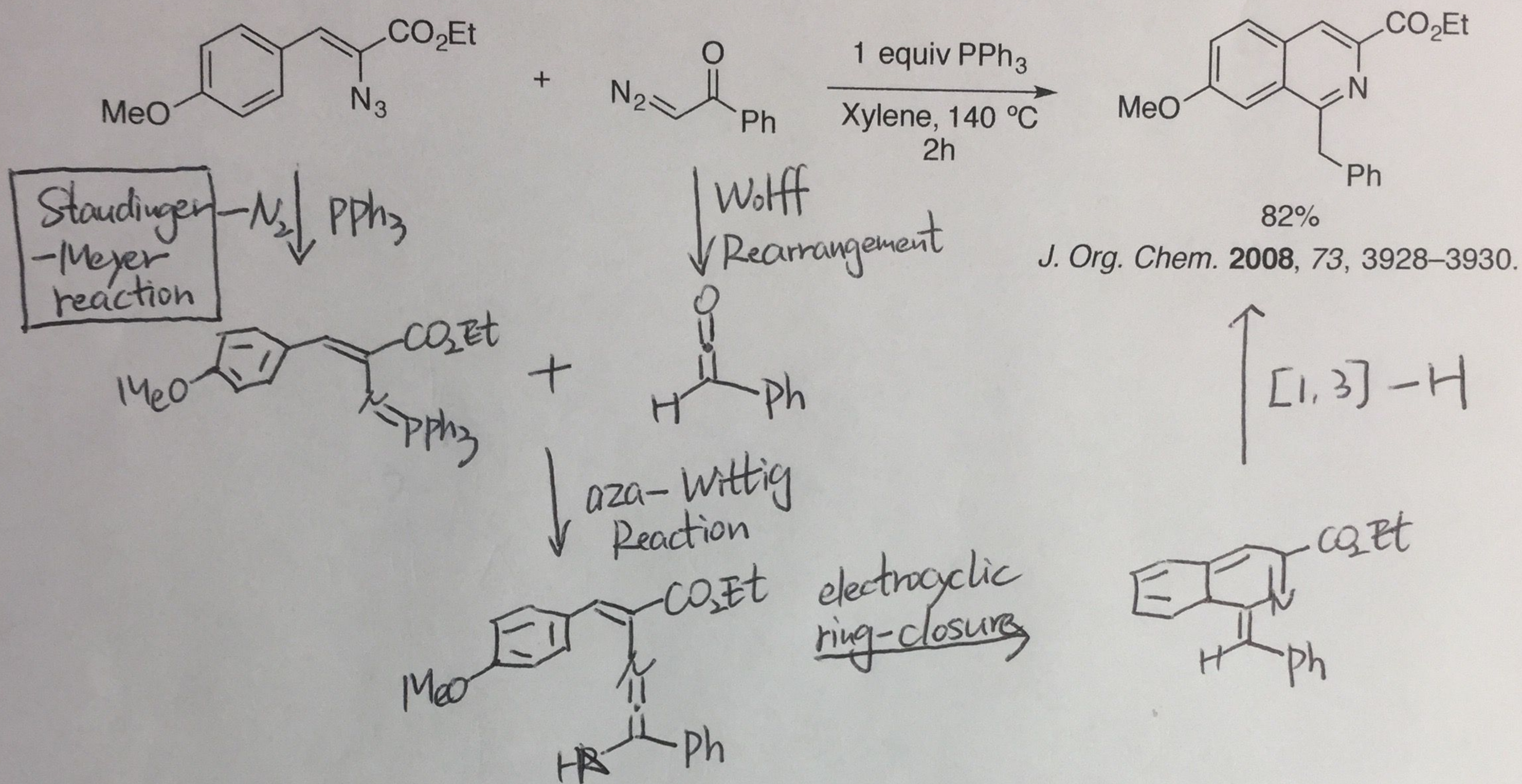
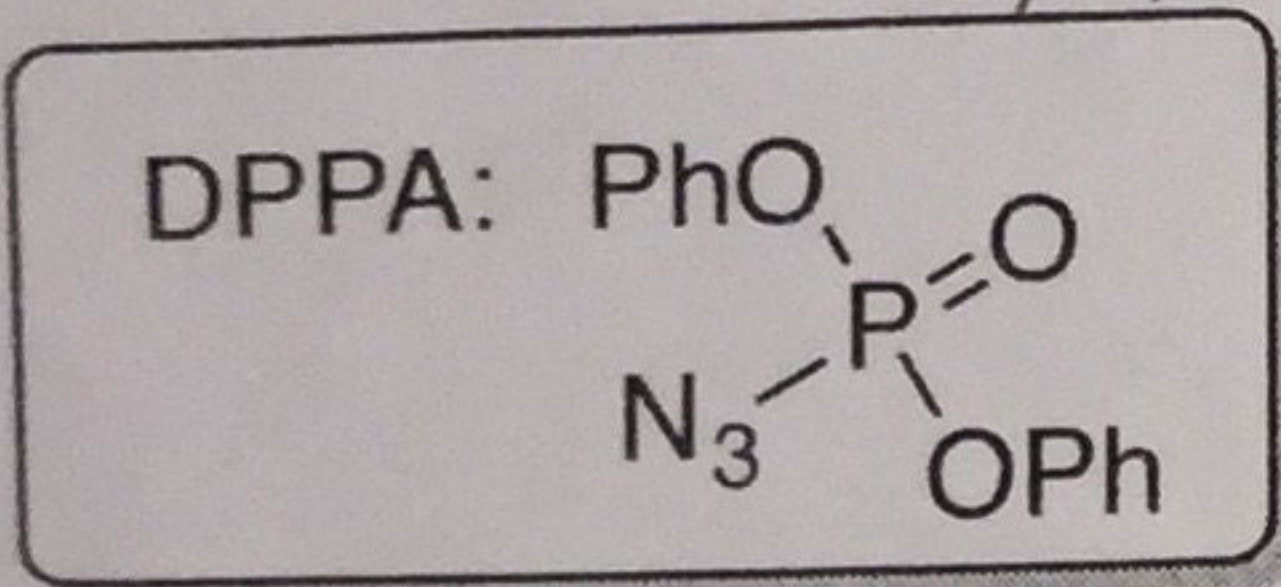
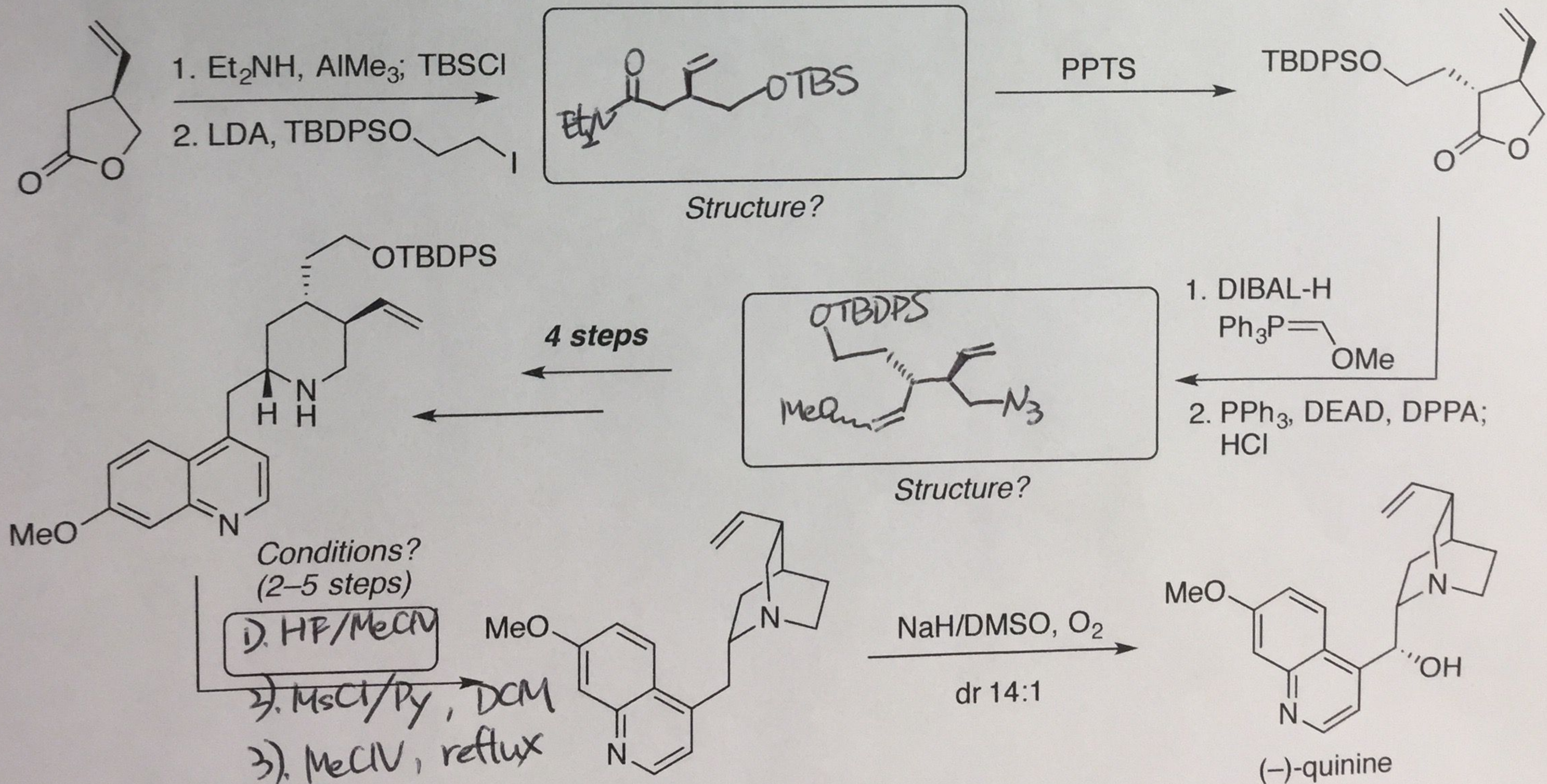


Part I

1. Propose a reasonable mechanism for the following transformation, and name all the Name Reactions included.

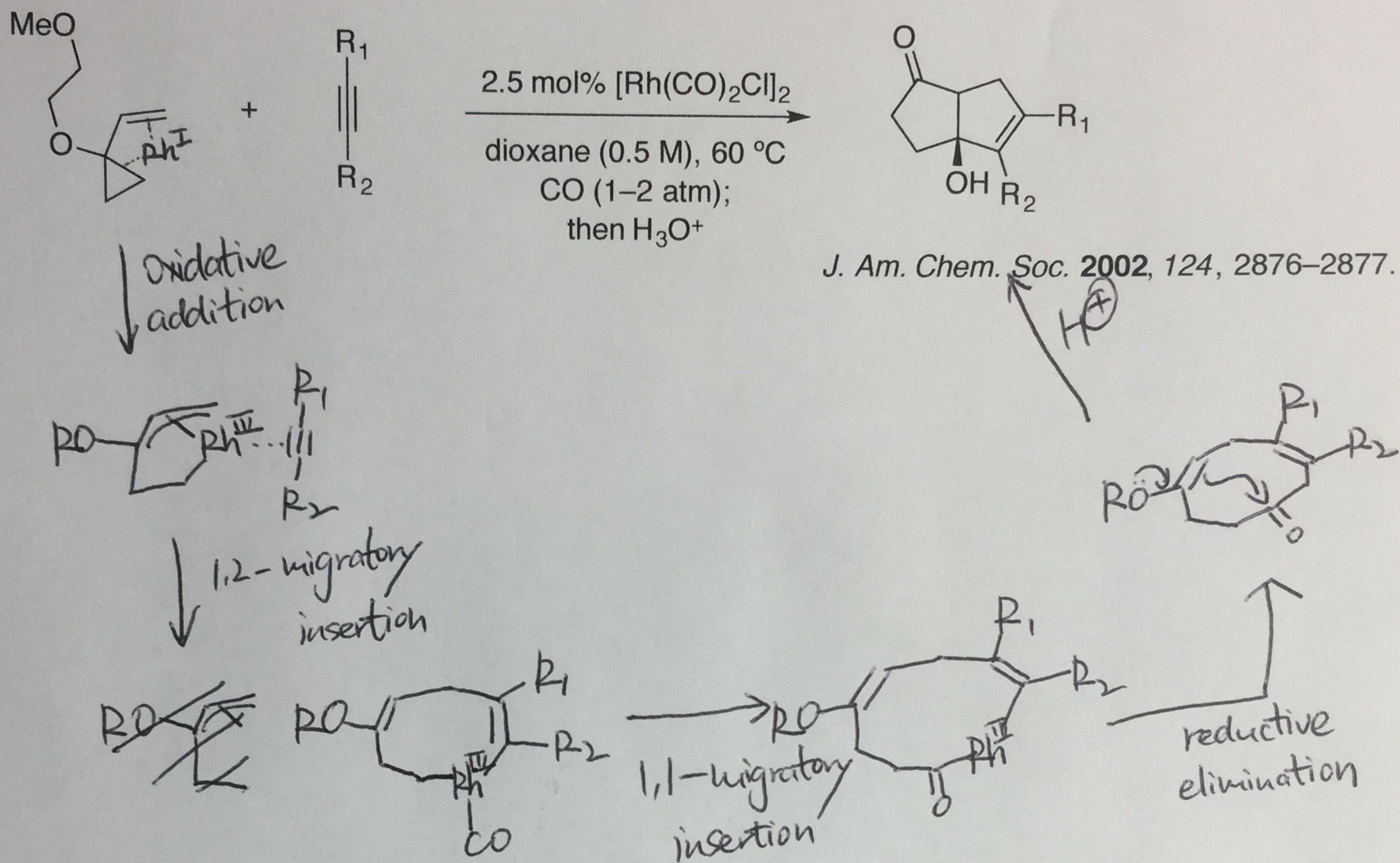


2. The first stereoselective total synthesis of Quinine. (In memory of Gilbert Stork)

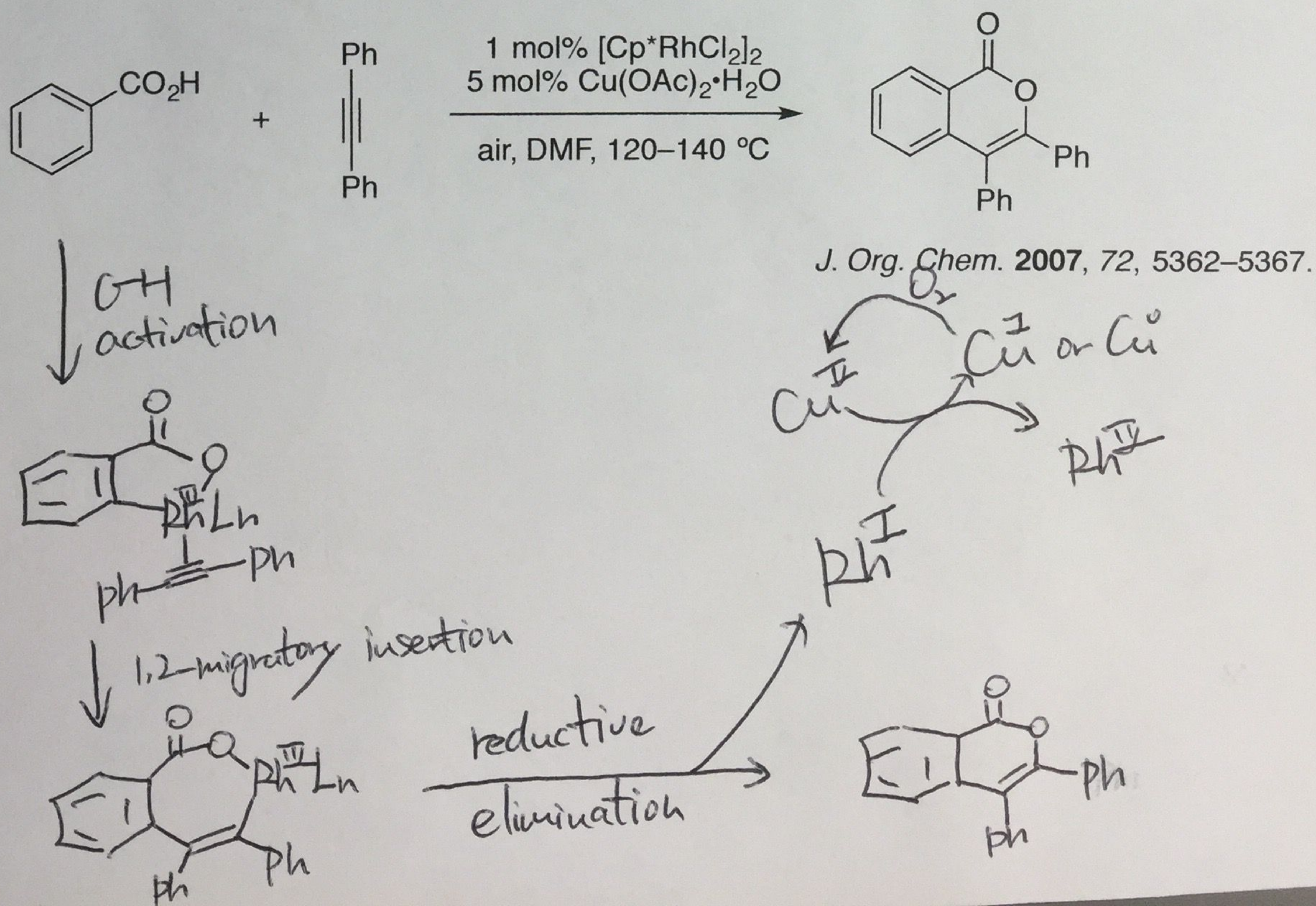


Part II

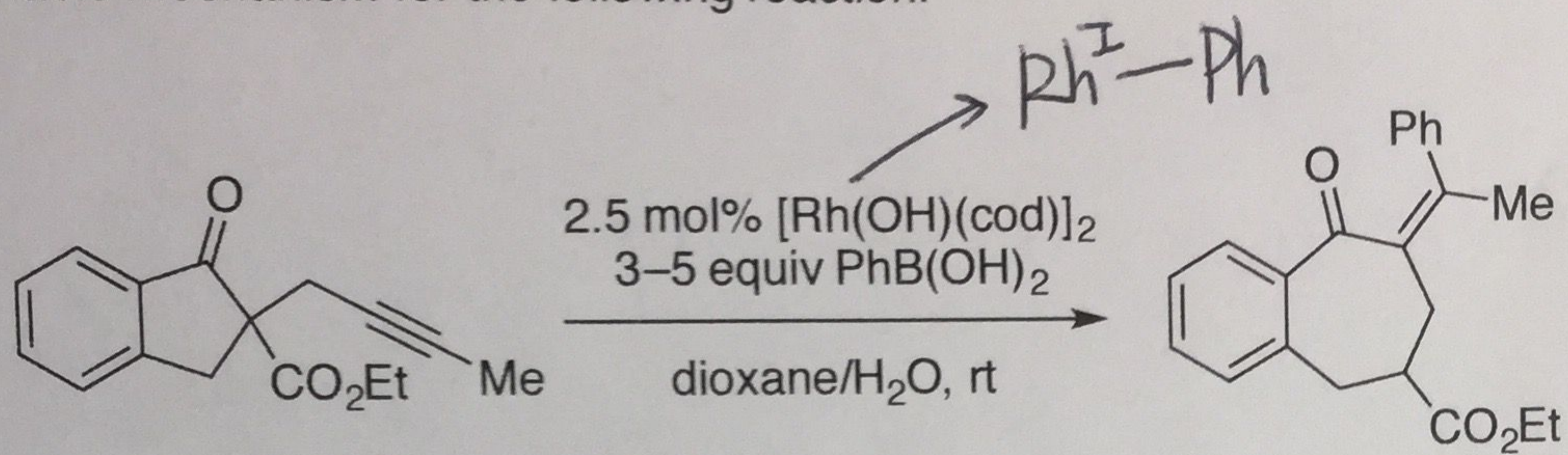
1. Propose a reasonable mechanism for the following reaction.



2. Propose a reasonable mechanism for the following reaction.



3. Propose a reasonable mechanism for the following reaction.



Angew. Chem. Int. Ed. **2005**, *44*, 7598–7600.

