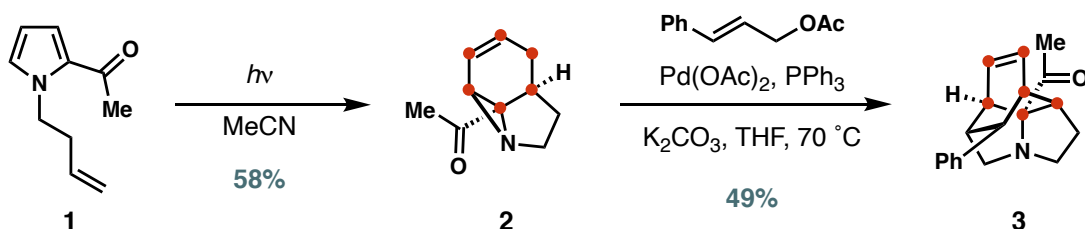
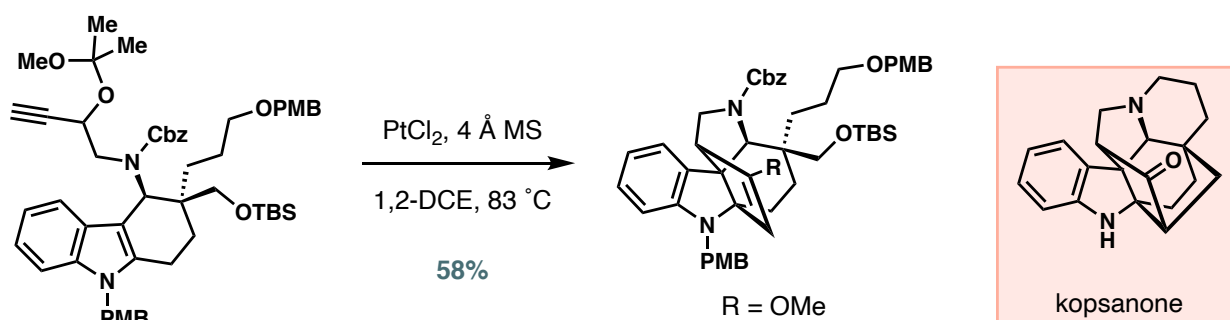


- (1) In 2013, Booker-Milburn and co-workers reported a novel photochemical sequence that converts *N*-butenylpyrroles (e.g. **1**) to tricyclic aziridines such as **2**. In a later disclosure, they demonstrated that these unique tricyclic compounds could be used to access tetracyclic amines (**3**). Provide mechanisms to account for both transformations.



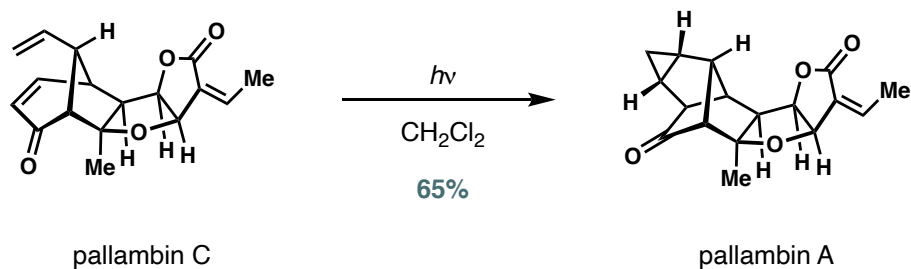
Booker-Milburn, K. I. *et al. Angew. Chem. Int. Ed.* **2013**, *52*, 1499.
Booker-Milburn, K. I. *et al. Org. Lett.* **2021**, *23*, 4986.

- (2) Propose a mechanism for the following transformation from Guo and Ye's synthesis of kopsanone.



Ye, T.; Guo, Y. *et al. Angew. Chem. Int. Ed.* **2020**, *59*, 12832.

- (3) Propose a mechanism to account for the photochemical conversion of pallambin C to pallambin A.



Jia, Y. *et al. Angew. Chem. Int. Ed.* **2019**, *58*, 13380.