



Dr. Sophie Colombel-Rouen

Ingénieur en Synthèse Chimique ENSCR

Equipe « Organométalliques : Catalyse et Matériaux »

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CURRENT POSITION

Since Oct. 2013 ENSCR Engineer – UMR CNRS 6226 - Organometallic: Catalysis and Material (OMC) and Organic and Supramolecular Chemistry (COS)

EDUCATION

- **Post-doctoral Fellow** (2012-2013) UMR CNRS 6226 - ENSCR (Advisor: Pr. T. Benvegna)
- **Ph.D. in Organic Chemistry** (2009-2012) - INSA Rouen - COBRA (Advisor: Pr. X. Pannecoucke and Dr. Eric Leclerc)
- **M.S. in Organic Chemistry** (2008-2009) - Rouen - TFChem (Advisor: Dr. G. Deliencourt-Godefroy)

RESEARCH

- Homogeneous and heterogeneous catalysis
- Development of new organometallic complexes with NHC ligands (Cu, Ru, Pd, Ag, Rh, Ir)
- Asymmetric C-C bond formation
- Synthesis of surfactants, glycolipids and supramolecular assembly
- Interstellar organic chemistry

PUBLICATIONS

7. "Asymmetric Sequential Cu-Catalyzed 1,6/1,4 Conjugate Additions of Hard Nucleophiles to Cyclic Dienones. Determination of Absolute Configurations and Origins of Enantioselectivity." M. Mauduit, C. Blons, M. Morin, T. Schmid; T. Vives, S. Colombel-Rouen, O. Baslé, T. Reynaldo, C. Covington, S. Halbert, S. Cuskelly, P. Bernhardt, C. Williams, J. Crassous, P. Polavarapu, C. Crévisy, H. Gérard, *Chem. Eur. J.* **2017**, 23, 7515-7525.

6. "From environmentally friendly reusable ionic-tagged Ru-based complexes to industrially relevant homogeneous catalysts: toward a sustainable olefin metathesis." T. E. Schmid, A. Dumas, S. Colombel-Rouen, C. Crévisy, O. Baslé, M. Mauduit, *Synlett*, **2017**, 28, 773-778.

5. "Active hydrogenation Rh nanocatalysts protected by new self-assembled supramolecular complexes of cyclodextrins and surfactants in water." C. Thanh, T. Nguyen, S. Menuel, S. Colombel-Rouen, M. Guerrero, E. Monflier, K. Philippot, A. Denicourt-Nowicki, A. Roucoux, *RSC Advances* **2016**, 6, 108125-108131.

4. "Synthesis, Chemistry, and Photochemistry of Methylcyanobutadiyne in the Context of Space Science." N. Kerisit, C. Rouxel, S. Colombel-Rouen, J.-C. Guillemin, Y. Trolez, L. Toupet. *J.O.C.*, **2016**, 81, 3560-3567.

3. "Synthesis and immunological evaluation of fluorinated α -C-galactosylceramide analogs." S. Colombel, N. Van Hijfte, T. Poisson, X. Pannecoucke, F. Monneaux, E. Leclerc. *Journal of Fluorine Chemistry*, **2015**, 173, 84-91.

2. "Addition of electrophilic radicals to 2-benzyloxyglycols: synthesis and functionalization of fluorinated α -C-glycosides and derivatives." S. Colombel, N. Van Hijfte, T. Poisson, E. Leclerc, X. Pannecoucke. *Chem. Eur. J.* **2013**, 19, 12778-12787.

1. "Straightforward Preparation of Functionalized α -CF₂-Galactosides through an Oxygen to Carbon Acyl Migration" S. Colombel, M. Sanselme, E. Leclerc, J.-C. Quirion, X. Pannecoucke. *Chem. Eur. J.* **2011**, 17, 5238-5241.

PROFESSIONAL SERVICE(S)

Elected member of the scientific committee at ENSCR (2014-2020).

Elected member of the board of directors at ENSCR (2014-2017).

Responsibility of the Quality Management (ISO 9001) for the Research Valorization at ENSCR (2014-).

Member of the organizing committee of the "Groupe d'Etudes en Chimie Organique" GECSO58 (2017, Dinard).