

Pr. Cédric Theunissen

0000-0001-9567-7847 

Laboratoire de Chimie Organique
Service de Chimie et PhysicoChimie Organiques
Université libre de Bruxelles (ULB)
Avenue F. D. Roosevelt 50, CP160/06
1050 Brussels, Belgium

Nationality: Belgian
Date of birth: Dec 2nd, 1989
Languages: French (native), English (fluent), Dutch (basic)
✉ Cedric.Theunissen@ulb.be
☎ +32 2 650 22 98

Education and Research Experience

- Since 2023** (2 years) • **Chargé de Cours** (Assistant Professor)
Laboratoire de Chimie Organique, Université libre de Bruxelles, Belgium
- 2022-2023** (1 year) • **Collaborateur Scientifique FNRS** (FNRS Scientific Collaborator)
Laboratoire de Chimie Organique, Université libre de Bruxelles, Belgium
- 2022** (9 months) • **Senior Scientist** (EOS project Biofact)
Laboratoire de Chimie Organique, Université libre de Bruxelles, Belgium
with Prof. Gwilherm Evano
- 2019-2022** (3 years) • **Chargé de Recherches FNRS** (FNRS Research Fellow)
Laboratoire de Chimie Organique, Université libre de Bruxelles, Belgium
with Prof. Gwilherm Evano
- 2017-2018** (2 years) • **Postdoctoral Researcher**
BAEF fellow (1 year) then *postdoctoral research scientist* (1 year)
Department of Chemistry, Columbia University, New York, USA
Development of a new system for visible-light-controlled olefin metathesis
Supervisor: Prof. Tomislav Rovis
- 2012-2016** (4 years) • **PhD Student** (FRIA Fellow)
Laboratoire de Chimie Organique, Université libre de Bruxelles, Belgium
Development of New Processes for the Direct Functionalization of Arenes and New Cationic Polycyclization Reactions
Supervisor: Prof. Gwilherm Evano
- 2011-2012** (7 months) • **Master Thesis Student**
Laboratoire de Chimie Organique et Photochimie, Université libre de Bruxelles, Belgium
Synthesis of a new tris-heteroleptic ruthenium(II) complex
Supervisor: Prof. Cécile Moucheron
- 2010-2012** (2 years) • **M.Sc. in Chemistry** (Great Distinction)
Université libre de Bruxelles, Belgium
- 2011** (3 months) • **Internship**
UCB Pharma, Belgium
Studies on the crystallization of an API
Supervisor: Dr. Julien Leveque
- 2007-2010** (3 years) • **B.Sc. in Chemistry** (Great Distinction)
Université libre de Bruxelles, Belgium

Teaching Experience (full teaching load)

Starting in 2025	General chemistry course (B.Sc. level, Solvay Brussels School of Economics and Management)
Since 2023	Organic chemistry course (B.Sc. level, ULB), transition-metal catalysis course (M.Sc. level, ULB) and organic chemistry laboratory classes (B.Sc. and M.Sc. levels, ULB)
2021	Organic chemistry course on pericyclic reactions (B.Sc. level, ULB)
2019	Organometallic chemistry course (M.Sc. level, Université de Haute-Alsace, France)
2013-2016	Teaching laboratory classes in organic chemistry (M.Sc. level, ULB)
Since 2012	Co-supervision of students (4 postdoctoral researchers, 2 PhD students, 7 master students, 5 undergraduate students)

Grants and Awards

2023	<i>Collaborateur scientifique grant</i> from the FNRS
2019-2022	<i>Chargé de recherches grant</i> from the FNRS
2017	<i>BAEF grant</i> from the Belgian American Educational Foundation (for postdoctoral work at Columbia University, USA)
2016	<i>Solvay Award 2016</i> (for PhD work)
2012-2016	<i>FRIA fellowship</i> from the FNRS (for PhD work at ULB)

Industry-Related Projects

2023	with <i>Syensqo</i> (France): co-supervision of a master student working on the valorization of chemical byproducts via C-H bond activation.
2022-2023	with <i>Oril</i> (France): co-supervision of 2 postdoctoral researchers working on the development of new carbonylative/Friedel Crafts reactions.
2022	with <i>Solvay</i> (France): co-supervision of a laboratory technician working on the development of a new process to prepare components for Li-ion batteries.
2021-2022	with <i>Sanofi</i> (France): co-supervision of a postdoctoral researcher working on the synthesis of one of Sanofi's API.
2016-2017	with <i>Eli Lilly</i> (USA): collaboration on the synthesis of biologically active compounds initiated by the OIDD program.
2015 & 2019	with <i>Minakem</i> (France): participation to two collaborative projects in process chemistry.
2014	with <i>Sigma Aldrich</i> (USA): large-scale synthesis of nitrogen-substituted alkynes which are commercialized by Sigma-Aldrich.

2025

Member of the Scientific Committee of the “Aromaticity Celebrating Benzene 200 Years” workshop (Dec. 8-10, 2025, ULB), in collaboration with the Solvay Institutes

Publications (25)

1. “Photoredox-Catalyzed Reductive Activation of Ammonium Salts” C. Jacob, J. Annibaleto, C. Theunissen, *Synlett* **2025**, 36, 1729. ([corresponding author](#))
2. “Copper-Catalyzed Coupling between ortho-Haloanilines and Lactams/Amides: Synthesis of Benzimidazoles and Telmisartan” V. Boquet, C. Sauber, R. Beltran, V. Ferrey, F. Rodier, P. Hansjacob, C. Theunissen, G. Evano, *J. Org. Chem.* **2024**, 89, 5469-5479.
3. “Copper-(Photo)Catalyzed Radical Reactions with Organic Halides” G. Evano, C. Theunissen, *Synlett* **2024**, 35, 485-499.
4. “Activation de Liaisons Carbone – Azote et Utilisation des Sels d’Ammonium comme Précurseurs de Radicaux” C. Theunissen, *Chimie Nouvelle* **2022**, 140, 8. ([corresponding author](#))
5. “Ammonium Salts as Convenient Radical Precursors Using Iridium Photoredox Catalysis”, J. Annibaleto, C. Jacob, C. Theunissen, *Org. Lett.* **2022**, 24, 4170-4175. ([corresponding author](#))
6. “A General Synthesis of Azetidines by Copper-Catalyzed, Photoinduced anti-Baldwin Radical Cyclization of Ynamides”, C. Jacob, H. Baguia, A. Dubart, S. Oger, P. Thilmany, J. Beaudelot, C. Deldaele, S. Peruško, Y. Landrain, B. Michelet, S. Neale, E. Romero, V. Van Speybroeck, C. Moucheron, C. Theunissen, G. Evano, *Nat. Commun.* **2022**, 13, 560. ([co-corresponding author](#))
7. “Visible-Light-Controlled Ruthenium-Catalyzed Olefin Metathesis”, C. Theunissen, M. A. Ashley, T. Rovis, *J. Am. Chem. Soc.* **2019**, 141, 6791-6796. This work was covered by a US patent (16/597231).
8. “Discussion Addendum for: Synthesis of Ynamides by Copper-Mediated Coupling of 1,1-Dibromo-1-alkenes with Nitrogen Nucleophiles. Preparation of 4-Methyl-N-(2-phenylethynyl)-N-(phenylmethyl)benzenesulfonamide”, C. Theunissen, P. Thilmany, M. Lahboubi, N. Blanchard, G. Evano, *Org. Synth.* **2019**, 96, 195-213.
9. “[DPEPhos](bcp)Cu]PF₆: A General and Broadly Applicable Copper-Based Photoredox Catalyst” H. Baguia, C. Deldaele, B. Michelet, J. Beaudelot, C. Theunissen, C. Moucheron, G. Evano, *J. Viz. Exp. (JoVE)* **2019**, e59739.
10. “Beyond Friedel and Crafts: Innate Alkylation of C-H Bonds in Arenes”, G. Evano, C. Theunissen, *Angew. Chem. Int. Ed.* **2019**, 58, 7558-7598. ([co-corresponding author](#))
11. “Beyond Friedel and Crafts: Directed Alkylation of C-H Bonds in Arenes”, G. Evano, C. Theunissen, *Angew. Chem. Int. Ed.* **2019**, 58, 7202-7236. ([co-corresponding author](#))
12. “Copper-Catalyzed Direct Alkylation of Heteroarenes”, C. Theunissen, J. Wang, G. Evano, *Chem. Sci.* **2017**, 8, 3465-3470.
13. “Cationic Polycyclization of Ynamides: Building up Molecular Complexity”, C. Theunissen, B. Métayer, M. Lecomte, N. Henry, H.-C. Chan, G. Compain, P. Gérard, C. Bachmann, N. Mokhtari, J. Marrot, A. Martin-Mingot, S. Thibaudeau, G. Evano, *Org. Biomol. Chem.* **2017**, 15, 4399-4416.
14. “Keteniminium Ions: Unique and Versatile Reactive Intermediates for Chemical Synthesis”, G. Evano, M. Lecomte, P. Thilmany, C. Theunissen, *Synthesis* **2017**, 49, 3183-3214.
15. “Copper-Catalyzed Cyanation of Alkenyl Iodides”, A. Nitelet, S. Zahim, C. Theunissen, A. Pradal, G. Evano, *Org. Synth.* **2016**, 93, 163-177.

16. "A Journey in the Chemistry of Ynamides: from Synthesis to Applications", G. Evano, N. Blanchard, G. Compain, A. Coste, C. S. Demmer, W. Gati, C. Guissart, J. Heimbürger, N. Henry, K. Jouvin, G. Karthikeyan, A. Laouiti, M. Lecomte, A. Martin-Mingot, B. Métayer, B. Michelet, A. Nitelet, C. Theunissen, S. Thibaudeau, J. Wang, M. Zarca, C. Zhang, *Chem. Lett.* **2016**, 45, 574-585 (with cover picture).
17. "Ynamides: Powerful and Versatile Reagents for Chemical Synthesis", G. Evano, C. Theunissen, M. Lecomte, *Aldrichimica Acta* **2015**, 48, 59-70.
18. "Room-Temperature Direct Alkynylation of Arenes with Copper Acetylides", C. Theunissen, G. Evano, *Org. Lett.* **2014**, 16, 4488-4491.
19. "Keteniminium Ion-Initiated Cascade Cationic Polycyclization", C. Theunissen, B. Métayer, N. Henry, G. Compain, J. Marrot, A. Martin-Mingot, S. Thibaudeau, G. Evano, *J. Am. Chem. Soc.* **2014**, 136, 12528-12531 (with cover picture).
20. "Turning Unreactive Copper Acetylides into Remarkably Powerful and Mild Alkyne Transfer Reagents by Oxidative Umpolung", G. Evano, K. Jouvin, C. Theunissen, C. Guissart, A. Laouiti, C. Tresse, J. Heimbürger, Y. Bouhoute, R. Veillard, M. Lecomte, A. Nitelet, S. Schweizer, N. Blanchard, C. Alayrac, A.-C. Gaumont, *Chem. Commun.* **2014**, 50, 10008-10018.
21. "Convenient and Practical Alkynylation of Heteronucleophiles with Copper Acetylides", C. Theunissen, M. Lecomte, K. Jouvin, A. Laouiti, C. Guissart, J. Heimbürger, E. Loire, G. Evano, *Synthesis (PSP Article)* **2014**, 46, 1157-1166.
22. "Metal-Catalyzed Synthesis of Hetero-Substituted Alkenes and Alkynes", G. Evano, A.-C. Gaumont, C. Alayrac, I. E. Wrona, J. R. Giguere, O. Delacroix, A. Bayle, K. Jouvin, C. Theunissen, J. Gatignol, A. C. Silvanus, *Tetrahedron (Report)* **2014**, 70, 1529-1616.
23. "Impact of Copper Catalysis in Natural Product Synthesis: the Emergence of New Retrosynthetic Paradigms", G. Evano, C. Theunissen, A. Pradal, *Nat. Prod. Rep.* **2013**, 30, 1467-1489 (with cover picture).
24. "Unprecedented Synthesis of Alkynylphosphine-boranes through Room-Temperature Oxidative Alkynylation", K. Jouvin, R. Veillard, C. Theunissen, C. Alayrac, A.-C. Gaumont, G. Evano, *Org. Lett.* **2013**, 15, 4592-4595.
25. "Le cuivre : un métal redoutablement efficace en synthèse organique", G. Evano, C. Guissart, C. Theunissen, S. Zahim, G. Duhirwe, N. Henry, M. Lecomte, A. Nitelet, *Chimie Nouvelle, Journal of the Belgium Royal Society of Chemistry* **2013**, 11-12.

Book Chapters (4)

1. "Reduction of O,O-, N,O-, and S,O-Acetals to Ethers" C. Theunissen, in *Comprehensive Organic Synthesis, Third Editions*, in press. ([corresponding author](#))
2. "Ynamides in the Synthesis of Natural/Biologically Relevant Products" C. Theunissen, in *The Chemistry of Ynamides – Development, Syntheses and Applications in Organic Synthesis*, G. Evano, J. Zhao, Eds.; Jenny Stanford Publishing: Singapore, 2024, pp. 639-694. ([corresponding author](#))
3. "Four-membered Heterocycles, and all Fused Systems with a Four-membered Heterocyclic Ring: Four-membered Rings with Three Heteroatoms with at least One Oxygen, Sulfur or Nitrogen Atom" C. Theunissen, in *Comprehensive Heterocyclic Chemistry IV*, J. Cossy, D. Black, C. Stevens, G. Evano, Eds.; Elsevier: Oxford, 2022, Vol. 2, pp. 648-684. ([corresponding author](#))
4. "Emerging Areas in Copper-Mediated Trifluoromethylations: Catalytic and Oxidative Processes" K. Jouvin, C. Guissart, C. Theunissen, G. Evano, in *Copper-Mediated Cross-Coupling Reactions*, G. Evano, N. Blanchard, Eds.; Wiley, 2013, pp. 515-530.

Patents (2)

1. “Methods for Manufacturing Bis(halogenosulfonyl)imide”, F. Batt, E. Derrien, V. Schanen, G. Evano, C. Theunissen, A. Zakardjian, A. Patent WO2024/061955 A1, **2024**.
2. “Compositions and Methods for Visible-Light-Controlled Ruthenium-Catalyzed Olefin Metathesis” T. Rovis, C. Theunissen, US Patent 16/597231, **2022**.

Communications and Posters (selected contributions)

1. **Communication:** “Ammonium Salts as Convenient Radical Precursors via C-N Bond Activation”. Presented at the EUChemS Organic Division Young Investigator Meeting, Dublin, Jul. 2024.
2. **Seminar:** “Radical Activation of Carbon – Halogen and Carbon – Nitrogen Bonds using Photoredox Catalysis”. Presented upon invitation by Pr. André Charette and Pr. Hélène Lebel at the Université de Montréal, Canada, Nov. 2021.
3. **Seminar:** “Visible-Light-Controlled Ruthenium-Catalyzed Olefin Metathesis”. Presented upon invitation by Dr. Nicolas Blanchard at the Université de Haute Alsace, France, Dec. 2019.
4. **Communication:** “Solvay Awards: a Pool of Scientific Talents for Innovation – Insights and Perspectives”. Presented at the 2019 Solvay Public Lectures – Frontiers of Chemistry, Brussels, Belgium, Oct. 2019.
5. **Communication:** “Visible-Light-Controlled Ruthenium-Catalyzed Olefin Metathesis”. Presented at Columbia University (Friday Synthesis Symposium), New York, USA, Dec. 2018.
6. **Communication:** “Keteniminium-Ion Initiated Cascade Cationic Polycyclization”. Presented at the 18th Sigma-Aldrich Organic Synthesis Meeting, Blankenberge, Belgium, Dec. 2014.
7. **Communication:** “Direct Alkynylation of Arenes with Copper Acetylides under Mild Conditions”. Presented at the Journée de l'école doctorale thématique CHIM (EDTCHIM), Namur, Belgium, Nov. 2013.
8. **Communication:** “Direct Alkynylation of Arenes with Copper Acetylides”. Presented at the 24th International Society of Heterocyclic Chemistry Congress (24th ISHC-Congress), Shanghai, China, Sept. 2013.
9. **Poster:** “Keteniminium-Ion Initiated Cascade Polycyclization”. Presented at the 14th Belgian Organic Synthesis Symposium, Louvain-la-Neuve, Belgium, Jul. 2014.
10. **Poster:** “Room-Temperature Direct Alkynylation of Arenes with Copper Acetylides”. Presented at the 17th Sigma-Aldrich Organic Synthesis Meeting, Blankenberge, Belgium, Dec. 2013.

Metrics (source: Web of Science®, July 2025)

<i>h</i>-Index	17
Sum of times cited	1,257 (1,220 without self-citations)
Citing articles	1,067 (1,054 without self-citations)
Average citations per item	55
Author position	First (32%), Last (26%), Corresponding (25%)