

RECENT ADVANCES TO ACCESS FLUORINATED SCAFFOLDS

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Over the last years, the organofluorine research field has known a fast expansion, [1] as shown by the plethora of pharmaceuticals and agrochemicals containing at least one fluorine atom [2]. Consequently, a special attention was paid to the development of modern strategies in organofluorine chemistry. Besides, transition metal catalyzed direct C-H bond functionalization has known tremendous progress over the last decade allowing new retrosynthetic disconnections and innovative approaches [3]. In that context, we focused on the development of new methodologies to introduce fluorinated groups onto molecules based on the combination of organofluorine chemistry and transition metal catalyzed C-H bond functionalization. Besides, a special attention was paid to the design of original electrophilic reagents [4].

[1] For selected reviews, see: (a) T. Besset, T. Poisson, X. Pannecoucke, *Chem. Eur. J.* **2014**, *20*, 16830. (b) R. Szpera, D. F. J. Moseley, L. B. Smith, A. J. Sterling, V. Gouverneur, *Angew. Chem. Int. Ed.* **2019**, DOI: 10.1002/anie.201814457.

[2] J. Wang, M. Sánchez-Roselló, J. L. Aceña, C. del Pozo, A. E. Sorochinsky, S. Fustero, V. A. Soloshonok, H. Liu, *Chem. Rev.* **2014**, *114*, 2432 and references therein.

[3] For selected reviews, see: (a) C. Sambigiato, D. Schönbauer, R. Blicke, T. Dao-Huy, G. Pototschnig, P. Schaaf, T. Wiesinger, M. F. Zia, J. Wencel-Delord, T. Besset, B. U. W. Maes, M. Schnürch, *Chem. Soc. Rev.* **2018**, *47*, 6603. (b) Special issue on C-H activation, *Chem. Rev.* **2017**, *117*, 8481-9520.

[4] For selected examples, see: (a) H.-Y. Xiong, T. Besset, D. Cahard, X. Pannecoucke, *J. Org. Chem.* **2015**, *80*, 4204. (b) Q. Zhao, T. Poisson, X. Pannecoucke, J.-P. Bouillon, T. Besset, *Org. Lett.* **2017**, *19*, 5106. (c) H.-Y. Xiong, A. Bayle, X. Pannecoucke, T. Besset, *Angew. Chem. Int. Ed.* **2016**, *55*, 13490. (d) E. Carbonnel, X. Pannecoucke, T. Besset, P. Jubault, T. Poisson, *Chem Commun.* **2018**, *54*, 2491. (e) J. Wang, H.-Y. Xiong, E. Petit, L. Bailly, X. Pannecoucke, T. Poisson, T. Besset, *Chem. Commun.* **2019**, DOI: 10.1039/C9CC01851D.