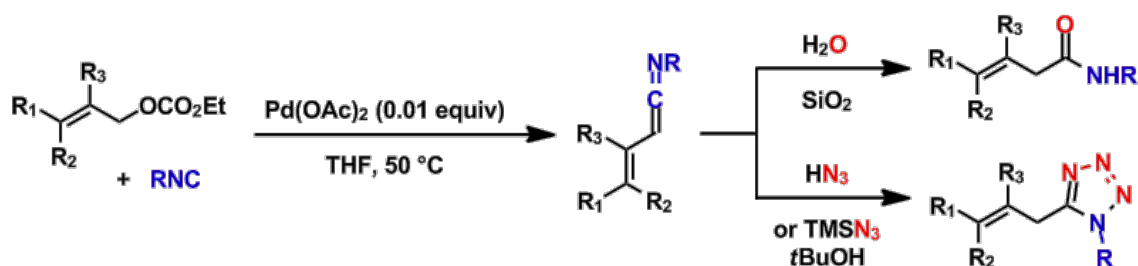


Ketenimines from Isocyanides and Allyl Carbonates: Palladium-Catalyzed Synthesis of β,γ -Unsaturated Amides and TetrazolesM. Mamboury¹, G. Qiu¹, Q. Wang^{1*}, J. Zhu^{1*}¹Laboratory of Synthesis and Natural Products, Institute of Chemical Sciences and Engineering, École Polytechnique Fédérale de Lausanne, Switzerland

The reaction of allyl ethyl carbonates with isocyanides in the presence of a catalytic amount of $\text{Pd}(\text{OAc})_2$ provided ketenimines through β -hydride elimination of the allyl imidoypalladium intermediates. The insertion of the isocyanide into the π -allyl Pd complex proceeded via an unusual η^1 -allyl Pd species. The resulting ketenimines were hydrolyzed to β,γ -unsaturated carboxamides during purification by flash column chromatography on silica gel or converted in situ into 1,5-disubstituted tetrazoles by [3+2] cycloaddition with hydrazoic acid or trimethylsilyl azide.



[1] Dr. Guanyinsheng Qiu[†], Mathias Mamboury[†], Dr. Qian Wang and Prof. Dr. Jieping Zhu, *Angew. Chem. Int. Ed.* **2016**, 55, 15377–15381

[†] These authors contributed equally.