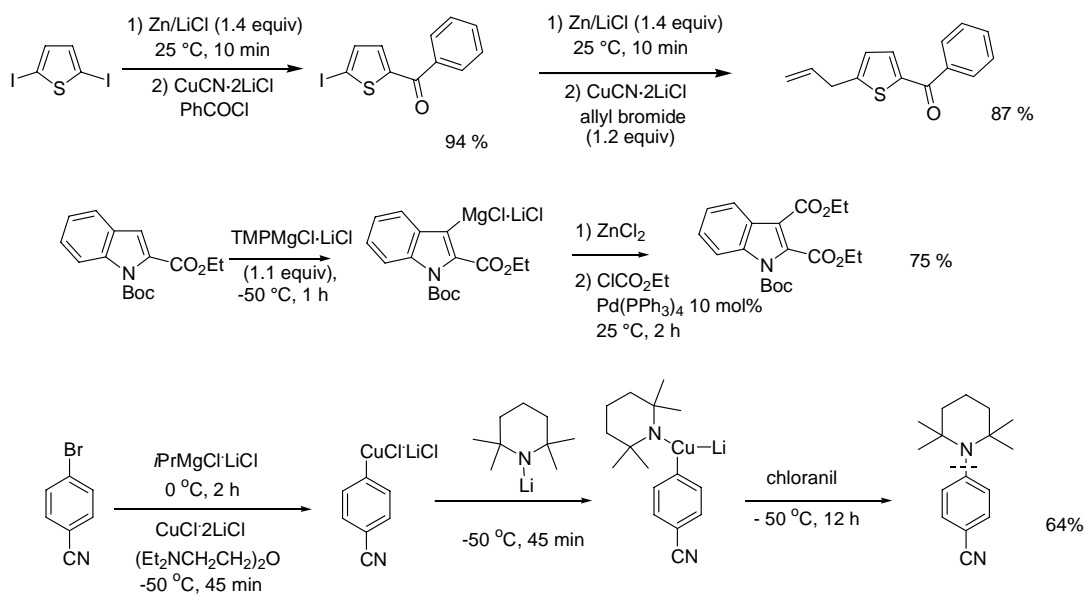


# Functionalized Mg and Zn-Organometallics for Organic Synthesis

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In the first part of the lecture, the preparation of highly functionalized organozinc compounds will be emphasized using zinc powder in the presence of LiCl.<sup>1</sup> This method allows the preparation of a range of heteroarylzinc species bearing a ketone or an aldehyde. In a second part, the preparation of polyfunctional magnesiated heterocycles using either a X/Mg- exchange triggered by *i*-PrMgCl-LiCl or by a direct deprotonation using new soluble Mg-bases such as TMPMgCl-LiCl or (TMP)<sub>2</sub>Mg-2LiCl.<sup>2</sup> Applications of these polyfunctional organometallics for the synthesis of bioactive molecules will be shown.<sup>3</sup> Finally, the synthesis of aminated heterocycles using an oxidative amination procedure with chloranil will be described.<sup>4</sup>



## References:

- (1) Krasovskiy, A.; Gavryushin, A.; Malakhov, V.; Knochel, P. *Angew. Chem. Int. Ed.* **2006**, *45*, 6040.
- (2) Boudet, N.; Knochel, P. *Org. Lett.* **2006**, *8*, 3737.
- (3) Krasovskiy, A.; Krasovskaya, V.; Knochel, P. *Angew. Chem. Int. Ed.* **2006**, *45*, 2958.
- (4) del Amo, V.; Dubbaka, S.; Krasovskiy, A.; Knochel, P. *Angew. Chem. Int. Ed.* **2006**, *45*, 7838.