

PALLADIUM CATALYZED INTERMOLECULAR IMINE FORMATION

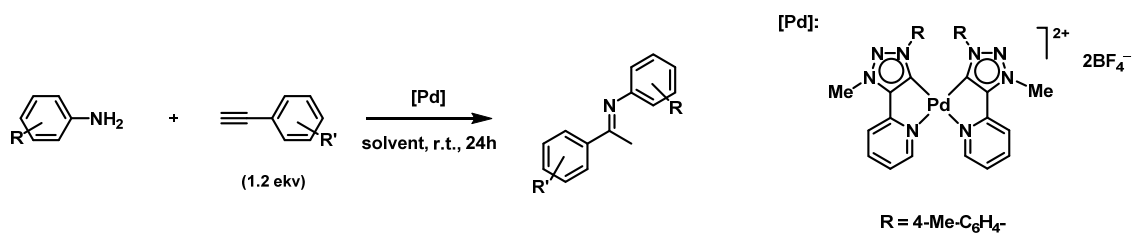
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The formation of C–N bond attracts considerable attention in different areas of chemistry. [1] Imines, an important class of nitrogen containing compound, play evident role as products and intermediates in the synthesis of various biologically active N-heterocyclic compounds and in industrial synthetic processes. Hydroamination, the addition of amine on alkynes, is the most economic process for imine synthesis. Although a wide range of metal catalysts for this transformation have been examined, in most cases the reactions were carried out under elevated temperatures and in the presence of additives. [2]

We recently discovered a mild and facile Pd-catalyzed intermolecular hydroamination of alkynes with anilines. [3] The reactions proceed with excellent regioselectivity and yield. The full scope of the reaction and mechanistic consideration will be presented.



[1] Beller M.; Breindl C.; Eichberger M.; Hartung C. G.; Seayad J.; Thiel O. R.; Tillack A.; Trauthwein H. *Synlett*, **2002**, 10 1579–1594.

[2] Huang L.; Arndt M.; Gooßen K.; Heydt H.; Gooßen L. J. *Chem. Rev.*, **2015**, 115, 2596–2697.

[3] Manuscript in preparation