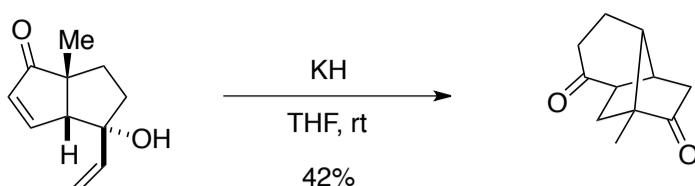


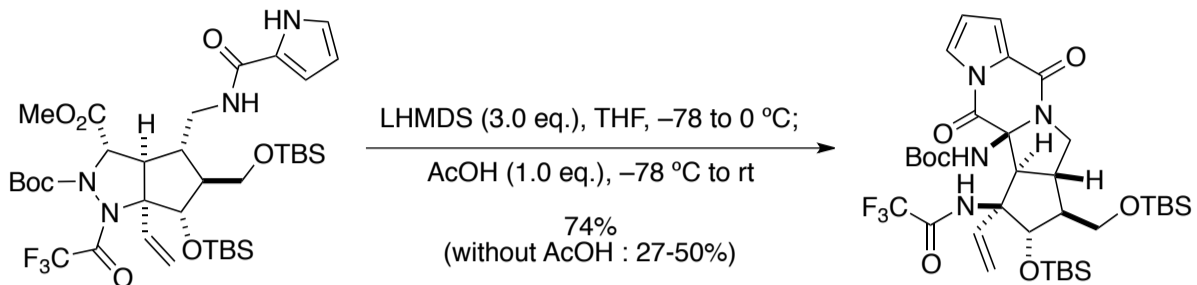
Name \_\_\_\_\_

1.



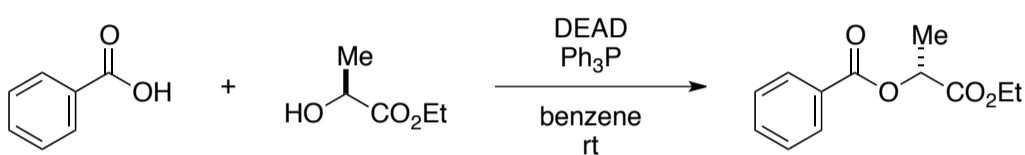
problem 11/04/2017 Q1  
H. Heathcock *et al.*, *J. Org. Chem.*, **46**, 9 (1981)

2.



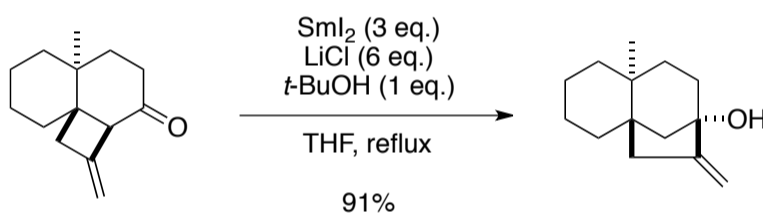
problem 04/07/2018 Q1  
K. Namba *et al.*, *Nat. Commun.*, **6**, 8731 (2015)

3.



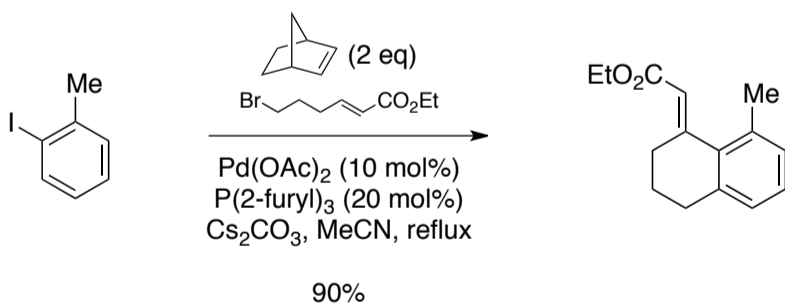
演習で学ぶ有機反応機構 (化学同人) A045  
O. Mitsunobu, *Synthesis*, **1** (1981)

4.



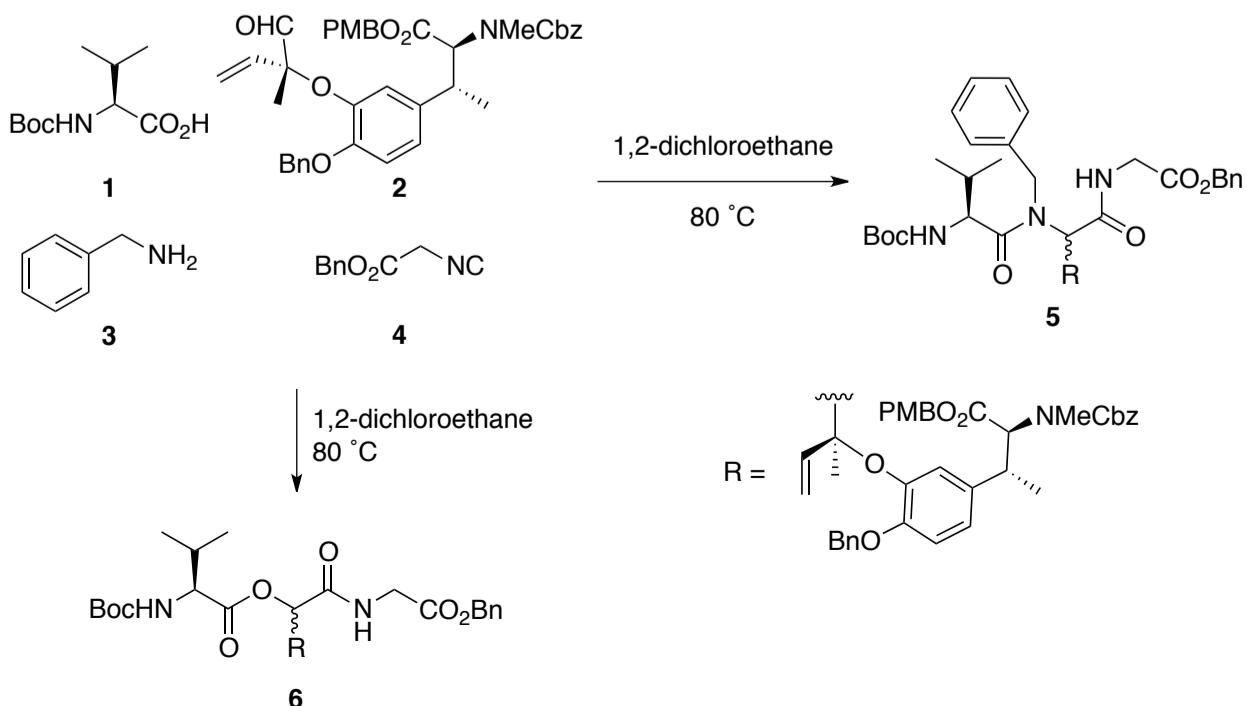
K. Takatori *et al.*, *Org. Lett.*, **19**, 3763 (2017)

5.



M. Lautens *et al.*, *Angew. Chem. Int. Ed.*, **39**, 1045 (2000)

6. Q. Compound **5** was obtained by the reaction of compounds **1~4**, but compound **6** was afforded in the following conditions. Answer better conditions in order to solve this problem. Please show the reasons why you chose the conditions, too.



C. A. Hutton *et al.*, *J. Org. Chem.*, **80**, 9831 (2015)