Dr. Antoine Simonneau

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born March 6, 1985, French nationality
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2 children (born 2015 and 2017)

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CURRENT SITUATION

Chargé de Recherche Classe Normale (Junior Researcher), Laboratoire de Chimie de Coordination (LCC), Centre National de la Recherche Scientifique (CNRS) and Université Paul Sabatier (UPS) - Toulouse III, since **Nov. 2015**. Team leader since **2019**.
Research interests: *Activation of small molecules (N_2, H_2, CO_2) and strong bonds (C–F) through cooperative methods involving reactive organometallic, inorganic and main-group molecular species.*

PREVIOUS EXPERIENCE

Oct. 2012–Jul. 2015 **Postdoctoral researcher** in the group of Prof. M. OESTREICH (Technische Universität, Berlin), as an ***Alexander von Humboldt postdoctoral fellow*** between **Feb. 2014** and **Jul. 2015**.
Project: *Development of transfer hydrosilylation methodologies and reactivity of strong main group electrophiles*

Feb. 2012–Jun. 2012 **Postdoctoral researcher** in the group of Dr. C. AUBERT and Prof. L. FENSTERBANK (Institut Parisien de Chimie Moléculaire, Université Pierre et Marie Curie, Paris, France).
Project: *Chiral phosphate ligands for atroposelective, rhodium-catalyzed [2 + 2 + 2] cycloadditions.*

EDUCATION

Jul. 2020 **Habilitation, University of Toulouse.** Thesis: "Dinitrogen transformation: towards molecular solutions based on zero-valent group 6 complexes".

Oct. 2008–Dec. 2011 **Ph.D. in Organic Chemistry**, with highest honors, in the group of Profs. M. MALACRIA and L. FENSTERBANK (Institut Parisien de Chimie Moléculaire, Sorbonne Université (formerly Université Pierre et Marie Curie), Paris, France), ***Springer Thesis Prize 2014***.
Thesis: *Gold-catalyzed Cycloisomerization Reactions through Activation of Alkynes: New Developments and Mechanistic Studies*. Published by Springer International Publishing Switzerland.
Ph.D. thesis defended the **9th December 2011**, issued **11th January 2012**.

Sep. 2007–Jul. 2008 **Master of Science in Organic and Bioorganic Chemistry**, with honors (Université Pierre et Marie Curie, Paris). M. Sc. thesis in the group of Prof. G. JAOUEN and Dr. F. LEBIDEAU (École Nationale Supérieure de Chimie de Paris). Project: *Diastereoselective synthesis of octahedral carbonyl complexes of rhenium.*

Sep. 2005–Jul. 2008 **Chemical Engineering degree** (french "Diplôme d'Ingénieur") of the École Nationale Supérieure de Chimie de Paris.

AWARDS

Jun. 2024 **Young Researcher Award of the Coordination Chemistry Division of the French chemical Society.**

Feb. 2022 **Young Investigator Award of the Chemistry Institute of Toulouse (ICT).** 1.5 k€ travel grant awarding talented early-career chemists from laboratories based in Toulouse.

Aug. 2017 **ERC Starting Grant.** *The European Research Council selects and funds the very best, creative researchers of any nationality and age, to run projects based in Europe. ERC Starting Grants are awarded to researchers of any nationality with two to seven years of experience since completion of the PhD and a scientific track record showing great promise.*

Nov. 2013 **Alexander von Humboldt Research Fellowship**. *Through the Humboldt Research Fellowship, the Alexander von Humboldt Foundation sponsors researchers with above-average qualifications from across the globe.*

Feb. 2014 **Springer Thesis Prize**. *Internationally top-ranked research institutes select their best thesis annually for publication in this series. Nominated and endorsed by two recognized specialists, each thesis is chosen for its scientific excellence and impact on research.*

INSTITUTIONAL RESPONSIBILITIES

since 2023	**Member of the LCC "Sustainability" working group.**
2020–2022	**Member of the LCC "Website" working group.**
Since March 2019	**Co-supervisor of the Small Molecule Activation (SMAc) Team**, Laboratoire de Chimie de Coordination. Supervision shared with S. Bontemps.

SUPERVISION AND EVALUATION OF RESEARCH TRAINING

PhD supervision	
2017–2020	**Anaïs Coffinet (Univ. Toulouse),** 100% supervision rate.
2018–2022	**Amal Bouammali (Univ. Toulouse),** 100% supervision rate.
2019–2023	**Quentin Le Dé (Univ. Toulouse),** 100% supervision rate.
2020–2024	**Marie-Christine Boegli (Univ. Toulouse),** 100% supervision rate.
2020–2024	**Sara Bonfante (Univ. Toulouse and Univ. of York),** co-supervision (50%) with Dr. John Slattery.
2021–2025	**Arno Estival (Univ. Toulouse),** co-supervision (50%) with Dr. Mary Grellier, LCC-University of Toulouse.
2024	**Luis Blancarte (Autonomous National University of Mexico)**, research stay.
2024–	**Quentin Lepeintre (Univ. Toulouse),** co-supervision (50%) with Prof. M. Drover, Western University (Canada).
Postdoc supervision	
2018–2021	**Dr. David Specklin**.
2020–2022	**Dr. Nicolas Queyriaux**
2023–2025	**Dr. Léon Escomel**.
2025-2026	**Dr. Michel Sigrist**.
Participation to PhD defense committees	
Dec. 2020	**Lydia Merakeb (LEM, Univ. Paris-Cité)**, examiner.
Nov. 2023	**Vincent Wowk (i-CLeHS, Chimie ParisTech)**, reviewer.
Jan. 2024	**Mathieu Pascaretti (URCOM, Univ. Le Havre)**, reviewer.
Sep. 2024	**Francesco Crisanti (LEM, Sorbonne Univ.)**, examiner.
June 2025	**Adrien Combourrieu (LCM, Institut Polytechnique de Paris)**, reviewer.
Jul. 2025	**Victor Monnot (CEMCA, Univ. Brest)**, reviewer.
since 2015	**Supervision** of 15 undergraduate internships (12 University of Toulouse, 1 University of Nantes, 1 ENSCM, 1 MITACS fellow from University of Montreal).

TEACHING ACTIVITIES

Jun. 2022	**2nd C@T Summer School, École des Mines D'Albi.** 1.5 h teaching on homogeneous nitrogen fixation.
Oct. 2020	**CCIMC Core Course (LCC, Toulouse)**. 2 h teaching on homogeneous nitrogen fixation for the graduate students of the European Joint Doctorate program CCIMC.
Feb. 2019	**XXXIXth Summer School of the Chemistry Department of the Federal University of São Carlos (UFSCar), Brazil under the theme "Chemistry and the Quality of Life"**. 9 h teaching on small molecules activation (homogeneous, photo- and electro-catalysis) related to energy transition and climate change. Graduate and undergraduate level. Title of the course: *Can Small Molecules Play A Role In Improving Quality Of Life ? Answers provided by current molecular chemistry.*
since 2016	**Supervisor and jury** for the chemical research project of the 1st and 3rd year bachelor students. Université Paul Sabatier, Toulouse, France.
Feb. 2009–Jul. 2011	**Teaching assistant**, practical courses of organic synthesis, bachelor level (250 hours). Institut Parisien de Chimie Moléculaire, Université Pierre et Marie Curie, Paris, France.

EDITORIAL AND PEER-REVIEWING ACTIVITIES

2024–2025	**Member of the Early Career Advisory Board of Inorg. Chem. Front. (RSC)**
2023–2024	**Member of the Early Career Advisory Board of JACS Au (ACS)**
since 2016	>35 reviews for the following journals (among others, please refer to my ORCID profile)

Angew. Chem Int. Ed.	J. Am. Chem. Soc	Chem. Sci.
Nat. Commun.	JACS Au	Chem. Commun.
Chem. Eur. J.	Chem. Asian J.	Science Advances

Inorg. Chem.	Inorg. Chem. Front.	Dalton Trans.
Eur. J. Inorg. Chem.	ChemCatChem	J. Org. Chem.

EXPERT ASSESSMENTS FOR FUNDING AGENCIES

2024	Review for the UP-Squared program, Université de Poitiers
2022	2 reviews for the French National Research Agency
2021	Review for the French National Research Agency
2021	Review for the Dutch NWO Agency
2020	Review for the French National Research Agency

ORGANIZATIONAL ACTIVITIES

2023–2024	**Member of the Organizing Committee of the GECOM-CONCOORD colloquium — Logistics & Sponsors crew**, 20-24 May 2024, Ax-les-Thermes, France.
2020	**Member of the Organizing Committee of the online colloquium "Cutting-edge Homogeneous Catalysis" (CEHC-1),** 4–6 May 2021, Toulouse, France.
2019–2020	**Member of the Organizing Committee of the European Colloquium on Inorganic Reaction Mechanisms (ECIRM)**, 12–15 July 2020, Toulouse, France (cancelled).

PROFESSIONNAL TRAINING

2024	**MOOC "Understanding Intellectual Property"** (8 h) from the French National Institute for Intellectual Property (INPI).

OUTREACH ACTIVITIES

2018–2019	**Welcome of high school students from "Lycée Toulouse-Lautrec" for a scientific project.** Supervision of glove-box experiments and reporting in a presentation.

FUNDING

2026	**French National Research Agency (ANR) collaborative research grant**. Public funding for fundamental research. Project "PICATA", principal investigator • 320 k€.
2025	**EMERGENCE International**, 3 k€ travel grant.
2025–2026	**EMERGENCE @CNRS Chimie grant.** Covered 18-month postdoc salary + 15 k€. Principal Investigator.
2024–2027	**Doctoral fellowship of the France-Canada Research Fund - French Ministry of research and Higher Education.** Covered the salary of a PhD student over 3 years. Co-principal investigator.
2024–2026	**France-Canada Research Fund.** CA$ 15 000 covering mobility expenses.
2024	**INFRANALYTICS Project.** Covered 15 days of NMR measurement at high field (800 and 1200 MHz). Solid state analysis of molecular molybdenum hydrides. Principal Investigator.
2022–2027	**International Research Project granted by the CNRS.** Funds researchers and student exchange in the frame of a collaborative research project between the LCC and the National Autonomous University of Mexico (UNAM). Coordinated by P. Lacroix (LCC) and Norberto Farfàn (UNAM). Funded a stay at the UNAM (June 7–12 2022), and a 6-months research stay for a Mexican student.
2022–2026	**French National Research Agency (ANR) collaborative research grant.** Public funding for fundamental research. Project "PUNCh", coordinated by M. Gennari, DCM, University of Grenoble-Alpes • 154 k€.
2021–2024	**Green Hydrogen grant.** Public funding for research on hydrogen and its applications. Project "CataLOHC". Principal Investigator • 76 k€.
2020–2024	**International Training Network "CCIMC".** European Joint Doctorate Program funded by the Marie Słodowska-Curie Actions coordinated by R. Poli and A.-M. Caminade (LCC). Funded a joint Ph.D. fellowship and research costs. Partnering entity: Department of Chemistry of the University of York.
2018–2023	**ERC Starting Grant.** Covered among others salaries for 3 Ph.D. and 2 postdocs, equipment, travel and consumables. Principal Investigator • 1.5 M€.
2017–2020	**Doctoral fellowship of the French Ministry of research and Higher Education.** Covered the salary of a PhD student over 3 years.
2015–2017	**"Nouveaux Entrants" fellowship**. Seed money provided by the Université Fédérale Toulouse Midi-Pyrénées to help settlement of young researchers. Principal Investigator • 14 k€.
2014–2015	**Alexander von Humboldt Research Fellowship**. Covered salary and research costs for 18 months.

2017	**AAPG ANR JCJC**, project "MIDIFUNk" — PI, **not funded.**
2019	**International Emerging Action**, PI with Prof. C. Gruenwaldt (Univ. Sao Carlos, Brazil), **not funded**.
2021	**Appel à projet ADEME**, co-PI with S. Bontemps (LCC, team SMAc), **not funded**.
2023	**ERC Call "Proof-of-Concept"**, project HYDRa — PI, **not funded** (Seal of Excellence obtained).
2024	**AAPG ANR PRC**, project "MnN's" — PI, **not funded.**
2024	**AAPG ANR PRC**, project "MimPhos" — partner (PI: C. Lorber, LCC, team SMAc), **not funded.**
2024	**ERC Call "Proof-of-Concept"**, project HYDRa — PI, **not funded** (Seal of Excellence obtained).
2024	**MSCA Call "Postdoctoral Fellowships"**, project MoBHy, **not funded** (Seal of Excellence obtained).

SCIENTIFIC PRODUCTIONS

A = article, C = communication, R = review, P = patent

Peer-reviewed journals – Independent career

R49. **Polytopic Main-group Lewis Acids for the Coordination and Activation of Small Molecules (Review)**, L. Escomel* and A. Simonneau,* *Coord. Chem. Rev.* **2025**, *544*, 216948..

C48. **Reductive Cleavage of Dioxygen Mediated by a Lewis Superacidic Bis(Borane)**, L. Escomel, L. Vendier, D. Gatineau, F. Molton, C. Duboc, M. Gennari* and A. Simonneau,* *JACS Au* **2025**, DOI: 10.1021/jacsau.5c00516.

A47. **Zirconium-Mediated Carbon-Fluorine Bond Functionalisation Through Cyclohexyne "Umpolung"**, S. Bonfante, T. F. N. Tanner, C. Lorber,* J. M. Lynam,* A. Simonneau* and J. M. Slattery,* *Chem. Sci.* **2025**, *16*, 3552–3559.

A46. **Synthesis and Characterization of Heptacoordinated Molybdenum(II) Complexes Supported with 2,6-Bis(pyrazol-3-yl)pyridine (bpp) Ligands**, A. Estival, L. E. Blancarte, L. Pinto, R. Pointis, N. Galas, A. Sournia-Saquet, L. Vendier, R. Santillan, N. Farfán, J.-B. Sortais, M. Grellier and A. Simonneau,* *Dalton Trans.* **2025**, *54*, 2860–2870.

A45. **Bio-Inspired Thiolate-FeII-Hydrazine Adduct Towards Iron-Mediated C-N Bond Formation**, I. Cassandrini, C. Philouze, A. Simonneau, C. Duboc and M. Gennari,* *Eur. J. Inorg. Chem.* **2025**, e202400633.

A44. **Reactivity of Metal Hydrides with CO_2: Going Beyond Formate with a High-Valent Cationic Pentahydride Mo(VI) Complex**, N. Queyriaux,* J. J. Cabrera-Trujillo, N. Durvin, L. Vendier, K. Miqueu* and A. Simonneau,* *Chem. Sci.* **2024**, *15*, 20582–20589.

C43. **Low-valent Group 6 Metals/$Al(C_6F_5)_3$ Donor-Acceptor Systems for CO_2 Activation and Cleavage**, L. Escomel, Q. Le Dé, M. Benonie, L. Vendier and A. Simonneau,* *Chem. Commun.*, **2024**, *60*, 13235-13238.

A42. **Coordination of $Al(C_6F_5)_3$ *vs* $B(C_6F_5)_3$ on Group 6 End-On Dinitrogen Complexes: Chemical and Structural Divergences**, L. Escomel, F. Martins, L. Vendier, A. Coffinet, N. Queyriaux, V. Krewald* and A. Simonneau,* *Chem. Sci.* **2024**, *15*, 11321-11336.

A41. **Seven-coordinate Group 6 Metal Hydrides Obtained by H_2 Activation at $B(C_6F_5)_3$ Adducts of N_2 Complexes: Frustrated Lewis Pair-type Reactivity of the B–N linkage**, M.-C. Boegli, A. Coffinet, C. Bijani and A. Simonneau,* *Chem. Asian J.* **2024**, *19*, e202400451.

R40. **Nitrogen Fixation by Manganese Complexes – Waiting for the Rush? (Concept)** Q. Le Dé, D. A. Valyaev* and A. Simonneau,* *Chem. Eur J.* **2024**, *30*, e202400784.

A39. **Metallomimetic C-F activation catalysis by simple phosphines**, S. Bonfante, C. Lorber,* J. M. Lynam,* A. Simonneau* and J. M. Slattery,* *J. Am. Chem. Soc.* **2024**, *146*, 2005-2014. **Most read article of January 2024, highlighted in *C&EN***.

A38. **An orbitally adapted semi-metallic frustrated Lewis pair template for N_2 activation and reduction to diazene-diide**, D. Specklin, M.-C. Boegli, A. Coffinet, L. Escomel, L. Vendier, M. Grellier and A. Simonneau,* *Chem. Sci.* **2023**, *14*, 14262–14270.

A37. **Protonation Behavior of a Tetrahydrido Molybdenum(IV) Complex with Organic and Inorganic Acids**, N. Queyriaux,* N. Durvin, D. Leon, M.-C. Boegli, L. Vendier and A. Simonneau,* *Eur. J. Inorg. Chem.* **2023**, *26*, e202300426.

A36. **An Experimental and Computational Investigation Rules Out Direct Nucleophilic Addition on the N_2 Ligand in Manganese Dinitrogen Complex $[Cp(CO)_2Mn(N_2)]$**, Q. Le Dé, A. Bouammali, C. Bijani, L. Vendier, I. del Rosal, D. A. Valyaev,* C. Dinoi* and A. Simonneau,* *Angew. Chem. Int. Ed.* **2023**, *62*, e202305235 (***Very Important Paper***).

A35. **CO_2 Hydroboration: Impact of the Boryl Moieties on the Reactivity of Four Bis(boryl)acetal Compounds toward 2,6-Diisopropylaniline**, S. Desmons, Y. Zhou, D. Zhang, C. Jarava-Barrera, A. Coffinet, A. Simonneau, L. Vendier, G. Luo* and S. Bontemps,* *Eur. J. Org. Chem.* **2023**, *26*, e202300525.

A34. **Biomimetic catalysis of nitrite reductase enzyme using copper complexes in chemical and electrochemical reduction of nitrite**, M. P. Ferreira, C. B. Castro, J. Honorato, S. He, W. G. G. Júnior, C. Esmieu, E. E. Castellano, A. F. de Moura, D. R. Truzzi, O. R. Nascimento, A. Simonneau and C. G. C. M. Netto,* *Dalton Trans.* **2023**, *52*, 11254–11264.

A33. **Assessing Combinations of Strong Lewis Acids and N_2-derived Molybdenum Nitrido Complexes for Heterolytic Bond Activations**, A. Coffinet, Q. Le Dé, D. Specklin, S. Benaamane, L. Muñoz, L. Vendier, N. Mézailles* and A. Simonneau,* *Chem. Eur. J.* **2023**, *29*, e202203774.

A32. **Syntheses of N_2-bridged heterobimetallic complexes, their structural and qualitative bonding analyses**, Q. Le Dé, F. Orbay, L. Vendier and A. Simonneau,* *J. Organomet. Chem.* **2023**, *986*, 122604.

A31. **Dinitrogen-derived (diarylboryl)diazenido Complexes with Differing Coordination to the Thallium Cation**, A. Bouammali, A. Coffinet, L. Vendier and A. Simonneau,* *Dalton Trans.* **2022**, 51, 10697–10701.

R30. **Transition Metal-mediated Dinitrogen Functionalisation with Boron**, A. Simonneau,* *New J. Chem.* **2021**, *45*, 9294–9301.

A29. **Borane-catalysed Dinitrogen Borylation by 1,3-B–H Bond Addition**, A. Coffinet, D. Zhang, L. Vendier, S. Bontemps and A. Simonneau,* *Dalton Trans.* **2021**, *50*, 5582–5589.

A28. **Synthesis, Characterization, and Comparative Theoretical Investigation of Dinitrogen-Bridged Group 6-Gold Heterobimetallic Complexes**, D. Specklin, A. Coffinet, L. Vendier, I. del Rosal, C. Dinoi* and A. Simonneau,* *Inorg. Chem.* **2021**, *60*, 5545–5562.

A27. **Reaction of Methyllithium with Group 6 Phosphine Dinitrogen Complexes**, A. Bouammali, C. Bijani, L. Vendier, M. Etienne and A. Simonneau,* *Eur. J. Inorg. Chem.* **2020**, 1423–1427.

A26. **Frustrated Lewis Pair Chemistry Enables N_2 Borylation by Formal 1,3-Addition of a B–H Bond in the Coordination Sphere of Tungsten**, A. Coffinet, D. Specklin, L. Vendier, M. Etienne and A. Simonneau,* *Chem. Eur. J.* **2019**, *25*, 14300–14303.

R25. **Enhanced Activation of Coordinated Dinitrogen with p-Block Lewis Acids (Concept)**, A. Simonneau* and M. Etienne, *Chem. Eur. J.* **2018**, *24*, 12458–12463 (***Reviews Showcase***).

C24. **Group 6 Transition Metal/Boron Frustrated Lewis Pair Templates Activate N_2 and Allow its Facile Borylation and Silylation**, A. Simonneau,* R. Turrel, L. Vendier and M. Etienne, *Angew. Chem. Int. Ed.* **2017**, *56*, 12268-12272 (***Hot Paper***).

Peer-reviewed journals – under mentorship

R23. **Review on Bioorganometallic Chemistry and New Outcomes in the Synthesis and Substitution of Tetracarbonyl(pyrrolylimine) Complexes of Rhenium with Organophosphorus Ligands**, A. Simonneau,* F. Le Bideau,* J.-H. Mirebeau, J. Marrot and G. Jaouen, *Curr. Top. Med. Chem.* **2017**, *17*, 2807–2819.

A22. **Assessing Ligand and Counterion Effects in the Noble Metal Catalyzed Cyclo-isomerization Reactions of 1,6-Allenynes: a Combined Experimental and Theoretical Approach**, F. Jaroschik, A. Simonneau, G. Lemière, K. Cariou, N. Agenet, H. Amouri, C. Aubert, J.-P. Goddard, D. Lesage, M. Malacria, Y. Gimbert,* V. Gandon* and L. Fensterbank,* *ACS Catal.* **2016**, *6*, 5146–5160.

C21. **An Air-stable Dimeric Ruthenium NHC Complex as Catalyst for Hydrosilylation and Dehydrogenative Coupling Reactions**, S. Bähr, A. Simonneau, E. Irran et M. Oestreich,* *Organometallics* **2016**, *35*, 925–928.

A20. **Formal SiH_4 Chemistry Using Stable and Easy-to-Handle Surrogates**, A. Simonneau and M. Oestreich,* *Nat. Chem.* **2015**, *7*, 816–822. **Highlighted in *Synfacts* and *Nachr. Chem***.

C19. **The Cyclohexadienyl-Leaving-Group Approach Toward Donor-Stabilized Silylium Ions**, A. Simonneau,* T. Biberger and M. Oestreich,* *Organometallics* **2015**, *34*, 3927–3929.

R18. **Fascinating Hydrogen Atom Transfer Chemistry of Alkenes Inspired by Problems in Total Synthesis (Highlight),** A. Simonneau and M. Oestreich,* *Angew. Chem. Int. Ed.* **2015**, *54*, 3626–3628.

A17. **Direct and Transfer Hydrosilylation Reactions Catalyzed by Fully or Partially Fluorinated Triarylboranes : A Systematic Study**, S. Keeß, A. Simonneau and M. Oestreich,* *Organometallics* **2015**, *34*, 1237–1244.

A16. **Salt-Free Preparation of Trimethylsilyl Ethers by $B(C_6F_5)_3$-Catalyzed Transfer Silylation Using a Me_3SiH Surrogate**, A. Simonneau, J. Friebel and M. Oestreich,* *Eur. J. Org. Chem.* **2014**, 2077–2083. **Highlighted in *Organic Chemistry Highlights***.

C15. **Two-fold Tandem Acyl-Group Shift/Cyclization via Gold Catalysis**, A. Simonneau, G. Maestri, L. Fensterbank* and M. Malacria,* *Arkivoc* **2014**, 287–296.

C14. **3-Silylated Cyclohexa-1,4-dienes as Precursors for Gaseous Hydrosilanes: The $B(C_6F_5)_3$-Catalyzed Transfer Hydrosilylaltion of Alkenes**, A. Simonneau and M. Oestreich,* *Angew. Chem. Int. Ed.*, **2013**, *52*, 11905–11907. **Highlighted in *Synfacts***.

C13. **Atroposelective [2+2+2] Cycloadditions Catalyzed by a Rhodium/Chiral Phosphate System,** M. Augé, M. Barbazanges-Aubry, A.-T. Tran, A. Simonneau, P. Elley, H. Amouri, C. Aubert,* L. Fensterbank,* V. Gandon, M. Malacria and C. Ollivier,* *Chem. Commun.*, **2013**, *49*, 7833–7835. **Highlighted in *Synfacts***.

C12. **Ring Expansions Within Gold-catalyzed Cycloisomerization of *O*-tethered 1,6-enynes. Application to the Synthesis of Natural Product-like Macrocycles,** A. Simonneau, Y. Harrak, L. Jeanne-Julien, G. Lemière, V. Mouriès-Mansuy, J.-P. Goddard, M. Malacria and L. Fensterbank,* *ChemCatChem*, **2013**, *5*, 1096–1099. **Back cover of the issue**.

A11. **Tracking Gold Acetylides in Gold(I)-Catalyzed Cycloisomerization Reactions of Enynes**, A. Simonneau, F. Jaroschik, D. Lesage, M. Karanik, R. Guillot, M. Malacria, J.-C. Tabet, J.-P. Goddard, L. Fensterbank,* V. Gandon* and Y. Gimbert,* *Chem. Sci.*, **2011**, *2*, 2417–2422.

A10. **Combination of Gold Catalysis and Selectfluor for the Synthesis of Fluorinated Nitrogen Heterocycles**, A. Simonneau, P. Garcia, J.-P. Goddard, V. Mouriès-Mansuy, M. Malacria* and L. Fensterbank,* *Beilstein J. Org. Chem.*, **2011**, *7*, 1379–1386.

C9. **Pentamethylcyclopentadienyl)Iridium Dichloride Dimer {[IrCp*Cl_2]$_2$}: a Novel Efficient Catalyst for the Cycloisomerizations of Homopropargylic Diols and *N*-tethered Enynes**, E. Benedetti, A. Simonneau, A. Hours, H. Amouri, A. Penoni, G. Palmisano, M. Malacria,* J.-P. Goddard and L. Fensterbank,* *Adv. Synth. Catal.*, **2011**, *353*, 1908–1912.

C8. **Gold-catalyzed 1,3-Acyloxy Migration/5-*exo*-dig Cyclization/1,5-Acyl Migration of Diynyl Esters**, D. Leboeuf, A. Simonneau, C. Aubert, M. Malacria,* V. Gandon* and L. Fensterbank,* *Angew. Chem. Int. Ed.*, **2011**, *50*, 6868–6871.

R7. **Transition Metal Catalyzed Cycloisomerizations of 1,*n*-Allenynes and -Allenenes**, C. Aubert,* L. Fensterbank,* P. Garcia, M. Malacria,* and A. Simonneau, *Chem. Rev.*, **2011**, *111*, 1954–1993.

C6. **Gold(I)-Catalysed Cycloisomerisation of 1,6-Enynes into Functionalised Allenes**, Y. Harrak, A. Simonneau, M. Malacria,* V. Gandon* and L. Fensterbank,* *Chem. Commun.*, **2010**, *46*, 865–867.

Book Chapters and Monographs

R5. **Push–Pull Activation of N_2: Coordination of Lewis Acids to Dinitrogen Complexes**, A. Coffinet, A. Simonneau and D. Specklin, in Encyclopedia of Inorganic and Bioinorganic Chemistry, R.A. Scott (Ed.), John Wiley & Sons, Ltd, 2020, DOI: 10.1002/9781119951438.eibc2755.

R4. **3-(Trimethylsilyl)-1,4-cyclohexadiene**, A. Simonneau and M. Oestreich, in Electronic Encyclopedia of Reagents for Organic Synthesis, D. Crich, P. L. Fuchs, A. B. Charette, T. Rovis (Eds.), Wiley: Chichester, Royaume-Uni, 2016, DOI: 10.1002/047084289X.rn01910.

3. **Gold-Catalyzed Cycloisomerization Reactions Through Activation of Alkynes**, A. Simonneau, Springer International Publishing Switzerland, 2014.

R2. **Gold-Catalyzed Reactions of Propargylic Esters**, L. Fensterbank, J.-P. Goddard, M. Malacria and A. Simonneau in Gold Catalysis: An Homogeneous Approach, V. Michelet, F. D. Toste (Eds.), Imperial College Press : Londres, Royaume-Uni, 2014, pp 331–391.

Patents

P1. **Use of Cyclohexa-2,5-dien-1-yl-silanes as Precursors for Gaseous Hydrosilanes**, A. Simonneau and M. Oestreich, *PCT Int. Appl.* WO 2015/036309 A1.

COMMUNICATIONS AND LECTURES

IL = invited lecture, IC = invited contribution in a conference, OC = oral communication

IC33. **Interplay of electron-rich metal species and Lewis acids for the activation of small molecules**, *Main-group Elements Reactivity Conference*, Namur, Belgique, **September 2025**.

OC32. **Implementing Lewis SuperAcids (LSA) in Hybrid Main Group/Metal Donor-Acceptor Systems for Small Molecules Activation**, *European Conference on Organometallic Chemistry*, Bern, Switzerland, **July 2025**.

IL27-31. **Interplay of Electron-rich Metal Species and Lewis Acids for the Activation of Small Molecules**, lecture tour in the United Kingdom in the frame of the Emergence International funding scheme provided by CNRS Chimie. Talks delivered at the *University of York*, the *University of Cambridge*, the *Imperial College*, the *University of Bath* and the *University of Cardiff*, **May 2025**.

IC26. **Molecular Donor-Acceptor Systems for Small Molecules Activation**, *Journées de Chimie de Coordination*, Saclay, France, **January 2025**.

IL25. **Molecular Donor-Acceptor Systems for Small Molecules Activation**, *Institut de Chimie Moléculaire de Bourgogne*, Dijon, France, **November 2024**.

OC24. **A Pentahydrydo Molybdenum Complex for Small Molecule Activation and Hydrogenation Catalysis**, *XLII Reunión del GEQO*, Sevilla, Spain, **September 2024**.

OC23. **Molecular Donor-Acceptor Systems for Small Molecules Activation**, *European Colloquium on Inorganic Reaction Mechanisms*, Toulouse, France, **September 2024**.

OC22. **Molecular Donor-Acceptor Systems for Small Molecules Activation**, *International Congress of Coordination Chemistry*, Fort Collins, USA, **July 2024**.

OC21. **Metallomimetic C–F Activation Catalysis by Simple Phosphines**, *International Congress of Catalysis*, Lyon, France, **July 2024**. **Best presentation award**.

IL20. **Molecular Donor-Acceptor Systems for Small Molecules Activation**, *Institut Charles Gerhardt*, Montpellier, France, **May 2024**.

OC19. **Activation of the Carbon-Fluorine Bond: from Metal Mediation to Metal-Free Catalysis**, *Journées de Printemps de la Division de Chimie Organique*, Paris, France, **April 2024**.

OC18. **Metallomimetic C–F Activation Catalysis by Simple Phosphines**, *Journées de Chimie de Coordination*, Strasbourg, France, **January 2024**.

IL17. **Vintage Organometallic Chemistry — Tales of Surprises and Serendipity**, *URCOM*, Université du Havre, France, **January 2024**.

IL16. **Activation of Small Molecules and Strong Bonds with a Vintage Flavour**, *Chimie ParisTech, Paris, France*, **October 2023**.

IL15. **Mid Transition Metal Complexes for Small Molecule Activation**, *Département de Chimie Moléculaire, Université Grenoble Alpes*, Grenoble, France, **June 2023**.

OC14. **Nucleophilic Addition on Coordinated N_2: Fact or Fiction?**, *GECOM-CONCOORD*, Fournols, France, **May 2023**.

OC13. **Revisiting N_2 Functionalization with Nucleophiles**, *Journées de Chimie Organique*, Palaiseau, France, **November 2022**.

OC12. **Revisiting N_2 Functionalization with Nucleophiles**, *ICOMC*, Prague, Czech Republic, **July 2022**.

IL11. **Electrophiles vs. Nucleophiles: What's the Best to Transform Dinitrogen?**, *Institut de Chimie de Toulouse*, **July 2022**.

IL10. **Metal-Boron Cooperation for Dinitrogen and Hydrogen Activation**, *Faculty of Chemistry of the National Autonomous University of Mexico*, **June 2022**.

OC9. **Metal-Boron Cooperation: From Stoichiometric Activation of Small Molecules to Catalysis**, *CEHC-2*, Leipzig, Germany, **March 2022**.

IC8. **Frustrated Lewis Pair Chemistry Inspires Nitrogen Fixation**, *PACIFICHEM*, Honolulu, United States of America (HI), **December 2020** (cancelled).

IC7. **Making Bonds between Dinitrogen and other Elements using Molecular Complexes**, *GECOM-CONCOORD*, Camaret-sur-mer, France, **May 2020** (cancelled).

IL6. **Dinitrogen Activation with the Help of the Main Group**, *Department of Chemistry of the Federal University of São Carlos*, Brazil, **Feb. 2019**.

IL5. **Functionalization of Dinitrogen Induced by p-Block and Metal Lewis acids**, *Université Claude Bernard Lyon 1*, France, **Sept. 2018**.

OC4. **Dinitrogen Complexes and Lewis Acids: A Fruitful Collaboration**, *International Conference on Coordination Chemistry*, Sendai, Japan, **Jul. 2018**.

OC3. **Group 6 Transition-Metal/Boron Frustrated Lewis Pair Templates for Dinitrogen Activation and its Functionalization**, *Journées de Chimie de Coordination*, Brest, France, **Feb. 2018**.

OC2. **Transfer Hydrosilylation**, 6th EuCheMS Chemistry Congress, Seville, Spain, **Sep. 2016**.

IL1. **My Journey in Organometallic Catalysis: from Complex Cycloisomerization Reactions to Mechanisms, Ending up in Small Molecule Activation**, *LCC Welcome Lecture*, Toulouse, France, **Dec. 2015**.

COLLABORATIONS

■ Local level	
S. Bontemps (LCC)	Boranes for small molecules functionalization, 2 publications.
C. Dinoi, I. del Rosal (LPCNO)	ERC-funded, DFT calculations, N_2-complexes chemistry, 2 publications.
M. Grellier (LCC)	Région Occitanie-funded, hydrogen storage, 1 publication.
N. Mézailles (LHFA)	ERC-funded, chemistry of molecular Molybdenum nitrides with Lewis acids, 1 publication.
D. Valyaev (LCC)	ERC-funded, manganese-dinitrogen complexes, 2 publications.
N. Queyriaux (LCC)	ERC-funded, chemistry of molecular Molybdenum hydrides, 2 publications.
J.-B. Sortais (LCC)	Homogeneous hydrogenation catalysis with molybdenum complexes, 1 publication.
■ National level	
M. Gennari, C. Duboc (DCM, Univ. Grenoble-Alpes)	ANR-funded, homogeneous dinitrogen reduction, 2 publications.
K. Miqueu (IPREM, Univ. Pau)	DFT calculations, reactivity of Molybdenum hydrides, 1 publication.
R. Gauvin, L. Delevoye (IRCP, Chimie ParisTech, and UCCS, Univ. Lille)	Infranalytics-funded, high-field, solid-state NMR of molecular Molybdenum hydrides
■ International level	
C. Gruenwaldt (Univ. São Carlos, Brazil)	Biomimetic copper and molybdenum complexes, 1 publication.
J. Lynam, J. Slattery (Univ. York, UK)	MSCA-funded, C–F bond activation, 2 publications.
N. Farfàn, R. Santillan (UNAM, Mexico)	CNRS-funded, dipyrromethene ligands for early transition metals, 1 publication.
V. Krewald (TU Darmstadt, Germany)	DFT calculations, N_2-complexes chemistry, 1 publication.
M. Drover (Western University, Canada)	France-Canada Research Fund & French Ministry of Research and Higher Education Base metals / boron cooperative systems for small molecule activation

NON-PROFESSIONAL OCCUPATIONS

since 2022 Secretary of the "loi 1901" association "L'Escapade Club" promoting sport climbing through courses and outdoor practice.