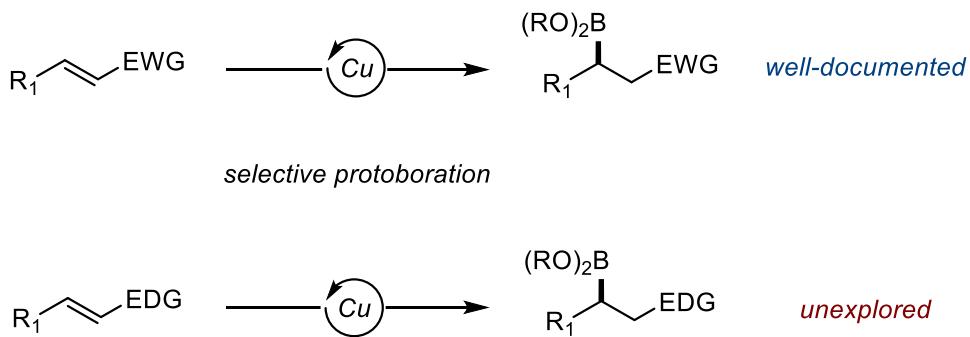


## Regio- and enantioselective Cu-catalyzed protoboration of electron-rich alkenes

**Arthur, Flaget**

Arthur.flaget@unige.ch

The development of catalytic and selective approaches to access enantiopure boron-containing compounds has gained important momentum over the last two decades.<sup>[1]</sup> Not only boron containing molecules are of interest in the pharma industry,<sup>[2]</sup> but they can also serve as platforms for the synthesis of added-value small molecules.<sup>[3]</sup> In this context, the Cu-catalyzed (enantio)selective protoboration of alkenes has established itself as a particularly efficient method.<sup>[4]</sup> However, while electron-poor alkenes have been extensively explored, electron-rich substrates remain essentially unexplored.<sup>[5]</sup>



EWG: electron withdrawing group; EDG: electron donating group

We will discuss our efforts in this direction with the development of highly regio- and enantioselective Cu-catalyzed protoborations of electron-rich alkenes.

### References:

- [1] Sterman, A.; Sosic, I.; Gobec, S.; Casar, Z. *Org. Chem. Front.* **2019**, *6*, 2991–2998.
- [2] Srebnik, M.; Dembitsky, V. M.; Al Aziz Al Quntar, A. *Chem. Rev.* **2011**, *111*, 209–237. Das, B. C.; Thapa, P.; Karki, R.; Schinke, C.; Das, S.; Kambhampati, S.; Banerjee, S. K.; Van Veldhuizen, P.; Verma, A.; Weiss, L. M. *Future Med. Chem.* **2013**, *5*, 653–676. Das, B. C.; Shareef, M. S.; Das, S.; Nandwana, N. K.; Das, Y.; Saito, M.; Weiss, L.M.; *Bioorg. Med. Chem.* **2022**, *63*, 116748–116773.
- [3] Viso, A.; Fernandez de la Pradilla, R.; Tortosa, M. *ACS Catal.* **2022**, *12*, 10603–10620.
- [4] Lee, Y.; Hoveyda, A. H. *J. Am. Chem. Soc.* **2009**, *131*, 3160–3161. Cai, Y.; Yang, X.; Zhang, S.; Li, F.; Li, Y.; Ruan, L.; Hong, X.; Shi, S. *Angew. Chem. Int. Ed.* **2018**, *57*, 1376–1380.
- [5] Chen, L.; Zou, X.; Zhao, H.; Xu, S. *Org. Lett.* **2017**, *19*, 3676–3679. Lopez, A.; Clark, T. B.; Parra, A.; Tortosa, M. *Org. Lett.* **2017**, *19*, 6272–6275.