

# CURRICULUM VITÆ

## Dr. Clément CAMP



Clément is currently a CNRS researcher in the Laboratoire de Catalysis, Polymerization, Processes and Materials (CP2M – UMR 5128), in Lyon (France). He earned the Agrégation of Science Physiques in 2009 and graduated in 2010 from the École Normale Supérieure de Lyon (France). He received his Ph.D. degree in 2013 from the University of Grenoble (France) for his work on the coordination chemistry and reactivity of low-valent  $f$ -element compounds, performed under the supervision of Dr. Marinella Mazzanti. He then joined Prof. John Arnold's group at the University of California, Berkeley (USA) for postdoctoral training where he studied the activation of small molecules by transition metal complexes. His current research interests deal with surface organometallic chemistry and cooperative effects in catalysis. Clément has authored 46 scientific papers, tackling problems in inorganic and organometallic chemistry with elements from across the periodic table. He has been laureate of several prestigious research grants, such as the CNRS MOMENTUM in 2017 and the ERC Starting Grant in 2021 and was the recipient of the CNRS bronze medal in 2022.

### Civil status:

Age 35 years old (Born on Dec. 3<sup>rd</sup> 1986)

Nationality French

### Address:

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Group website: <https://www.cp2m.org/people/1-charge-de-recherche-clement-camp.html>

## CURRENT POSITION

**CNRS Permanent Research Scientist – since september 2015**

Laboratory of Catalysis, Polymerization, Processes and Material (CP2M)

UMR 5128 CNRS / UCBL / CPE-Lyon, Université de Lyon (France).

## ACADEMIC TRAINING

- **2013-2015**      **Post-doctoral training** – group of **Pr. J. Arnold**  
University of California – Berkeley (USA).  
*Synthesis of metal complexes involving early and late transition metals aiming at discovering new modes of reactivity with small molecules.*
- **2010-2013**      **PhD in Inorganic and Bio-Inorganic Chemistry** – supervisor **Dr M. Mazzanti**  
Laboratory of Ions Recognition and Coordination Chemistry,  
INAC, CEA-Grenoble / Université Joseph Fourier (France).  
*Design and reactivity of mono and polymeric complexes of low-valent f-elements*
- **2010**            **Master of Science**  
Summa cum laude – rank = 1<sup>st</sup>/22  
École Normale Supérieure de Lyon (France).
- **2009**            **Agrégation<sup>[1]</sup> national competitive examination in Physical Sciences**  
Rank: 2<sup>nd</sup>/579
- **2008**            **Research internship (3 months)** – supervisor **Pr. S. Otto**  
Department of Chemistry, University of Cambridge (United Kingdom).  
*Thermodynamically controlled self-replication of a macrocycle in a dynamic combinatorial library.*
- **2007**            **Bachelor of Science**  
École Normale Supérieure de Lyon<sup>[1]</sup> (France).  
  
**Research internship (2 months)** – supervisor **Pr. E. Benoist**  
Laboratoire de Synthèse et Physico-Chimie de Molécules d'Intérêt Biologique  
UMR 5068 – Université Paul Sabatier, Toulouse (France).  
*Synthesis of bifunctional chelating agents by Click Chemistry.*

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<sup>1</sup> The **agrégation** is a prestigious and highly selective national competitive examination for some positions in the French public education system. Students dedicate an entire year of their curriculum to prepare for this exam which is used as an unofficial national ranking system for students, giving a fair comparison between students of different universities.

# SCIENTIFIC PRODUCTION

## Scientific record:

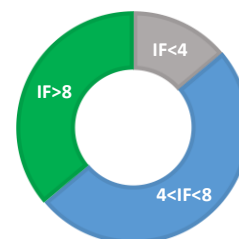
45 peer-reviewed articles including 8 *J. Am. Chem. Soc.* ; 2 *Angew. Chem. Int. Ed.* ; 3 *Chem. Sci.* ; 5 *Chem. Commun.* ; 2 *Chem. Eur. J.* ; 1 *J. Catal.* ; 1 *ACS Catal.*

13 corresponding author articles and 18 1<sup>st</sup> author articles.

*h* = 21 ; >1400 citations<sup>[2]</sup> ; mean IF = 8.0

>40 conferences and seminars contributions

Several **invited papers** in special issues (e.g. 2022 *Chem. Commun. Pioneering Investigators*; 2018 Dalton transactions: **New-talent Europe** issue), and **6 Front Cover** articles (*JACS* 2019&2019; *Inorg. Chem.* 2022; Dalton Trans. 2021&2015; *Chem. Sci.* 2013).



## Patents:

- 1. A. Vivien; L. Veyre; **C. Camp**; C. Thieuleux; R. Mirgalet *Deposited on January 2021*.

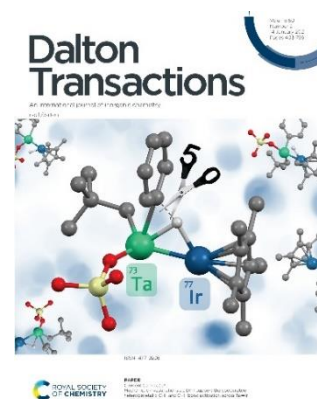
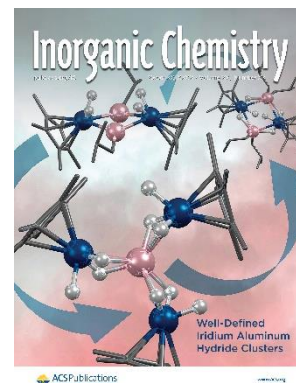
## Publications:

### Refereed publications from C2P2 Laboratory – Lyon, France (CNRS permanent position):

- 47. V. Dardun; T. Pinto; L. Benaillon; L. Veyre; **C. Camp**; V. Meille and C. Thieuleux "Room temperature preparation of small crystalline palladium and palladium-tin nanoparticles: application in Suzuki-Miyaura cross-coupling reaction", *Submitted*.
- 46. J. Salaam, I. N'Dala-Louika, C. Balogh, I. Suleimanov, G. Pilet, L. Veyre, **C. Camp**, C. Thieuleux, F. Riobé, O. Maury "Tris-dipicolinate lanthanide complexes: influence of the second hydration sphere on the solid-state luminescence properties", " *Submitted*.
- 45. L. Escomel; D. F. Abbott; V. Mougel; L. Veyre; C. Thieuleux; **C. Camp\*** "Preparation of a Highly Dispersed Silica-Supported Iridium-Aluminium Catalyst for Methane Activation using Surface Organometallic Chemistry" *Chem. Commun.* **2022**, asap paper. *2022 Pioneering Investigators* <https://doi.org/10.1039/d2cc02139k>
- 44. S. Lassalle; J. Petit; R. L. Falconer; V. Hérault; E. Jeanneau; C. Thieuleux; **C. Camp\*** "Reactivity of Tantalum/Iridium and Hafnium/Iridium Alkyl Hydrides with Alkyl Lithium Reagents: Nucleophilic Addition, Alpha-H Abstraction or Hydride Deprotonation?" *Organometallics* **2022**, asap paper. <https://doi.org/10.1021/acs.organomet.2c00158>
- 43. A. Vivien; L. Veyre; R. Mirgalet; **C. Camp** and C. Thieuleux "Mn<sub>2</sub>(CO)<sub>10</sub> and UV light: a promising combination for regioselective alkene hydrosilylation at room temperature", *Chem. Commun.* **2022**, 58, 4091-4094. <https://doi.org/10.1039/D2CC00377E>

<sup>2</sup> according to « Google Scholar »

- 42. L. Escomel; N. Soulé; E. Robin; I. Del Rosal; L. Maron; E. Jeanneau; C. Thieuleux and **C. Camp\*** "Rational Preparation of Well-Defined Multinuclear Iridium–Aluminum Polyhydride Clusters and Comparative Reactivity", *Inorg. Chem.* **2022**, 61, 15, 5715-5730. **Front Cover Article** <https://doi.org/10.1021/acs.inorgchem.1c03120>
- 41. M. Jakoobi; A. Vivien; **C. Camp** and C. Thieuleux "Co<sub>2</sub>(CO)<sub>8</sub> and allyl glycidyl ether as unexpected partners in generating functionalized siloxane oils and cross-linked materials", *Cat. Sci. technol.* **2021**, 11, 4714-4718. <https://doi.org/10.1039/D1CY00920F>
- 40. L. Escomel; I. Del Rosal; L. Maron; E. Jeanneau; L. Veyre; C. Thieuleux and **C. Camp\*** "Strongly Polarized Iridium<sup>δ-</sup>-Aluminum<sup>δ+</sup> Pairs: Unconventional Reactivity Patterns Including CO<sub>2</sub> Cooperative Reductive Cleavage", *J. Am. Chem. Soc.* **2021**, 143, 12, 4844–4856. <https://doi.org/10.1021/jacs.1c01725> **Highlighted in the special issue Out in Inorganic Chemistry: A Celebration of LGBTQIAPN+ Inorganic Chemists**
- 39. M. Jakoobi; V. Dardun; **C. Camp** and C. Thieuleux "Co<sub>2</sub>(CO)<sub>8</sub> as an efficient catalyst for the synthesis of functionalized polymethylhydrosiloxane oils and unconventional cross-linked materials", *Cat. Sci. technol.* **2021**, 11, 3176-3181. <https://doi.org/10.1039/D1CY00191D>
- 38. M. Renom-Carrasco; W. Khodja, C. Demarcy, L. Veyre, **C. Camp** and C. Thieuleux "Development of Pd supported catalysts using thiol-functionalized mesoporous silica frameworks: application to the chemo- and regio-selective C-3 arylation of free-indole" *Eur. J. Inorg. Chem.* **2021**, 2021, (9), 814-820. **Hot paper C-H activation** <https://doi.org/10.1002/ejic.202001086>
- 37. J. Petit; P.-A. Pavard and **C. Camp\*** "Unusually large "yaw" angle upon coordination of a new bulky unsymmetrical 3-hydroxyadamantyl-functionalized N-heterocyclic carbene ligand to rhodium(I)", *Mendeleev Communications* **2021**, 31, (1), 51-53. **Invited contribution in special Issue: Metal-NHC Dynamics in Organometallic Chemistry and Catalysis.** <https://doi.org/10.1016/j.mencom.2021.01.015>
- 36. M. Al Kharboutly, G. Veryasov, P. Gaval, A. Verchere, **C. Camp**, E. A. Quadrelli, J. Galipaud, B. Reynard, M. Cobian, T. Le Mogne, and C. Minfray "Mo(VI) dithiocarbamate with no pre-existing Mo-S-Mo core as an active lubricant additive", *Tribology International* **2021**, 154, 106690. <https://doi.org/10.1016/j.triboint.2020.106690>
- 35. R. Srivastava; M. Jakoobi; C. Thieuleux; E. A. Quadrelli and **C. Camp\*** "A Family of Rhodium(I) NHC Chelates Featuring O-containing Tethers Active in Tandem Alkene Isomerization/Hydrosilylation", *Dalton Trans.* **2021**, 50, 869-879. <https://doi.org/10.1039/D0DT03698F>
- 34. I. Del Rosal, S. Lassalle, C. Dinoi, C. Thieuleux, L. Maron and **C. Camp\*** "Mechanistic Investigations via DFT Support the Cooperative Heterobimetallic C-H and O-H Bond Activation Across Ta=Ir Multiple Bonds", *Dalton Trans.* **2021**, 50, 504-510. **Front Cover Article** <https://doi.org/10.1039/D0DT03818K>
- 33. S. Lassalle, R. Jabbour, I. Del Rosal, L. Maron, E. Fonda, L. Veyre, D. Gajan, A. Lesage, C. Thieuleux and **C. Camp\*** "Stepwise Construction of Silica-supported Tantalum/Iridium Heteropolymetallic Catalysts Using Surface Organometallic Chemistry", *J. Catal.* **2020**, 392, 287-301. <https://doi.org/10.1016/j.jcat.2020.10.016>
- 32. M. Jakoobi, V. Dardun, L. Veyre, V. Meille, **C. Camp**, and C. Thieuleux "Developing a Highly Active Catalytic System Based on Cobalt Nano-particles for Terminal and Internal Alkene Hydrosilylation", *J. Org. Chem.* **2020**, 85, 18, 11732-11740. <https://doi.org/10.1021/acs.joc.0c01439>



- 31. R. Srivastava; E. A. Quadrelli and **C. Camp**\* "Lability of Ta-NHC adducts as a Synthetic Route Towards Heterobimetallic Ta/Rh Complexes", *Dalton Trans.* **2020**, 49, 3120-3128. <https://doi.org/10.1039/D0DT00344A>
- 30. Y. Mohr; M. Renom-Carrasco; C. Demarcy; E. A. Quadrelli; **C. Camp**; F. M. Wisser; E. Clot; C. Thieuleux and J. Canivet "Regiospecificity in Ligand-Free Pd-Catalyzed C-H Arylation of Indoles: LiHMDS as Base and Transient Directing Group", *ACS Catal.* **2020**, 10, 4, 2713-2719. <https://doi.org/10.1021/acscatal.9b04864>
- 29. S. Lassalle; R. Jabbour; P. Schiltz; P. Berruyer; T. K. Todorova; L. Veyre; D. Gajan; A. Lesage; C. Thieuleux and **C. Camp**\* "Metal-Metal Synergy in Well-Defined Surface Tantalum-Iridium Heterobimetallic Catalysts for H/D Exchange Reactions", *J. Am. Chem. Soc.* **2019**, 141, 49, 19321-19335. **Front Cover Article**. <https://doi.org/10.1021/jacs.9b08311>
- 28. A. Kaithal; L.-L. Gracia; **C. Camp**; E. A. Quadrelli and W. Leitner "Direct Synthesis of Cycloalkanes from Diols and Secondary Alcohols or Ketones Using a Homogeneous Manganese Catalyst", *J. Am. Chem. Soc.* **2019**, 141, 44, 17487-17492. **Front Cover Article. Most Read (Top 20) article Nov. 2019**. <https://doi.org/10.1021/jacs.9b08832>
- 27. Y. Cao; Y. Wu; C. Badie; S. Cadot; **C. Camp**; E. A. Quadrelli and J. Bachmann "Electrocatalytic Performance of Titania Nanotube Arrays Coated with MoS<sub>2</sub> by ALD toward the Hydrogen Evolution Reaction", *ACS Omega* **2019**, 4, 8816-8823. <https://doi.org/10.1021/acsomega.9b00322>
- 26. V. Dardun; L. Escomel; E. Jeanneau and **C. Camp**\* "On the Alcoholysis of Alkyl-Aluminum(III) Alkoxy-NHC Derivatives: Reactivity of the Al-Carbene Lewis Pair vs Al-Alkyl", *Dalton Trans.* **2018**, 47, 10429-10433. **Special Issue New Talent: Europe**. <https://doi.org/10.1039/C8DT01498A>
- 25. R. Srivastava; R. Moneuse; J. Petit; P.-A. Pavard; V. Dardun; M. Rivat; P. Schiltz; M. Solari; E. Jeanneau; L. Veyre; C. Thieuleux; E. A. Quadrelli and **C. Camp**\* "Early/Late Heterobimetallic Tantalum/Rhodium Species Assembled Through a Novel Bifunctional NHC-OH Ligand", *Chem. Eur. J.* **2018**, 24, 4361-4370. <https://doi.org/10.1002/chem.201705507>



#### **Refereed publications from University of California – Berkeley, USA (postdoctoral work):**

- 24. **C. Camp**\* and J. Arnold "On the non-innocence of "Nacnacs": ligand-based reactivity in  $\beta$ -diketimate supported coordination compounds", *Dalton Trans.* **2016**, 45, 14462-14498. <https://doi.org/10.1039/C6DT02013E>
- 23. **C. Camp** and J. Arnold "3. Synthesis of White Phosphorus (P<sub>4</sub>) from Red Phosphorus: Preparation B" in "Chapter VI Synthetic Route to White Phosphorus (P<sub>4</sub>) and Arsenic Triphosphide (AsP<sub>3</sub>)", *Inorg. Synth.* **2018**, 37, 123-134. <https://doi.org/10.1002/9781119477822.ch6>
- 22. **C. Camp**; L. N. Grant; R. G. Bergman and J. Arnold "Photo-activation of  $d^0$  niobium imido azides: en route to nitrido complexes", *Chem. Commun.* **2016**, 52, 5538-5541. <https://doi.org/10.1039/C6CC02081J>
- 21. **C. Camp**; L. Naested; K. Severin and J. Arnold "N-N Bond Cleavage in a Nitrous Oxide-NHC Adduct Promoted by a PNP Pincer Cobalt(I) Complex", *Polyhedron* **2016**, 103, Part A, 157-163. **Special Issue in honor of Malcom Chisholm**. <https://doi.org/10.1016/j.poly.2015.09.001>
- 20. A. B. Altman; C. D. Pemmaraju; **C. Camp**; J. Arnold; S. G. Minasian; D. Prendergast; D. K. Shuh and T. Tyliczszak "Theory and X-ray Absorption Spectroscopy for Aluminum Coordination Complexes – Al K-edge Studies of Charge and Bonding in (BDI)Al, (BDI)AlR<sub>2</sub>, and (BDI)AlX<sub>2</sub> Complexes", *J. Am. Chem. Soc.* **2015**, 137(32), 10304-10316. <https://doi.org/10.1021/jacs.5b05854>

- 19. **C. Camp**; N. Settineri; J. Lefevre; A. R. Jupp; J. M. Goicoechea; L. Maron and J. Arnold "Uranium and Thorium Complexes of the Phosphaethynolate Ion", *Chem. Sci.* **2015**, 6, 6379-6384. <https://doi.org/10.1039/C5SC02150B>
- 18. **C. Camp**; L. Maron; R. G. Bergman and J. Arnold "Activation of white phosphorus by low-valent Group 5 complexes: formation and reactivity of *cyclo*-P<sub>4</sub> inverted sandwich compounds", *J. Am. Chem. Soc.* **2014**, 136(50), 17652-17661. <https://doi.org/10.1021/ja5107282>
- 17. S. S. Rozenel; R. Padilla; **C. Camp** and J. Arnold "Unusual activation of H<sub>2</sub> by reduced cobalt complexes supported by a PNP pincer ligand", *Chem. Commun* **2014**, 50, 2612-2614. <https://doi.org/10.1039/C3CC46018E>

**Refereed publications from CEA – Grenoble, France (doctoral studies):**

- 16. **C. Camp**; D. Tonilo; J. Andrez; J. Pécaut and M. Mazzanti "A versatile route to homo- and hetero-bimetallic 5*f*–5*f* and 3*d*–5*f* complexes supported by a redox active ligand framework", *Dalton Trans.* **2017**, 46, 11145-11148. **Front Cover Article.** <https://doi.org/10.1039/C7DT01993A>
- 15. **C. Camp**; L. Chatelain; C. E. Kefalidis; J. Pécaut; L. Maron and M. Mazzanti "CO<sub>2</sub> Conversion to Isocyanate via Multiple N-Si Bond Cleavage at a Bulky Uranium(III) Complex", *Chem. Commun.* **2015**, 51, 15454-15457. <https://doi.org/10.1039/C5CC06707C>
- 14. **C. Camp**; L. Chatelain; V. Mougél; J. Pécaut and M. Mazzanti "Ferrocene-based Tetradentate Schiff Bases as Supporting Ligands in Uranium Chemistry", *Inorg. Chem.* **2015**, 54(12), 5774-5783. <https://doi.org/10.1021/acs.inorgchem.5b00467>
- 13. **C. Camp**; O. Cooper; J. Andrez; J. Pécaut and M. Mazzanti "CS<sub>2</sub> activation at uranium(III) siloxide *ate* complexes: the effect of a Lewis acidic site", *Dalton Trans.* **2015**, 44, 2650-2656. <https://doi.org/10.1039/C4DT02585G>
- 12. L. C. J. Pereira<sup>‡</sup>; **C. Camp**<sup>‡</sup>; J. T. Coutinho; L. Chatelain; P. Maldivi; M. Almeida and M. Mazzanti "Single molecule magnet behavior in mononuclear homoleptic tetrahedral uranium(III) complexes", *Inorg. Chem.* **2014**, 53(22), 11809-11811. <https://doi.org/10.1021/ic501520c>
- 11. O. Cooper; **C. Camp**; J. Pécaut; C. Kefalidis; S. Gambarelli; L. Maron and M. Mazzanti, "Multimetallic Cooperativity in Uranium Mediated CO<sub>2</sub> Activation", *J. Am. Chem. Soc.* **2014**, 136(18), 6716-6723. <https://doi.org/10.1021/ja5017624>
- 10. **C. Camp**; M. A. Antunes; G. G. Garcia; I. Ciofini; I. Santos; J. Pécaut; M. Almeida; J. Marçalo and M. Mazzanti "Two-electron versus one-electron reduction of chalcogens by uranium(III): synthesis of a terminal U(V) persulfide complex", *Chem. Science* **2014**, 5, 841-846. <https://doi.org/10.1039/C3SC52742E>
- 9. **C. Camp**; V. Mougél; J. Pécaut; L. Maron; and M. Mazzanti "Cation-mediated conversion of the state of charge in uranium arene inverted-sandwich complexes", *Chem. Eur. J.* **2013**, 19, 17528-17540. <https://doi.org/10.1002/chem.201302752>
- 8. **C. Camp**; C. E. Kefalidis; J. Pécaut; L. Maron; and M. Mazzanti "Controlled thermolysis of uranium alkoxy(siloxy) complexes: a route to new polymetallic complexes of low-valent uranium", *Angew. Chem. Int. Ed.* **2013**, 12646-12650. <https://doi.org/10.1002/anie.201307291>
- 7. **C. Camp**; J. Pécaut and M. Mazzanti "Tuning uranium-nitrogen multiple bond formation with ancillary siloxide ligands", *J. Am. Chem. Soc.* **2013**, 135(32), 12101-12111. <https://doi.org/10.1021/ja405815b>
- 6. **C. Camp**; J. Andrez; J. Pécaut and M. Mazzanti "Synthesis of electron-rich uranium(IV) complexes supported by tridentate Schiff base ligands and their multi-electron redox chemistry", *Inorg. Chem.* **2013**, 52, 7078-7086. **Highlighted Article.** <https://doi.org/10.1021/ic4006218>
- 5. E. Mora; L. Maria; B. Biswas; **C. Camp**; I. C. Santos; J. Pécaut; A. Cruz; J. M. Carretas; J. Marçalo and M. Mazzanti "Diamine bis(phenolate) as supporting ligands in organoactinide (IV) chemistry", *Organometallics* **2013**, 32(5), 1409-1422. <https://doi.org/10.1021/om3010806>

- 4. V. Mougel; **C. Camp**; J. Pécaut; C. Copéret; L. Maron; C. E. Kefalidis and M. Mazzanti "Siloxide as a supporting ligand in U(III)-mediated small molecule activation", *Angew. Chem. Int. Ed.* **2012**, 51(49), 12280-12284. <https://doi.org/10.1002/anie.201206955>
- 3. **C. Camp**; V. Guidal; B. Biswas; J. Pécaut; L. Dubois and M. Mazzanti "Multielectron redox chemistry of lanthanide Schiff-base complexes", *Chem. Science* **2012**, 3(8), 2433-2448. **Front Cover Article.** <https://doi.org/10.1039/C2SC20476B>
- 2. **C. Camp**; V. Mougel; P. Horeglad; J. Pécaut and M. Mazzanti "Multielectron redox reactions involving C-C coupling and cleavage in uranium Schiff base complexes", *J. Am. Chem. Soc.* **2010**, 132(49), 17374-17377. <https://doi.org/10.1021/ja1089364>

**Refereed publication from Université Paul Sabatier – Toulouse, France (predoctoral studies):**

- 1. **C. Camp**; S. Dorbes; C. Picard and E. Benoist, "Efficient and tunable synthesis of new polydentate bifunctional chelating agents using click chemistry", *Tetrahedron Lett.* **2008**, 49, 1979-1983. <https://doi.org/10.1016/j.tetlet.2008.01.086>

**PhD Thesis:**

Design and reactivity of mono and polymetallic complexes of low-valent f-elements, **2013**.  
Available online: <http://www.theses.fr/2013GRENV023>



## Conferences and seminars contributions:

- 47. **Invited Lecture**, Forum Labo, Lyon (France), 19-20/09/2022.
- 46. **Poster Communication**, *Gordon Research Conference: Green Chemistry*, 24-29/07/2022, Castelldefels (Spain).
- 45. **Oral Communication**, 29th International Conference on Organometallic Chemistry (ICOMC), Prague (Czech Republic) 17-22/07/2022.
- 44. **Invited Seminar**, Chemistry Department - University of Padova (Italy), 17/06/2022.
- 43. **Oral Communication**, *4<sup>th</sup> international Green Catalysis Symposium*, 19-22/04/2022, Rennes (France).
- 42. **Oral communication**, *French Chemical Society – Coordination Chemistry Symposium*, 7-8/04/2022, Lille (France).
- 41. **Invited Lecture**, *Negishi Legacy Symposium*, 02/12/2021, Lyon (France).
- 40. **Oral communication**, SCF2021 Congress – Catalysis session, France, 29/06/2021, online due to COVID crisis.
- 39. **Invited Seminar**, Chemistry Departmental Seminar - University of Kansas, USA, 07/05/2021, online due to COVID crisis.
- 38. **Invited Seminar**, *Dalton Transactions New Talent: Europe desktop seminar*, 19/04/2021, online due to COVID crisis.
- 37. **Invited Lecture**, *Cotton Award Symposium – American Chemical Society National Meeting*, 08/04/2021, online due to COVID crisis.
- 36. **Oral communication**, *Journées des CR de l'Institut de Chimie du CNRS*, 18/01/2021, Meudon (France).
- 35. **Invited Seminar**, *Institut de Chimie et Biochimie Moléculaires et Supramoléculaires*, 23/09/2020, Lyon (France).
- 34. **Invited Lecture**, *Global Inorganic Discussion Weekend – Chemical Institute of Canada*, 04/05/2020.
- 33. **Oral communication**, *French Chemical Society – Coordination Chemistry Symposium*, 23-24/01/2020, Marseille (France).
- 32. **Invited Speaker**, *BIG-NSE workshop – Technische Universität Berlin - Einstein Center of Catalysis*, 16/10/2019, Berlin (Germany).
- 31. **Oral communication**, *EICC-5 EuChemS Inorganic Chemistry Conference*, 24-28/06/2019 Moscow (Russia).
- 30. **Invited Speaker**, *CCRA 2019 - Journée de Chimie de Coordination en Rhône-Alpes*, 04/04/2019, Grenoble (France).
- 29. **Poster communication**, *Gordon Research Conference: Inorganic Reaction Mechanisms*, 10-15/03/2019, Galveston (Texas - USA).
- 28. **Oral communication**, *Journée thématique de l'institut de chimie de Lyon: Les métaux et leurs propriétés – Optique, Catalyse, Électronique, Santé*, 29/01/2019, Lyon (France).
- 27. **Poster communication**, *Innovative Catalysis and Sustainability Catalysis Winter School*, 7-12/01/2019, Bardonecchia (Italy).
- 26. **Poster communication**, *1<sup>st</sup> Stable Carbene Symposium*, 30/11/2018, Toulouse (France).
- 25. **Poster communication**, *Gordon Research Conference: Green Chemistry*, 29-3/08/2018, Castelldefels (Spain).
- 24. **Chair**, *Gordon Research Seminar: Green Chemistry*, 28-29/07/2018, Castelldefels (Spain).



- 23. **Oral communication**, 28<sup>th</sup> International Conference on Organometallic Chemistry (ICOMC), 15-20/07/2018, Firenze (Italy).
- 22. **Poster communication**, Gordon Research Conference: Organometallic Chemistry, 8-13/07/2018, Salve Regina – Rhode Island (USA).
- 21. **Oral communication**, French Chemical Society National Congress, 30-4/07/2018, Montpellier (France).
- 20. **Oral communication**, XI International School on Organometallic Chemistry “Marcial Moreno Mañas”, 6-8/06/2018, Oviedo (Spain).
- 19. **Oral communication** and **Chair** “Early Transition Metals” INOR session, 255<sup>th</sup> ACS National Meeting and Exposition, 18-22/03/2018, New Orleans – Louisiana (USA).
- 18. **Oral communications (x2)**, Atlantic Basin Conference on Chemistry (ABC-Chem), 23-26/01/2018, Cancun (Mexico).
- 17. **Roundtable panelist**, RAFALD Workshop, 7-9/11/2017, Montpellier (France).
- 16. **Poster communication**, 253<sup>rd</sup> ACS National Meeting and Exposition, 2-6/04/2017, San Francisco – California (USA).
- 15. **Poster communication**, Gordon Research Conference: Green Chemistry, 31-05/08/2016, Stowe – Vermont (USA).
- 14. **Poster communication**, French Chemical Society – Coordination Chemistry Symposium, 7-8/04/2016, Grenoble (France).
- 13. **Poster communication**, III<sup>rd</sup> Sustainable Industrial Chemistry Winter School, 16-19/02/2016, Bologna (Italy).
- 12. **Poster communication**, French Chemical Society – Coordination Chemistry Symposium, 28-29/01/2016, Toulouse (France).
- 11. **Oral Communication**, 249<sup>th</sup> ACS National Meeting and Exposition, 22-26/03/2015, Denver – Colorado (USA).
- 10. **Invited Seminar**, Glenn T. Seaborg Centre Seminars, 12/06/2014, Lawrence Berkeley National Laboratory, Berkeley – California (USA).
- 9. **Poster communication**, European f-Elements Network COST Action meeting, 14-15/04/2014, Nürnberg (Germany).
- 8. **Poster communication**, French Chemical Society – RA section meeting, 13/06/2013, Grenoble (France).
- 7. **Poster communication**, French Chemical Society – Coordination Chemistry Symposium, 7-8/02/2013, Lyon (France).
- 6. **Poster communication**, International Scientific Forum on CO<sub>2</sub> chemistry and biochemistry, 28-29/09/2012, Lyon (France).
- 5. **Oral Communication**, 40<sup>th</sup> International Conference on Coordination Chemistry (ICCC), 9-13/09/2012, Valencia (Spain).
- 4. **Poster communication**, European f-Elements Network COST Action meeting, 1-4/04/2012, Tarragona (Spain).
- 3. **Poster communication**, French Chemical Society – Coordination Chemistry Symposium, 26-27/01/2012, Strasbourg (France).
- 2. **Oral Communication**, French Chemical Society – RA section meeting, 9/06/2011, Le Bourget du Lac (France).
- 1. **Poster communication**, Gordon Research Conference: Inorganic Reaction Mechanisms, 6-11/03/2011, Galveston - Texas (USA).

# AWARDS AND DISTINCTIONS

- **CNRS bronze medal 2022.** <https://www.cnrs.fr/fr/personne/clement-camp>
- **CNRS excellence award for doctoral supervision and research, Villeurbanne, France.** 2015 & 2020
- **Award for the best poster presentation, European f-Elements Network COST Action meeting,** 14-15/04/2014, Nürnberg (Germany).
- **Award for the best poster presentation, French Chemical Society – Coordination Chemistry Symposium,** 26-27/01/2012, Strasbourg (France).
- **Award for the best oral communication, French Chemical Society – RA section meeting,** 9/06/2011, Le Bourget du Lac (France).

# OTHER ACTIVITIES

## Supervision

- **PhD students:**
  - Léon Escomel (UCBL, in collaboration with C. Thieuleux, 2019-2022).
  - Vincent Dardun (UCBL, in collaboration with C. Thieuleux, 2019-2022).
  - Isis N'Dala Louika (UCBL, in collaboration with C. Thieuleux, 2018-2021).
  - Sébastien Lassalle (UCBL, in collaboration with C. Thieuleux, 2017-2021).
  - Clément Demarcy (UCBL, in collaboration with C. Thieuleux, 2017-2021).
  - Ravi Srivastava (SINCHEM, in collaboration with A. Quadrelli, 2016-2020).
  - Akash Kaithal (SINCHEM, in collaboration with A. Quadrelli, 2016-2020).
- **Post-docs:**
  - A. Lachguar (Project ANR SHICC, 2022).
  - R. Falconer (Project ANR SHICC, 2021-2022).
  - C. Cuevas-Chavez (Project FUI DISCOVER, 2021-2022, in collaboration with C. Thieuleux).
  - A. Vivien (Project FUI DISCOVER, 2021-2023, in collaboration with C. Thieuleux).
  - M. Zukush (Project ANR ULTIMED, 2019-2021, in collaboration with A. Quadrelli).
  - A. Verchère (Project ANR ULTIMED, 2019, in collaboration with A. Quadrelli).
  - M. Renom-Carrasco (Project H-CCAT, 2018-2019, in collaboration with C. Thieuleux).
  - M. Jakoobi (Project CNRS-MOMENTUM, 2018-2020).
  - G. Veryasov (Project MOST Carnot Ingénierie@Lyon, in collaboration with A. Quadrelli, 2017-2018). *now working at TOTAL-Belgium.*
- **Undergraduate students:**
  - Wolf Wagner (RWTH Aachen M2 intern, spring 2022).
  - Chloé Liagre (CPE M2 intern, spring 2022).
  - Valentin Hérault (ENS Lyon M1 intern, spring 2021).
  - Emmanuel Robin (CPE M1 intern, spring 2021).
  - Naime Soule (CPE M1 intern, spring 2021).
  - Antoine Costa (CPE M1 intern, spring 2021).
  - Anna Héritier (CPE M1 intern, spring 2021).
  - Lisa-Lou Gracia (CPE M2 intern, spring 2019).
  - Léon Escomel (ENS Lyon M2 intern, spring 2018 and spring 2019).

- Vincent Dardun (ENS Lyon M1&M2 intern, spring 2017 and spring 2019).
- Pauline Schiltz (CPE M1&M2 intern, spring 2017 and spring 2019).
- Paul-Alexis Pavard (CPE/UCBL M1 intern, spring 2016 and M2 intern, spring 2018).
- Julien Petit (CPE/UCBL M1 intern, spring 2016 and M2 intern, spring 2018).
- Guillaume Zuber (Polytech Lyon M1 intern, fall 2017).
- Sébastien Lassalle (CPE/UCBL M2 intern, spring 2017).
- Tianran Ding (CPE/UCBL M2 intern – in collaboration with A. Tlili, spring 2017).
- Madleen Rivat (ENS Lyon L3 intern, spring 2017).
- Raphaël Moneuse (ENS Lyon L3 intern, spring 2017).
- Noor Narwaz (CPE M1 intern, spring 2017).
- Lucie Fimabre (CPE M1 intern, spring 2017).
- Marius Solari (CPE M1 intern, spring 2017).

## Teaching

- **École Supérieure de Chimie Physique Electronique de Lyon** (2015-ongoing)  
*Organometallic chemistry (lectures and tutorial classes, 3<sup>rd</sup> year students).*
- **École Normale Supérieure de Lyon** (2015-ongoing)  
*Bio-Inorganic Chemistry, Practical Inorganic Chemistry (lectures and lab classes, 5<sup>th</sup> year students preparing the « Agrégation » of chemistry).*
- **Lycée de la Martinière Montplaisir, Lyon** (2007-2010 and 2015-ongoing)  
*Chemistry examiner: weekly oral exams with 1<sup>st</sup> and 2<sup>nd</sup> year students in “classes préparatoires aux grandes écoles” PCSI/BCPST/PC\*.*
- **Université Claude Bernard Lyon 1** (2015)  
*Molecular approach to catalysis (lectures, 5<sup>th</sup> year international students).*
- **Université Joseph Fourier, Grenoble** (2010-2013)  
*Organic chemistry, Practical inorganic and organic chemistry, General chemistry (lectures and lab classes, 5<sup>th</sup> year students preparing the « Agrégation » and « CAPES » of chemistry).*  
*Structure of matter, Crystallography (lectures and lab classes, 1<sup>st</sup> year students).*

## Project funding and management

### Principal investigator

- 2016 **IMPULSION - Programme Avenir Lyon/Saint-Etienne** research grant: “Towards Surface-Supported Heterobimetallic Catalysts” (67 k€).
- 2016-2018 **European Doctoral Programme on Sustainable Industrial Chemistry (SINCHEM)** “Innovative Heterobimetallic Catalysts for Cooperative C-H bond Activation” (~100 k€, 3-years PhD fellowship funded, in collaboration with A. Quadrelli).
- 2017 **Institut de Chimie de Lyon** research grant: CHEF C(sp<sub>2</sub>)-SCF<sub>3</sub> “Catalyseur HÉTÉROGÈNE pour la Formation de liaison C(sp<sub>2</sub>)-SCF<sub>3</sub>” (10 k€ - in collaboration with A. Tlili).
- 2017-2019 **École doctorale de Chimie** de l'Université de Lyon: “Vers une Catalyse Coopérative: Conception de Nouveaux Catalyseurs Supportés Hétérobimétalliques à Base de Nanoparticules” (~100 k€, 3-years PhD fellowship funded, in collaboration with C. Thieuleux).
- 2018-2020 **CNRS-MOMENTUM** research grant: “Towards Surface-Supported Heterobimetallic Complexes for Cooperative Catalysis” (256 k€). (19 projects selected / 430 submitted).
- 2021-2024 **ANR-JCJC** research grant: **SHICC** “Supported Heterobimetallic Isolated sites for Cooperative Catalysis” (228 k€).
- 2022 **Institut de Chimie de Lyon** research grant: **LuFlr** “LUMINESCENT F-ELEMENT-IRIDIUM ARCHITECTURES” (8 k€ - in collaboration with O. Maury).
- 2022-2024 **CNRS – International Emerging Action** research grant **AnTM** “Actinide/Transition Metal Heteronuclear Polyhydrides for Small Molecules Activation” (24 k€ - in collaboration with J. Arnold, University of California Berkeley).
- 2022-2027 **ERC Starting grant: DUO** “Atomically Dispersed Heterobimetallic Catalysts for Cooperative C-H Bonds Activation” (1500 k€).

### Associate investigator:

- 2018-2020 **Institut Carnot Ingénierie@Lyon** grant: “Sulfur-Rich Molybdenum Organometallic Complexes for the Generation of MoS<sub>2</sub> Layers in Tribological Contacts (**MOST**)”.
- 2017-2021 European Union's Horizon 2020 research grant: “Solid Catalysts for activation of aromatic C-H bonds (**H-CCAT**)”

- 2018-2021 **ANR PRC** research grant: “Eco-by-design soft hybrid phosphors for lighting applications (**ECO-PHOS**)” (477 k€, involvement = 10%).
- 2019-2023 **ANR PRC** research grant: “Atomic-level control over ultrathin 2D layers of Transition Metal Dichalcogenides by a Molecular Layer Deposition route (**ULTiMeD**)” (545 k€, involvement = 20%).
- 2019-2023 **ANR PRC** research grant: “Hyperactive catalytic species in the liquid phase from nanoparticles or immobilized molecular species (**HYPERCAT**)”
- 2018-2023 **FUI** research grant: “Développement Industriel en Sécurité de Colloïdes Métalliques de grande Versatilité d’usage (**DISCOVER**)”
- 2021-2025 **ANR PRC** research grant proposal: “Catalytic Alkane Silylation by Heterogeneized Metalopolyoxometalates (**CASH-POM**)” (402 k€, involvement = 15%).

## Large instruments access

- **TGIR-RMN** – Centre de RMN à hauts champs de Lyon – (collab. **A. Lesage** and **D. Gajan**) 2018-2019 Project “Advanced NMR characterization of Tantalum-Iridium Heterobimetallic Catalysts on Silica” High-field solid-state MAS  $^1\text{H}$ - $^1\text{H}$  double, triple et quadruple quanta experiments for elucidating the structure of complex surface polyhydrides.
- **Synchrotron SOLEIL** – Beamline SAMBA (collab. **E. Fonda**) – December 2019 Project “Structure of Tantalum-Iridium Heterobimetallic Catalysts on Silica Highly Active for H/D Exchange Reactions. Determination of Metal-Metal and Metal-Support Synergy” X-ray absorption spectroscopy (XANES et EXAFS) on Ta and Ir edges.

## Organization of conferences, workshops and meetings

- Member of the steering committee (young researchers and ethics committees) of the International Conference on Catalysis (ICC) in 2024 at Lyon.
- Member of the organizing and scientific committee of the 2022 winter school on Catalysis at the Energy-Chemistry Nexus, 14-18/03/2022, Aussois, France
- Member of the scientific committee of the 19<sup>th</sup> International Symposium on Silicon Chemistry (ISOS), 5-10/07/2020, Toulouse, France.
- **Chair of the 2018 Gordon Research Seminar: Green Chemistry**, 28-29/07/2018, Castelldefels (Spain).
- Member of the organizing committee of the **2018 RAFALD Workshop**, 6-8/11/2018, Lyon (France).
- Chair of the INOR session “Early Transition Metals”, 255<sup>th</sup> ACS National Meeting and Exposition, 18-22/03/2018, New Orleans – Louisiana (USA).
- Co-organizer (50%) of the C2P2 laboratory scientific seminars (>30 lectures from national and international invited speakers).
- Organization of the seminar “Jean-Pierre Sauvage (Nobel 2016) meet the young chemists”, 7/12/2017, Lyon (France).
- Co-organizer (50%) of the *Autumn School of Erasmus Mundus Joint Doctorate SINCHEM*, 30-1/12/2016, Lyon (France).
- Organization of weekly scientific meetings for the COMS team involving 3 PIs and ~20 students and staff members.

## Peer-review and jury committees

- Peer-review for scientific journals (*J. Am. Chem. Soc.*, *Angew. Chem. Int. Ed.*, *ACS Catalysis*, *Green Chem.*, *Organometallics*, *Inorg. Chem.*, *ACS Organic & Inorganic Au*, *Chem. Eur. J.*, *J. Catal.*, *Dalton Trans.*, *Cat. Sci. Technol.*, *ChemSusChem*, *ChemAsianJ*, *Helvetica Chimica Acta*, *Eur. J. Inorg. Chem.*, *Inorganica chimica acta*, *Mendeleev Commun.*, *J. Chem.*).
- Grant proposals external expert for the European Commission (programmes FET-OPEN (2018 & 2020), Marie Skłodowska-Curie Action (2019 & 2020), EIC PATHFINDER (2021 & 2022)), the Agence Nationale de la Recherche (ANR), the Czech Science Foundation and the Frontier Research in Chemistry (FRC) Foundation.
- PhD thesis examiner: Teng Zhang, July 2019, Sorbonne Université, Paris.
- Jury member for the “Young researcher award” (JEDI representative) of the French Chemical Society (2022).
- External member of Comités de Suivis de Thèse at Université Claude Bernard Lyon 1 (France) and École Polytechnique (France).
- Master thesis examiner at École Polytechnique Fédérale de Lausanne (EPFL – Switzerland), École Normale Supérieure de Lyon (France) and Université Claude Bernard Lyon 1 (France).

## Dissemination of scientific culture and outreach

- Articles for the general public: « Le tris-dipicolinate de lanthanide: un complexe à tout faire? » to be published in *L'actualité Chimique* in 2022.
- Member of the organizing committee of the 51<sup>st</sup> International Chemistry Olympiads (Paris, 2019).
- Meetings and discussions with high school classrooms involved in the Prix Pierre Potier des Lycéens as part of French Chemical Society Young Chemist Network (RJ-SCF) representative (Lyon, 2019).
- Roundtable speaker at the “Career panel” mentorship component of the Young Chemists network at the French Chemical Society National Congress, 30-4/07/2018, Montpellier (France).
- Mentoring of CPGE students for their “Travaux d’Initiative Personnelle Encadrée” (2015-ongoing)
- Running of booths for the “Fête de la science” (annually) and organization of a touring exhibition and a short movie for the 2011 International Year of Chemistry.
- Volunteer in a STEM role model program: organization of scientific activities (workshops, hands-on experiments) towards public high school classrooms (2011-2012 Grenoble, Chambéry, Annonay).
- Presence on social networks (twitter).

## Professional memberships

- Member of the Société Chimique de France (SCF) since 2010. Member of the SCF JEDI council (*Jeunes, Équité, Diversité, Inclusion*) since 2021.

## MISCELLANEOUS SKILLS

- Languages: French (native), English (fluent), Spanish (good level).
- Driving License since 2005.