

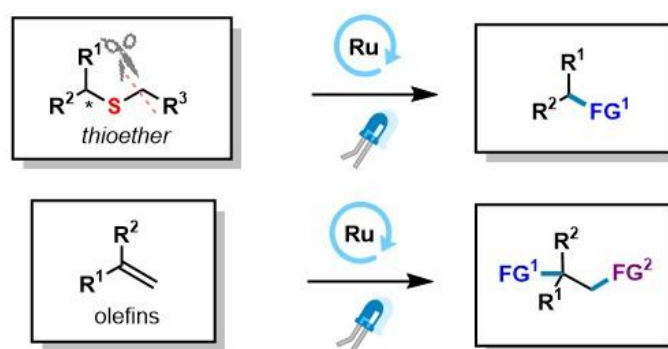
# Visible Light Photoredox Catalysis as a tool for functionalization and preparation of complex organic molecules

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Visible light photoredox catalysis has emerged as a powerful strategy for the selective formation of new C-H, C-C and C-heteroatom bonds.<sup>[1]</sup> Indeed, this useful synthetic tool allows chemists to make reactions which cannot be done with already known processes (or under harsh conditions) under mild and eco-friendly conditions. For the past five years,<sup>[2]</sup> we have been interested in the development of novel photoredox-catalyzed transformations: (1) activation of sulfidic C-S bonds,<sup>[3]</sup> and (2) tandem difunctionalization of olefins.<sup>[4]</sup> This lecture will detail our contribution to this field by presenting the synthesis of a wide variety of complex organic molecules. Learning and understanding the catalytic processes and mechanism involved in our transformations are an important part of our research program and lead us to new developments.



## REFERENCES

- [1] (a) Ghosh, I.; Marzo, L.; Das, A.; Shaikh, R.; König, B. *Acc. Chem. Res.* **2016**, *49*, 1566; (b) Prier, C. K.; Rankic, D. A.; MacMillan, D. W. C. *Chem. Rev.*, **2013**, *113*, 5322.
- [2] Courant T. ; Masson, G. *J. Org. Chem.* **2016**, *81*, 6945.
- [3] (a) Lanzi, M.; Merad, J.; Boyarskaya, D. V.; Maestri, G.; Allain, C.; Masson, *Org. Lett.* **2018**, *20*, 5247. (b) Lebé, C. ; Languet, M. ; Allain, C. ; Masson, G. *Org. Lett.* **2016**, *18*, 1478. (c) Jarrige, L. ; Levitre, G. ; Masson, G. *J. Org. Chem.* **2016**, *81*, 7230.
- [3] (a) Daniel, M.; Dagousset, G.; Diter P.; Klein, P.-A.; Tuccio, B.; Goncalves, A.-M.; Masson, G.; Magnier, E. *Angew. Chem. Int. Ed.* **2017**, *56*, 3997; (b) Jarrige, L.; Carboni, A.; Dagousset, G.; Levitre, G.; Magnier, E.; Masson, G. *Org. Lett.* **2016**, *18*, 2906. (c) Carboni, A.; Dagousset, G.; Magnier, E.; Masson, G. *Chem. Commun.* **2014**, *50*, 14197. (d) Dagousset, G.; Carboni, A.; Magnier, E.; Masson, G. *Org. Lett.* **2014**, *16*, 4340. (e) Carboni, A.; Dagousset, G.; Magnier, E.; Masson, G. *Org. Lett.* **2014**, *16*, 1240. (f) Courant, T. Masson, G. *Chem. Eur. J.*, **2012**, *18*, 423.