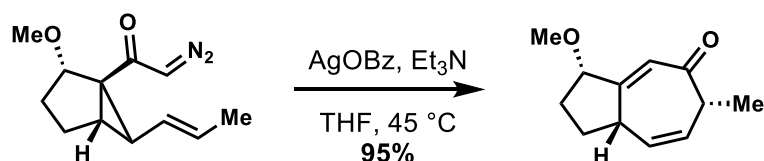


Problem Session

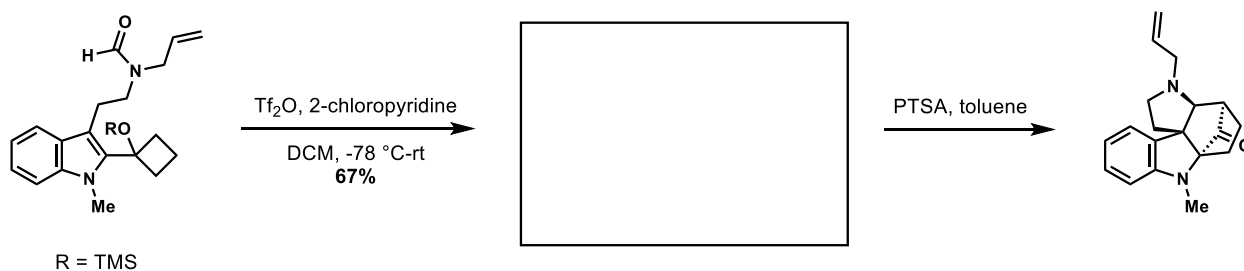
5/16/23

Sam He and Ximing Li

1. Provide a mechanism for the following transformation. (Richmond Sarpong, Julius T. Su, and Brian M. Stoltz, *J. Am. Chem. Soc.* **2003**, *125*, 13624-13625)



2. Provide mechanisms for the following transformations and fill in the intermediate. (Shuang-Hu Wang *et al.*, *Angew. Chem. Int. Ed.* **2020**, *59*, 21954-21958)



3. Flash vacuum pyrolysis gives ring expanded products *via N*-methyl radicals. Please explain the following ring expansion with different product distribution: (Jill F. McLellan, Hamish McNab, and Thomas W. Muir, *J. Chem. Soc., Chem. Commun.* **1993**, 839-840)

