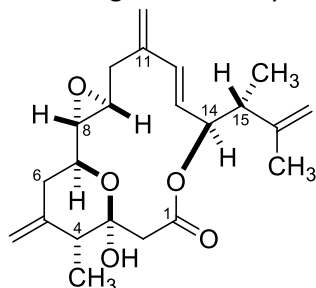


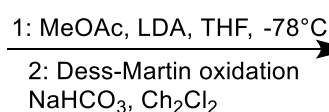
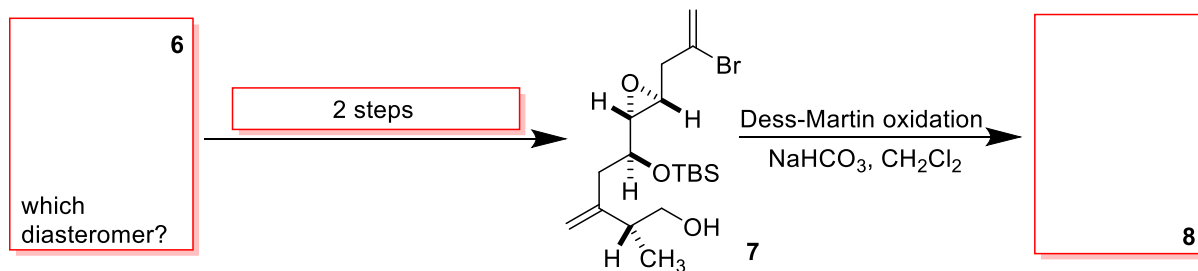
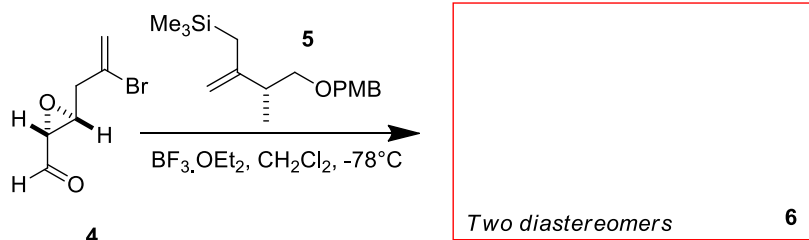
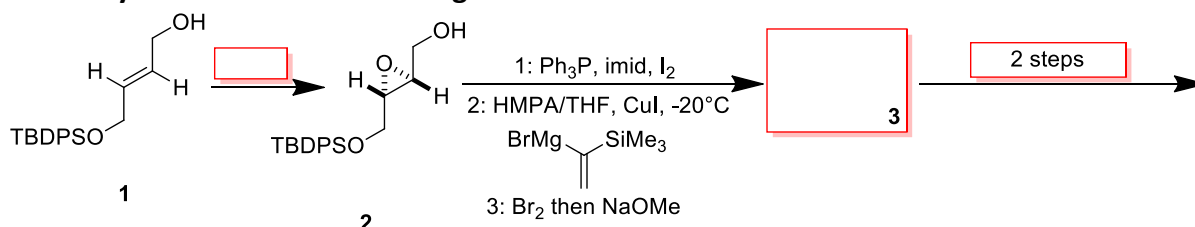
Studies for the Total Synthesis of Amphidinoline P

Amphinolidines are a family of macrocyclic molecules naturally secreted by marine plancton of the genus *Amphidinium*. Many of these compounds display cytotoxic effects on various lines of cancer cells and produce sub-micromolar IC_{50} values. However, these molecules are only available in exceedingly low quantities, making them a target for total synthesis.



Structure of Amphidinoline P

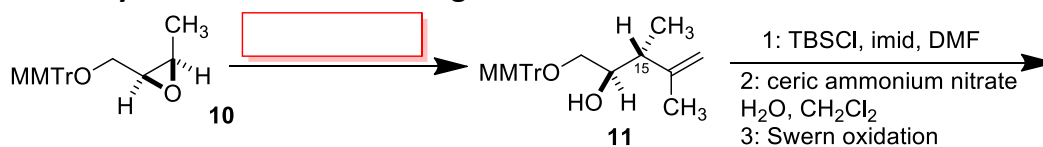
- Synthesis of the C₁- C₁₁ fragment.**



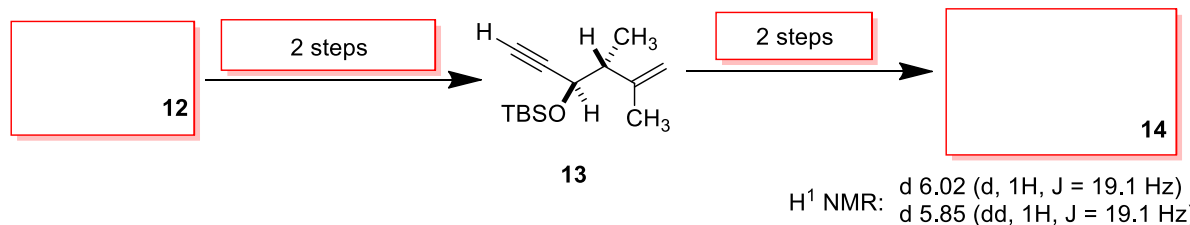
IR peaks at 1750 and 1715 cm^{-1}

IR peak at 1723 cm^{-1}
 1H NMR: d 9.48 (d, $J = 1.9$ Hz, 1H)

• **Synthesis of the C₁₂-C₁₇ fragment.**



MMTrCl = (4-MeOPH)Ph₂CCl



• **Formation of the C₁₁-C₁₂ bond and completion of synthesis**

