

Carine Maaliki

*PhD, Organic and Organometallic
Chemistry*

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French
Born on 21th of May 1984

EDUCATION

- 2009-2012 **PhD Organic and Organometallic Chemistry**, Laboratory of Coordination of Chemistry (LCC) CNRS-UPR 8241, Toulouse, France.
- 2008-2009 **Master 2 Research Chemistry and Biology**, Paul Sabatier University, Toulouse, France.
- 2007-2008 **Master 1 Chemical Sciences and Engineering**, option organic chemistry University of Nantes, France.
- 2004-2007 **Bachelor of Chemistry**, (with Bs-2 Biology) University of Tours, France.

RESEARCH EXPERIENCE

- 2017-Present **Research associate**
«Porous Organic Cages: form synthesis to application »

Supervisor: Prof. Niveen Khashab
Team: Smart Hybrid Materials Laboratory
- 2016-2016 **Research associate**
[10 months] *« Structures optimization for recognition of different forms of amyloid- β peptide »*
Supervisor: Dr. Emmanuel Gras and Dr. B. Mestre-Voegtle.
Team: Alzheimer and Amyloids: Molecular Basis, Therapy by Chelation and Detection LCC, CNRS-UPR 8241, **Toulouse**, France.
- 2014-2016 **Research associate**
[19 months] *« Synthesis of new monomers and polymers for chelating metals salt from waste water »*
Supervisor: Prof. Jérôme Thibonnet.
Team: Research and Innovation in medicinal chemistry
University of Tours, **Tours**, France.
*In collaboration with **CEA-Le Ripault** (coordinator: Dr. Stéphane Cadra).*

« New indol derivatives for inhibition of bacteria growth »
Supervisor: Prof. Jérôme Thibonnet.
Team: Research and Innovation in medicinal chemistry
University of Tours, **Tours**, France.
- 2013-2014 **Post-doctoral position**
[18 months] *« Synthesis of new carbohydrate clicked on fullerene »*
Supervisor: Prof. Stéphane. Vincent.
Team: Bio-organic Chemistry
University of Namur, **Namur**, Belgium.
- 2009-2012 **PhD research**, *« Novel Organo-phosphorylated ligands: synthesis & coordination chemistry »*
[3 years] Supervisor: Prof. Remi Chauvin & Dr. Yves Canac.
Team: Molecules, carbo-mers and chiral catalysts
LCC, CNRS-UPR 8241, **Toulouse**, France.

2009 **Graduate training (Master 2)**, «*Synthesis of Jaspine B analogues* »
[6 months] Supervisor: Dr. Yves Genisson.
Team: Laboratory of Synthesis and Physico-Chimistry of molecules of biological Interest,
Paul Sabatier University, **Toulouse**, France.

TEACHING & TUTORING EXPERIENCE

- **Part-Time teaching:**

University of Tours:

- 2014-2015: 34h of Laboratory practical courses of organic chemistry,
Level: Bachelor (1st year) of Biology and Bachelor (1st year) of Material Science.
- 2015-2016: 42h of Laboratory practical courses of general chemistry,
Level: Bachelor (1st & 3rd year) of Biology.

University of Namur:

- 2013-2014: 40h of Laboratory practical courses of organic chemistry,
Level: Bachelor (1st year) of chemistry and Bachelor (1st year) of pharmaceutical Science.

- **Co-supervisor** of students :

- 2009-2012: Two master (1st year) students for 4 months,
One master (2nd year) student for 6 months.
- 2014-2015: Two bachelor degree students for 2 months,
One master student (1st year) for 2 months.
- **Member** of the young committee of the JCO 2016 (SCF-Club jeune chercheur Midi-Pyrénées).
- **Workshop** « *La nuit des chercheurs* » in Quai des savoirs, 2016, Toulouse.
- **Workshop** « *Fête de la science* » in University of Tours, 2015, Tours.
- **Workshop** for the international year of chemistry in « *Palais de la découverte* », 2011, Paris, France.
- **Workshop** « *Fête de la science* » in Laboratory of Coordination of Chemistry, 2011, Toulouse.

SCIENTIFIC SKILLS

Chemistry:

- Organic chemistry, carbohydrate chemistry, organometallic chemistry.
- Bioactive molecules
- Click chemistry
- Fullerene chemistry
- Experiment under inert atmosphere: Schlenks and glovebox technics.
- Standard organic and organometallic chemistry technics
- Analysis: RMN (¹H, ¹³C, ³¹P, 2D), HPLC, FPLC, IR, UV, Energy dispersive X-ray fluorescence spectrometry (EDX-7000).

Editorial & Office skills:

- Writing of scientific articles and reports
- *Databases*: Scifinder, Beilstein, Web of knowledge...
- *Softwares related to chemistry*: ChemDraw, Mercury, MestRe-C, MestReNova, Top Spin, Delta

Languages: *French*: mother tongue; *English*: writing reading and speaking; *Arabic*: beginner.

PUBLICATIONS

- **Articles in international peer-reviewed journals: 12**

1. *Org. Biomol. Chem.*, **2010**, *8*, 3227.
« Flexible and enantioselective access to jaspine B and biologically active chain-modified analogues thereof »
Y. Salma, S. Ballereau, **C. Maaliki**, S. Ladeira, N. Andrieu-Abadie, Y. Génisson.
2. *New J. Chem.*, **2012**, *36*, 17.
« Carbeniophosphanes and their carbon → phosphorus → metal ternary complexes »
Y. Canac, **C. Maaliki**, I. Abdellah, R. Chauvin.
3. *Chem. Eur. J.*, **2012**, *18*, 7705.
« On the P-coordinating limit of NHC-phosphenium cations towards Rh(I) centers »
C. Maaliki, C. Lepetit, Y. Canac, C. Bijani, C. Duhayon, R. Chauvin.
4. *Eur. J. Inorg. Chem*, **2012**, 4057.
« Bis-ylide ligands from linear vs cyclic proximal diphosponiums »
C. Maaliki, C. Barthes, M. Abdalilah, C. Duhayon, Y. Canac, R. Chauvin.
5. *Chem. Eur. J.*, **2012**, *18*, 16153. (& Cover picture)
« Carbene-stabilized phosphenium oxides and sulfides »
C. Maaliki, C. Lepetit, C. Duhayon, Y. Canac, R. Chauvin.
6. *RSC Adv.*, **2013**, *3*, 20391.
« P-oxidation of gem-dicationic phosphines »
C. Maaliki, Y. Canac, C. Lepetit, C. Duhayon, R. Chauvin.
7. *Eur. J. Inorg. Chem*, **2016**, 313. (& Cover picture)
«A Push-Pull Pd II Complex with a Ternary Pd-P-C + Accepting End and a Key N-Heterocyclic Carbene-Imidazoliophosphine Ligand »
L. Dubrulle, C. Poidevin, **C. Maaliki**, Y. Canac, C. Lepetit, C. Duhayon, R. Chauvin.
8. *Synthesis*, **2016**, *48*, 1407.
«Two Novel and Simple Approaches to 'CD45 Protein Tyrosine Phosphatase Inhibitor' (Z)-Pulchellalactam and Derivatives»
E. Anselmi, K. Cherry, **C. Maaliki**, S. Inack Ngi, A. Duchêne, J. Thibonnet, M. Abarbri.
9. *Acta Crystallographica Section C.*, **2016**, 198.
« The search for formal electrostatic effects on molecular conformation and crystal packing: crystal structure of 2,2''-disubstituted (H versus PPh₂) 1,1'-(1,2-phenylene)bis(3-methyl-1H-imidazol-3-ium) bis(trifluoromethanesulfonate) »,
C. Duhayon, Y. Canac, L. Dubrulle, **C. Maaliki**, R. Chauvin.
10. *Tetrahedron lett.*, **2016**, *57*, 3358.
« Palladium and Copper Catalyzed Sonogashira Decarboxylative Coupling of Aryl Halides and Alkynyl Carboxylic Acids »,
C. Maaliki, Y. Chevalier, E. Thiery, J. Thibonnet.
11. *Inorg. Chem*, **2016**, *55*, 11018.
« Phosphenium vs pro-phosphide character of P-tert-butyl-dicyclopropeniophosphine: zwitterionic palladate complexes of a dicationic phosphido ligand »,
C. Mboyi, **C. Maaliki**, A. Mankou Makaya, Y. Canac, C. Duhayon, R. Chauvin.
12. *Eur. J. Org. Chem*, **2017**, *2*, 209.
« Emergence of copper-mediated formation of C–C Bonds »,

C. Maaliki, E. Thiery, J. Thibonnet.

- **Patents: 1**

1. «*Composés aptes à complexer au moins un élément métallique et matériaux polymériques obtenus à partir des dits composés*» Commissariat à l'énergie atomique et aux énergies alternatives et Université de Tours, S. Cadra, J. Thibonnet and C. Maaliki. n° 16 55724.

- **Book Chapters: 2**

1. Carbohydrate Chemistry, **2014**, volume 40, chapter 20,
« Conformationally restricted glycoside derivatives as mechanistic probes and/or inhibitors of sugar processing enzymes and receptors »
C. Maaliki, C. Gauthier, O. Massinon, R. Sagar, S. P. Vincent and Y. Blériot.
2. *Comprehensive Organic Chemistry Experiments for the Laboratory Classroom*, **2015**, RSC Eds. Carlos A. M. Afonso, Robert Franzén, Bin Tan, Nuno R. Candeias, Dulce Simão, Alexandre Trindade and Jaime Coelho.
« Sonogashira Coupling between a vinylic halide and a terminal alkyne »
C. Maaliki and J. Thibonnet.

- **Posters: 7**

1. 17ème Journée Institut de Recherche Pierre Fabre, June **2010**, Abbaye-Ecole de Sorrèze, France.
2. 18ème Journée Institut de Recherche Pierre Fabre, June **2011**, Abbaye-Ecole de Sorrèze, France.
3. EUCOM, July **2011**, Toulouse-Labège, France
4. 17th Sigma-Aldrich Symposium, December **2013**, Blankenbergue, Belgique.
5. Journée rencontre Université de Tours-CEA-Les Ripaults, October **2015**, Monts, France.
6. JOC, September **2016**, Massy-Palaiseau, France.
7. JMJC, October **2016**, Nice, France.

- **Oral Presentations: 3**

1. Journée de l'école doctorale Science de la Matière, May **2011**, Toulouse, France.
2. Journée de la Société Chimique de France et societa de chimica catalana, November **2011**, Barcelone, Espagne.
3. Journée de la Société Chimique de France, December **2011**, University of Tours, France.