob/c5ob01739d#!divAbstract

A practical deca-gram scale ring expansion of (R)-(−)-carvone to (R)-(+)-3-methyl-6-isopropenyl-cyclohept-3-enone-1
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http://pubs.rsc.org/en/content/articlelanding/2015/ob/c5ob00525f/unauth#!divAbstract

A flow-based synthesis of telmisartan
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http://www.akademiai.com/doi/abs/10.1556/JFC-D-15-00002

Two-stage flow synthesis of coumarin via *O*-acetylation of salicylaldehyde
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http://www.akademiai.com/doi/abs/10.1556/1846.2014.00043

The preparation of ethyl levulinate facilitated by flow processing: the catalyzed and uncatalyzed esterification of levulinic

acid

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Photodecarboxylations in an advanced meso-scale continuous flow photoreactor

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Flow alkylation of thiols, phenols, and amines using a heterogenous base in a packed-bed reactor

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Generation and trapping of ketenes in flow

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A concise flow synthesis of efavirenz[‡]

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http://onlinelibrary.wiley.com/doi/10.1002/anie.201411728/abstract

A monolith immobilised iridium Cp* catalyst for hydrogen transfer reactions under flow conditions

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http://pubs.rsc.org/en/content/articlelanding/2015/ob/c4ob02376e#!divAbstract

Development of a flow method for the hydroboration/oxidation of olefins

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http://pubs.rsc.org/en/Content/ArticleLanding/2015/OB/c5ob00170f#!divAbstract

Reevaluation of the 2-nitrobenzyl protecting group for nitrogen containing compounds: an application of flow photochemistry

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Vertex Pharmaceuticals Inc., 50 Northern Avenue, Boston, MA, United States

http://www.sciencedirect.com/science/article/pii/S0040403915000106

Flow synthesis of ethyl isocyanoacetate enabling the telescoped synthesis of 1,2,4-triazoles and pyrrolo-[1,2-c]pyrimidines

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http://pubs.rsc.org/en/Content/ArticleLanding/2015/OB/c5ob00245a#!divAbstract

Heterogenization of Pd–NHC complexes onto a silica support and their application in Suzuki–Miyaura coupling under batch and continuous flow conditions

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http://pubs.rsc.org/en/content/articlelanding/2014/cy/c4cy00829d/unauth%20-%20!divAbstract#!divAbstract

The direct α-C(sp^3)–H functionalisation of N-aryl tetrahydroisoquinolines via an iron-catalysed aerobic nitro-Mannich reaction and continuous flow processing

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http://pubs.rsc.org/en/Content/ArticleLanding/2015/CC/c4cc07913b#!divAbstract

Efficient continuous-flow synthesis of macrocyclic triazoles

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Factors Influencing the regioselectivity of the oxidation of asymmetric secondary amines with singlet oxygen

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http://onlinelibrary.wiley.com/doi/10.1002/chem.201500121/abstract?deniedAccessCustomisedMessage=&userIsAuthenticated=false

Glucuronidation of bile acids under flow conditions: design of experiments and Koenigs–Knorr reaction optimization

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http://pubs.rsc.org/en/content/articlelanding/2014/ob/c4ob01911c#!divAbstract

Electroactive and photoactive poly[Isoindigo-alt-EDOT] synthesized using direct (hetero)arylation polymerization in batch and in continuous flow

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Chemical assembly systems: layered control for divergent, continuous, multistep syntheses of active pharmaceutical ingredients[‡]

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Continuous reductions and reductive aminations using solid $NaBH_4$

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Versatile, high quality and scalable continuous flow production of metal-organic frameworks

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http://dx.doi.org/10.1038/srep05443

Flow synthesis and biological activity of aryl sulphonamides as selective carbonic anhydrase IX and XII inhibitors

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Facilitating biomimetic syntheses of borrerine derived alkaloids by means of flow-chemical methods.

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http://dx.doi.org/10.1071/CH14530

Synthesis of a carprofen analogue using a continuous flow UV-reactor

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http://dx.doi.org/10.1021/op5002148

Continuous synthesis of organozinc halides coupled to negishi reactions

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http://dx.doi.org/10.1002/adsc.201400243

Efficient synthesis of panaxadiol derivatives using continuous-flow microreactor and evaluation of anti-tumor activity

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Continuous flow magnesiation of functionalized heterocycles and acrylates with TMPMgCl·LiCl

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A continuous-flow approach to 3,3,3-trifluoromethylpropenes: bringing together Grignard addition, Peterson elimination, inline extraction, and solvent switching

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Development of a Grignard-type reaction for manufacturing in a continuous-flow reactor

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First example of alkyl-aryl Negishi cross-coupling in flow: mild, efficient and clean introduction of functionalized alkyl groups

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A general continuous flow method for palladium catalysed carbonylation reactions using single and multiple tube-in-tube gas-liquid microreactors

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http://dx.doi.org/10.1002/ejoc.201402804

Flow chemistry meets advanced functional materials

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http://dx.doi.org/10.1002/chem.201402801

Multistep flow synthesis of 5-amino-2-aryl-2*H*-[1,2,3]-triazole-4-carbonitriles

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http://dx.doi.org/10.1002/chem.201402074

The rapid synthesis of oxazolines and their heterogeneous oxidation to oxazoles under flow conditions

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http://dx.doi.org/10.1039/C4OB02105C

First example of a continuous-flow carbonylation reaction using aryl formates as CO precursors

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Glycosylation with *N*-acetyl glycosamine donors using catalytic iron(III) triflate: from microwave batch chemistry to a scalable continuous-flow process

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The generation of a library of bromodomain-containing protein modulators expedited by continuous flow synthesis
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An efficient etherification of *Ginkgol biloba* extracts with fewer side effects in a micro-flow system
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Continuous flow synthesis of thieno[2,3-*c*]isoquinolin-5(4*H*)-one scaffold: a valuable source of PARP-1 inhibitors
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Regioselective synthesis of 3-aminoimidazo[1,2-*a*]-pyrimidines under continuous flow conditions
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Microwave irradiation and flow chemistry for a straightforward synthesis of piano-stool iron complexes
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Continuous flow macrocyclization at high concentrations: synthesis of macrocyclic lipids
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Continuous synthesis of artemisinin-derived medicines
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http://dx.doi.org/10.1039/C4CC05098C

Consecutive oxygen-based oxidations convert amines to α-cyanoepoxides
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http://dx.doi.org/10.1039/C4CC04932**B**

Continuous-flow oxidative cyanation of primary and secondary amines using singlet oxygen
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Flow synthesis of a versatile fructosamine mimic and quenching studies of a fructose transport probe
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Synthesis of all four stereoisomers of 3-(tert-Butoxycarbonyl)-3-azabicyclo[3.1.0]hexane-2-carboxylic acid
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Seamless integration of dose-response screening and flow chemistry: efficient generation of structure–activity relationship data of β-Secretase (BACE1) inhibitors
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Controlled synthesis of poly(3-hexylthiophene) in continuous flow
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Integration of enabling methods for the automated flow preparation of piperazine-2-carboxamide
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Sequential flow process for the controlled polymerisation and thermolysis of RAFT-synthesised polymers
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Robust and reusable supported palladium catalysts for cross-coupling reactions in flow
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Investigating the continuous synthesis of a nicotinonitrile precursor to nevirapine
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Porous, functional, poly(styrene-co-divinylbenzene) monoliths by RAFT polymerization

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New insights into cyclobutenone rearrangements: a total synthesis of the natural ROS-generating anti-cancer agent cribrostatin 6†

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Hypervalent iodine/TEMPO-mediated oxidation in flow systems: a fast and efficient protocol for alcohol oxidation

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The application of a monolithic triphenylphosphine reagent for conducting Ramirez *gem*-dibromoolefination reactions in flow

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Flow-based, cerium oxide enhanced, low-level palladium sonogashira and heck coupling reactions by perovskite catalysts

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The fit for purpose development of $S1P_1$ receptor agonist GSK2263167 using a Robinson annulation and Saegusa oxidation to access an advanced phenol intermediate

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Raman spectroscopy as a tool for monitoring mesoscale continuous-flow organic synthesis: Equipment interface and assessment in four medicinally-relevant reactions

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Biotransformation with whole microbial systems in a continuous flow reactor: resolution of (*RS*)-flurbiprofen using *Aspergillus oryzae* by direct esterification with ethanol in organic solvent

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Continuous flow synthesis of Coumarin

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Continuous flow-processing of organometallic reagents using an advanced peristaltic pumping system and the telescoped flow synthesis of (E/Z)-tamoxifen

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Integrated synthesis and testing of substituted xanthine based DPP4 inhibitors: application to drug discovery

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Applying flow chemistry: methods, materials, and multistep synthesis

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Controlled synthesis of poly(3-hexylthiophene) in continuous flow

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http://dx.doi.org/10.3762/bjoc.9.170

Building a sulfonamide library by eco-friendly flow synthesis

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The rapid generation of isocyanates in flow

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Continuous synthesis of pyridocarbazoles and initial photophysical and bioprobe characterization

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Microwave heating and conventionally-heated continuous-flow processing as tools for performing cleaner palladium-catalyzed decarboxylative couplings using oxygen as the oxidant – a proof of principle study

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Rapid discovery of a novel series of Abl kinase inhibitors by application of an integrated microfluidic synthesis and screening platform

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http://pubs.acs.org/doi/abs/10.1021/jm400099d

A multi-step continuous flow process for the N-demethylation of alkaloids

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A two-stage continuous-flow synthesis of spirooxazine photochromic dyes

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Ozonolysis of some complex organic substrates in flow

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Continuous synthesis and use of N-heterocyclic carbene copper(I) complexes from insoluble Cu2O

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An expeditious synthesis of imatinib and analogues utilising flow chemistry methods

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Continuous-flow generation of diazoesters and their direct use in S-H and P-H insertion reactions: synthesis of a-sulfanyl, a-sulfonyl and a-phosphono carboxylates

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Synthesis of carbohydrate-functionalised sequence-defined oligo (amidoamine)s by photochemical thiol-ene coupling in a continuous flow reactor

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Synthesis of RAFT block copolymers in a multi-stage continuous flow process inside a tubular reactor

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Continuous flow synthesis of organic electronic materials: case studies in methodology translation and scale-up
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Preparation of arene chromium tricarbonyl complexes using continuous-flow processing: (η6-$C_6H_5CH_3$)$Cr(CO)_3$ as an example
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http://dx.doi.org/10.1556/JFC-D-12-00018

Visible light-initiated preparation of functionalized polystyrene monoliths for flow chemistry
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Integrated continuous processing and flow characterization of RAFT polymerization in tubular flow reactors
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Synthesis of an H3 antagonist via sequential one-pot additions of a magnesium ate complex and an amine to a 1,4-ketoester followed by carbonyl-directed fluoride addition
Joel M. Hawkins, Pascal Dubé, Mark T. Maloney, Lulin Wei. Marcus Ewing, Stephen M. Chesnut, Joshua R. Denette, Brett M. Lillie, Rajappa Vaidyanathan
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http://dx.doi.org/10.1021/op300093j

A "catch-react-release" method for the flow synthesis of 2-aminopyrimidines and preparation of the imatinib base
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http://dx.doi.org/10.1021/ol301673q

Sustainable and efficient methodology for CLA synthesis and identification
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Continuous synthesis and purification by direct coupling of a flow reactor with simulated moving-bed chromatography
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http://dx.doi.org/10.1002/anie.201202795

A continuous flow process for the radical induced end group removal of RAFT polymers
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Continuous flow synthesis of secondary amides by tandem azidation- amidation of anilines
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Asymmetric homogeneous hydrogenation in flow using a tube-in-tube reactor
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http://dx.doi.org/10.1002/adsc.201200073

Continuous flow hydrogenation using an on-demand gas delivery reactor
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http://dx.doi.org/10.1021/op300019w

An efficient method for the lipase-catalysed resolution and in-line purification of racemic flurbiprofen in a continuous-flow reactor
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http://dx.doi.org/10.1016/j.molcatb.2012.02.008

Soluble polymer-supported flow synthesis: A green process for the preparation of heterocycles
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http://dx.doi.org/10.1002/ejoc.201101726

Continuous flow synthesis and scale-up of glycine- and taurine-conjugated bile salts
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http://dx.doi.org/10.1039/C2OB25528F

Development of a continuous flow scale-up approach of reflux inhibitor AZD6906
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Phase-transfer catalysis under continuous flow conditions: an alternative approach to the biphasic liquid/liquid O-alkylation of phenols
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Continuous-flow synthesis of the anti-malaria drug artemisinin
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Continuous proline catalysis via leaching of solid proline
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Scale-up of flow-assisted synthesis of C2-symmetric chiral PyBox ligands
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Application of flow chemistry to the selective reduction of esters to aldehydes

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Synthesis of annulated pyridines by intramolecular inverse-electron-demand hetero-diels-alder reaction under superheated continuous flow conditions

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The application of a monolithic triphenylphosphine reagent for conducting appel reactions in flow microreactors

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Continuous preparation of arylmagnesium reagents in flow with inline IR monitoring

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New insights into cyclobutenone rearrangements: a total synthesis of the natural ROS-generating anti-cancer agent cribrostatin (ROS=reactive-oxygen species)

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The oxygen-mediated synthesis of 1,3-butadiynes in continuous flow: using teflon AF-2400 to effect gas/liquid contact

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Lead diversification 2: application to P38, gMTP and lead compounds

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A continuous-flow synthesis of annulated and polysubstituted furans from the reaction of ketones and a-haloketones

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Suzuki-Miyaura cross-coupling of heteroaryl halides and arylboronic acids in continuous flow
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The oxygen-mediated synthesis of 1,3-butadiynes in continuous flow: using teflon AF-2400 to effect gas/liquid contact
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Continuous flow synthesis of conjugated polymers
Helga Seyler, David J. Jones, Andrew B. Holmes and Wallace W. H. Wong
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Continuous-flow, palladium-catalysed alkoxycarbonylation reactions using a prototype reactor in which it is possible to load gas and heat simultaneously
Michael A. Mercadante and Nicholas E. Leadbeater
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http://dx.doi.org/10.1039/C1OB05808H

Teflon AF-2400 mediated gas–liquid contact in continuous flow methoxycarbonylations and in-line FTIR measurement of CO concentration
Peter Koos, Ulrike Gross, Anastasios Polyzos, Matthew O'Brien, Ian Baxendale and Steven V. Ley
Innovative Technology Centre, University of Cambridge, UK

http://dx.doi.org/10.1039/C1OB06017A

Rapid access to α-alkoxy and α-amino acid derivatives through safe continuous-flow generation of diazoesters
Hannah E. Bartrum[1], David C. Blakemore[2], Christopher J. Moody[1], Christopher J. Hayes[1]
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Continuous flow photolysis of aryl azides: preparation of 3H-azepinones
Farhan R. Bou-Hamdan, François Lévesque, Alexander G. O'Brien, Peter H. Seeberger
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http://dx.doi.org/10.3762/bjoc.7.129

Ozonolysis in flow using capillary reactors
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Nitrile oxide 1,3-dipolar cycloaddition by dehydration of nitromethane derivatives under continuous flow conditions
Malte Brasholz, Simon Saubern* and G. Paul Savage
CSIRO Materials Science and Engineering, Victoria, Australia.

http://dx.doi.org/10.1071/CH11079

Nitration chemistry in continuous flow using fuming nitric acid in a commercially available flow reactor
Cara E. Brocklehurst, Hansjrg Lehmann, and Luigi La Vecchia
Global Discovery Chemistry, Novartis, Basel, Switzerland

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Synthesis of a drug-like focused library of trisubstituted pyrrolidines using integrated flow chemistry and batch methods

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Synthesis of (+)-dumetorine and congeners by using flow chemistry technologies
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Preparation of fluoxetine by multiple flow processing steps
Batoul Ahmed-Omer, Adam J. Sanderson
Eli Lilly and Co. Ltd., Lilly Research Centre, UK.

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Oxidation reactions in segmented and continuous flow chemical processing using an N-(tert-Butyl) phenylsulfinimidoyl chloride monolith
Lange, Matthew J. Capener, Alexander X. Jones, Catherine J. Smith, Nikzad Nikbin, Ian R. Baxendale,
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http://dx.doi.org/10.1055/s-0030-1259923

Decarboxylative biaryl synthesis in a continuous flow reactor
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Diastereoselective chain-elongation reactions using microreactors for applications in complex molecule assembly
Catherine F. Carter[1], Heiko Lange[1], Daiki Sakai[2], Ian R. Baxendale[1], Steven V. Ley[1]
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One-flow, multistep synthesis of nucleosides by Brønsted acid-catalyzed glycosylation
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http://dx.doi.org/10.1002/ange.201006440

An integrated flow and batch-based approach for the synthesis of o-methyl siphonazole
Marcus Baumann, Ian R. Baxendale, Malte Brasholz, John J. Hayward, Steven V. Ley, Nikzad Nikbin
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http://dx.doi.org/10.1055/s-0030-1260573

Flow synthesis of organic azides and the multistep synthesis of imines and amines using a new monolithic triphenylphosphine reagent
Catherine J. Smith, Christopher D. Smith, Nikzad Nikbin, Steven V. Ley, Ian R. Baxendale
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http://dx.doi.org/10.1039/C0OB00813C

A fully automated, multistep flow synthesis of 5-amino-4-cyano-1,2,3-triazoles
Catherine J. Smith, Nikzad Nikbin, Steven V. Ley, Heiko Lange, Ian R. Baxendale
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http://dx.doi.org/10.1039/C0OB00815J

A general, one-step synthesis of substituted indazoles using a flow reactor
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Continuous flow synthesis of fullerene derivatives
Helga Seyler, Wallace Wing Ho Wong, Dave Jones, Andrew B. Holmes
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http://dx.doi.org/10.1021/jo2001879

Controlled RAFT polymerization in a continuous flow microreactor
Christian H. Hornung ,Carlos Guerrero-Sanchez, Malte Brasholz, Simon Saubern, John Chiefari, Graeme Moad, Ezio Rizzardo, San H. Thang
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Highly efficient dehydration of carbohydrates to 5-(chloromethyl)furfural (CMF), 5-(hydroxymethyl)furfural (HMF) and levulinic acid by biphasic continuous flow processing
Malte Brasholz , Karin von Känel, Christian H. Hornung, Simon Saubern, John Tsanaktsidis
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http://dx.doi.org/10.1039/C1GC15107J

Continuous flow thermolysis of azidoacrylates for the synthesis of heterocycles and pharmaceutical intermediates
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http://dx.doi.org/10.1039/C0CC04481D

Safe and reliable synthesis of diazoketones and quinoxalines in a continuous flow reactor
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http://dx.doi.org/10.1021/ol1027927

The continuous-flow synthesis of carboxylic acids using CO2 in a tube-in-tube gas permeable membrane reactor
Anastasios Polyzos, Matthew O'Brien, Trine P. Petersen, Ian R. Baxendale, Steven V. Ley
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http://dx.doi.org/10.1002/anie.201006618

A breakthrough method for the accurate addition of reagents in multi-step segmented flow processing
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Continuous flow coupling and decarboxylation reactions promoted by copper tubing
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Synthesis of β-Keto esters in-flow and rapid access to substituted pyrimidines
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Synthesis of 3-aryl/benzyl-4,5,6,6a-tetrahydro-3aH-pyrrolo[3,4-d]isoxazole derivatives: a comparison between conventional, microwave-assisted and flow-based methodologies

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http://dx.doi.org/10.1021/jo1014323

Flow synthesis of tricyclic spiropiperidines as building blocks for the histrionicotoxin family of alkaloids
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A continuous flow process using a sequence of microreactors with in-line IR analysis for the preparation of N,N-diethyl-4-(3-fluorophenylpiperidin-4-ylidenemethyl)benzamide as a potent and highly selective δ-opioid receptor agonist
Zizheng Qian, Ian R. Baxendale, Steven V. Ley
Innovative Technology Centre, University of Cambridge
http://dx.doi.org/10.1002/chem.201002147

Preparation of arylsulfonyl chlorides by chlorosulfonylation of in situ generated diazonium salts using a continuous flow reactor
Laia Malet-Sanz, Julia Madrzak, Steven V.Ley and Ian R.Baxendale
Innovative Technology Centre, University of Cambridge
http://dx.doi.org/10.1039/C0OB00450B

$KMnO_4$-mediated oxidation as a continuous flow process
Jorg Sedelmeier, Steven V. Ley, Ian R. Baxendale and Marcus Baumann
Innovative Technology Centre, University of Cambridge
http://dx.doi.org/10.1021/ol101345z

Synthesis of highly substituted nitropyrrolidines, nitropyrrolizines and nitropyrroles via multicomponent-multistep sequences within a flow reactor
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http://dx.doi.org/10.3987/COM-10-S(E)77

A gram-scale batch and flow total synthesis of perhydrohistrionicotoxin
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http://dx.doi.org/10.1002/chem.201090183

Effect of phase transfer chemistry, segmented fluid flow, and sonication on the synthesis of cinnamic esters
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http://dx.doi.org/10.1016/j.tet.2010.04.031

Continuous flow palladium (II)-catalyzed oxidative heck reactions with arylboronic acids
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http://dx.doi.org/10.1002/ejoc.201000063

Reaction of Grignard reagents with carbonyl compounds under continuous flow conditions
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http://dx.doi.org/10.1016/j.tet.2010.02.078

[3+2] Dipolar cycloadditions of an unstabilised azomethine ylide under continuous flow conditions
Mark Grafton, Andrew C. Mansfield and M. Jonathan Fray
Pfizer Global Research and Development, Sandwich, UK
http://dx.doi.org/10.1016/j.tetlet.2009.12.071

A highly efficient flow reactor process for the synthesis of N-Boc-3,4-dehydro-l-proline methyl ester
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http://dx.doi.org/10.1016/j.tetasy.2009.12.023

Efficient continuous flow synthesis of hydroxamic acids and suberoylanilide hydroxamic acid preparation
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http://dx.doi.org/10.1021/jo900144h

The application of flow microreactors to the preparation of a family of casein kinase I inhibitors
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http://dx.doi.org/10.1039/b925327k

Multi-step synthesis by using modular flow reactors: the preparation of YneOnes and their use in heterocycle synthesis
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http://dx.doi.org/10.1002/chem.200902906

A flow process using microreactors for the preparation of a quinolone derivative as a potent $5HT_{1B}$ antagonist
Zizheng Qian, Ian R. Baxendale, Steven V. Ley
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http://dx.doi.org/10.1055/s-0029-1219358

A flow-based synthesis of Imatinib: the API of Gleevec
Mark D. Hopkin, Ian R. Baxendale and Steven V. Ley
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http://dx.doi.org/10.1039/c001550d

ReactIR flow cell: a new analytical tool for continuous flow chemical processing
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http://dx.doi.org/10.1021/op900305v

A safe and reliable procedure for the iododeamination of aromatic and heteroaromatic amines in a continuous flow reactor
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http://dx.doi.org/10.1016/j.tetlet.2009.10.007

Development of fluorination methods using continuous-flow microreactors
Marcus Baumann, Ian R. Baxendale, Laetitia J. Martin, Steven V. Ley
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http://dx.doi.org/10.1016/j.tet.2009.05.083

Multistep synthesis using modular flow reactors: Bestmann-Ohira reagent for the formation of alkynes and triazoles
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A bifurcated pathway to thiazoles and imidazoles using a modular flow microreactor
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http://dx.doi.org/10.1021/cc800070a

The use of diethylaminosulfur trifluoride (DAST) for fluorination in a continuous-flow microreactor
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http://dx.doi.org/10.1055/s-2008-1078026

A modular flow reactor for performing Curtius rearrangements as a continuous flow process
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http://dx.doi.org/10.1039/b801631n

[3 + 2] Cycloaddition of acetylenes with azides to give 1,4-disubstituted 1,2,3-triazoles in a modular flow reactor
Christopher D. Smith[1], Ian R. Baxendale[1], Steve Lanners[1], John J. Hayward[1], Steven V. Ley[1], Stephen C. Smith[2]
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Azide monoliths as convenient flow reactors for efficient Curtius rearrangement reactions
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A microcapillary flow disc reactor for organic synthesis
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A flow reactor process for the synthesis of peptides utilizing immobilized reagents, scavengers and catch and release protocols
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http://dx.doi.org/10.1039/b612197g

Fully automated flow-through synthesis of secondary sulfonamides in a binary reactor system
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http://dx.doi.org/10.1021/cc060152b

Fully automated continuous flow synthesis of 4,5-disubstituted oxazoles
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http://dx.doi.org/10.1021/ol061975c

Continuous flow ligand-free heck reactions using monolithic Pd [0] nanoparticles
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http://dx.doi.org/10.1021/op7000436

Tagged phosphine reagents to assist reaction work-up by phase-switched scavenging using a modular flow reactor
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http://dx.doi.org/10.1039/b703033a

A flow process for the multi-step synthesis of the alkaloid natural product oxomaritidine: a new paradigm for molecular assembly
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