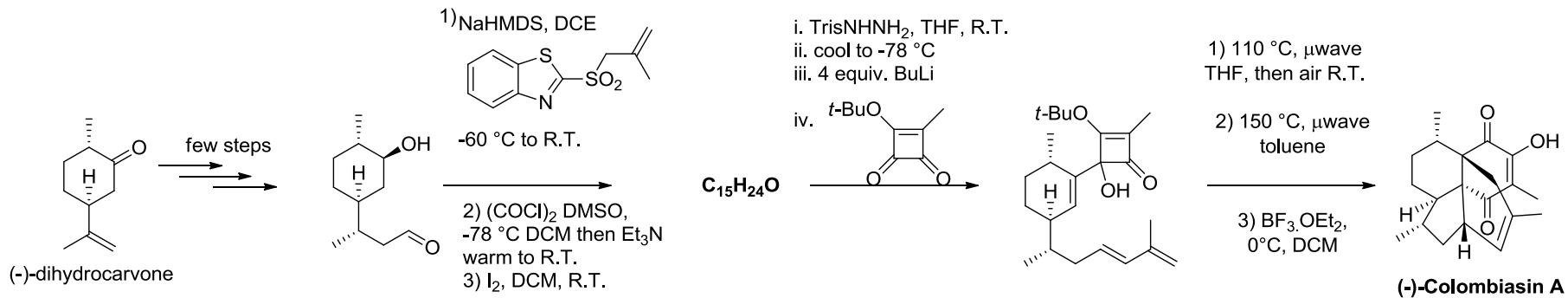


For all this exercises, describe the mechanism of the different reactions

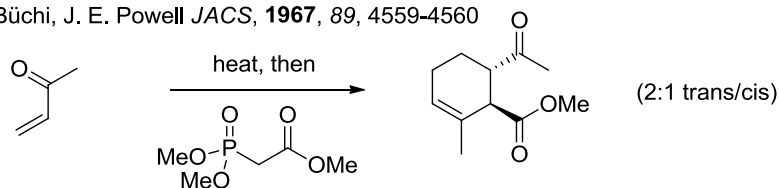
Exercise 1: Total Synthesis of (-)-Colombiasin A

Harrowven and coworkers *Angew. Chem. Int. Ed.* **2005**, *44*, 1221–1222



Exercise 2: Rearrangement

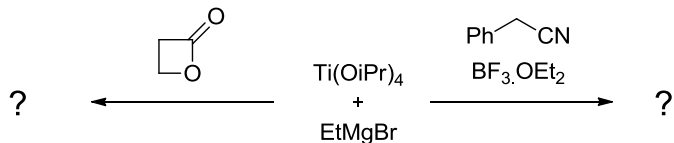
J.G. Büchi, J. E. Powell *JACS*, **1967**, *89*, 4559-4560



Exercise 3: Name reaction

Taddei and coworkers *J. Org. Chem.* **2000**, *65*, 9245-9248

Szymoniak and coworker *Chem. Commun.* **2001**, 1792–1793



Bonus question:

What is the name of this reaction and the modification?

Exercise 4: Multicomponent reaction

Lee and coworker *J. Org. Chem.* **2009**, *74*, 7556–7558

