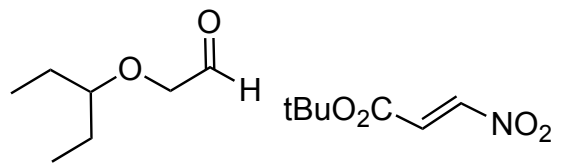
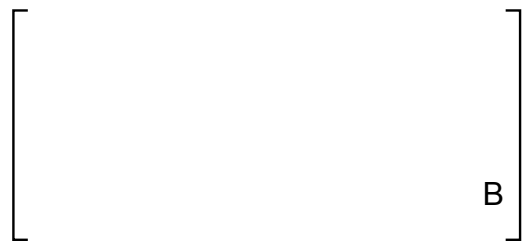


Synthesis Challenge #8 AG Wegner
JLU Giessen
05.12.2013



↓ 1

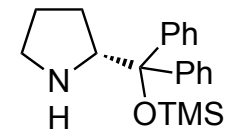


↓ 2-3



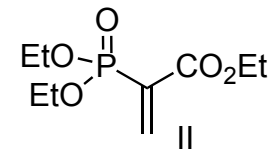
1) **I** (1 mol%), ClCH₂CO₂H (20 mol%), Toluene

2) **II**, CsCO₃
3) TolSH



I

Please, provide a detailed mechanism for step 1).



II

Please, provide a detailed mechanism for step 2) & 3).

4-6



- 4) TFA, Toluene
- 5) $(\text{COCl})_2$, DMF (cat)
- 6) TMSN_3 , pyridine

Please, provide a detailed mechanism for step 5)

D

7

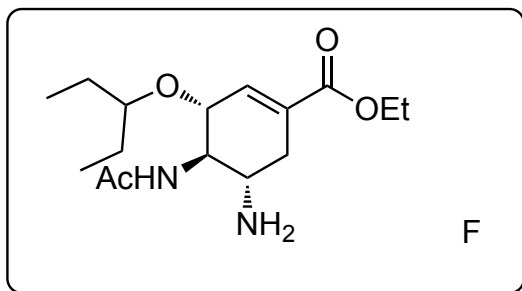


- 7) AcOH, Ac_2O

Please, provide mechanism for step 7)

E

8-9



8) Zn, TMSCl, EtOH, 70°C, 2h;
NH₃, 0°C, 10 min
9) K₂CO₃

Please, provide mechanism for step 9)