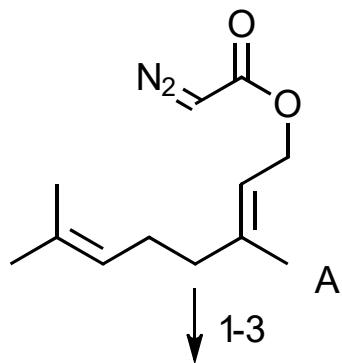
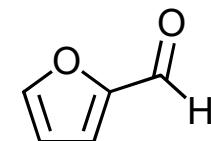


**Synthesis Challenge # 63**  
AG Wegner  
30.03.2017



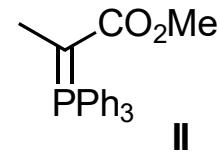
- 1) I, DBU (10 mol%), IBX, DMSO  
2) Cu(TBS)<sub>2</sub> (10 mol%), toluene, 80°C  
3) NaBH<sub>4</sub>, MeOH

Please provide a synthesis for A.

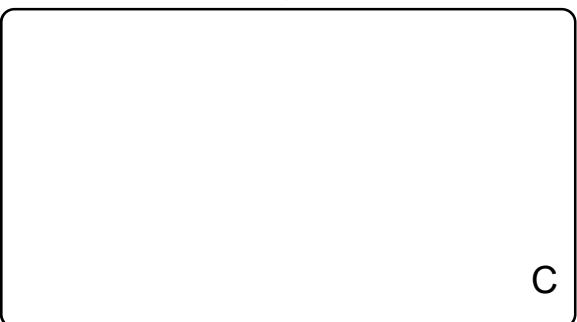


I

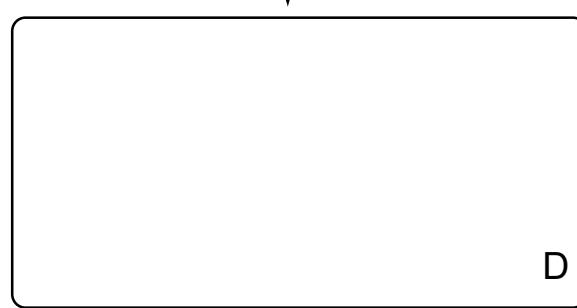
- 4) 4 N KOH, EtOH, then allylBr, DMF  
5) PPh<sub>3</sub>, I<sub>2</sub>, imidazole  
6) nBuLi (2.5 eq.), THF



↓ 4-6

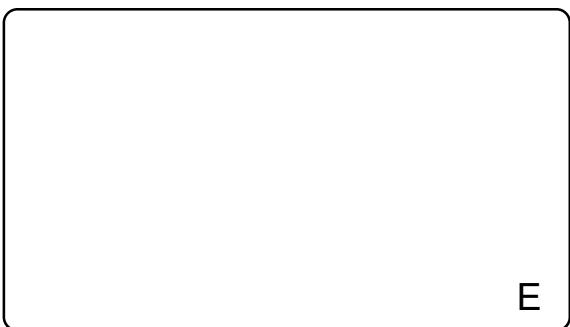


↓ 7-9

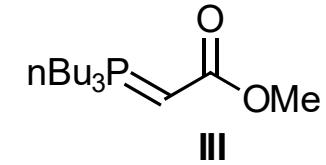


- 7) *m*CPBA  
8) NaIO<sub>4</sub>  
9) II

↓  
10-13



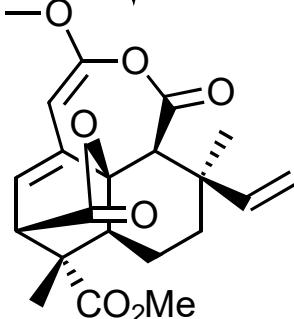
- 10)  $\text{VO}(\text{acac})_2$ , TBHP
- 11)  $\text{Ag}_2\text{O}$ , MeI, acetone
- 12) III
- 13) Jones oxidation



↓  
14



- 14) DABCO, toluene, 120°C, 3d



↓  
15-16

- 15)  $\text{Pd}(\text{PPh}_3)_4$ ,  $\text{PPh}_3$
- 16)  $\text{Tf}_2\text{O}$ ,  $\text{Et}_3\text{N}$ , -78°C - 0°C