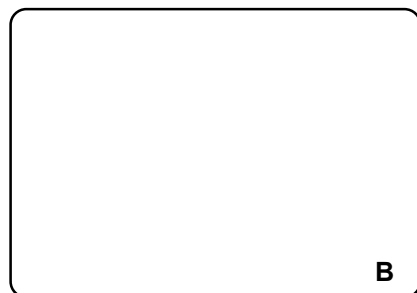
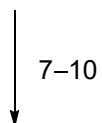
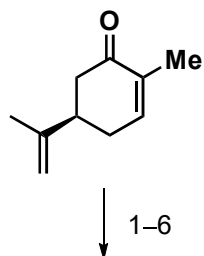
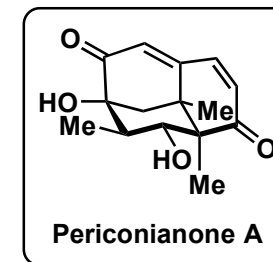


Total Synthesis of the Sesquiterpenoid Periconianone A Based on a Postulated Biogenesis

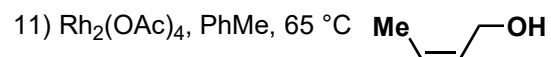
Raphael Liffert, Anthony Linden, and Karl Gademann

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- 1) FeCl_3 , MeMgBr , TMSCl
- 2) PhNO , AcOH
- 3) TBSCl , imid, DMAP
- 4) LiCl , CuI , MeMgBr , TMSCl
- 5) MVK , $\text{BF}_3 \cdot \text{Et}_2\text{O}$
- 6) O_3 , MeOH then $\text{Cu}(\text{OAc})_2$, FeSO_4

- 7) H_2 , Pd/C
- 8) NaOMe
- 9) LiHMDS , $\text{F}_3\text{C}(\text{CO})\text{OCH}_2\text{CF}_3$
- 10) MsN_3 , Et_3N

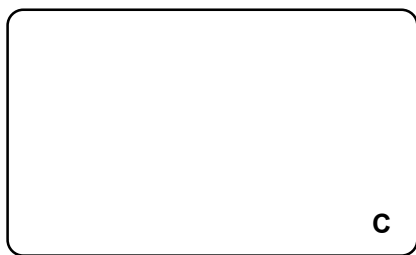


Step 1: Who invented this protocol?

Step 2: Come up with a mechanism.

Step 6: Name this transformation.

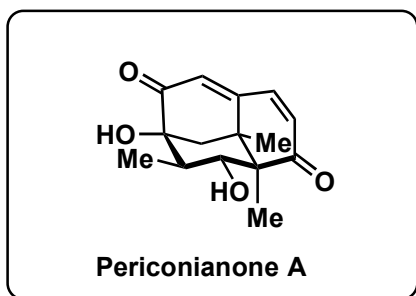
Step 11: Classify this reaction and rationalize the stereochemical outcome.



↓ 12



↓ 13–17



12) $\text{Ca}(\text{OMe})_2$, MeOH

- 13) HF (aq.)
14) DMP, NaHCO_3
15) O_3 , pyridine *then* PPh_3
16) diphenyl phosphate, 65°C
17) LiHMDS, PhSeCl *then* NaIO_4 (aq.)

Step 12: A rearrangement takes place.
Think about the driving force.