

# Thierry OLLEVIER

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## Education

- **1997:** **Ph.D.** in Chemistry – University of Namur (Belgium)
- **1991:** **B.Sc.** in Chemistry – University of Namur

## Academic Career Development

- **2010 –:** **Full Professor** – Université Laval (Québec, Canada)
- **2006 – 2010:** **Associate Professor** – Université Laval
- **2001 – 2006:** **Assistant Professor** – Université Laval

## Academic Experience

- **February 2020:** **Visiting Professor** (Università di Salerno, Italy)
- **January 2020:** **Visiting Professor** (Università di Bologna, Italy)
- **November 2017:** **Visiting Professor** (Paris XI-Orsay, France)
- **June 2017:** **Visiting Professor** (São Luis, Brasil)
- **May 2017:** **Visiting Professor** (Université d'Orléans, France)  
Laboratoire de Chimie Organique et Analytique (Lab. Prof. I. Gillaizeau)
- **2013 (1 month):** **Visiting Professor**  
ENSICAEN/Université de Caen (Lab. Pr A.-C. Gaumont, France)
- **2012 (1 month):** **Visiting Professor**  
Université de Toulouse (Lab. Pr R. Chauvin, France)
- **2012 (11 months):** **Visiting Professor**  
École Nationale Supérieure de Chimie Montpellier (Lab. Dr M. Taillefer, France)
- **2000 – 2001:** **Post-Doctoral Fellow**  
Supervisor: Prof. A. B. Charette, University of Montreal (Canada)
- **1998 – 2000:** **Post-Doctoral Fellow**  
Supervisor: Prof. B. M. Trost, Stanford University (USA)
- **1997 (4 months):** **Post-Doctoral Fellow**  
Supervisor: Prof. I. E. Markó, Université catholique de Louvain (Belgium)
- **1991 – 1997:** **Ph.D. in Chemistry (*Summa cum laude*)**  
Supervisor: Prof. A. Krief, University of Namur
- **1989 – 1991:** **B.Sc. in Chemistry (*Summa cum laude*)**  
Supervisor: Prof. A. Krief, University of Namur
- **1990 (2 months):** Industrial **Internship** in Insecticide Chemistry  
Supervisor: Dr. A. J. Whittle, ICI Agrochemicals (Jealott's Hill, UK)
- **1989 (1 month):** Research **Internship** (Molecular Spectroscopy)  
Supervisor: Prof. N. M. D. Brown, University of Ulster (Coleraine, UK)

## Administrative Responsibilities

- **2012–:** President of the *Comité-conseil de la Bibliothèque*, U. Laval
- **2016–19, 2007–13:** Member of the Board of Administrators, U. Laval
- **2016–18, 2007–13:** Member of the Executive Committee, U. Laval
- **2013–15:** Member of the Academic Council, U. Laval

## **Research Grants & Training**

- Individual grants: 1.550 million \$ (2001–2022)
- Team grants: 1.25 million \$ (2001–2022)
- 6 Post-doctoral fellows, 17 Ph.D. students (13 defended theses)
- 13 M.Sc. students, 49 international interns

## **Areas of Interest and Expertise**

- Organic synthesis, synthetic methodology
- Iron catalysis, diazo compounds, fluorine chemistry, reactions in flow
- Asymmetric catalysis, organometallic chemistry
- Green chemistry, catalysis in aqueous conditions
- Administration and management of research, research development

## **Publications and Conferences on Invitation**

- 116 Publications (84 research articles, 30 encyclopedia articles, 2 conference proceedings)
- 1 Edited book, 4 book chapters, 1 patent
- 2522 Citations, h factor = 30 (*Web of Science*, 4 March 2023)
- 106 Conferences on invitation (scientific meetings: 21, univ. & industr. conf.: 85)

## **Organization of a Scientific Meeting**

- Chairman of the Scientific Program of the 96<sup>th</sup> Canadian Chemistry Conference, Québec, Canada (26–30 May **2013**)

## **Prizes and honors**

- Fellow of the Royal Society of Chemistry (UK) (**2016**–).
- “Professor of the Month” awarded by *Silicycle*, Québec, February **2014**.
- “Best Young Presenter Prize” awarded by the *Australian Journal of Chemistry* at the Eurasia12 meeting, Corfu, April **2012**.
- Professeur étoile (Teaching prize based on the students’ evaluations, Faculté des sciences et de génie, Université Laval, **2022–2017, 2014, 2013, 2011, 2010, 2004**).
- Highlighted articles: *Synfacts* (7), *ChemInform* (14), journal covers (6).
- Member of the *Commission de terminologie et de néologie de la chimie et des matériaux* (Ministère de l’Économie, des Finances et de l’Industrie, Paris) (**2010**–).
- Prix Stas (Prize from the Belgian Royal Academy, **1997**).

## **Referee and Editor Responsibilities**

- Editor-in-Chief of *SynOpen* (**2023**–)
- Member of the advisory board of *SynOpen* (**2019–2022**)
- Guest editor for *RSC Advances* – “Catalytic Organic Transformations” (**2019**)
- Associate Editor of *RSC Advances* (**2015–2022**)
- Member of the editorial board of *Current Organic Chemistry*, *Mini-reviews in Organic Chemistry*, *Letters in Organic Chemistry*
- Vice-President of CES 07 (organic chemistry) scientific committee of Agence Nationale de la Recherche (ANR, France, **2017–2018**)
- Member of CES 07 (organic chemistry) scientific committee of Agence Nationale de la Recherche (ANR, France, **2015–2017**)

- Referee for various international funding agencies: European Union (Horizon 2020), ANR (France), NSERC (Canada), Canada Foundation for Innovation, FRQNT (Québec–Canada), Petroleum Research Fund
- Referee for various international journals (*Nature Comm.*, *Science*, ACS, RSC, Wiley, Elsevier journals)
- Editor of a volume entitled “Bismuth-Mediated Organic Reactions” in the series *Topics in Current Chemistry* (Springer Verlag, **2012**, vol. 311)

## Selection of representative publications

82. Lauzon, S.; Ollevier, T. "Fluorine in metal-catalyzed asymmetric transformations: the lightest halogen causing a massive effect", *Chem. Sci.* **2022**, *13*, 10985–11008.
80. Tanbouza, N.; Petti, A.; Leech, M.; Caron, L.; Walsh, J.; Lam, K.; Ollevier, T. "Electrosynthesis of Stabilized Diazo Compounds from Hydrazones", *Org. Lett.* **2022**, *24*, 4665–4669.
79. Tanbouza, N.; Caron, L.; Khoshoei, A.; Ollevier, T. "Catalytic Bismuth(V)-Mediated Oxidation of Hydrazones into Diazo Compounds", *Org. Lett.* **2022**, *24*, 2675–2678.
78. Lauzon, S.; Schouwey, L.; Ollevier, T. "C2-Symmetric 2,2'-Bipyridine- $\alpha,\alpha'$ -1-adamantyl-diol Ligand: Bulky Iron-Complexes in Asymmetric Catalysis", *Org. Lett.* **2022**, *24*, 1116–1120.
77. Ollevier, T.; Carreras, V. "Emerging Applications of Aryl Trifluoromethyl Diazoalkanes and Diazirines in Synthetic Transformations", *ACS Organic & Inorganic Au* **2022**, *2*, 83–98.
75. Lauzon, S.; Ollevier, T. "2,2'-Bipyridine- $\alpha,\alpha'$ -trifluoromethyl-diol ligand: synthesis and application in the asymmetric Et<sub>2</sub>Zn alkylation of aldehydes", *Chem. Commun.* **2021**, *57*, 11025–11028.
74. Carreras, V.; Ollevier, T. "Fluoride-triggered Synthesis of 1-Aryl-2,2-Difluoroalkenes via Desilylative Defluorination of (1-Aryl)-2,2,2-trifluoroethyl-silanes", *J. Org. Chem.* **2021**, *86*, 13160–13168.
71. Tanbouza, N.; Carreras, V.; Ollevier, T. "Photochemical Cyclopropenation of Alkynes with Diazirines as Carbene Precursors in Continuous Flow", *Org. Lett.* **2021**, *23*, 5420–5424.
70. Petti, A.; Fagnan, C.; van Melis, C.; Tanbouza, N.; Garcia, A.; Mastrodonato, A.; Leech, M.; Goodall, I.; Dobbs, A.; Ollevier, T.; Lam, K. "Supporting Electrolyte-Free Anodic Oxidation of Oxamic Acids into Isocyanates: An Expedient Way to Access Ureas, Carbamates, and Thiocarbamates", *Org. Proc. Res. & Dev.* **2021**.
69. Lauzon, S.; Caron, L.; Ollevier, T. "Efficient stereoselective synthesis of chiral 3,3'-dimethyl-(2,2'-bipyridine)-diol ligand and applications in Fe<sup>II</sup>-catalysis", *Org. Chem. Front.* **2021**, *8*, 2242–2249.
67. Tanbouza, N.; Ollevier, T.; Lam, K. "Bridging Lab and Industry with Flow Electrochemistry", *iScience* **2020**, *23*, 101720.
63. Carreras, V.; Besnard, C.; Gandon, V; Ollevier, T., "Asymmetric Cu<sup>I</sup>-Catalyzed Insertion Reaction of 1-Aryl-2,2,2-trifluoro-1-diazoethanes into Si-H Bonds", *Org. Lett.* **2019**, *21*, 9094–9098.
58. Keipour, H.; Jalba, A.; Tanbouza, N.; Carreras, V.; Ollevier, T. "alpha-Thiocarbonyl Synthesis via Fe<sup>II</sup>-Catalyzed Insertion Reaction of alpha-Diazocarbonyls into S-H Bonds", *Org. Biomol. Chem.* **2019**, *17*, 3098–3102.
57. Zaid, Y.; Mboyi, C. D.; Pichette Drapeau, M.; Radal, L.; Ouazzani Chahdi, F; Kandri Rodi, Y; Ollevier, T.; Taillefer, M., "Transition-Metal-Free alpha-Vinylation of Enolizable Ketones with  $\beta$ -Bromostyrenes", *Org. Lett.* **2019**, *21*, 1564–1568.
55. Pichette Drapeau, M.; Tlili, A.; Zaid, Y.; Sotiropoulos, J.-M.; Ollevier, T.; Taillefer, M. "Transition-Metal-Free Synthesis of Biarylmethanes from Aryl Iodides and Benzylic Ketones", *Chem. Eur. J.* **2018**, *24*, 17449–17453.
53. Li, M.; Carreras, V.; Jalba, A.; Ollevier, T. "Asymmetric Diels-Alder Reaction of  $\alpha,\beta$ -Unsaturated Oxazolidin-2-one Derivatives Catalyzed by a Chiral Fe(III)-Bipyridine Diol Complex", *Org. Lett.* **2018**, *20*, 995–998.
52. Xu, W.; Ollevier, T.; Kleitz, F. "Iron-Modified Mesoporous Silica as Efficient Solid Lewis Acid Catalyst for the Mukaiyama Aldol Reaction", *ACS Cat.* **2018**, *8*, 1932–1944.
50. Lauzon, S.; Keipour, H.; Gandon, V.; Ollevier, T. "Asymmetric Fe<sup>II</sup>-Catalyzed Thia-Michael Addition Reaction to  $\alpha,\beta$ -Unsaturated Oxazolidin-2-one Derivatives", *Org. Lett.* **2017**, *19*, 5736–5739.
49. Keipour, H.; Ollevier, T. "Iron-Catalyzed Carbenoid Insertion of  $\alpha$ -Diazoesters into Si-H Bonds", *Org. Lett.* **2017**, *19*, 5736–5739.

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48. Keipour, H.; Carreras, V.; Ollevier, T. “Progress in the Catalytic Carbene Insertion Reaction into the Silicon-Hydrogen Bond”, *Org. Biomol. Chem.* **2017**, *15*, 5441–5456.
47. Keipour, H.; Jalba, A.; Delage-Laurin, L.; Ollevier, T. “Copper-Catalyzed Carbenoid Insertion of  $\alpha$ -Diazoesters and  $\alpha$ -Diazoketones into Si–H and S–H Bonds”, *J. Org. Chem.* **2017**, *82*, 3000–3010.
46. Kraiem, J.; Ollevier, T., “Atom economical synthesis of N-alkylbenzamides via iron(III) sulfate catalyzed rearrangement of 2-alkyl-3-aryloxaziridines in water and in the presence of surfactant”, *Green Chem.* **2017**, *19*, 1263–1267.
45. Jalba, A.; Régnier, N.; Ollevier, T., “Enantioselective Sulfoxidation and Highly Efficient Tandem Kinetic Resolution using aqueous  $H_2O_2$  and in situ Generated Chiral Iron Catalysts”, *Eur. J. Org. Chem.* **2017**, 1628–1637.
44. Kraiem, J.; Ghedira, D.; Ollevier, T., “Hydrogen peroxide/dimethyl carbonate: a green system for epoxidation of N-alkylimines and N-sulfonylimines. One-pot synthesis of N-alkyloxaziridines from N-alkylamines and (hetero)aromatic aldehydes”, *Green Chem.* **2016**, *18*, 4859–4864.
43. Ollevier, T., “Iron bis-oxazoline complexes in asymmetric catalysis”, *Catal. Sci. Technol.* **2016**, *6*, 41–48.
39. Pichette Drapeau, M.; Fabre, I.; Grimaud, L.; Ciofini, I.; Ollevier, T.; Taillefer, M., “Transition-Metal-Free  $\alpha$ -Arylation of Enolizable Aryl Ketones and Mechanistic Evidence for a Radical Process”, *Angew. Chem. Int. Ed.* **2015**, *54*, 10587–10591.
38. Lafantaisie, M.; Mirabaud, A.; Plancq, B.; Ollevier, T., “Highly Enantioselective Lewis-Acid-Surfactant-Combined Catalysis for the Mukaiyama Aldol Reaction in Water”, *ChemCatChem* **2014**, *6*, 2244–2247.
37. Pichette Drapeau, M.; Ollevier, T.; Taillefer, M., “On the Frontier Between Nucleophilic Aromatic Substitution and Catalysis”, *Chem. Eur. J.* **2014**, *20*, 5231–5236.
36. Kitanosono, T.; Ollevier, T.; Kobayashi, S., “Iron- and Bismuth-Catalyzed Asymmetric Mukaiyama Aldol Reactions in Aqueous Media”, *Chem. Asian J.* **2013**, *8*, 3051–3062.
35. Plancq, B.; Companys, S.; Lafantaisie, M.; Maroun, C.; Ollevier, T., “Highly Efficient Asymmetric Epoxide Opening with Indoles Using a Chiral Bipyridine Iron(II) Catalyst”, *Org. Biomol. Chem.* **2013**, *11*, 7463–7466.
31. Plancq, B.; Ollevier, T., “Iron(II)-catalyzed enantioselective aminolysis of meso-epoxides”, *Chem. Commun.* **2012**, *48*, 3806–3808.
30. Li, Z.; Plancq, B.; Ollevier, T., “Bismuth Triflate-catalyzed Asymmetric Allylation of Aromatic Aldehydes”, *Chem. Eur. J.* **2012**, *18*, 3144–3147.
29. Ollevier, T.; Plancq, B., “Highly Enantioselective Mukaiyama Aldol Reaction in Aqueous Conditions Using a Chiral Bipyridine Iron(II) Catalyst”, *Chem. Commun.* **2012**, *48*, 2289–2291.

## Languages

French: mother tongue, English: fluent, Dutch: excellent knowledge, Italian: basic knowledge