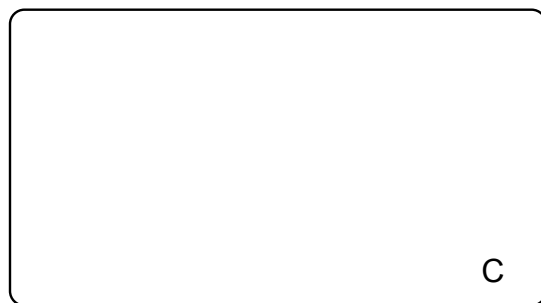
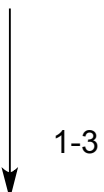
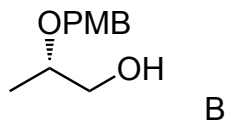
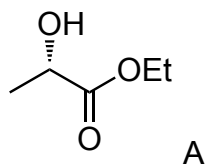


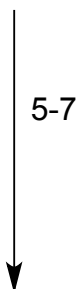
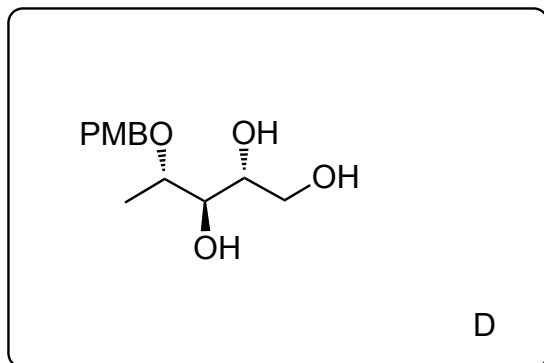
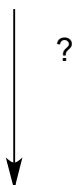
Synthesis Challenge #6 AG Wegner
JLU Giessen
14.11.2013



- 1) $(\text{COCl})_2$, DMSO, Et_3N , CH_2Cl_2 , -78°C
- 2) $\text{Ph}_3\text{P}=\text{CHCO}_2\text{Et}$
- 3) DIBAL-H, CH_2Cl_2

Please, provide reagents for the transformation from A to B.

Please give a detailed mechanism of step 1)?

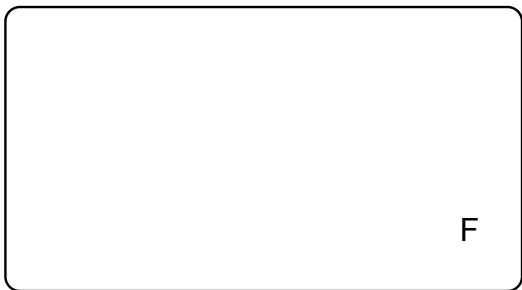


- 5) TBS-Cl, imidazole, DMF
- 6) PTSA, MeOH
- 7) (COCl₂), DMSO, Et₃N, CH₂Cl₂

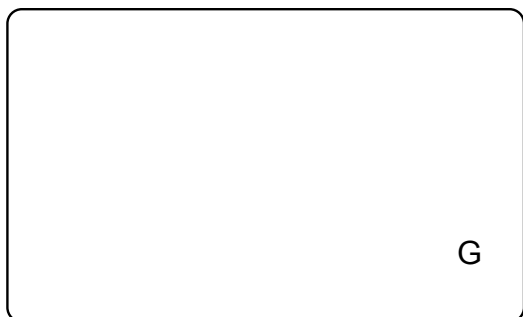
Please, provide reagents for the transformation from C to D.

What is the oxidant in step7)? Do you know oxidations using the same one?

8-9



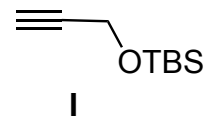
10-12



8) **I**, *n*BuLi, THF, -78°C
9) Ac₂O, Et₃N, DMAP, CH₂Cl₂

10) DDQ
11) Ac₂O, Et₃N, DMAP, CH₂Cl₂
12) PTSA, MeOH

Please, rationalize the stereochemical outcome in step 8).



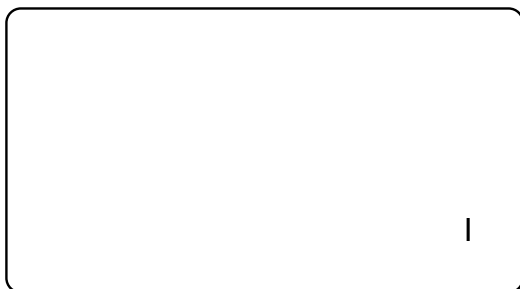
13-14



13) IBX, DMSO, CH₂Cl₂, 0°C
14) (+)IPC₂Ballyl, Et₂O

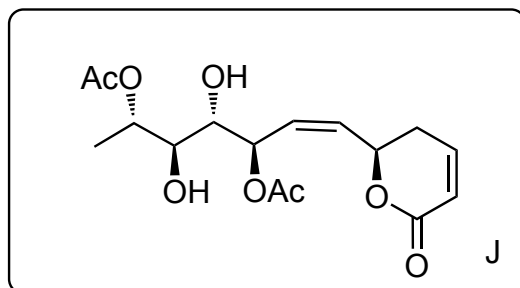
What is (+)IPC₂Ballyl? How does it react?

15-16



15) acryloyl chloride, Et₃N, DMAP (cat.), CH₂Cl₂
16) Grubbs-II, CH₂Cl₂, reflux

17-18



17) Pd/BaSO₄, H₂, quinoline
18) H₂SiF₆ (20^{-25%} in H₂O), CH₃CN