Short CV

Jean-Christophe M. Monbaliu, PhD
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CONTACT DETAILS
CiTOS | Center for Integrated Technology and Organic Synthesis
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EDUCATION

Ph.D. (Organic Chemistry)	Nov. 2008
Université catholique de Louvain	Belgium
Postgraduate (Organic Chemistry)	June 2006
Université catholique de Louvain	Belgium
Ms. Sc. (Chemistry)	June 2004
Université catholique de Louvain	Belgium

EMPLOYMENT HISTORY

Professor	2023 – to date
University of Liège	Belgium
Principal Investigator	2023 – to date
WEL Research Institute	Belgium
Minjiang Scholar Chair Professor of Fujian (part-time)	2020 – 2022
Fuzhou University	China
Associate Professor *(Chargé de Cours)*	2019 – 2023
University of Liège	Belgium
Senior Lecturer *(Chef de Travaux)*	2018 – 2019
University of Liège	Belgium
Lecturer *(Premier Assistant)*	2013 – 2017
University of Liège	Belgium
Postdoctoral Fellow	2012 – 2013
Massachusetts Institute of Technology	USA
Postdoctoral Fellow	2010 – 2012
University of Florida	USA
Postdoctoral Researcher	2010-2013
FWO-Vlaanderen	Belgium
Postdoctoral Associate	2008 – 2010
Ghent University	Belgium

FELLOWSHIPS and AWARDS

WEL-T Advanced Grant	2023
International Expert – Fujian Hundred Talents Program	2020
Tongjiang Scholar Chair Professor of Quanzhou	2020
Minjiang Scholar Chair Professor of Fujian	2020
Mandat d'Impulsion Scientifique F.R.S.-FNRS	2019
Belgian nominee for the EuChemS Young Investigator Award	2017
Belgian American Educational Foundation	2011
Research Foundation – Flanders	2010
Special Funds for Research UGent	2009
FRIA-FNRS PhD fellowship	2004
Royal Society of Chemistry-Belgium	2004
Solvay Annual Award	2004

MEMBERSHIP

Organizing Committee of the Belgian Organic Synthesis Symposium (BOSS)
Société Royale de Chimie – Division Chimie Organique et Biomoléculaire
International Solvay Institute – Belgian chemistry committee
Fellow of the Royal Chemical Society
Flow Chemistry Society – Board Member
American Chemical Society
Belgian American Educational Foundation – Alumni

RESEARCH

Monbaliu (IF 26, Scopus) has produced 92 peer-reviewed publications (*ca.* 60 were published within the last 5 years at ULiège, among which 17 were highlighted in special editions or as "hot" or "very important" contributions and several were selected as front or back frontispiece artwork features), 7 book contributions and 5 patents.

Since its creation in 2013, CiTOS has facilitated the development of a large international network both with academic and industrial partners. Research at CiTOS aims at providing new strategies and concepts for the advanced production of chemicals with a reduced environmental footprint, higher productivity, and selectivity. The lab is internationally recognized for the implementation of continuous flow and microreaction technology for complex sequences in organic synthesis. Since 2017, CiTOS became the first Corning Incorporated Advanced-Flow™ reactor (AFR) Qualified Lab in Europe. In 2022, Monbaliu founded Flo**W**4**all**, a Flow Technology Platform in Wallonia that focuses on training, technology transfer, and services. This platform has become a valuable resource for the Industry. Additionally, in 2023, he also took on the role of Principal Investigator at the WEL Research Institute, where he leads efforts to integrate AI and quantum chemistry for advancements in flow processes.

The group has secured national funding from the WEL Research Institute, F.RS.-FNRS, the Walloon region, ARC programs, FSR, as well as European (ESF [COST, INTERREG EMR], ERDF, Marie-Curie IF, and Marie-Curie doctoral Network) and international funding (US-FDA, NASA, Fuijian-Mingjiang).

The group currently counts 1 PI, 1 scientific manager (FloW4all), 1 scientist (FloW4all), 1 technician, 4 postdocs, 9 Ph.D. students, 2 master students, 3 visiting Erasmus Students, and 1 industrial affiliates. Dr. Monbaliu has supervised 6 defended PhD theses and 17 defended master theses.

TEACHING

Dr. Monbaliu is in charge of the teaching and practice of Organic Chemistry and Flow Technology at ULiège (Department of Chemistry), where his duties concern the entire chemistry curriculum (192 h/year of teaching activities in person; 205 h/year of practice under his responsibility):

1. Organic Chemistry I (Bachelor 1)
2. Organic Chemistry II (Bachelor 2)
3. Advanced Organic Chemistry (Master 1)
4. Introduction to Continuous Flow Organic Synthesis (Master 1)
5. Physical Organic Chemistry (Master 2)
6. Introduction to peptide and protein synthesis and physico-chemical properties (Master 2)
7. Organic Chemistry Labs and Practice (Bachelor 1 and 2)
8. Integrated Spectroscopy Labs (Bachelor 3)
9. Bibliographic research, research project (Bachelor 3)

OTHER SCIENTIFIC ACTIVITIES

Referee for: *J. Am. Chem. Soc., Org. Lett., J. Org. Chem., Org. Process. Res. Dev.*, *J. Chem. Edu., Angew. Chem. Int. Ed., ChemSusChem, ChemCatChem*, *Chem. Eur. J.*, *Green Chem.*, *React. Chem. Eng., Catal. Sci. Technol., J. Flow Chem., Tetrahedron, Tetrahedron Lett., J. Mol Cat. A*, *Beilstein J. Org. Chem., J. Cat.*

Consultant for: Janssen Pharmaceutica (2017-2019), Corning SAS (2017 to date), Institut de Recherches Servier (2018 to date), NovAliX (2018 to date), Immunodiagnostic Systems (2018 to date), Oril Industrie (2019 to date), Mithra Pharmaceuticals (2020 to date), GlaxoSmithKline (2020 to date), Minakem (2021 to date). International Scientific Board Member for CordenPharma (2023 to date).

LIST OF PUBLICATIONS (selection)

88. "Revisiting the Paradigm of Reaction Optimization in Flow with a Priori Computational Reaction Intelligence" P. Bianchi, J.-C. M. Monbaliu, *Angew. Chem. Int. Ed.* **2023**, e202311526 (DOI: 10.1002/anie.202311526).
87. "A miniaturized ozonolysis flow platform for expeditious sulfur mustard warfare simulant neutralization" M. Boddaert, P. Bianchi, D. V. Silva-Brenes, A. Musina, M. Winter, P. M. C. Roth, P.-Y. Renard, J. Legros and J.-C. M. Monbaliu*, *Green Chem.* **2023**, Advance Article (DOI: 10.1039/D3GC03470D).
    Front cover January 2024
86. "Metal-free synthesis of estetrol key intermediate under intensified continuous flow conditions" P. Bianchi, A. Dubart, M. Moors, D. Cornut, G. Duhirwe, J. Ampurdanés Vilanova, and J.-C. M. Monbaliu*, *React. Chem. Eng.* **2023**, *8*, 1565-1575 (doi: 10.1039/D3RE00051F)
    Front cover June 2023 (here)
85. "A perspective on automated advanced continuous flow manufacturing units for the upgrading of biobased chemicals towards pharmaceuticals", G. Kaisin*, L. Bovy, Y. Joyard, N. Maindron, V. Tidal, J.-C. M. Monbaliu*, *J. Flow Chem*, **2023**, *23*, 1349-1357 (doi: 10.1007/s41981-022-00247-9)
84. "Continuous Flow Photooxidative Degradation of Azo Dyes with Biomass-derived Carbon Dots", C. Campalani, G. Petit, J.-C. M. Monbaliu* M. Selva and A. Perosa*, *ChemPhotoChem*, **2023**, *7*, e202200234 (doi: 10.1002/cptc.202200234)
    Front cover May 2023 (here)
83. "Will the next generation of chemical plants be in miniaturized flow reactors?", J.-C. M. Monbaliu* and J. Legros*, *Lab Chip*, **2022**, *23*, 1349-1357 (doi: 10.1039/D2LC00796G)
    Lab on a Chip HOT Articles 2022 (here)
82. "On Demand Flow Platform for the Generation of Anhydrous Dinitrogen Trioxide and Its Further Use in N-Nitrosative Reactions" Y. Chen, S. Renson and J.-C. M. Monbaliu*, *Angew. Chem. Int. Ed.* **2022**, e202210146 (doi: 10.1002/anie.202210146)
81. "Accelerating the end-to-end production of cyclic phosphate monomers with modular flow chemistry" R. Morodo, R. Riva, N. M. S. van den Akker, D. G. M. Molin, C. Jérôme and J.-C M. Monbaliu*, *Chem. Sci.*, **2022**, 10699-10706 (doi: 10.1039/D2SC02891C)
    Featured as a 2022 Chemical Science Hot Article (here)
    Featured as a 2022 ChemSci Pick of Week Collection (here)
80. "Development and validation of an integrated microfluidic device with an in-line Surface Enhanced Raman Spectroscopy (SERS) detection of glyphosate in drinking water" G. Emonds-Alt, C. Malherbe, A. Kasemiire, H. T. Avohou, P. Hubert, E. Ziemons, J.-C. M. Monbaliu, G. Eppe, *Talanta*, **2022**, 249, 123640 Accepted (doi: 10.1016/j.talanta.2022.123640)
79. "A Continuous Flow Generator of Organic Hypochlorites for the Neutralization of Chemical Warfare Agent Simulants" V.-E. H. Kassin, D. V. Silva Brenes, T. Bernard, J. Legros and J.-C. M. Monbaliu*, *Green Chem*. **2022**, *24*, 3167-3179 (doi: 10.1039/D2GC00458E)
    Featured as a 2022 Green Chemistry Hot Article (here)
78. "Out-smarting smart drug modafinil through flow chemistry" D. V. Silva-Brenes, N. Emmanuel, V. Lopez-Mejias, J. Duconge Soler, C. Vlaar, T. Stelzer and J.-C M. Monbaliu*, *Green Chem*. **2022**, ***24***, 2094-2103 (doi: 10.1039/D1GC04666G)
    Featured as a 2022 Green Chemistry Hot Article (here)
77. "Continuous flow organocatalyzed methoxycarbonylation of benzyl alcohol derivatives with dimethyl carbonate" T. Toupy, L. Bovy and J.-C. M. Monbaliu*, *J. Flow Chem.* **2022**, *12*, 207–217 (doi: 10.1007/s41981-022-00216-2)
76. "Intensified Continuous Flow Michaelis–Arbuzov Rearrangement toward Alkyl Phosphonates" T. Toupy and J.-C M. Monbaliu*, *Org. Process Res. Dev.* **2022**, *26*, 467–478 (doi: 10.1021/acs.oprd.1c00472)

75. "Perspectives for the Upgrading of Bio-based Vicinal Diols within the Developing European Bioeconomy" C. Muzyka and J.-C M. Monbaliu*, *ChemSusChem* **2022**, **Accepted manuscript** (doi: 10.1002/cssc.202102391)
74. "A multifaceted approach towards understanding the peculiar behavior of (?)-hydroxyiminophosphonates" T. Toupy, C. Kune, K. Van Hecke, L. Quinton and J.-C M. Monbaliu*, *Org. Chem. Front.* **2022**, *9*, 173-182 (doi: 10.1039/D1QO01564H).
73. "Three decades of unveiling the complex chemistry of C-nitroso species with computational chemistry" P. Bianchi and J.-C. M. Monbaliu*, *Org. Chem. Front*. **2022**, *9*, 223-264 (doi: 10.1039/D1QO01415C).
    Front cover: January 2022 issue
72. "Flow neutralization of sulfur-containing chemical warfare agents with Oxone: packed-bed vs. aqueous solution" A. Delaune, S. Mansour, B. Picard, P. Carrasqueira, I. Chataigner, L. Jean, P.-Y. Renard, J.-C. M. Monbaliu and Julien Legros*, *Green Chem.* **2021**, *23*, 2925-2930 (doi: 10.1039/D1GC00449B)
71. "A modular, low footprint and scalable flow platform for the expedient α-aminohydroxylation of enolizable ketones" V.-E. Kassin, R. Morodo, T. Toupy, I. Jacquemin, K. Van Hecke, R. Robiette and J.-C. M. Monbaliu*, Green Chem. 2021, 23, 2336-2351 (doi: 10.1039/D0GC04395H)
70. "Au nanobipyramids@mSiO2 core-shell nanoparticles for plasmon-enhanced singlet oxygen photooxygenations in segmented flow microreactors" C. Mendoza, A. Désert, D. Chateau, C. Monnereau, L. Khrouz, F. Lerouge, C. Andraud, J.-C. M. Monbaliu, S. Parola and B. Heinrichs, *Nanoscale Adv.* **2020**, *2*, 5280-5287 (doi: 10.1039/D0NA00533A)
69. "Continuous Flow Upgrading of Selected C2-C6 Platform Chemicals Derived from Biomass" R. Gérardy, D. P. Debecker, J. Estager, P. Luis and J.-C. M. Monbaliu,* *Chem. Rev.* **2020**, *120*, 7219-7347 (doi: 10.1021/acs.chemrev.9b00846)
68. "The deoxydehydration (DODH) reaction: a versatile technology for accessing olefins from bio-based polyols" N. Ntumba Tshibalonza and J.-C. M. Monbaliu*, *Green Chem.* **2020**, *22*, 4801-4848 (doi: 10.1039/D0GC00689K)
    Front cover
67. "Scalable and robust photochemical flow process towards small spherical gold nanoparticles" P. Bianchi, G. Petit and J.-C. M. Monbaliu*, *React. Chem. Eng.* **2020**, *5*, 1224-1236 (doi: 10.1039/D0RE00092B)
    Front cover
66. "Continuous flow organophosphorus chemistry" R. Morodo, P. Bianchi and J.-C. M. Monbaliu*, *Eur. J. Org. Chem.* **2020**, *33*, 5236-5277 (doi: 10.1002/ejoc.202000430)
    Front cover
    Tagged as *Very Important Paper*
    Featured in the Special Collection YourJOC Talents 2020
65. "A safe and compact flow platform for the neutralization of a mustard gas simulant with air and light" N. Emmanuel, P. Bianchi, J. Legros and J.-C. M. Monbaliu*, *Green Chem.* **2020**, *22*, 4105-4115 (doi: 10.1039/D0GC01142H)
    Back cover
64. "Separation of bio-based chemicals using pervaporation" W. Li, J. Estager, J.-C. M. Monbaliu, D. Debecker and P. Luis, *J. Chem. Technol. Biotechnol.* **2020,** *95*, 2311-2334 (doi: 10.1002/jctb.6434)
63. "Radiosynthesis of [18F]difluoromethyl heteroaryl-sulfones for radical C-H 18F-difluoromethylation of heteroarenes by visible light photoredox catalysis" A Lemos, L. Trump, B. Lallemand, P. Pasau, J. Mercier, C. Lemaire, J.-C. M. Monbaliu, C. Genicot and A. Luxen, *Catalysts* **2020**, *10*, 275 (doi: 10.3390/catal10030275)
62. "Supported ionic liquid membranes for the separation of methanol/dimethyl carbonate mixtures by pervaporation" W. Li, C. Molina Fernandez, J. Estager, J.-C. M. Monbaliu, D. Debecker and P. Luis, *J. Membr. Sci.* **2020**, *598*, 117790 (doi: 10.1016/j.memsci.2019.+117790)

61. “Metal-free hydroxylation of tertiary ketones under intensified and scalable continuous flow conditions” V.-E. H. Kassin, T. Toupy, G. Petit, P. Bianchi, E. Salvadeo and J.-C. M. Monbaliu*, J. Flow Chem. 2020, 10, 167–179 (doi: 10.1007/s41981-019-00073-6)
60. “Development of a sustainable continuous flow approach toward allantoin” E. Salvadeo and J.-C. M. Monbaliu, *J. Flow Chem.* **2020**, *10*, 251–257 (doi: 10.1007/s41981-019-00056-7)
59. “Versatile and scalable synthesis of cyclic organic carbonates under organocatalytic continuous flow conditions” R. Gérardy, J. Estager, P. Luis, D. P. Debecker and J.-C. M. Monbaliu*, *Catal. Sci. Technol.* **2019**, *9*, 6841-6851 (doi: 10.1039/C9CY01659G)
Front cover (here)
58. “Understanding chemical interaction between phosphonate-derivative molecules and silver surface cluster in SERS: a combined experimental and computational approach” G. Emonds-Alt, B. Mignolet, C. Malherbe, J.-C. M. Monbaliu, F. Remacle and G. Eppe
Phys. Chem. Chem. Phys. **2019**, *21*, 22180-22187 (doi: 10.1039/C9CP01615E)
57. “Continuous flow upgrading of glycerol toward oxiranes and active pharmaceutical ingredients thereof” R. Morodo, R. Gérardy, G. Petit and J.-C. M. Monbaliu*, *Green Chem.*, **2019**, *21*, 4422-4433 (doi: 10.1039/C9GC01819K)
56. “Expedient preparation of active pharmaceutical ingredient ketamine under sustainable continuous flow conditions” V.-E. Kassin, R. Gérardy, T. Toupy, D. Collin, E. Salvadeo, F. Toussaint, K. Van Hecke and J.-C. M. Monbaliu*, *Green Chem.* **2019**, *21*, 2952-2966 (doi: 10.1039/C9GC00336C)
Featured as a 2019 Green Chemistry Hot Article (here)
Front inside cover (here)
55. “Solubility Determination and Correlation of Warfarin Sodium 2-Propanol Solvate in Pure, Binary, and Ternary Solvent Mixture” M. V. George De la Rosa, R. Santiago, J. Malavé Romero, J. Duconge, Jorge, J.-C. M. Monbaliu, V. López-Mejías and T. Stelzer, *J. Chem. Eng. Data* **2019**, *64*, 1399-1413 (doi: 10.1021/acs.jced.8b00977)
54. “Development of a continuous fluidic reactor for the photocatalytic treatment of liquid effluents” M. Pelzer, S. L. Pirard, C. A. Páez, J.-C. M. Monbaliu and B. Heinrichs, *J. Mater. Sci. Nanotechnol*. **2019**, *7*, (3), 301.
53. "Native chemical ligation and extended methodologies. Mechanisms, catalysis, scope and limitations" V. Agouridas, O. El Mahdi, V. Diemer, M. Cargoët, J.-C. M. Monbaliu* and O. Melnyk, *Chem. Rev.* **2019**, *119*, 7328-7443 (doi: 10.1021/acs.chemrev.8b00712)
52. “Finding the perfect match: a combined computational and experimental study towards efficient and scalable photosensitized [2+2] cycloadditions in flow” J. Williams, M. Nakano, R. Gérardy, J. A. Rincon, O. de Frutos, C. Mateos, J.-C. M. Monbaliu and C. O. Kappe, *Org. Process Res. Dev*. **2019**, *23*, 78-87 (doi: 10.1021/acs.oprd.8b00375)
51. “Solvent-free organocatalytic preparation of cyclic organic carbonates under scalable continuous flow conditions” Z. Wang, R. Gérardy, G. Gauron, C. Damblon and J.-C. M. Monbaliu*, *React. Chem. Eng.* **2019**, *4,* 17-26 (doi: 10.1039/c8re00209f)
50. “Sustaining the transition from petro- to biobased chemical industry with flow chemistry” R. Gérardy, R. Morodo, J. Estager, P. Luis, D. P. Debecker, and J.-C. M. Monbaliu*, *Top. Curr. Chem.* **2019**, 377: 1 (doi: 10.1007/s41061-018-0222-3)
49. “A versatile biobased continuous flow strategy for the production of 3-butene-1,2-diol and vinyl ethylene carbonate from erythritol” N. Ntumba Tshibalonza, R. Gérardy, Z. Alsafra, G. Eppe and J.-C. M. Monbaliu*, *Green Chem*. **2018**, *20*, 5147-5157 (doi: 10.1039/C8GC02468E)
Featured as a 2018 Green Chemistry Hot Article (here)
48. “Improving Continuous Flow Singlet Oxygen Photooxygenations with Functionalized Mesoporous Silica Nanoparticles” C. Mendoza, N. Emmanuel, C. A. Páez, L. Dreesen, J.-C. M. Monbaliu* and B. Heinrichs, *ChemPhotoChem* **2018,** *2*, 890-897 (doi: 10.1002/cptc.201800148)
47. “Sorption and pervaporation study of methanol/dimethyl carbonate mixture with poly(etheretherketone) (PEEK-WC) membrane” W. Li,F. Galiano, J. Estager, J.-C. M. Monbaliu, D.

P. Debecker, A. Figoli and P. Luis, *J. Memb. Sci.* **2018**, *132*, 127-136 (doi: 10.1016/j.memsci.2018.09.040)

46. "Application of pervaporation in the bio-production of glycerol carbonate" W. Li, R. Sreerangappa, J. Estager, J.-C. M. Monbaliu, D. P. Debecker and P. Luis, *Chem. Eng. Process.* **2018**, *132*, 127-136 (doi: 10.1016/j.cep.2018.08.014)
45. "Accelerated microfluidic native chemical ligation at difficult amino acids toward cyclic peptides" N. Ollivier, T. Toupy, J.-C. M. Monbaliu* and O. Melnyk, *Nat. Commun.* **2018**, *9*, 2847 (doi: 10.1038/s41467-018-05264-8).
    Featured in the 2018 Synthetic and Medicinal Chemistry issue of Nature Communication (here)
    Highlighted as "SYNFACTS of the month" (here)
44. "Continuous Flow Organic Chemistry: Successes and Pitfalls at the Interface with Current Societal Challenges" R. Gérardy, N. Emmanuel, T. Toupy, V. Kassin, N. Ntumba Tshibalonza, M. Schmitz, J.-C. M. Monbaliu*, *Eur. J. Org. Chem.* **2018**, 2301–2351 (doi:10.1002/ejoc.201800149)
    Tagged as *Very Important Paper* (here)
    Most accessed paper in June 2018 (here)
    Featured in the Special Collection EurJOC Readers' Choice 2019 (here)
43. "NOTA–PRGD2 and NODAGA–PRGD2: Bioconjugation, Characterization, Radiolabelling & Design Space", M. Salvé, H. T. Avohou, J.-C. M. Monbaliu, P. Lebrun, C. Lemaire, C. Damblon, P. de Tullio, R. Hustinx and A. Luxen, *J. Label. Cmpd. Radiopharm.* **2018**, *61*, 487-500 (doi:10.1002/jlcr.3613)
42. "Transitioning from macroscopic batch to microfluidic processes for the efficient singlet oxygen photooxygenation of methionine" C. Mendoza, N. Emmanuel, C. Paez, L. Dreesen, J.-C. M. Monbaliu* and B. Heinrichs, *J. Photochem. Photobiol. A* **2018**, *356*, 193-200 (doi:10.1016/j.jphotochem.2017.12.028)
41. "Continuous-flow preparation of g-butyrolactone scaffolds from renewable fumaric and itaconic acids under photosensitized conditions" R. Gérardy, M. Winter, C. R. Horn., A. Vizza, K. Van Hecke and J.-C. M. Monbaliu*, *Org. Process Res. Dev.* **2017**, *21*, 2012–2017 (doi:10.1021/acs.oprd.7b00314)
40. "Scalable Photocatalytic Oxidation of Methionine under Continuous-Flow Conditions" N. Emmanuel, C. Mendoza, M. Winter, C. Horn, A. Vizza, L. Dreesen, B. Heinrichs and J.-C. M. Monbaliu*, *Org. Process Res. Dev.* **2017**, *21*, 1435–1438 (doi:10.1021/acs.oprd.7b00212)
39. "Revisiting the deoxydehydration of glycerol towards allyl alcohol under continuous-flow conditions" N. Ntumba Tshibalonza and J.-C. M. Monbaliu*, *Green Chem.* **2017**, *19*, 3006-3013 (doi:10.1039/C7GC00657H)
38. "Exploring the Fundamentals of Microreactor Technology with Multidisciplinary Lab Experiments Combining the Synthesis and the Characterization of Inorganic Nanoparticles" N. Emmanuel, G. Emonds-Alt, M. Lismont*, G. Eppe* and J.-C. M. Monbaliu*, *J. Chem. Edu.* **2017**, *94*, 775–780 (doi:10.1021/acs.jchemed.6b00899)
37. "Assessing inter- and intramolecular continuous-flow strategies towards methylphenidate (Ritalin) hydrochloride" R. Gérardy, M. Winter, A. Vizza and J.-C. M. Monbaliu*, *React. Chem. Eng.* **2017**, *2*, 149-158 (doi:10.1039/C6RE00184J)
    Featured in the *2017 Emerging Investigators Issue of React. Chem. Eng.*
36. "Expanding chemistry's horizon with continuous-flow reactors" J.-C. M. Monbaliu*, N. Emmanuel and R. Gérardy, *Chimie Nouvelle* **2016**, *122*, 18-26 (here)
35. "Compact and integrated approach for advanced end-to-end production, purification, and aqueous formulation of lidocaine hydrochloride", J.-C. M. Monbaliu, T. Stelzer, E. Revalor, N. Weeranoppanant, K. F. Jensen, A. S. Myerson, *Org. Process Res. Dev.* **2016**, *20*, 1347-1353 (doi: 10.1021/acs.oprd.6b00165)
34. "On-demand continuous flow production of pharmaceuticals in a compact, reconfigurable system", A. Adamo, R. L. Beingessner, M. Behnam, J. Chen, T. F. Jamison, K. F. Jensen, J.-C. M. Monbaliu, A. S. Myerson, E. Revalor, D. R. Snead, T. Stelzer, N. Weeranoppanant, S. Y. Wong, P. Zhang, *Science* **2016**, *352*, 61-67 (doi: 10.1126/science.aaf1337)
    Featured in the 2016 C&EN review of notable chemistry research

33. "Continuous-flow N-heterocyclic carbenes generation and organocatalysis", L. Di Marco, M. Hans, L. Delaude and J.-C. M. Monbaliu*, *Chem. Eur. J.* **2016**, *22*, 4508–4514 (doi:10.1002/chem.201505135)
    Tagged as *hot paper* and highlighted on Chemistry Views (here)
32. "Accelerating chemoselective peptide bond formation using bis(2-selenylethyl)amido peptide selenoester surrogates", L. Raibaut, M. Cargoët, N. Ollivier, Y.-M. Chang, H. Drobecq, E. Boll, R. Desmet, J.-C. M. Monbaliu* and Oleg Melnyk*, *Chem. Sci.* **2016**, *7*, 2657-2665 (doi: 10.1039/C5SC03459K)
31. "Continuous-flow thermolysis for the preparation of vinylglycine derivatives", N. Lamborelle, J. Simon, A. Luxen and J.-C. M. Monbaliu*, *Org. Biomol. Chem.* **2015**, *13*, 11602-11606 (doi: 10.1039/C5OB02036K)
30. "Preparation, reactivity and synthetic utility of simple benzotriazole derivatives", R. Gérardy and J.-C. M. Monbaliu*, *Top. Heterocycl. Chem.* **2015**, 1-66 (doi: 110.1007/7081_2015_179)
29. "Efficient continuous flow benzotriazole activation and coupling of amino acids", S. Seghers, F. E. A. Van Waes, A. Cukalovic, J.-C. M. Monbaliu *et al., J. Flow Chem.*, **2015**, *5*, 220-227 (doi: 10.1556/1846.2015.00029)
28. "New benzotriazole-based reagents for the phosphonylation of various N-, O- and S-nucleophiles", Pandmand, A. D. Tiwari, S. Panda, J.-C. M. Monbaliu *et al., Tetrahedron Lett.* **2014**, *55*, 5898-5901 (doi: 10.1016/j.tetlet.2014.07.057)
27. "L'intensification des procédés chimiques, une approche radicale", C. Henneuse, J.-C. M. Monbaliu, *Athena* **2014**, 18-21 (here)
26. "Feruloyl benzotriazole and Weinreb amide as bioinspired building blocks: a reactivity study towards O-, N-, S- and C-nucleophiles", B. I. Roman, J.-C. M. Monbaliu *et al., Eur. J. Org. Chem.* **2014**, 2594-2611. (doi: 10.1002/ejoc.201301895)
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