



## Dr Thomas CASTANHEIRO



Associate Professor, Rouen Normandie University

Fluorinated Biomolecules Synthesis Team

Tel : 02 35 14 00 05

E-mail : [thomas.castanheiro-matias@univ-rouen.fr](mailto:thomas.castanheiro-matias@univ-rouen.fr)



### PROFESSIONAL EXPERIENCES

- 2019- Associate Professor; Rouen Normandie University, France.
- 2018-2019 Postdoctoral Associate; Advisor: Dr. Arnaud Voituriez, Institut de Chimie des Substances Naturelles (ICSN), France.
- 2017-18 Postdoctoral Associate; Advisor: Prof. Jennifer Roizen, Duke University at Durham, North-Carolina, USA.
- 2013-2016 PhD in Organic Synthesis; Advisor: Dr Mihaela Gulea; Co-advisor: Dr Morgan Donnard, Strasbourg University, France.

### EDUCATION

- 2013-2016 Ph.D. Organic Chemistry, University of Strasbourg, France.
- 2011-2013 M.S. Organic Chemistry/Medicinal Chemistry, University of Paris Descartes and Paris Diderot, France.

### ADMINISTRATIVE & INSTITUTIONAL RESPONSIBILITIES

- 2019- Co-coordinator of the web page of team Synthesis of Fluorinated Biomolecules
- 2019- Coordinator of the hydrogenation room.

### RESEARCH INTERESTS

Development of innovative synthetic methodologies to access fluorinated heterocyclic molecules of therapeutic interests by photoredox catalysis. Development of electrochemical processes to the discovery of new access to aliphatic primary amines.

### SCIENTIFIC ACHIEVEMENTS

**Academic record (h-index: 7)**

12 publications, 1 book chapter.

## SUPERVISION ACTIVITIES

- 2020- 1 PhD student in co-supervision  
2019- 1 PhD student in co-supervision

## GRANTS AND FELLOWSHIPS

- 2013-2016 IDEX European PhD fellowship at Strasbourg university

## TEACHING ACTIVITIES

- 2019- 192 h per year at the pharmacy department of Rouen Normandy university  
2014-2016 128 h of laboratory classes in analytical and mineral chemistry

## MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2014- Member of Société Chimique de France (SCF)  
2014- Member of Division de Chimie Organique (DCO)  
2020- Member of GIS-Fluor

## PUBLICATIONS

### Publications:

- 12 E. Nobile, T. Castanheiro, T. Besset : *Radical-Promoted Distal C-H Functionalization of C(sp<sup>3</sup>) Centers with Fluorinated Moieties*, *Angew. Chem. Int. Ed.*, **2020**, doi : 10.1002/anie.202009995.
- 11 C. Lorton, T. Castanheiro, A. Voituriez : *Catalytic and Asymmetric Process via PIII/PV=O Redox Cycling : Access to (Trifluoromethyl)cyclobutenes via a  $\gamma$ -Michael Addition/Wittig Olefination Reaction*, *J. Am. Chem. Soc.*, **2019**, *141*, 10142–10147.
- 10 A. L. G. Kanegusuku, T. Castanheiro, S. K. Ayer, J. L. Roizen : *Sulfanyl Radicals Direct Photoredox-Mediated Giese Reactions at Unactivated  $\gamma$ -C(sp<sup>3</sup>)-H bonds*, *Org. Lett.*, **2019**, *21*, 6089–6095. highlighted in *Synfacts: Paul Knochel, Juri Skotnitzki. Synfacts*, **2019**, *15*, 1145.
- 9 T. Castanheiro, A. Schoenfelder, M. Donnard, I. Chataigner, M. Gulea : *Synthesis of Sulfur-Containing Exo-Bicyclic Dienes and Their Diels–Alder Reactions To Access Thiacyclopolyfused Polycyclic Systems*, *J. Org. Chem.*, **2018**, *83*, 4505–4515.
- 8 J. M. Blackburn, M. A. Short, T. Castanheiro, S. K. Ayer, T. D. Muellers, J. L. Roizen : *Synthesis of N-Substituted Sulfamate Esters from Sulfamic Acid Salts by Activation with Triphenylphosphine Ditriflate*, *Org. Lett.* **2017**, *19*, 6012–6015.
- 7 T. Castanheiro, A. Schoenfelder, J. Suffert, M. Donnard, M. Gulea : *Comparative study on the reactivity of propargyl and alkynyl sulfides in palladium-catalyzed domino reaction*, *C.R.*

- Chimie* **2017**, 20, 624–633. *Special issue in memory of Jean Normant, 11th International Symposium on Carbanion Chemistry 17-21 July 2016 - Rouen, France.*
- 6 T. Castanheiro, J. Suffert, M. Donnard, M. Gulea : *Synthesis of Sulfur Heterocycles via Domino Metal-mediated Reactions, Phosphorus, Sulfur Silicon Relat. Elem.* **2017**, 192:2, 162–165. *Special issue 27th International Symposium on Organic Chemistry of Sulfur, July 24–29, 2016 Jena/Germany.*
  - 5 T. Castanheiro, J. Suffert, M. Gulea, M. Donnard : *Aerobic Copper-Mediated Domino Three-Component Approach to 2-Aminobenzothiazole Derivatives* *Org. Lett.*, **2016**, 18, 2588–2591.
  - 4 T. Castanheiro, J. Suffert, M. Donnard, M. Gulea : *A recent advances in the chemistry of organic thiocyanates*, *Chem. Soc. Rev.*, **2016**, 45, 494–505.
  - 3 A. Beyer, T. Castanheiro, P. Busca, G. Prestat : *Copper (I)/ Copper(II)-Assisted Tandem Catalysis : The case Study of Ullman/Chan-Evans-Lam N1,N3-diarylation of 3-Aminopyrazole*, *ChemCatChem* **2015**, 7, 2433–2436.
  - 2 T. Castanheiro, M. Gulea, M. Donnard, J. Suffert : *Practical Access to Aromatic Thiocyanate by CuCN-Mediated Direct Aerobic Oxidative Cyanation of Thiophenols and Diaryl Disulfides* *Eur. J. Org. Chem.* **2014**, 7814–7817.
  - 1 T. Castanheiro, M. Donnard, M. Gulea, J. Suffert : *Cyclocarbopalladation/Cross-coupling Cascade Reactions in Sulfide Series: Access to Sulfur Heterocycles* *Org. Lett.*, **2014**, 16, 3060–3063.

Book Chapter:

- 1 M. Donnard, T. Castanheiro, M. Gulea *Pd and Cu-Mediated Domino Reactions for the Synthesis of Sulfur Heterocycles In Targets in Heterocyclic Systems*; Attanasi, O. A.; Spinelli, D., Ed.; Italian Society of Chemistry, **2017**, 21, 254-276.