A UNIFIED APPROACH TO THE CHEMOSELECTIVE α-FUNCTIONALIZATION OF AMIDES

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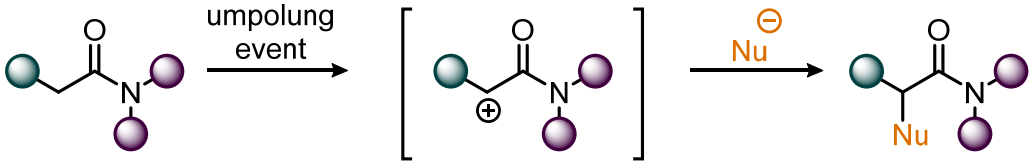
The α-functionalisation of carbonyls traditionally relies on enolate chemistry, mandating the use of strong bases in particular in the case of carboxamides. The electrophilic activation of amides has emerged recently as a milder alternative [1]. We have developed an approach for the chemoselective α-functionalization of amides *via* an Umpolung strategy [2–4] which allows the use of heteroatom nucleophiles as coupling partners.

In this poster, we will present the reaction scope as well as applications to biologically relevant compounds. Mechanistic and theoretical investigations are also featured [5].



- Broad range of nucleophiles (Cl, Br, I, OR, SR, NRR')
- Readily available reagents
- Broad functional group tolerance
- Room temperature
- Selective for amides in presence of esters/nitriles/ketones

(Presented together with Miran Lemmerer)

+ and # authors contributed equally

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[2] Kaiser, D.; de la Torre, A.; Shaaban, S.; Maulide, N. *Angew. Chem., Int. Ed.* **2017**, *56*, 5921–5925.

[3] Kaiser, D.; Teskey, C. J.; Adler, P.; Maulide, N. *J. Am. Chem. Soc.* **2017**, *139*, 16040–16043.

[4] Adler, P.; Teskey, C. J.; Kaiser, D.; Holy, M.; Sitte, H. H.; Maulide, N. *Nat. Chem.* **2019**, *11*, 329–334.

[5] Gonçalves, C. R.; Lemmerer, M.; Teskey, C. J.; Adler, P.; Kaiser, D.; Li, J.; Maryasin, B.; González, L.; Maulide, N. *manuscript in preparation*.