

PALLADIUM-CATALYZED SEQUENTIAL ARYLATION OF CYCLIC VINYLOGOUS ESTERS

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A novel methodology for the synthesis of bis- α -arylated cyclic vinylogous esters is developed [1]. The palladium-catalyzed sequential arylation reaction was facilitated by the application of sterically bulky phosphine ligands. The optimized conditions accommodated a range of aryl and heteroaryl bromides. Notably, we discovered that the kinetic barrier of the first arylation reaction is significantly lower than the second event. Taking advantage of this phenomenon, a sequential introduction of two different aryl moieties at the α position of vinylogous esters was readily achieved in a one-pot operation. The scope and mechanism of these transformations will be discussed in the presentation.

[1] For previous works on the α -arylation of vinylogous esters, see: (a) Johnson, T.; Pultar, F.; Menke, F.; Lautens, M. *Org. Lett.* **2016**, *18*, 6488–6491. (b) Hou, W.-Y.; Wu, Y.-K. *Org. Lett.* **2017**, *19*, 1220–1223. (c) Zhao, Y.; Zhou, Y.; Liang, L.; Yang, X.; Du, F.; Li, L.; Zhang, H. *Org. Lett.* **2009**, *11*, 555–558