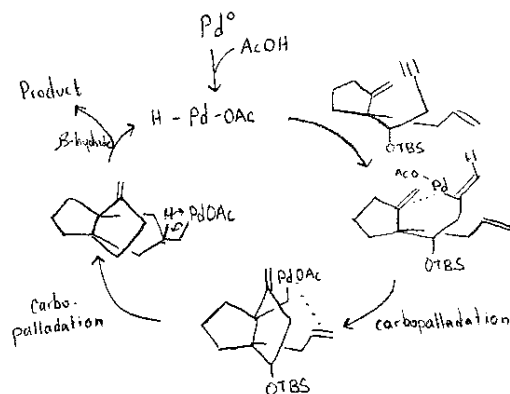
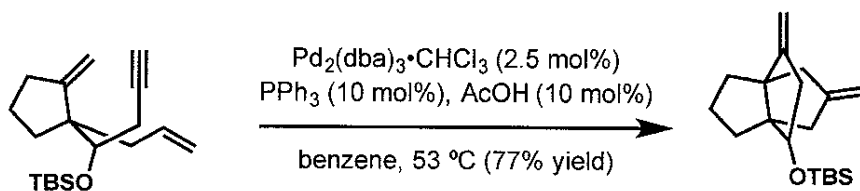
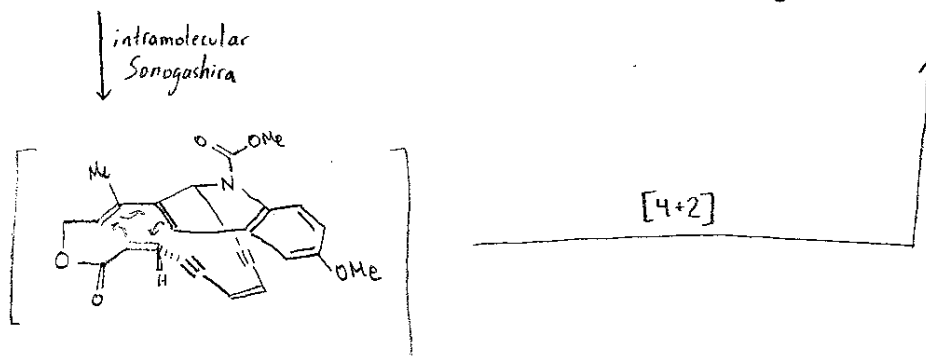
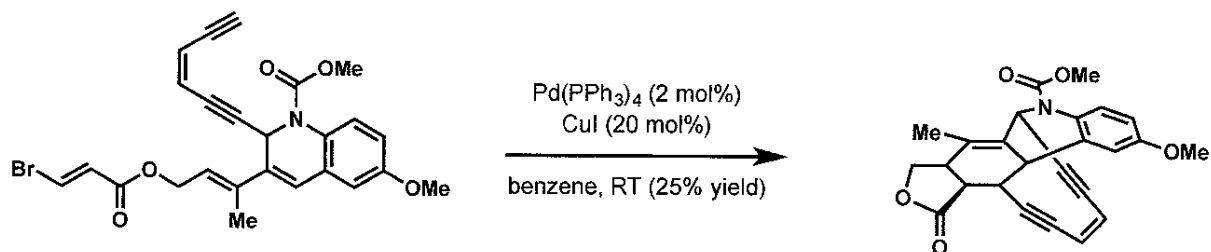


1. Propose a plausible mechanism for the following transformation.



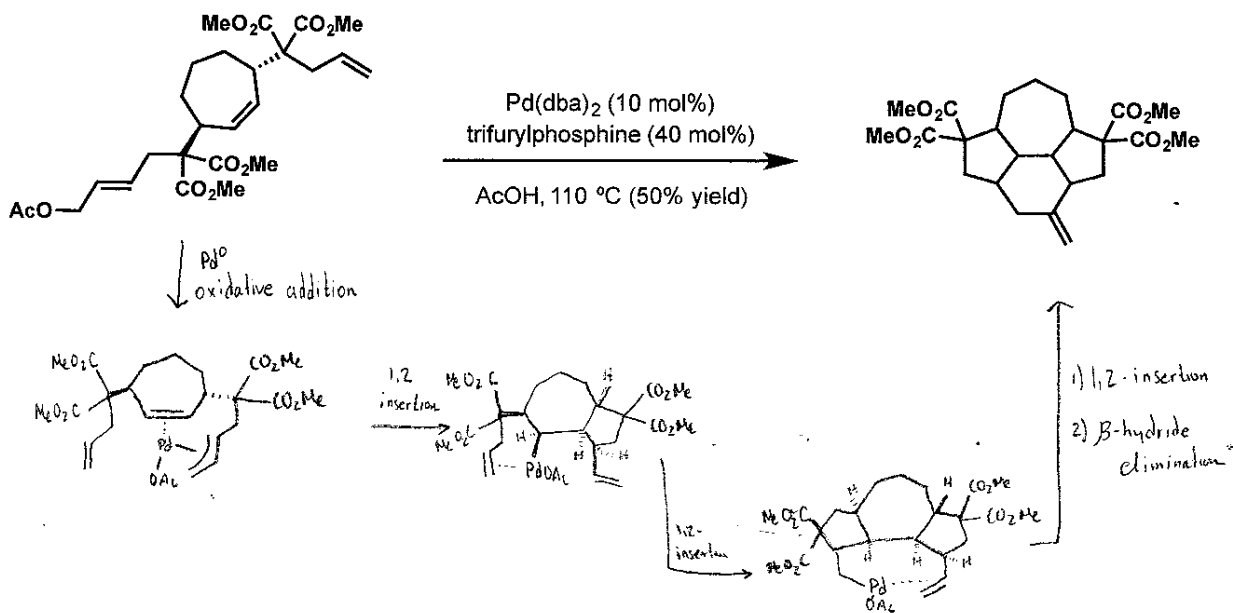
Trost, B. M. *Angew. Chem. Int. Ed.* **1995**, 34, 259.

2. Propose a plausible mechanism for the following transformation.



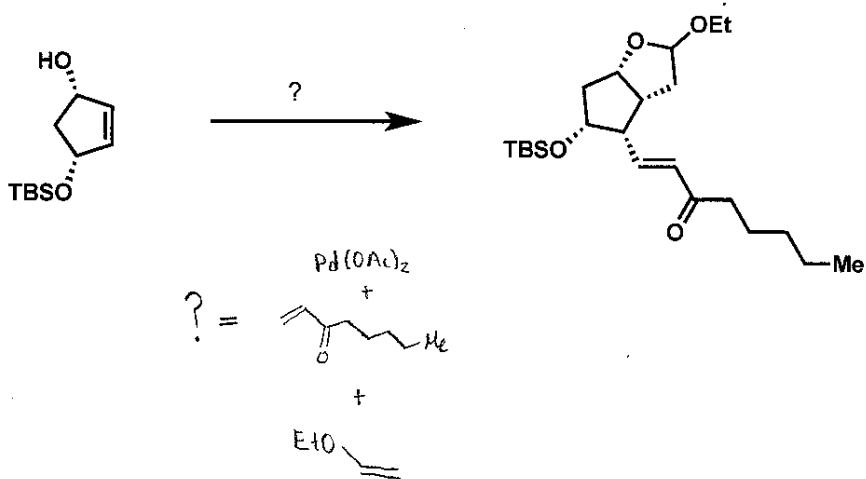
Schreiber, S. L. *J. Am. Chem. Soc.* **1990**, 112, 7410.

3. Propose a plausible mechanism for the following reaction.



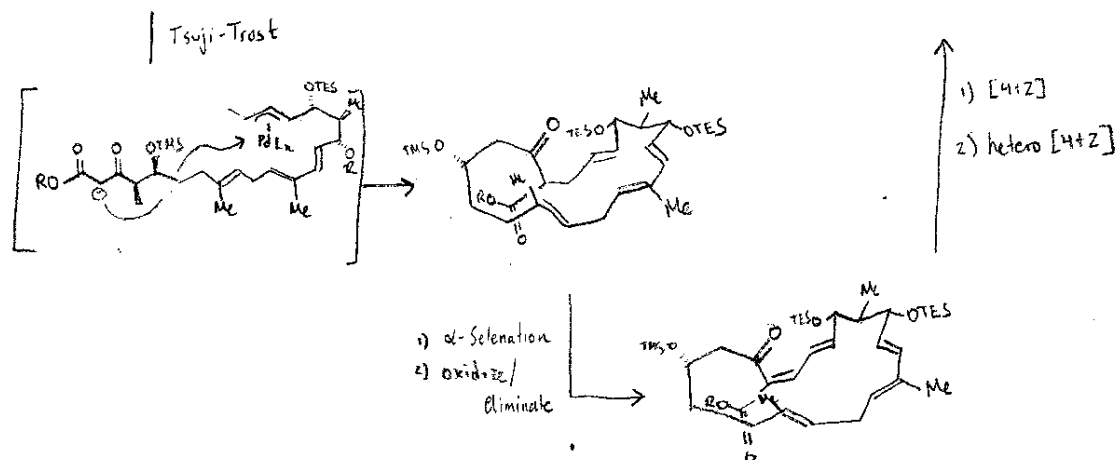
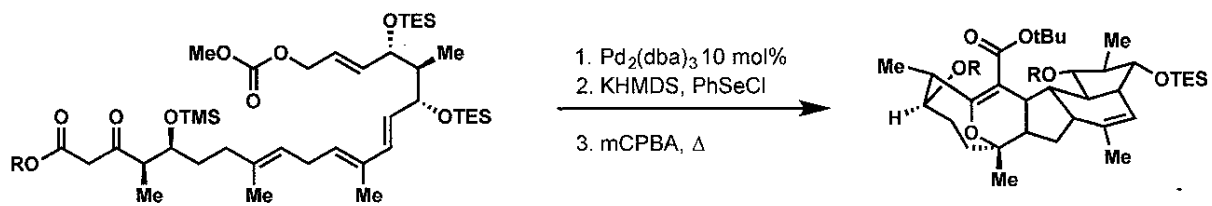
Oppolzer, W. *J. Org. Chem.* **1991**, *56*, 6256.

4. (Mini-Team Challenge) Propose a synthetic route to yield the product in as few efficient steps as possible.



Larock, R. C. *J. Am. Chem. Soc.* **1991**, *113*, 7815.

5. Propose a plausible mechanism and provide the isolable intermediate after step 1.



Sorensen, E. J. *J. Am. Chem. Soc.* **2002**, *124*, 4552.