

CURRICULUM VITAE

Joanna Wencel-Delord
Associated Scientist 2 at CNRS, National Center for Scientific Research

European School of Chemistry, Polymers and Materials (ECPM)
University of Strasbourg,
25, rue Becquerel, F-67087 Strasbourg Cedex2
Tel. +33 (0)3 68 85 26 43



Date/Place of birth: 25 January 1983 in Poznań, Poland
Polish Nationality, Married, 1 child

e-mail : wenceldelord@unistra.fr

Research experience and Education:

- Since 10. 2013:* **Associated Scientist 2 at CNRS**, National Center for Scientific Research Laboratory "SynCat" (Asymmetric Synthesis and Catalysis), University of Strasbourg (France), ECPM.
Scientific Mentor: Prof. Françoise Colobert
- 2012 – 2013:* **Temporary Assistant Professor (ATER)** at European School of Chemistry, Polymers and Materials (ECPM); University of Strasbourg, Laboratory: SyBio directed by Prof. Philippe Compain.
Subject : *"Synthesis of iminosugars derivatives via Rh-catalyzed C-H amination reactions"*
- 01. 2011–06. 2012:* **Post-doctoral fellow** in the group of Prof. Frank Glorius at the University of Münster (Münster, Germany).
Subject: *"Transition metal catalyzed C-H bond activation"*
- 2007-2010:* **PhD thesis**, University Rennes 1, Laboratory "Chemical Science of Rennes" (UMR 6226), (France)
Supervision of Dr. Christophe. Crévisy and Dr. Marc Mauduit.
Subject : *"Synthesis of chiral DiPPAM ligands and evaluation of their metal complexes for C-C bond couplings"*
- 2006-2007:* **Master of Research** in Molecular chemistry, University Rennes 1 (France).
- 2004-2007:* **Engineering Degree in Chemistry** (National School of Chemistry in Rennes, France) (ENSCR).

Supervision of students (as CNRS associated scientist):

- 4 post-doctorant students
- 3 PhD student
- 3 Master Student

Teaching:

- 2013 – 2016:* Annual participation in practical courses in organic chemistry at ECPM, in the context of 3-weeks research projects.
- 2012 – 2013:* Tutoring of practical courses in organic chemistry as ATER (Temporary Assistant Professor) at ECPM, University of Strasbourg.
- 2007-2010:* Tutoring of practical courses in organic chemistry, University Rennes 1

Collective responsibilities:

- Participation in “**COST Action: CA15106 - C-H Activation in Organic Synthesis (CHAOS)**”; Head of “Asymmetric C-H activation” Working group and Management Committee member
- Various collective duties in the laboratory (ordering of chemicals, implication in the NMR service, member of the “Chemical Store of the University of Strasbourg”).

Research interests:

- Stereoselective C-H Activation
- Axial chirality
- Asymmetric synthesis implying hypervalent iodine
- Visible light photocatalysis
- Dual Catalysis

Scientific records:

- Publications:* 29 articles and reviews in international journals
- Patents:* 1 patent
- Book chapters:* 1 book chapter in « Topics in Organometallic Chemistry »
- Oral communications:* 4 communications in the international symposiums
2 invited academic conferences
1 invited industrial conference
- Posters:* 5 presentations; 1 poster prize at ESOC 2015
- h-index 14

Distinctions:

- Selected by French Society of Chemistry, Organic Chemistry Division, to participate in the prestigious Young Investigator Workshop, Avairo (Portugal), 2015
- Invitation to submit an article in Organic Chemistry Frontiers « Emerging Investigators » Special Issue (2015)
- Fellow of « University of Strasbourg Institute for Advanced Study » (USIAS) (research project grant)
- Prestigious “National Research Agency, Young Researcher Grant” (2015)

Publications:

- 1) “*Stereoselective Metal-catalyzed C-C bond Coupling Reactions by Stereoconvergence, Dynamic Kinetic asymmetric transformation or Dynamic Kinetic Resolution*”, Wencel-Delord, J.; Colobert, F. *Synthesis*, **2016**, accepted article.
- 2) “*Mild metal-catalyzed C-H activation: examples and concepts*”, Gensch, T.; Hopkinson, M. N.; Glorius, F.; Wencel-Delord, J. *Chem. Soc. Rev.* **2016**, *45*, 2900.
- 3) “*Asymmetric C-H activation as modern strategy towards expedient synthesis of Steganone*”, Dherbassy, Q.; Wencel-Delord, J.; Colobert, F. *Tetrahedron*, **2016**, doi:10.1016/j.tet.2016.03.060
- 4) “*Remarkable solvent effect of fluorinated alcohols on transition metal catalysed C-H functionalizations*”, Wencel-Delord, J.; Colobert, F. *Org. Chem. Front.* **2016**, *3*, 394.
- 5) “*1,1,1,3,3,3-hexafluoroisopropanol as remarkable medium for atroposelective sulfoxide directed Fujiwara-Moritani reaction with acrylates and styrenes*”, Dherbassy, Q.; Schwertz, G.; Chessé, M.; Hazra, C. K.; Wencel-Delord, J.; Colobert, F. *Chem. Eur. J.* **2016**, *22*, 1735.
- 6) « *Pushing the limits of catalytic C-H amination in polyoxygenated cyclobutanes* » Nocquet, P.-A.; Hensienne, R.; Wencel-Delord, J.; Laigre, E.; Sidelarbi, K.; Becq, F.; Norez, C.; Hazelard' D.; Compain, P. *Org. Biomol. Chem.* **2016**, *14*, 2780.
- 7) “*Diastereoselective, substrate-controlled transition metal catalyzed C-H activation: an old solution to a modern synthetic challenge*”, Wencel-Delord, J.; Colobert, F. *Synlett*, **2015**, *26*, 2644.
- 8) “*Synthesis of a new class of iminosugars based on constrained azaspirocyclic scaffolds by way of catalytic C-H amination*”, Nocquet, P.-A.; Hensienne, R.; Wencel-Delord, J.; Wimmer, E.; Hazelard' D.; Compain, P. *Org. Biomol. Chem.* **2015**, *13*, 9176.
- 9) “*Recent advances and new concepts for the synthesis of axially stereo-enriched biaryls*”, Wencel-Delord, J.; Panossian, A.; Leroux, F. R.; Colobert, F. *Chem Soc. Rev.* **2015**, *44*, 3418.
- 10) “*Enantiopure sulfoxides: efficient chiral directing group for stereoselective C-H bond activation: towards the control of axial chirality*”, Dherbassy, Q.; Schwertz, G.; Hazra, C. K.; Wencel-Delord, J.; Colobert, F. *Phosphorus Sulfur Silicon Relat. Elem.* **2015**, *190*, 1339.
- 11) “*Synthesis of Axially Chiral Biaryls through Sulfoxide-Directed Asymmetric Mild C-H Activation and*

Dynamic Kinetic Resolution", Hazra, C. K; Dherbassy, Q.; Wencel-Delord, J.; Colobert, F. *Angew. Chem. Int. Ed.* **2014**, *53*, 13871.

- 12) "Asymmetric C(sp²)-H activation", Wencel-Delord, J.; Colobert, F. *Chem. Eur. J.* **2013**, *19*, 14010.
- 13) "Enantioselective 1,6-Conjugate Addition of Dialkylzinc Reagents to Acyclic Dienones Catalyzed by Cu-DiPPAM Complex—Extension to Asymmetric Sequential 1,6/1,4-Conjugate Addition", Magrez-Chiquet, M.; Morin, M. S. T.; Wencel-Delord, J.; Amraoui, S. D.; Baslé, O.; Alexakis, A.; Crévisy, C.; Mauduit, M. *Chem. Eur. J.* **2013**, *19*, 13663.
- 14) "C–H bond activation – enabling rapid build-up & unique late stage diversification of functional molecules", Wencel-Delord, J.; Glorius, F. *Nature Chem.* **2013**, *5*, 369.
- 15) "Rhodium(III) and Hexabromobenzene - A Catalyst System for the Cross-Dehydrogenative Coupling of Simple Arenes and Heterocycles with Arenes Bearing Directing Groups", Wencel-Delord, J.; Nimphius, C.; Wang, H.; Glorius, F. *Angew. Chem. Int. Ed.* **2012**, *51*, 13001.
- 16) "Beyond Directing Groups: Transition Metal-Catalyzed C-H Activation of Simple Arenes", Kuhl, N.; Hopkinson, M.; Wencel-Delord, J.; Glorius, F. *Angew. Chem. Int. Ed.* **2012**, *51*, 10236.
- 17) "Significant Asymmetric Amplification in Enantioselective Cu/DiPPAM-catalyzed 1,6- and 1,4-Conjugate Additions of Diethylzinc to (Di)enones", Magrez, M.; Wencel-Delord, J.; Alexakis, A.; Crévisy, C.; Mauduit, M. *Org. Lett.* **2012**, *14*, 3576.
- 18) "Cp*Rh-Catalyzed C–H Activations: Versatile Dehydrogenative Cross-Couplings of C_{sp2} C–H Positions with Olefins, Alkynes, and Arenes", Patureau, F. W.; Wencel-Delord, J.; Glorius, F. *Aldrichimica Acta* **2012**, *45*, 31.
- 19) "High Yielding, Versatile, and Practical [Rh(III)Cp*]-Catalyzed Ortho Bromination and Iodination of Arenes", Schröder, N.; Wencel-Delord, J.; Glorius, F. *J. Am. Chem. Soc.* **2012**, *134*, 8298.
- 20) "Undirected Arene and Chelate-Assisted Olefin C-H Bond Activation: [Rh(III)Cp*]-Catalyzed Dehydrogenative Alkene-Aryl Coupling as New Pathway for the Selective Synthesis of Highly Substituted Z-Olefins", Wencel-Delord, J.; Nimphius, C.; Patureau, F. W.; Glorius, F. *Chem. Asian J.* **2012**, *7*, 1208.
- 21) "[Rh(III)Cp*]-Catalyzed Dehydrogenative Aryl-Aryl Bond Formation", Wencel-Delord, J.; Nimphius, C.; Patureau, F. W.; Glorius, F. *Angew. Chem. Int. Ed.* **2012**, *51*, 2247.
- 22) "Towards mild metal-catalyzed C-H bond activation", Wencel-Delord, J.; Dröge, T.; Liu, F.; Glorius, F. *Chem. Soc. Rev.* **2011**, *40*, 4740.
- 23) "Enantioselective 1,4-conjugate addition of diethylzinc to (E)-alkenyl aryl ketones catalysed by Cu/DiPPAM complex", Magrez, M.; Wencel-Delord, J.; Crévisy, C.; Mauduit, M. *Tetrahedron* **2012**, *68*, 3507.
- 24) "N-[[2-(Diphenylphosphino)phenyl]methylene]-3-methyl-L-valine Sodium Salt", Wencel-Delord, J.; Mauduit, M.; Crévisy, C. *e-EROS Encyclopedia of Reagents for Organic Synthesis* **2010** John Wiley & Sons, Ltd., doi: 10.1002/047084289X.rm01307.
- 25) "Enantioselective 1,6-Conjugate Addition to Cyclic Dienones Catalyzed by the Cu-DiPPAM Complex", Wencel-Delord, J.; Alexakis, A.; Crévisy, C.; Mauduit, M. *Org. Lett.* **2010**, *12*, 4335.
- 26) "Chelating Hydroxyalkyl NHC as Efficient Chiral Ligands for Room-Temperature Copper-Catalyzed Asymmetric Allylic Alkylation", Jennequin, T.; Wencel-Delord, J.; Rix, D.; Daubignard, J.; Crévisy, C.; Mauduit, M. *Synlett* **2010**, *11*, 1661.
- 27) "Isolation and Characterisation of a Chiral η¹-Allyl Palladium DiPPAM Complex: Application to the

Enantioselective Pd-Catalyzed Allylic Alkylation", Wencel, J.; Laurent, I.; Toupet, L.; Crévisy, C.; Mauduit, M. *Organometallics* **2010**, *29*, 1530.

28) *Chiral, Chelating, Hydroxyalkyl and Hydroxyaryl N-Heterocyclic Carbenes: Design, Synthesis and Application in Copper-Catalyzed Asymmetric Conjugate Addition (Cu-ACA)*", Wencel, J.; Mauduit, M.; Hénon, H.; Kehrl, S.; Alexakis, A. *Aldrichimica Acta* **2009**, *42*, 43.

29) *Chiral phosphinoazomethinylate salts as new 'one-step available' ligands for copper-catalyzed asymmetric conjugate addition*", Wencel, J.; Rix, D.; Jennequin, T.; Labat, S.; Crévisy, C.; Mauduit, M. *Tetrahedron: Asymmetry* **2008**, *19*, 1804.

Patent: *"Synthesis of tridentate azomethinylate salts and their applications in asymmetric catalysis"*, Wencel, J.; Rix, D.; Crévisy, C.; Mauduit, M. PCT. Int Appl WO 2009050284, 2009.

Book chapter: *"Rh(III) and Ir(III) catalyzed C-C bond cross couplings from C-H bonds"*, Wencel-Delord, J.; Patureau, F. W.; Glorius, Frank. *Top. Organomet. Chem.* **2015**, DOI 10.1007/3418_2015_140