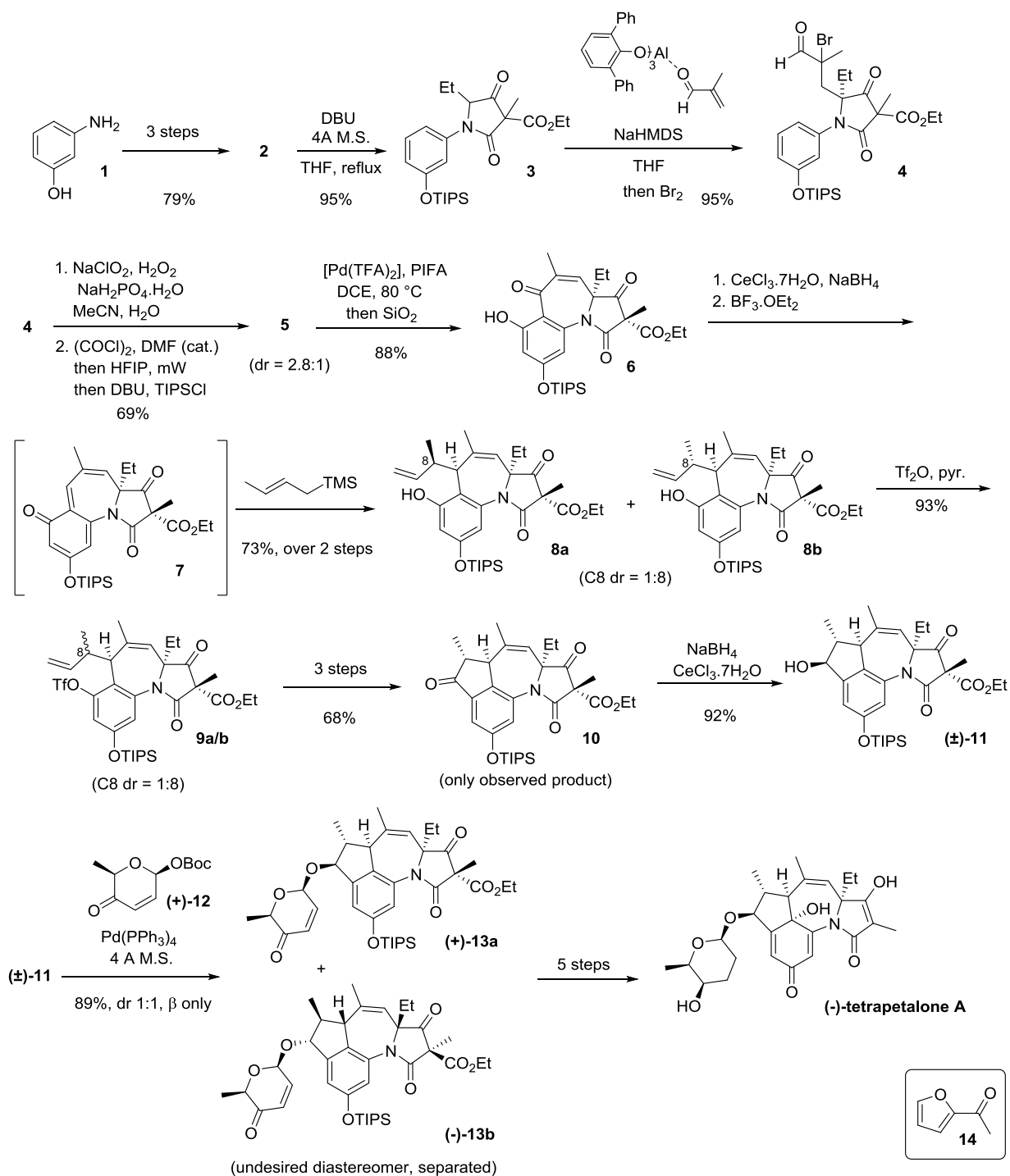


Total Synthesis of (-)-Tetrapetalone A

Submitted by Melinda

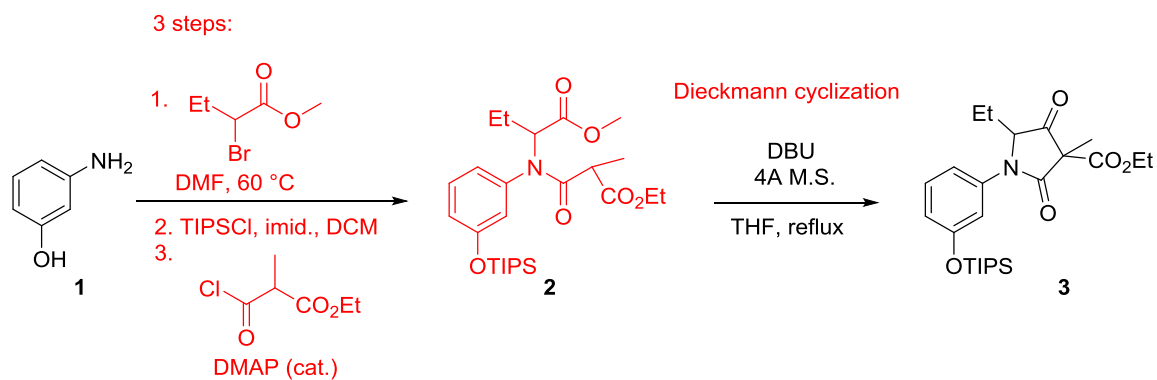


Total Synthesis of (-)-Tetrapetalone A – Solutions

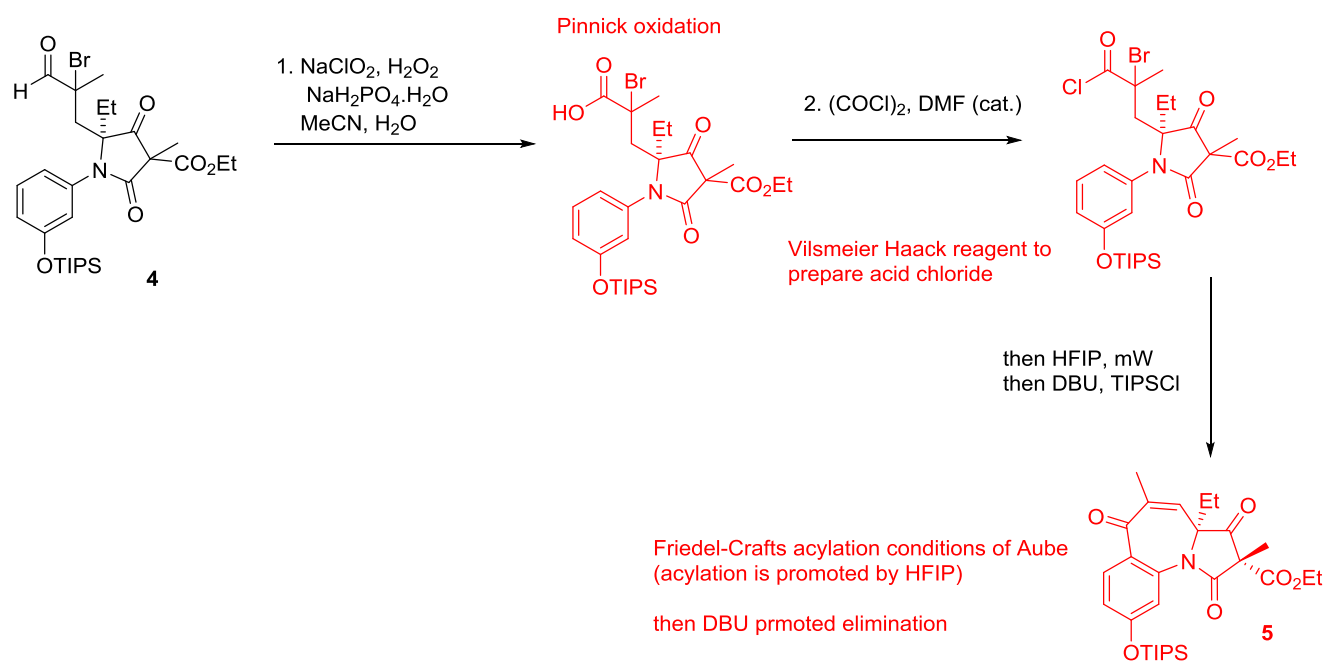
Submitted by Melinda

Dhanjee, H. H.; Kobayashi, Y.; Buegler, J. F.; McMahon, T. C.; Haley, M. W.; Howell, J. M.; Fujiwara, K.; Wood, J. L. *J. Am. Chem. Soc.* **2017**, DOI: 10.1021/jacs.7b09358

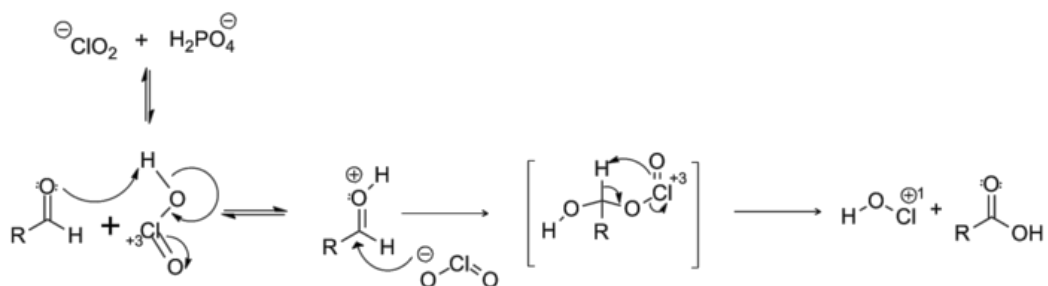
1.



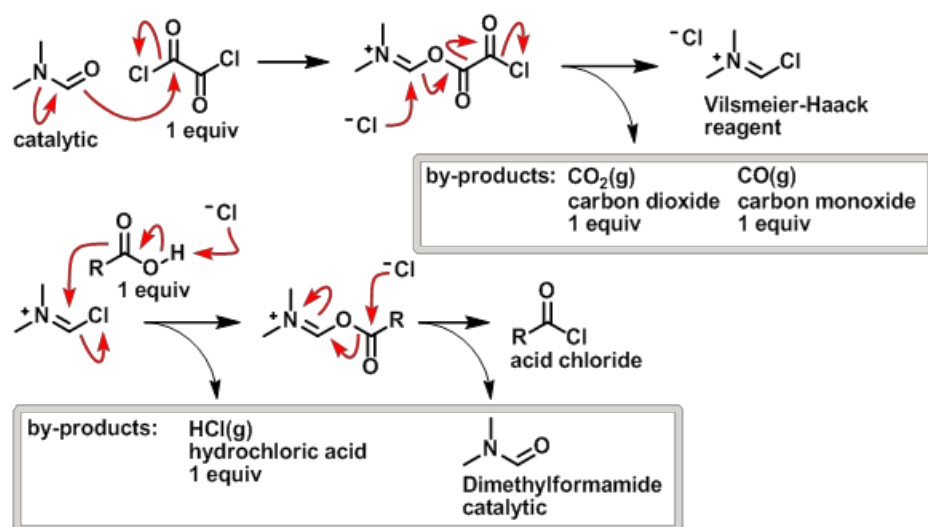
2.



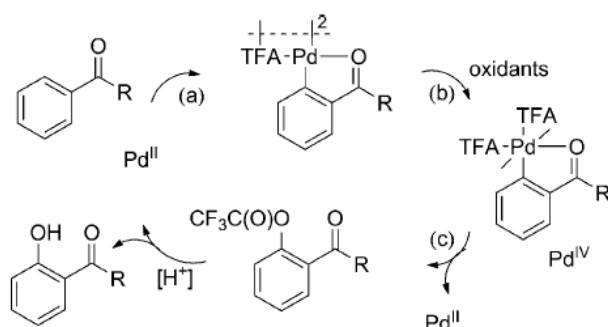
Pinnick oxidation:



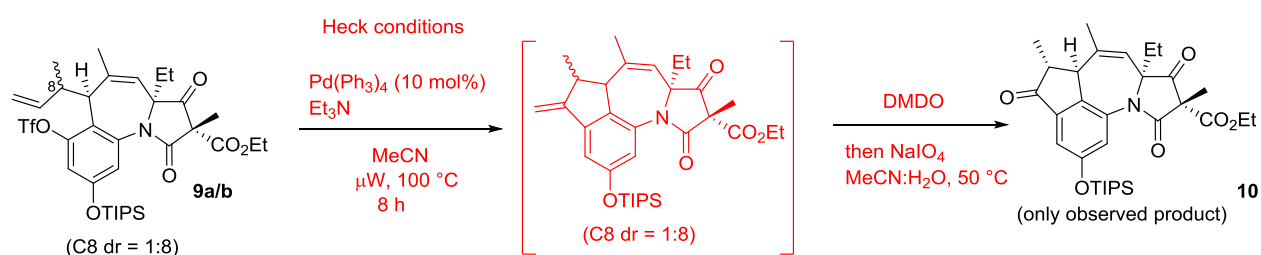
Vilsmeier Haack reaction:



3. Shan, G.; Yang, X.; Ma, L.; Rao, Y. *Angew. Chem. Int. Ed.* **2012**, *51*, 13070.



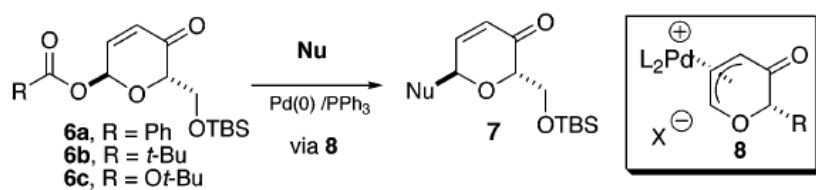
4.



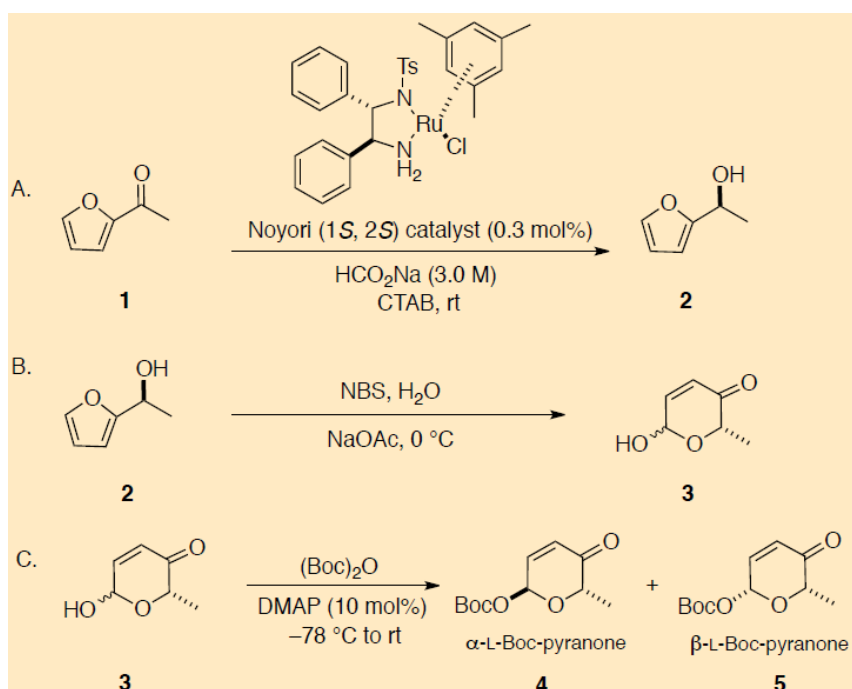
5.

a., The net overall retention in the palladium-mediated nucleophilic addition is attributed to retention of stereochemical integrity during both generation of the π -allyl-Pd intermediate and the subsequent addition of the nucleophile.

Scheme 2



b., asymmetric hydrogenation of the ketone-Achmatowicz reaction-hemiacetal protection



Achmatowicz reaction mechanism:

