

STUDIES ON THE Ru-CATALYZED CARBOXYLATIVE MURAI REACTION

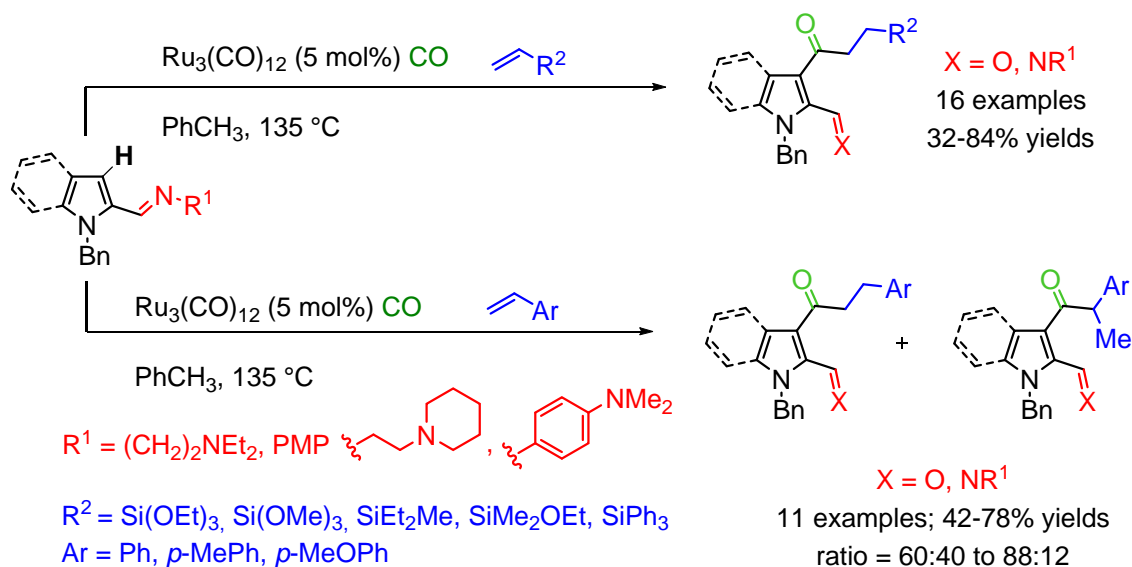
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Nowadays, the direct and selective functionalization of non-acidic C-H bonds allows the use of simple and cheap starting materials for the construction of complex organic molecules, adding the C-H bonds to the most common functional groups, such as carbonyls, halides, alcohols, etc.¹ On the other hand, the direct functionalization of nitrogen containing heterocycles remains a topic of utmost importance.² In this context, we have recently reported a directed Ru(0)-catalyzed addition of alkenes³ and boronic acids⁴ to furfural imines, leading to C3-alkylated and arylated furfurals, respectively.

We report in this communication the direct C3-H functionalization of 2-formylpyrrole and 2-formylindole derivatives *via* a carbonylative Murai reaction.⁵ The discovery, optimization and substrate scope of this new C-H activation based transformation will be disclosed.



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