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| ***Curriculum Vitae: Dr. Timothy Noël*** | C:\Users\tnoel\Desktop\Timothy@TUE\Noel_cropped profile.jpg |

***Personal Information***

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| Name | Timothy Noël |
| Work Address | Department of Chemical Engineering & Chemistry  Eindhoven University of Technology  Den Dolech 2  5612 AZ Eindhoven, The Netherlands  Helix STW 1.48 |
| Work | + 31-40-247-3623 |
| E-mail | t.noel@tue.nl |
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| Date of Birth | September 02, 1982 |
| Place of Birth | Aalst |
| Nationality | Belgian |
| Civil status | Married |

***Professional Experience***

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| **2017 – present** | **Associate Professor** at Eindhoven University of Technology |
| **2012 – 2017** | **Assistant Professor**  Laboratory for Micro Flow Chemistry and Process Technology  Department of Chemical Engineering and Chemistry  Eindhoven University of Technology, Eindhoven  The Netherlands  Research Interests: microfluidics, micro flow chemistry, organic synthetic chemistry, enantioselective catalysis, fluorine chemistry, catalytic carbon-carbon and carbon-heteroatom formation |
| **2013 – present** | **10% Research Professor**  Department of Organic Chemistry (S4)  Ghent University, Ghent  Belgium |
| **2010 – 2011** | **Post-doctoral Research: Fulbright Scholar**  Department of Chemistry  Novartis – MIT Center for Continuous Manufacturing  Massachusetts Institute of Technology (MIT), Cambridge  United States of America  Host: Prof. Dr. Stephen L. Buchwald  Collaboration with group of Prof. Dr. Klavs F. Jensen (Department of Chemical Engineering)  Research Topic: *Cross-coupling reactions in continuous-flow – Towards a continuous manufacturing of pharmaceuticals*. |

***Education***

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| **2005 – 2009** | **Ph.D. in Sciences – Chemistry: BOF Research Fellow**  Laboratory for Organic and Bioorganic Synthesis  Department of Chemistry  Ghent University, Ghent  Belgium  Supervisor: Prof. Dr. Johan Van der Eycken  Ph.D. Thesis: *Synthesis and application of chiral dienes and chiral imidates for asymmetric transition metal catalysis.* |
| **2005 – 2008** | **Doctoral School**  Department of Chemistry  Ghent University, Ghent  Belgium  Graduated with marks equivalent to high distinction.  Courses: *Organometallic Chemistry; Asymmetric Synthesis; Bioorganic Chemistry; Advanced NMR; Advanced Chromatography; Advanced Academic English Writing Skills; Management of Research and Development in University and Industry*. |
| **2004 – 2005** | **Predoctoral Training in Chemistry**  Department of Chemistry  Ghent University, Ghent  Belgium  Graduated with marks equivalent to high distinction – First of the year. |
| **2000 – 2004** | **Industrial Chemical Engineer (M.Sc.)**  Department of Chemical Engineering  KaHo Sint-Lieven, Ghent  Belgium  M.Sc. Thesis: *The synthesis of a fluorescence label with improved spectral properties for labeling D10-p5-2k as an HIV-1 inhibitor.*  Graduated with high distinction – First of the year. |
| **1994 – 2000** | **High School – Latin-Sciences**  Sint-Jozefscollege, Aalst  Belgium  Recipient of the Excellence Award and Science Award.  Graduated with high distinction – First of the year. |

***Scientific Awards***

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| **2017** | * DECHEMA award “in recognition of ground-breaking work on continuous photo-chemical conversion in microfluidic systems”. |
| **2016** | * “Thieme Chemistry Journal Award” for promising young professors at the beginning of their career. |
| **2015** | * VIDI grant (Netherlands Institute for Scientific Research, NWO), 800 k€. |
| **2013** | * Marie Curie Career Integration Grant, 100 k€. |
| **2012** | * VENI grant (Netherlands Institute for Scientific Research, NWO), 250 k€. * Finalist European Young Chemist Award, EuCheMS Conference. |
| **2011** | * Incentive Award for Young Researchers 2011 (Comité de Gestion du Bulletin des Sociétés Chimiques Belges), 2 500 €. |
| **2010** | * Fulbright – Hays Award. |
| **2006** | * Best poster presentation in the chemistry section at the Ph.D. Symposium, Ghent University, 250 €. |
| **2004** | * Extraordinary Research Fund Fellowship (BOF fellowship, Ghent University). |
| **2000** | * Excellence Award at Sint-Jozefscollege, Aalst, Belgium. * Science Award at Sint-Jozefscollege, Aalst, Belgium. |

***Research Publications:*** *h-index = 32; Total #citations = 3459 (accessed on 7/05/2018)*

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| **124** | Homogeneous and Gas-Liquid Catellani-type Catalysis Enabled by Continuous-Flow Chemistry.  Casnati, A.; Gemoets, H. P. L.; Motti, E.; Della Ca, N.; Noël, T. submitted for publication. |
| **123** | A fully automated continuous-flow platform for fluorescence quenching studies and Stern-Volmer analysis.  Kuijpers, K. P. L; Bottecchia, C.; Cambie, D.; Drummen, K.; Koenig, N. J.; Noël, T. submitted for publication. |
| **122** | Real-time reaction control for solar production of chemicals under fluctuating irradiance.  Zhao, F.; Cambie, D.; Hessel, V.; Debije, M. G.; Noël, T. *Green Chem.* **2018**, *DOI:* 10.1039/c8gc00613j. (Highlighted in Chemistry World, Le Monde, Radio Omroep Brabant.) |
| **121** | Biocatalytic synthesis of the Green Note trans-2-hexenal in a continuous-flow microreactor.  Van Schie, M. M. C. H.; Pedroso de Almeida, T.; Laudadio, G.; Tieves, F.; Fernandez-Fueyo, E.; Noël, T.; Arends, I. W. C. E.; Hollmann, F. *Beilstein J. Org. Chem.* **2018**, *14*, 697-703. |
| **120** | Selective sp3 C-H Aerobic Oxidation enabled by Decatungstate Photocatalysis in Flow.  Laudadio, G; Govaerts, S.; Wang, Y.; Ravelli, D.; Koolman, H. F.; Fagnoni, M.; Djuric, S. W.; Noël, T. *Angew. Chem. Int. Ed.* **2018**, *57*, 4078-4082. |
| **119** | Continuous-flow in-line solvent-swap crystallization of Vitamin D3.  Escriba-Gelonch, M.; Hessel, V.; Maier, M.C.; Noël, T.; Neira D’Angelo, M. F.; Gruber-Woelfler, H.. *Org. Process Res. Dev.* **2018**, DOI: 10.1021/acs.oprd.7b00351. |
| **118** | Micro-flow high-p,T intensification of Vitamin D3 synthesis using a ultraviolet lamp.  Escriba-Gelonch, M.; Noël, T.; Hessel, V. *Org. Process Res. Dev.* **2018**, DOI: 10.1021/acs.oprd.7b00318. |
| **117** | Scale up of a luminescent solar concentrator based photomicroreactor via numbering-up.  Zhao, F.; Cambie, D.; Janse, J.; Wieland, E.; Kuijpers, K. P. L.; Hessel, V.; Debije, M. G.; Noël, T. *ACS Sustainable Chem. Eng.* **2018**, *6*, 422-429. |
| **116** | A personal perspective on the future of flow photochemistry.  Noël, T. *J. Flow Chem.* **2017**, *7*, 87-93. |
| **115** | Visible Light-Mediated Selective Arylation of Cysteine in Batch and Flow.  Bottecchia, C.; Rubens, M.; Gunnoo, S. B.; Hessel, V.; Madder, A.; Noël, T. *Angew. Chem. Int. Ed.* **2017**, *56*, 12701-12707. (Highlighted in OPRD, DOI: 10.1021/acs.oprd.7b00371) |
| **114** | An environmentally benign and selective electrochemical oxidation of sulfides and thiols in a continuous-flow microreactor.  Laudadio, G.; Straathof, N. J. W.; Lanting, M. D.; Knoops, B.; Hessel, V.; Noël, T. *Green Chem.* **2017**, *19*, 4061-4066. |
| **113** | Flow Synthesis of Diaryliodonium Triflates.  Laudadio, G.; Gemoets, H. P. L. Hessel, V.; Noël, T.; *J. Org. Chem.* **2017**, *82*, 11735-11741. (Highlighted in OPRD 2017, *21*, 1187-1195) |
| **112** | Effect of Acetonitrile-Based Crystallization Conditions on the Crystal Quality of Vitamin D3.  Gruber-Woelfler, H.; Escriba-Gelonch, M.; Noël, T.; Maier, M.C.; Hessel, V. *Chem. Eng. Technol.* **2017**, *40*, 2016-2024. |
| **111** | Access to cyclic gem-difluoroacyl scaffolds via electrochemical and visible light photocatalytic radical tandem cyclization of heteroaryl chlorodifluoromethyl ketones.  Adouama, C.; Keyrouz, R.; Pilet, G.; Monnereau, C.; Gueyrard, D.; Noël, T.; Medebielle, M. *Chem. Commun.* **2017**, *53*, 5653-5656. |
| **110** | Visible light induced trifluoromethylation of highly functionalized arenes and heteroarenes in continuous flow.  Abdiaj, I.; Bottecchia, C.; Alcazar, J.; Noël, T.; *Synthesis* **2017**, *49*, 4978-4985. (highlighted on the Thieme Chemistry homepage) |
| **109** | Continuous-flow in-line solvent-switch crystallization of Vitamin D3.  Escriba-Gelonch, M.; Hessel, V.; Maier, M. C.; Neiro dÁngelo, F.; Noël, T.; Gruber-Woelfler, H. *Chem. Eng. J.* **2017**, submitted. |
| **108** | Visible-Light Photocatalytic Decarboxylation of α,β-Unsaturated Carboxylic Acids: Facile access to Stereoselective Difluoromethylated Styrenes in Batch and Flow.  Wei, X.-J.; Hessel, V.; Noël, T.; *ACS Catalysis* **2017**, *7*, 7136-7140. (Highlighted in OPRD, DOI: 10.1021/acs.oprd.7b00371) |
| **107** | A Modular Flow Design for the Meta-selective C−H Arylation of Anilines.  Gemoets, H. P. L.; Laudadio, G.; Verstraete, K.; Hessel, V.; Noël, T.; *Angew. Chem. Int. Ed.* **2017**, *56*, 7161-7165. |
| **106** | Scale up of a luminescent solar concentrator based photomicroreactor via numbering-up.  Zhao, F.; Cambie, D.; Janse, J.; Wieland, E. W.; Kuijpers, K. P. L.; Hessel, V.; Debije, M. G.; Noël, T.;**2017**, *7*, 7136-7140. |
| **105** | Every Photon Counts: Understanding and Optimizing Photon Paths in Luminescent Solar Concentrator-based Photomicroreactors (LSC-PMs).  Cambie, D.; Zhao, F.; Hessel, V.; Debije, M. G.; Noël, T.; *React. Chem. Eng.* **2017**, *2*, 561-566. |
| **104** | Merger of Visible Light Photoredox Catalysis and C–H Activation for the Room Temperature C-2 Acylation of Indoles in Batch and Flow.  Sharma, U. K.; Gemoets, H. P. L.; Schroeder, F.; Noël, T.; Van der Eycken, E. V. *ACS Catalysis.* **2017**, *7*, 3818-3823. (highlighted in OPRD **2017**, DOI: 10.1021/acs.oprd.7b00193 and DOI: 10.1021/acs.oprd.7b00251) |
| **103** | Safety assessment in development and operation of modular continuous-flow processes.  Kockmann, N.; Thenee, P.; Fleischer-Trebes, C.; Laudadio, G.; Noël, T. *React. Chem. Eng.* **2017**, *2*, 258-280. |
| **102** | A sensitivity analysis of a numbered-up photomicroreactor system.  Kuijpers, K. P. L.; van Dijk, M. A. H.; Rumeur, Q.; Hessel, V.; Su, Y.; Noël, T. *React. Chem. Eng.* **2017**, *2*, 109-115. (Invited contribution for the Emerging Investigators issue) |
| **101** | Flow Chemistry Perspective for C–H Bond Functionalization.  Laudadio, G.; Noël, T. In *Strategies for Palladium-Catalyzed Non-Directed and Directed C-H Bond Functionalization*, Maiti, D. & Kapdi, A. Eds., Elsevier, **2017**, pp. 275-288. |
| **100** | A leaf-inspired luminescent solar concentrator for energy efficient continuous-flow photochemistry.  Cambie, D.; Zhao, F.; Hessel, V.; Debije, M.G.; Noël, T. *Angew. Chem. Int. Ed.* **2017**, *56*, 1050-1054. (selected as VIP paper, which denotes the top 5% papers by the referees and the editor) |
| **99** | Practical Photocatalytic Trifluoromethylation and Hydrotrifluoromethylation of Styrenes in Batch and Flow.  Straathof, N. J. W.; Cramer, S. E.; Hessel, V.; Noël, T. *Angew. Chem. Int. Ed.* **2016**, *55*, 15549-15553. |
| **98** | Micro-Flow Photosynthesis of New Dienophiles for Inverse-Electron-Demand Diels-Alder Reactions. Potential applications for pretargeted in vivo PET imaging.  Billaud, E. M. F.; Shahbazali, E.; Ahamed, M.; Cleeren, F.; Noël, T.; Koole, M.; Verbruggen, A.; Hessel, V.; Bormans, G. *Chem. Sci.* **2017**, *8*, 1251-1258. |
| **97** | Disulfide-Catalyzed Visible-Light Oxidative Cleavage of C=C Bonds and Evidence of an Olefin-Disulfide Charge-Transfer Complex.  Deng, Y.; Wei, X.-J.; Wang, H.; Sun, Y.; Noël, T.; Wang, X. *Angew. Chem. Int. Ed.* **2017**, *56*, 832-836. (selected as Hot paper) |
| **96** | Mild and selective base-free C–H arylation of heteroarenes: Experiment and computation.  Gemoets, H. P. L.; Kalvet, I.; Nyuchev, A. V.; Erdmann, N.; Hessel, V.; Schoenebeck, F.; Noël, T. *Chem. Sci*., **2017**, *8*, 1046-1055. |
| **95** | Photo-Claisen Rearrangement of Allyl Phenyl Ether in Micro-Flow: Influence of Phenyl Core Substituents and Vision on Orthogonality.  Shahbazali, E.; Noël, T.; Hessel, V. *J. Flow Chem.,* **2016**, *6*, 252-259. |
| **94** | A mechanistic investigation of the visible light photocatalytic trifluoromethylation of heterocycles using CF3I in flow.  Su, Y.; Kuijpers, K. P. L.; Konig, N.; Shang, M.; Hessel, V.; Noël, T. *Chem. Eur. J.,* **2016**, *22*, 12295-12300. |
| **93** | Kinetic study of hydrogen peroxide decomposition at high temperatures and concentrations in two capillary microreactors.  Shang, M.; Noël, T.; Su, Y.; Hessel, V. *AIChE J.,* **2017**, *63*, 689-697. |
| **92** | Batch and flow synthesis of disulfides by visible light induced TiO2 photocatalysis.  Bottecchia, C.; Erdmann, N.; Tijssen, P. M. A.; Milroy, L.-G.; Brunsveld, L.; Hessel, V.; Noël, T. *ChemSusChem,* **2016**, *9*, 1781-1785. (Highlighted in OPRD DOI: 10.1021/acs.oprd.6b00321) |
| **91** | Visible Light-Induced Trifluoromethylation and Perfluoroalkylation of Cysteine Residues in Batch and Continuous Flow.  Bottecchia, C.; Wei, X.-J.; Kuijpers, K. P. L.; Hessel, V.; Noël, T. *J. Org. Chem.* **2016**, *81*, 7301-7307. |
| **90** | From alcohol to 1,2,3-triazole via a multi-step continuous-flow synthesis of a rufinamide precursor.  Borukhova, S.; Noël, T.; Metten, B.; de Vos, E.; Hessel, V. *Green Chem.* **2016**, *18*, 4947-4953. |
| **89** | Palladium-catalyzed aerobic oxidative coupling of o-xylene in flow: a safe and scalable protocol for cross-dehydrogenative coupling.  Erdmann, N. E.; Su, Y.; Bosmans, B.; Hessel, V.; Noël, T. *Org. Process Res. Dev.,* **2016**, *20*, 831-835. |
| **88** | Utilization of milli-scale coiled flow inverter in combination with phase separator for continuous-flow liquid-liquid extraction processes.  Vural-Guersel, I.; Kurt, S. K.; Aalders, J.; Wang, Q.; Noël, T.; Nigam, K.D.P.; Kockmann, N.; Hessel, V. *Chem. Eng. J.,* **2016**, *283*, 855-868. |
| **87** | Hydrogen chloride gas in solvent-free continuous conversion of alcohols to chlorides in microflow.  Borukhova, S.; Noël, T.; Hessel, V. *Org. Process Res. Dev.,* **2016**, *20*, 568-573. |
| **86** | High pressure direct synthesis of adipic acid from cyclohexene and hydrogen peroxide via capillary microreactors.  Shang, M.; Noël, T.; Su, Y.; Hessel, V. *Ind. Eng. Chem. Res.,* **2016**, *55*, 2669-2676. |
| **85** | Continuous ruthenium-catalyzed methoxycarbonylation with supercritical carbon dioxide.  Stouten, S.C.; Noël, T.; Wang, Q.; Beller, M.; Hessel, V. *Catal. Sci. Technol.,* **2016**, *6*, 4712-4717. |
| **84** | Applications of continuous-flow photochemistry in organic synthesis, material science and water treatment.  Cambié, D.; Bottecchia, C.; Straathof, N. J. W.; Hessel, V.; Noël, T. *Chem. Rev.,* **2016**, *116*, 10276-10341. |
| **83** | Continuous-flow multi-step synthesis of Cinnarizine, Cyclizine and a Buclizine derivative from bulk alcohols.  Borukhova, S.; Noël, T.; Hessel, V. *ChemSusChem,* **2016**, *9*, 67-74. |
| **82** | Accelerated Gas-liquid Visible Light Photoredox Catalysis with Continuous-Flow Photochemical Microreactors.  Straathof, N. J. W.; Su, Y.; Hessel, V.; Noël, T., *Nature Protocols,* **2016**, *11*, 10-21 |
| **81** | A convenient numbering-up strategy for the scale-up of gas-liquid photoredox catalysis in flow.  Su, Y.; Kuijpers, K.; Hessel, V.; Noël, T., *React. Chem. Eng.,* **2016**, *1*, 73-81. (cover article) |
| **80** | Beyond organometallic flow chemistry: the principles behind the use of continuous-flow reactors for synthesis.  Noël, T.; Su, Y.; Hessel, V., *Top. Organomet. Chem.,* **2016**, *57*, 1-42. |
| **79** | Liquid phase oxidation chemistry in continuous-flow  Gemoets, H. P. L.; Su, Y.; Shang, M.; Hessel, V.; Luque, R.; Noël, T., *Chem. Soc. Rev.* **2016**, *45*, 83-117. |
| **78** | Leaching-Free Supported Gold Nanoparticles Catalyzing Cycloisomerizations under Microflow Conditions.  Schröder, F.; Erdmann, N.; Noël, T.; Luque, R.; Van der Eycken, E. V. *Adv. Synth. Catal.,* **2015**, *357*, 3141-3147. |
| **77** | Controlled Photocatalytic Aerobic Oxidation of Thiols to Disulfides in an Energy Efficient Photomicroreactor.  Su, Y.; Talla, A.; Hessel, V.; Noël, T., *Chem. Eng. Technol,* **2015**, *38*, 1733-1742. (cover article) |
| **76** | Heterocat, homocat, and biocat. What does better flow?  Hessel, V.; Noël, T., *Chim. Oggi* **2015**, *33*, 44-49. |
| **75** | Supported Liquid Phase Catalyst coating in micro flow Mizoroki–Heck.  Stouten, S.; Noël, T.; Wang, Q.; Hessel, V. *Chem. Eng. J* **2015**, *279*, 143-148. |
| **74** | Supported Gold Nanoparticles as an Efficient, Reusable and Green Heterogeneous Catalyst for Cycloisomerization Reactions. Schröder, F.; Ojeda, M.; Erdmann, E.; Jacobs, J.; Van Meervelt, L.; Luque, R.; Noël, T.; Van der Eycken, J.; Van der Eycken, E. V. *Green Chem.* **2015**, *17*, 3314-3318. |
| **73** | Room temperature catalysis enabled by light. Noël, T., In *Sustainable catalysis, energy-efficient reactions and applications.* Luque, R.; Lam, F., Eds, Wiley-VCH, Berlin,**2015**, 135-154. |
| **72** | Pressure-Accelerated Azide–Alkyne Cycloaddition: Micro Capillary versus Autoclave Reactor Performance. Borukhova, S.; Seeger, A. D.; Noël, T.; Wang, Q.; Busch, M.; Hessel, V., *ChemSusChem* **2015**, *8*, 504-512. |
| **71** | Separation/Recycling Methods of Homogeneous Transition Metal Catalysts in Continuous Flow. Vural-Gursel, I.; Noël, T.; Wang, Q.; Hessel, V., *Green Chem.* **2015**, *17*, 2012-2026. |
| **70** | Visible light photoredox catalysis.  Erdmann, N.; Noël, T., In *Green Chemistry in Drug Discovery: From academia to industry*, Le, P. T.; Richardson, P. F., Eds, Springer Science, **2015**, accepted for publication. |
| **69** | Reactor Concepts for Aerobic Liquid-phase Oxidation: Microreactors and tube reactors.  Gemoets, H.; Hessel, V.; Noël, T., In *Liquid Phase Aerobic Oxidation Catalysis – Industrial applications and academic perspectives*, Stahl, S. S.; Alsters, P. L., Eds, Wiley-VCH, Berlin,**2016**, pp. 399-419. |
| **68** | A compact photochemical design combining a capillary microreactor with small-scale LEDs for gas-liquid photocatalytic transformations.  Su, Y.; Hessel, V.; Noël, T., *AIChE J.* **2015**, *61*, 2215-2227. |
| **67** | Accelerating Visible Light Photoredox Catalysis in Continuous-flow Reactors.  Straathof, N. J. W.; Noël, T., In *Visible light photocatalysis in organic chemistry*, C. R. J. Stephenson, T. Yoon, D. W. C. MacMillan, Eds., Wiley-VCH, Berlin,**2018**, pp. 389-413. |
| **66** | Iridium(I)-catalyzed ortho-directed hydrogen-isotope exchange in continuous-flow reactors.  Habraken, E. R. M.; Vliegen, M.; Noël, T., *J. Flow Chem.* **2015**, *5*, 2-5. |
| **65** | Continuous Metal Scavenging and Coupling to One-pot Copper-Catalyzed Azide-Alkyne Cycloaddition Click Reaction in Flow.  Vural-Gursel, I.; Aldiansyah, F.; Wang, Q.; Noël, T.; Hessel, V. *Chem. Eng. J.* **2015**, *270*, 468-475. |
| **64** | Metal-free photocatalytic aerobic oxidation of thiols to disulfides in batch and continuous-flow.  Talla, A.; Driessen, B.; Straathof, N. J. W.; Milroy, L.-G.; Brunsveld, L.; Hessel, V.; Noël, T., *Adv. Synth. Catal.* **2015**, *357*, 2180-2186. |
| **63** | Connected nucleophilic substitution-Claisen rearrangement in flow – Analysis for kilo-lab process solutions with orthogonality.  Shahbazali, E.; Spapens, M.; Kobayashi, H.; Ookawara, S.; Noël, T.; Hessel, V. *Chem. Eng. J.* **2015**, *281*, 144-154. |
| **62** | Cross-coupling chemistry in continuous flow.  Noël, T.; Hessel, V., In *New Trends in cross-coupling: Theory and applications*, T. Colacot, Ed., RSC, Cambridge (UK), **2015**, pp. 608-642. |
| **61** | 2- and 3-stage temperature ramping for the direct synthesis of adipic acid in micro-flow packed-bed reactors.  Shang, M.; Noël, T.; Wang, Q.; Su, Y.; Miyabayashi, K.; Hessel, V.; Hasebe, S., *Chem. Eng. J.* **2015**, *260*, 454-462. |
| **60** | Aerobic C–H olefination of indoles via a cross-dehydrogenative coupling in continuous flow.  Gemoets, H. P. L.; Hessel, V.; Noël, T., *Org. Lett.* **2014**, *16*, 5800-5803. |
| **59** | The Claisen Rearrangement – Part 1: Mechanisms and Transition States, Revisited with Quantum Mechanical Calculations and Ultrashort Pulse Spectroscopy  Zelentsov, S.; Hessel, V.; Shahbazali, E., Noël, T., *ChemBioEng Rev.* **2014**, *1*, 230-240. |
| **58** | The Claisen Rearrangement – Part 2: Impact Factor Analysis of the Claisen Rearrangement, in Batch and in Flow.  Hessel, V.; Shahbazali, E., Noël, T.; Zelentsov, S., *ChemBioEng Rev.* **2014**, *1*, 244-261. |
| **57** | Claisen-Umlagerung im Ruhr- und Durchflussbetrieb: Verstandnis des Mechanismus und Steuerung der Einflussgroßen  Hessel, V.; Shahbazali, E., Noël, T.; Zelentsov, S., *Chem. Ing. Tech.* **2014**, *86*, 2160-2179. |
| **56** | A mild and fast photocatalytic trifluoromethylation of thiols in batch and continuous-flow.  Straathof, N. J. W.; Tegelbeckers, B. J. P.; Hessel, V.; Wang, X.; Noël, T., *Chem. Sci.* **2014**, *5*, 4768-4773 |
| **55** | Photochemical transformations accelerated in continuous-flow reactors: basic concepts and applications.  Su, Y.; Straathof, N. J. W.; Hessel, V.; Noël, T., *Chem. Eur. J.* **2014**, *20*, 10562-10589. (Highlighted on the Chem Eur J facebook webpage; highlighted on Organic Chemistry Portal by Douglass F. Taber, 28/09/2015; cover of volume 20, issue 34; As of November/December 2015, this highly cited paper received enough citations to place it in the top 1% of its academic field based on a highly cited threshold for the field and publication year. Source: Essential Science Indicators). |
| **54** | Biotechnical microflow processing at the edge: lessons to be learnt for a young discipline.  Hessel, V.; Tibhe, J.; Noël, T.; Wang, Q. *Chem. Biochem Eng. Q.* **2014**, *83*, 167-188. |
| **53** | Catalyst retention in continuous flow with supercritical carbon dioxide.  Stouten, S. C.; Noël, T.; Wang, Q.; Hessel, V. *Chem. Eng. Process.* **2014**, *28*, 26-32. |
| **52** | Micro Flow Chemistry: New possibilities for synthetic chemists.  Noël, T., In *Discovering the future of molecular sciences*, B. Pignataro, Ed., Wiley-VCH, Weinheim (Germany), **2014**, pp.137-164. |
| **51** | Eco-efficiency analysis for intensified production of an active pharmaceutical ingredient: a case study.  Hessel, V.; Dencic, I.; Ott, D.; Kralisch, D.; Noël, T.; Meuldijk, J.; de Croon, M. H. J. M.; Laribi, Y.; Perrichon, P., *Org. Process Res. Dev.* **2014**, *18*, 1326-1338. |
| **50** | Heat-integrated novel process of liquid fuel production from bioresources – process simulation and costing study.  Vural-Gursel, I.; Wang, Q.; Noël, T.; Hessel, V.; Kolb, G. A.; van Veen, A., *Chem. Eng. Trans.* **2014**, *39*, 931-936. |
| **49** | Rapid trifluoromethylation and perfluoroalkylation of five-membered heterocycles by photoredox catalysis in continuous flow.  Straathof, N. J. W.; Gemoets, H.; Wang, X.; Schouten, J. C.; Hessel, V.; Noël, T., *ChemSusChem* **2014**, *7*, 1612-1617. (*Invited artwork for the cover of ChemSusChem*) |
| **48** | Visible Light Photocatalytic Metal-Free Perfluoroalkylation of Heteroarenes in Continuous Flow.  Straathof, N. J. W.; van Osch, D. J. G. P.; Schouten, A.; Wang, X.; Schouten, J. C.; Hessel, V.; Noël, T., *J. Flow Chem.* **2014**, *4*, 12-17. |
| **47** | The accelerated preparation of 1,4-dihydropyridines using microflow reactors.  Baraldi, P.T.; Noël, T.; Wang, Q.; Hessel, V., *Tetrahedron Lett.* **2014**, *55*, 2090-2092. |
| **46** | Metallic nanoparticles made in flow and their catalytic applications in organic synthesis.  Shahbazali, E.; Hessel, V.; Noël, T.; Wang, Q., *Nanotechnology Rev.* **2014**, *3*, 65-86. |
| **45** | Solvent- and catalyst-free Huisgen cycloaddition towards Rufinamide in flow with decision on a greener and less expensive dipolarophile.  Borukhova, S.; Noël, T.; Metten, B.; de Vos, E.; Hessel, V., *ChemSusChem* **2013**, *6*, 2220-2225. |
| **44** | Ferrocene-derived P,N ligands: Synthesis and application in enantioselective catalysis.  Noël, T.; Van der Eycken, J., *Green Processing and Synthesis* **2013**, *2*, 297-309. |
| **43** | Improving energy efficiency of process of adipic acid synthesis in flow using pinch analysis.  Vural-Gursel, I.; Wang, Q.; Noël, T.; Hessel, V.; Tinge, J. T., *Ind. Eng. Chem. Res.* **2013**, *52*, 7827-7835. |
| **42** | Flow Synthesis of phenylserine using threonine aldolase immobilized on Eupergit support.  Tibhe, J.; Fu, H.; Noël, T.; Wang, Q.; Meuldijk, J.; Hessel, V., *Beilstein J. Org. Chem.* **2013**, *9*, 2168-2179. |
| **41** | Accelerating photoredox catalysis in continuous microflow.  Noël, T.; Wang, X.; Hessel, V., *Monographic suppl. Series of Chimica Oggi -* *Chem. Today: Organometallic chemistry, biocatalysis and catalysis,* **2013,** *31*, 10-14. |
| **40** | A mild, one-pot Stadler-Ziegler synthesis of arylsulfides facilitated by photoredox catalysis in batch and continuous-flow.  Wang, X.; Cuny, G. D.; Noël, T., *Angew. Chem. Int. Ed.* **2013**, *52*, 7860-7864. |
| **39** | Lipase based biocatalytic flow process in a packed bed microreactor.  Dencic, I.; de Vaan, S.; Noël, T.; Meuldijk, J.; de Croon, M.; Hessel, V., *Ind. Eng. Chem. Res.* **2013**, *52*, 10951-10960. |
| **38** | Novel Process Windows for Enabling, Speeding-up and Uplifting Flow Chemistry.  Hessel, V.; Kralisch, D.; Kockmann, N.; Noël, T.; Wang, Q., *ChemSusChem* **2013**, *6*, 746-789. (Special attention: one of the most frequently cited papers in ChemSusChem among those published in 2012 or 2013; most cited paper in 2015) |
| **37** | The impact of Novel Process Windows on the Claisen rearrangement.  Kobayashi, H.; Driessen, B.; van Osch, D. J. G. P.; Talla, A., Noël, T.; Hessel, V., *Tetrahedron* **2013**, *69*, 2885-2890. |
| **36** | Implementation of heat integration for efficient process design of direct adipic acid synthesis in flow.  Vural-Gürsel, I.; Wang, Q.; Noël, T.; Hessel, V. *Chem. Eng. Trans.* **2013**, *35*, 775-780. |
| **35** | A view through Novel Process Windows.  Stouten, S. C.; Noël, T.; Wang, Q.; Hessel, *Aust. J. Chem.* **2013**, *66*, 121-130. |
| **34** | Supported aqueous phase catalyst coating in micro flow Mizoroki-Heck reaction.  Stouten, S. C.; Noël, T.; Wang, Q.; Hessel, *Tetrahedron Lett.* **2013**, *54*, 2194-2198. |
| **33** | Packed-bed microreactor for continuous-flow adipic acid synthesis from cyclohexene and hydrogen peroxide.  Shang, M.; Noël, T.; Wang, Q.; Hessel, V. *Chem. Eng. Technol.* **2013**, *36*, 1001-1009. |
|  |  |
| **32** | Micro Process Technology – 3. Applications  Hessel, V.; Noël, T. *Ullmann’s Encyclopedia of Industrial Chemistry*, DOI: 10.1002/14356007.o16\_o02. |
| **31** | Membrane microreactors: Gas-liquid reactions made easy.  Noël, T.; Hessel, V. *ChemSusChem* **2013**, *6*, 405-407. |
| **30** | Micro reaction technology for valorization of biomolecules using enzymes and metal catalysts.  Dencic, I.; Noël, T.; Meuldijk, J.; de Croon, M.; Hessel, V. *Eng. Life Sci.* **2013**, *13*, 326-343. |
| **29** | Chemical intensification in flow chemistry through harsh reaction conditions and new reaction design.  Noël, T.; Hessel, V. In *Microreactors in preparative chemistry: Practical aspects in bioprocessing, nanotechnology, catalysis and more*, W. Reschetilowski, Ed., Wiley-VCH, Weinheim (Germany), **2013**, pp. 273-295. (DOI: 10.1002/9783527652891.ch11) |
| **28** | Direct synthesis of adipic acid in flow – A sustainable process alternative.  Vural-Gürsel, I.; Wang, Q.; Noël, T.; Hessel, V. *Chem. Eng. Trans.* **2012**, *29*, 565-570. |
| **27** | Green is the future of chemistry.  Noël, T. *Green Proc. Synth.* **2012**, *1*, 399-401. |
| **26** | Window of opportunity – Increase in profitability using modular compact plants and microreactor based flow processing.  Vural-Gürsel, I.; Hessel, V.; Wang, Q.; Noël, T.; Lang, J. *Green Proc. Synth.* **2012**, *1*, 315-336. |
| **25** | Chiral imidate-ferrocenylphosphanes: Synthesis and application as P,N-ligands in iridium(I)-catalyzed hydrogenation of unfunctionalized and poorly functionalized olefins.  Bert, K.; Noël, T.; Kimpe, W.; Goeman, J. L.; Van der Eycken, J. *Org. Biomol. Chem.* **2012**, *10*, 8539-8550. |
| **24** | Threonine aldolase immobilization on different supports for engineering of productive, cost-efficient enzymatic microreactors.  Fu, H.; Dencic, I.; Tibhe, J.; Pedraza, C. A. S.; Wang, Q.; Noël, T.; Meuldijk, J.; de Croon, M.; Hessel, V.; Weizenmann, N.; Oeser, T.; Kinkeade, T.; Hyatt, D.; Van Roy, S.; Dejonghe, W.; Diels, L. *Chem. Eng. J.* **2012**, *207-208*, 564-576. |
| **23** | Modeling of anionic polymerization in flow with coupled variations of concentration, viscosity and diffusivity.  Cortese, B.; Noël, T.; de Croon, M.H.J.M.; Schulze, S.; Klemm, E.; Hessel, V. *Macromol. React. Eng.* **2012**, *6*, 507-515. (Cover article) |
| **22** | Copper(I)-catalyzed azide-alkyne cycloadditions in microflow: Catalyst activity, high T operation, and an integrated continuous copper scavenging unit.  Varas, A. C.; Noël, T.; Wang, Q.; Hessel, V. *ChemSusChem* **2012**, *5*, 1703-1707*.* |
| **21** | Micro Process Technology – 1. Introduction  Hessel, V.; Noël, T. *Ullmann’s Encyclopedia of Industrial Chemistry*, DOI: 10.1002/14356007.q16\_q01 |
| **20** | Micro Process Technology – 2. Processing  Hessel, V.; Noël, T. *Ullmann’s Encyclopedia of Industrial Chemistry*, DOI: 10.1002/14356007.b16\_b37.pub2 |
| **19** | Potential analysis of smart flow processing and micro process technology for fastening process development – Use of chemistry and process design as intensification fields.  Hessel, V.; Vural-Gürsel, I.; Wang, Q.; Noël, T.; Lang, J. *Chem. Eng. Technol.* **2012**, *35*, 1184-1204. |
| **18** | Potentialanalyse von Milli- und Mikroprozesstechniken fuer die Verkuerzung von Prozessentwicklungszeiten – Chemie und Prozess Design als Intensivierungsfelder.  Hessel, V.; Vural-Gürsel, I.; Wang, Q.; Noël, T.; Lang, J. *Chem. Ing. Tech.* **2012**, *84*, 660-684. |
| **17** | Chiral Imidate Ligands: Synthesis and Applications in Asymmetric Catalysis.  Noël, T.; Bert, K.; Janssens, P.; Van der Eycken, J. In *Innovative Catalysis in Organic Synthesis: Oxidations, Hydrogenations and C–X Bond Forming Reactions*, P. G. Andersson, Ed., Wiley-VCH, Weinheim (Germany), **2012**, pp. 309-325. |
| **16** | Accelerating Pd-catalyzed C–F bond formation: Use of a microflow packed-bed reactor.  Noël, T.; Maimone, T. J.; Buchwald, S.L. *Angew. Chem. Int. Ed.* **2011**, *50*, 8900-8903*.*  (*Selected as a hot paper by the editors of Angewandte Chemie. Highlighted in Org. Process Res. Dev.* **2012** *DOI: 10.1021/op300251d*) |
| **15** | Suzuki-Miyaura cross-coupling of heteroaryl halides and aryl boronic acids in continuous-flow.  Noël, T.; Musacchio, A. J. *Org. Lett.* **2011**, *13*, 5180-5183. |
| **14** | A Teflon microreactor with integrated piezoelectric actuator to handle solid forming reactions.  Kuhn, S.; Noël, T.; Gu, L.; Heider, P. L.; Jensen, K. F. *Lab Chip* **2011**, *11*, 2488-2492.  (*Selected as a Hot Paper; Invited artwork for the cover of Lab on a Chip, volume 11, number 15*) |
| **13** | Suzuki-Miyaura cross-coupling reactions in flow: Multistep synthesis enabled by a microfluidic extraction.  Noël, T.; Kuhn, S.; Musacchio, A. J.; Jensen, K.F.; Buchwald, S.L. *Angew. Chem. Int. Ed.* **2011**, *50*, 5943-5946.  (*Highlighted in Chemical & Engineering News* **2011**, *89*, pp. 39) |
| **12** | Palladium-catalyzed amination reactions in flow: overcoming the challenges of clogging *via* acoustic irradiation.  Noël, T.; Naber, J.R.; Hartman, R.L.; McMullen, J.P.; Jensen, K.F.; Buchwald, S.L. *Chem. Sci.* **2011**, *2*, 287-290.  (*Highlighted in Chemistry World + interview with T.* *Noël: 13 january 2011; Highlighted in Conveying News: 24 january 2011; Top Ten Most Accessed Articles in December 2010, January 2011*) |
| **11** | Chloro(2-dicyclohexylphosphino-2’,4’,6’-triisopropyl-1,1’-biphenyl)[2-(2-aminoethyl)phenyl)]palladium (II), XPhos first generation precatalyst.  Noël, T. *e-EROS Encyclopedia of Reagents for Organic Synthesis* **2011**, DOI: 10.1002/047084289X.rn01343. |
| **10** | Cross-Coupling in Flow.  Noël, T.; Buchwald, S.L. *Chem. Soc. Rev.* **2011**, *40*, 5010-5029.  (One of the most accessed reviews in August 2011; highlighted in Faculty of 1000; *Highlighted in Org. Process Res. Dev.* **2012** *DOI: 10.1021/op300251d*) |
| **9** | Imidate-Phosphane ligands as highly versatile ligands for Palladium-catalyzed allylic substitution reactions.  Noël, T.; Bert, K.; Van der Eycken, E.; Van der Eycken, J. *Eur. J. Org. Chem.* **2010**, 4056-4061. |
| **8** | Rhodium/olefin-catalyzed reaction of arylboronic acids with an alfa-acetamido acrylic ester: Mizoroki-Heck-type reaction versus conjugate addition.  Noël, T.; Gök, Y.; Van der Eycken, J. *Tetrahedron: Asymmetry* **2010**, *21*, 540-543. |
| **7** | Novel *C*2-symmetrical bisoxazolines with a chiral *trans*-2,3-diphenylcyclopropane backbone: Preparation and application in asymmetric catalytic reactions.  Gök, Y.; Noël, T.; Van der Eycken, J. *Tetrahedron: Asymmetry* **2010**, *21*, 2275-2280. |
| **6** | A novel *C*2-symmetrical bisphosphane ligand with a cyclopropane backbone: Synthesis and application in Rh(I)-catalyzed Asymmetric 1,4-addition of arylboronic acids to cyclic enones.  Gök, Y.; Noël, T.; Van der Eycken, J. *Tetrahedron: Asymmetry* **2010**, *21*, 2768-2774. |
| **5** | *Trans*-(2*R*,3*R*)-diphenylcyclopropane-1,1-dimethanol: a pivotal diol for the synthesis of novel *C2*-symmetric ligands for asymmetric transition metal catalysis.  Vervecken, E.; Van Overschelde, M.; Noël, T.; Gök, Y.; Alvárez Rodríguez, S.; Cogen, S.; Van der Eycken, J. *Tetrahedron: Asymmetry* **2010**, *21*, 2321-2328. |
| **4** | Cyclic Imidate Ligands.  Noël, T.; Vandyck, K.; Van der Eycken, J. PCT Int. Appl. **2010**, WO 2010115903 A1 20101014 (date filed: 02/06/2010). |
| **3** | Chiral imidates as a new class of nitrogen-based chiral ligands: synthesis and catalytic activity in asymmetric aziridinations and diethylzinc additions.  Noël, T.; Vandyck, K.; Robeyns, K.; Van Meervelt, L.; Van der Eycken, J. *Tetrahedron* **2009**, *65*, 8879-8884. |
| **2** | Efficient one-step synthesis of chiral oxazoline-alcohol ligands via a cyclic imidate ester rearrangement.  Noël, T.; Robeyns, K.; Van Meervelt, L.; Van der Eycken, E.; Van der Eycken, J. *Tetrahedron: Asymmetry* **2009**, *20*, 1962-1968. |
| **1** | Some new *C*2**-**symmetric bicyclo[2.2.1]heptadiene ligands: synthesis and catalytic activity in rhodium(I)-catalyzed asymmetric 1,4- and 1,2-additions.  Noël, T.; Vandyck, K.; Van der Eycken, J. *Tetrahedron* **2007**, *63*, 12961-12967. |

***Cover articles***

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|  | [Thumbnail image of graphical abstract](http://onlinelibrary.wiley.com/store/10.1002/mren.201290032/asset/image_m/mcontent.gif?v=1&s=9e8748361714e0eade933c67d217eb292b9c4f95) |  |  |
| *Lab Chip*  **2011**, *11*, 2488-2492 | *Macromol. React. Eng.*  **2012**, *6*, 507-515 | *ChemSusChem*  **2014**, *7*, 1612-1617 | *Chem. Eur. J.*  **2014**, *20*, 10562-10589 |
|  |  |  |  |
| *Chem. Ing. Tech.*  **2014**, *12*, 2160-2179 | *Chem. Eng. Technol.*  **2015,** *38*, 1733-1742 | *Chem. Soc. Rev.*  **2016**, *45*, 83-117. | *React. Chem. Eng.*  **2016**, *1*, 73-81. |
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| *Angew. Chem Int. Ed.*  **2017**, *56*, 1050-1054 |  |  |  |

***Guest Editorials***

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| **2012** | Guest editor of a special issue of Challenges: “Challenges in Chemical Processes”. (Together with Volker Hessel) |
| **2015** | Guest editor of a special issue in Journal of Flow Chemistry, volume 5, issue 3, pp. 123-194 “Flow Chemistry in North America”. (Together with Aaron Beeler) |
| **2015** | Guest editor of a special issue in Chemical Engineering Technology: “Chemical intensification in flow” **2015**, issue 10 (Together with Volker Hessel) |
| **2016** | Guest editor of a special issue of Challenges: “Challenges in Chemical Processes”. (Together with Volker Hessel) |
| **2017** | Guest editor of a special issue in ChemPhotoChem: “Flow photochemistry”. (Together with Kevin-Booker Milburn) |

***Books***

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| **2017** | Photochemical processes in continuous-flow reactors: From engineering principles to chemical applications, Noël, T. ed., World Scientific Publishing, London (UK), **2017**, ISBN 9781786342188. |
| **2016** | Organometallic Flow Chemistry, Noël, T. ed., Springer, Heidelberg (Germany), **2016,** ISBN 978-3-319-33243-7. |

***Conferences participation – Oral Presentations***

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| **2018** | Seminar at RWTH Aachen (Aachen, Germany) (Invited Seminar) |
| **2018** | Lecture at Heriot-Watt University (Edinburgh, Scotland) (Invited Lecture) |
| **2018** | Modern Photocatalysis Beilstein Meeting (Potsdam, Germany) (Invited Lecture) |
| **2018** | EPSRC Center for Doctoral Training in Critical Resource Catalysis (CRITICAT) (Edinburgh, Scotland) (Keynote Lecture) |
| **2018** | Journées de la Catalyse (Gif-sur-Yvette, France) (Keynote lecture) |
| **2018** | Lecture at the Annual Internal Meeting fo the Cluster of Excellence RESOLV (Velen, Germany) (Invited Lecture). |
| **2018** | Synthesis in flow seminar (Bleriot-Plage, France) (Invited Lecture) |
| **2018** | Lecture at Cardiff University (UK) (Invited Lecture) |
| **2018** | Lecture at PhotoTrain meeting – Bologna (Italy) (Invited Lecture) |
| **2018** | Flow Chemistry Europe Meeting – Cambridge (UK) (Invited Lecture). |
| **2018** | 5th Innovation for Health (Rotterdam, The Netherlands) (Invited Lecture). |
| **2018** | University Seminar at University of Graz (Graz, Austria) (Invited Lecture). |
| **2017** | Syngenta Chemistry Lecture 2017 (Stein, Switzerland) (Invited Lecture). |
| **2017** | Joint Meeting of 11th International Symposium on Integrated Synthesis (ISONIS-11) and 3rd International Symposium on Middle Molecular Strategy (3rd ISMMS) (Awaji Island, Japan) (Invited Lecture). |
| **2017** | University Seminar at University of Osaka (Osaka, Japan) (Invited Lecture). |
| **2017** | 1692th Zasshikai Seminar – University of Tokyo (Tokyo, Japan) (Invited Lecture). |
| **2017** | 17th Tateshina Conference (Tateshina, Japan) (Invited Lecture). |
| **2017** | iCAT-TUE Symposium (International Symposium on Catalysis for Sustainable Society) (Eindhoven, The Netherlands) (Invited Lecture) |
| **2017** | University Seminar Aarhus University (Aarhus, Denmark) (Invited Lecture). |
| **2017** | FROST 6 (6th Conference on Frontiers in Organic Synthesis Technology) (Budapest, Hungary) (Keynote Lecture, Conference Chair). |
| **2017** | Organic Chemistry day (La Giornata della Chimica Organica) (Pavia, Italy) (Invited Lecture). |
| **2017** | Advancing chemical synthesis through automation, processes and thinking, Beilstein Organic Chemistry Symposium 2017 (Potsdam, Germany) (Invited Lecture). |
| **2017** | COST Summer School CHAOS (Tallinn, Estonia) (Training Seminar). |
| **2017** | AMN/ISMM/APBCM/ANZNMF meeting (Tasmania, Australia) (Keynote Lecture). |
| **2017** | Invited seminar at University of Leipzig (Leipzig, Germany) (Invited Talk). |
| **2017** | Lab on a Chip Conference (Munich, Germany) (Invited Talk). |
| **2017** | Workshop “Electron Transfer, Radical Ions and Radical Chemistry” (Lyon, France) (Invited Talk). |
| **2017** | Invited seminar at Indian Institute of Science-Bangalore (Bangalore, India) (Invited Talk). |
| **2017** | Invited seminar at Indian Institute of Technology-Bombay (Mumbai, India) (Invited Talk). |
| **2017** | Advances in Organic Synthesis (AOS-2017) (Pune, India) (Invited Talk). |
| **2017** | Prof. K.V.Thomas Endowment International Symposium on New Trends in Applied Chemistry (Kochi, India) (Plenary Lecture). |
| **2017** | Flow Chemistry Conference Europe 2017 (Cambridge, UK) (Keynote Lecture). |
| **2016** | Dutch Design & Synthesis Guest Lectures seminar at Syncom (Groningen, The Netherlands) (Invited Talk). |
| **2016** | Flow Chemistry Society – Miami (USA) (Invited Talk). |
| **2016** | Invited seminar at Merck (New Jersey, USA) (Invited Talk). |
| **2016** | Invited seminar at Abbvie (Chicago, USA) (Invited Talk). |
| **2016** | Invited seminar at Virginia Commonwealth University (Richmond, USA) (Invited Talk). |
| **2016** | The international conference on microreaction technology, IMRET 14 (Beijing, China) (Keynote Talk). |
| **2016** | 22nd International Congress of Chemical and Process Engineering, CHISA 2016 (Prague, Czech Republic) (Keynote Talk). |
| **2016** | 27th European Colloquium on Heterocyclic Chemistry (Amsterdam, The Netherlands) (Keynote Talk). |
| **2016** | 39th Annual Meeting of the Brazilian Chemical Society (Goiania, Brazil) (Keynote Talk). |
| **2016** | Research Seminar at the Federal University of Rio de Janeiro (Rio de Janeiro, Brazil) (Invited Talk). |
| **2016** | NextGenChem@NL symposium (Nijmegen, Netherlands) |
| **2016** | Zing Flow Conference (Albufeira, Portugal) (Invited Talk, Session chair). |
| **2016** | Organic colloquium at Johannes Gutenberg University Mainz (Mainz, Germany) (Invited Talk). |
| **2016** | Research Seminar at Radboud University of Nijmegen (Nijmegen, The Netherlands) (Invited Talk). |
| **2016** | Research Seminar at University of Antwerp (Antwerp, Belgium) (Invited Talk). |
| **2016** | Research Seminar at University of Twente (Twente, The Netherlands) (Invited Talk). |
| **2016** | Flow Chemistry Conference Europe 2016 (Cambridge, UK) (Conference Chair – Invited Talk). |
| **2016** | Flow Workshop Hasselt 2016 (Hasselt, Belgium) (Invited Talk). |
| **2015** | Webinar on 9th December 2015 for Technology Networks (Invited Talk). |
| **2015** | Pacifichem 2015 (Honolulu, Hawai, USA) (Invited Talk). |
| **2015** | EPIC5 (European Process Intensification Conference) (Nice, France) (Keynote Talk). |
| **2015** | Photochemistry Gordon Research Conference (Stonehill College, Easton, MA, USA) (Invited Talk). |
| **2015** | 17th International Symposium on Relations between Homogeneous and Heterogeneous Catalysis (ISHHC17) (Utrecht, Netherlands). |
| **2015** | NextGenChem@NL symposium (Leiden, Netherlands) |
| **2015** | ACS Meeting Denver, New Trends in Cross-Coupling Catalysis in Industry and Academia, Session dedicated to the 2015 ACS Award in Industrial Chemistry in honor of Dr. Thomas J. Colacot (Johnson Matthey) (Denver, CO, USA) (Invited Talk). |
| **2015** | Lecture at DSM – Geleen (Netherlands) (Invited talk). |
| **2015** | Flow Chemistry Society – Berlin (Germany) (Conference & Session Chair – Keynote Lecture). |
| **2014** | Netherlands Process Technology Symposium (NPS 14) (Netherlands) (Keynote Lecture). |
| **2014** | NextGenChem@NL symposium (Eindhoven, Netherlands). |
| **2014** | Automation in chemistry: Carbohydrate synthesis and continuous-flow (Germany) (Invited Talk). |
| **2014** | Queen’s University Belfast (UK) (Invited Talk). |
| **2014** | Flow Chemistry Society – Boston (USA) (Invited Talk). |
| **2014** | Engineering for a Sustainable Future – Eindhoven (NL) (Invited Talk). |
| **2014** | Flow Chemistry Society – Barcelona (Spain) (Invited Talk). |
| **2014** | University of Amsterdam – Amsterdam (NL) (Invited Talk). |
| **2013** | FROST 4 – Flow Chemistry Society – Budapest (Hungary) (Invited Talk). |
| **2013** | Prof. Guangwen Chen’s Group – Dalian Institute of Chemical Physics – Dalian **2013** (China) (Invited talk). |
| **2013** | Global Congress of Catalysis – Dalian **2013** (China) (Invited talk). Special attention: Chair of Photocatalysis session. |
| **2013** | FLOHET – 2013, Annual Florida Heterocyclic and Synthetic IUPAC – Sponsored Conference, Florida **2013** (USA) (Invited talk). |
| **2013** | Lecture at Janssen Pharmaceuticals – Beerse (Belgium) (Invited talk). |
| **2012** | MinacNed Conference, Amsterdam **2012** (The Netherlands), (Invited talk). |
| **2012** | European Young Chemist Award at Euchems Chemistry Conference, Prague **2012** (Czech Republic), (Invited talk)*.* |
| **2012** | Euchems Chemistry Conference, Prague **2012** (Czech Republic). |
| **2012** | Incentive Award for Young Researchers Lecture at Vlaams Jongeren Congres, Oostende **2012** (Belgium), (Invited talk)*.* |
| **2012** | Microwave & Flow Chemistry Conference, Lanzarote **2012** (Spain). |
| **2011** | 15th Sigma-Aldrich Organic Synthesis Meeting, Spa **2011** (Belgium), Opening and Plenary Lecture, (Invited talk)*.* |
| **2011** | Lecture at Ghent University, Department of Chemistry, Ghent 2011 (Belgium), (Invited talk)*.* |
| **2011** | Lecture at EcoSynth, Oostende **2011** (Belgium), (Invited talk)*.* |
| **2010** | Metals In Synthesis Seminars, Massachusetts Institute of Technology **2010** (USA). |
| **2010** | Flemish Youth Conference of Chemistry, Blankenberge **2010** (Belgium). |
| **2009** | 13th Sigma-Aldrich Organic Synthesis Meeting, Spa **2009** (Belgium)*.* |
| **2009** | 42nd IUPAC Conference, Glasgow **2009** (Scotland, UK). |
| **2009** | COST Chemistry D.40, Turku **2009** (Finland). |
| **2007** | Flemish Youth Conference of Chemistry, Antwerp **2007** (Belgium). |

***Supervision and guidance of Ph.D. students***

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| **2018** | *Enabling and accelerating C–H functionalization through continuous-flow chemistry.*  Hannes P. L. Gemoets (TU/e). |
| **2017** | *Accelerated (photo)redox chemistry in continuous-flow microreactors.*  Natan J. W. Straathof (TU/e). |
| **2016** | *Flow Reactor Networks for integrated synthesis of active pharmaceutical ingredients.*  Svetlana Borukhova (TU/e). |
| **2016** | *Use of supported liquid-phase catalysts and supercritical CO2 in continuous micro flow.*  Stefan C. Stouten (TU/e). |
| **2016** | *The direct synthesis of adipic acid from cyclohexene and hydrogen peroxide by a continuous micro-flow process.*  Minjing Shang (TU/e). |
| **2015** | *The chemical plant of tomorrow and the future. Process-design intensification at different production scales.*  Iris Vural-Gűrsel (TU/e). Special attention: Cum Laude. |

***Supervision and guidance of postdoctoral researchers***

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| **2017** | Dr. Fang Zhao. Ph.D. from Tsinghua University. Current position: Lecturer at East China University of Science and Technology (ECUST). |
| **2016** | Dr. Alexander Nyuchev. Ph.D. from Lobachevsky State University of Nizhny Novgorod (Russia). Current position: Assistant Professor at Lobachevsky State University of Nizhny Novgorod (Russia). |
| **2016** | Dr. Yuanhai Su. Ph.D. from Dalian Institute of Chemical Physics. Current position: Professor at Shanghai Jiao Tong University. Special attention: recipient of 1000-talents scholarship. |
| **2015** | Dr. Nico Erdmann. Ph.D. from RWTH Aachen. Current position: consultant at Accenture. |

***Participation in research projects – Supervision and guidance of (under-)graduate students***

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| **2018** | *A sunlight driven mini-plant.* Corne Haaij (MSc Student, TU/e) |
| **2017** | *Automated screening of quenching partners and quenching rate determination with database integration.*  Niels J. Koenig (M.Sc. Student, TU/e) |
| **2017** | *Transition-Metal-Catalyzed C-H Fluoroalkylation of Electron-Rich Heteroarenes Using Fluoroalkyl Bromide in Batch and Flow.*  Ali Saadun (M.Sc. Student, TU/e) |
| **2017** | *Numbering-up of LSC-photomicroreactors with a chamber-style distributor.*  Jeroen Janse (M.Sc. Student, TU/e) |
| **2017** | *Visible-Light Photocatalyzed Difluoroalkylation of Alkynes.*  Wout Boon (Erasmus M.Sc. Student, KULeuven, BE) |
| **2017** | *Electrochemical Oxidation of Sulfides in Continuous Micro-flow.*  Menno Lanting (M.Sc. Student, TU/e) |
| **2017** | *Towards a modular design for an electrochemical microreactor*  Wouter De Smet (M.Sc. Student, TU/e) |
| **2017** | *A broadly applicable red dye doped luminescent solar concentrator photomicroreactor.*  Jeroen Dobbelaar (M.Sc. Student, TU/e). |
| **2017** | *Automated screening and optimization for photoredox catalysis.*  Koen Drummen (M.Sc. Student, TU/e). |
| **2017** | *Arylation of cysteine residues via photoredox catalysis in batch and flow.*  Marc H. M. van den Bosch (M.Sc. Student, TU/e). |
| **2016** | *Investigation of two UV-induced isomerizations by means of actinometry measurements.*  Teodora Tsompanoglou (M.Sc. Student, TU/e). |
| **2016** | *Exploring the scope of the photocatalytic trifluoromethylation of styrenes in batch and flow.*  Sten Cramer (M.Sc. Student, TU/e). |
| **2016** | *A Comparison between Classical Cross-coupling and C-H Activation via Experiments, Cost Analysis and Green Metrics.*  Arian Schouten (M.Sc. Student, TU/e). |
| **2016** | *Sensitivity analysis of important process parameters for the scale-up of microreactors for photoredox catalysis via numbering-up.*  Rong Fan (M.Sc. Student, TU/e). |
| **2016** | *Rapid prototyping of Luminescent Solar Concentrator based photoreactors via 3D printing.*  Eric W. Wieland (M.Sc. Student, TU/e). |
| **2016** | *Catalyst free electrochemical oxidation of sulfides in continuous microflow.*  Bennie Knoops (M.Sc. Student, TU/e). |
| **2016** | *Cross-dehydrogenative coupling of aromatic compounds in continuous-flow microreactors.*  Benjamin Bosmans (M.Sc. Student, TU/e). |
| **2016** | *Meta-Selective C-H Arylation of Electron-rich Aromatics in Micro Flow.*  Kirsten Verstraete (M.Sc. Student, TU/e). |
| **2016** | *Biomolecule Functionalization via Photoredox Catalysis.*  Maarten Rubens (M.Sc. Student, TU/e). |
| **2015** | *Continuous-flow synthesis of CF3-vinylic compounds via Heck type coupling and photoredox catalysis.*  Nicolle Beckers (M.Sc. Student, TU/e). |
| **2015** | *Accurate Measurements of the Photon Flux in Multiphase Reactor Systems by Actinometry.*  Robin Verijke (M.Sc. Student, TU/e). |
| **2015** | *A convenient internal numbering-up strategy for the scale up of gas-liquid photoredox catalysis.*  Koen Kuijpers (M.Sc. Student, TU/e). |
| **2015** | *TiO2 catalyzed aerobic oxidation of thiols in a photomicroreactor.*  Patricia Tijssen (M.Sc. Student, TU/e). |
| **2014** | *Continuous-flow synthesis of CF3-vinylic compounds via Heck-type coupling.*  Luuk Spijkers (M.Sc. Student, TU/e). |
| **2014** | *Combining Photoredox Catalysis and C-H activation for the Site-selective Arylation of 1-methylindole.*  Liesbeth Colpaert (Erasmus Student, KaHo Sint Lieven). |
| **2014** | *Direct Functionalization of Heterocycles through Generation of a Short-lived Organolithium Intermediate in Micro-Flow.*  Sieuwert Blommaert (Erasmus Student, KaHo Sint Lieven). |
| **2014** | *The Enzymatic Epoxidation of Styrene in Microflow.*  Robin Dellaert (M.Sc. Student, TU/e). |
| **2014** | *Optimization of key steps towards Rufinamide and Aripiprazole.*  Marc Van den Bergh (M.Sc. Student, TU/e). |
| **2014** | *Thermal Claisen Rearrangement in Flow – Increasing Selectivity of Two-step Synthesis.*  Max Spapens (M.Sc. Student, TU/e). |
| **2014** | *Continuous metal scavenging with a flow liquid-liquid extraction unit.*  Ferry Aldiansyah (M.Sc. Student, TU/e). |
| **2014** | *Photoredox-Catalyzed Trifluoromethylation of Thiols in Microflow.*  Bart Tegelbeckers (M.Sc. Student, TU/e). |
| **2014** | *Perfluorovinylation of Anilines in Continuous Micro Flow.*  Laura Kollau (M.Sc. Student, TU/e). |
| **2014** | *Photoredox Aerobic Oxidation of Thiols to Disulfides in a Photomicroreactor.*  Ali Talla (M.Sc. Student, TU/e). |
| **2014** | *Photocatalytic Perfluoralkylation in Photomicroreactors and a Study Towards the Distance-to-*  *Time Transformation.*  Dannie J. G. P. van Osch (M.Sc. Student, TU/e). |
| **2013** | *Synthesis of perfluoroalkylated heterocyclic substrates facilitated by photoredox catalysis in a capillary microreactor.*  Hannes Gemoets (Erasmus Student, KaHo Sint Lieven). |
| **2012** | *Copper(I)-catalyzed azide-alkyne cycloaddition in a micro flow system: Catalyst activity study enabling high T operation and coupling to flow copper scavenging.*  Alvaro C. Varas (M.Sc. Student, TU/e). |
| **2012** | *Enzyme immobilization with innovative carrier materials for chiral synthesis of alfa-aminoalcohols in microreactors*.  Hui Fu (M.Sc. Student, TU/e). |
| **2012** | *Steps towards a high pressure intensified and multi-step flow synthesis of 1,2,3-triazoles via catalyst-free Huisgen Cycloaddition*.  Svetlana Borukhova (M.Sc. Student, TU/e). |
| **2012** | *The Claisen rearrangement of allyl phenyl ether and the optimization of the synthesis of allyl phenyl ethers in continuous-flow – High T, p and c processing.*  Danny J. G. P. van Osch (B.Sc. Student, TU/e). |
| **2012** | *Johnson-Claisen rearrangement of cinnamyl alcohol and triethyl ortoacetate in microstructured reactors.*  Ali Talla (B.Sc. Student, TU/e). |
| **2012** | *Influence of Novel Process Windows on the Claisen rearrangement of allyl phenyl ether.*  Brian Driessen (B.Sc. Student, TU/e). |
| **2011** | *Contribution to the development of a multistep flow system for C–C bond formation reactions.*  Andrew Musacchio (Undergraduate Student, MIT, USA) |
| **2009** | *Contribution to the application of chiral imidate,phosphane ligands in several asymmetric test reactions*.  Punit Rasadia (Erasmus-Mundus Student, Ghent University). |
| **2009** | *Contribution to the synthesis of chiral imidate,phosphane ligands and their application in asymmetric allylic alkylation reactions*.  Katrien Bert (Predoctoral Student, Ghent University). |
| **2008** | *Contribution to the synthesis and validation of an imidazolidine organocatalyst for asymmetric α-halogenation*.  Elvan Er (Socrates-Erasmus Student, Ghent University). |
| **2007** | *Contribution to the synthesis and validation of chiral dienes based on a bicyclo[2.2.1]heptadiene backbone*.  Yilmaz Özkiliç (Socrates-Erasmus Student, Ghent University). |

***Research Funding***

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| *Granted Research Project Applications* | | |
| **2018** | Marie Curie Intra-European Fellowship, Dr. Paola Riente.  *Application of Metal Oxide Semiconductors in Photocatalysis (MOSPhotocat)* | 178 k€ |
| **2018** | Marie Curie Intra-European Fellowship, Dr. Carlo Sambiagio.  *Flow Chemistry for CH activation (FlowAct)* | 166 k€ |
| **2017** | Host of a CSC scholarship, Ir. Yiran Cao.  *Electrochemistry in flow.* | 200 k€ |
| **2017** | Collaboration with AbbVie.  *CH oxidation.* | 25 k€ |
| **2016** | FET Open, co-applicant (Prof. Hessel Coordinator).  *Catalyst Cascade Reactions in ‘One-Flow’ within a Compartmentalized, Green-Solvent ‘Digital Synthesis Machinery’ – End-to-End Green Process Design for Pharmaceuticals* (One-Flow)*.* | 3,900 k€ |
| **2015** | VIDI award from Dutch Science Foundation, NWO, personal grant.  *Sensitized photoredox catalysis in continuous-flow microreactors* (SensPhotoFlow)*.* | 800 k€ |
| **2015** | Marie Curie Innovative Training Network, coordinator of the project, incl. 3 Ph.D. positions and a part-time project manager.  *Accelerating photoredox catalysis in continuous-flow systems.* (Photo4Future) | 2,289 k€ |
| **2014** | Marie Curie Intra-European Fellowship, Dr. Yuanhai Su.  *Synthesis of trifluoromethylstyrene compounds via gas-liquid photoredox catalysis in continuous-flow microreactors.* (PhotoFlow) | 200 k€ |
| **2013** | CatchBio grant from Dutch Science Foundation, NWO.  *Boosting organometallic-catalyzed C–H oxidation reactions in continuous-flow microreactors.* | 225 k€ |
| **2013** | ECHO grant from Dutch Science Foundation, NWO.  *Breaking the unbreakable: C-H carbonylation in micro flow and vision to process.* | 260 k€ |
| **2013** | Marie Curie Career Integration Grant, personal grant.  *C–H Activation and Carbonylation in Continuous Microflow (FLACH)* | 100 k€ |
| **2012** | VENI award from Dutch Science Foundation, NWO, personal grant.  *The Fluor Revolution: Boosting Fluorination in Continuous-Flow.* | 250 k€ |
| **2010** | Fulbright-Hays award, Bureau of Educational and Cultural Affairs, US Department of State, personal grant.  *Multistep Microchemical Synthesis of Imatinib – Towards a Continuous Manufacturing of Pharmaceuticals.* | ---[a] |
| **2005-2009** | Extraordinary Research Fund fellow (BOF grant), personal grant. | 200 k€ |
|  | *Novel efficient chiral ligands for asymmetric catalysis.* |  |
| [a] Involves sponsorship of VISA, flight tickets, health insurance, etc. | | |
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***Outreach activities***

* Ted Talk at TEDxAUCollege “The sunny side of chemistry” (Amsterdam, March 7th, 2017): <https://www.youtube.com/watch?v=bZ89r2tK3xc>
* Participation in the BZT show for the demonstration of chemical experiments with children (Dutch television, Ned 3, February 2, 2013).
* Teacher days: Presentation for high school science teachers during docentendag ST (2013-2014).
* Presentation about photoredox catalysis in microreactors for highly gifted children.
* Demonstration of chemical experiments (Basisschool EigenWijs, Veldhoven, groep 7-8).
* Uitleggen van wetenschappelijke fenomenen op de Nederlandse Radio (NPO Radio 2, Programma: Bureau Kijk in de Vegte)

1. 26-07-2015 ‘Waarom klinkt heet water schenken anders dan koud water?'   
   <http://www.npo.nl/bureau-kijk-in-de-vegte/26-07-2015/RBX_KRO_729397/RBX_KRO_1520543> (radio interview)
2. 05-07-2015 'Waarom blijft plastic nat in de vaatwasser?'   
   <http://www.npo.nl/bureau-kijk-in-de-vegte/05-07-2015/RBX_KRO_729394/RBX_KRO_1283784> (radio interview)
3. 11-10-2015 ‘Waarom loopt het geluid op als je met een lepel op de bodem van een kop koffie tikt?’

<http://www.kro-ncrv.nl/bureaukijkindevegte/seizoenen/2015/30-141062-11-10-2015/290-105413-waarom-loopt-het-geluid-op-als-je-met-een-lepel-op-de-bodem-van-een-kop-koffie-tikt> (radio interview)

* Twitter: @NoelGroupTUE

***Other professional activities***

* Flow Chemistry Consultant for InnoStudio (Hungary), AbbVie (USA), Merck (USA), Sun Pharmaceuticals (India).
* I am an associate editor for Journal of Flow Chemistry.
* I am actively involved in the peer-review process of several scientific journals.
* In 2012-2013, I was a docent coach at TU/e for novel bachelor students in the department Chemical Engineering and Chemistry.
* Teaching: Micro Process Technology (6KM45), Advanced Inorganic Chemistry (6KM60), Introduction chemistry and chemical technology (6A1X0), Chemical Reaction Engineering (6P3X0), Advanced Organic Chemistry (8RM00)
* I am a member of several professional associations:
  + Royal Society of Chemistry (RSC), membership number 435174.
  + Royal Society of Chemistry Flanders (KVCV), membership number 9282.
  + American Chemical Society (ACS), membership number 30140007.