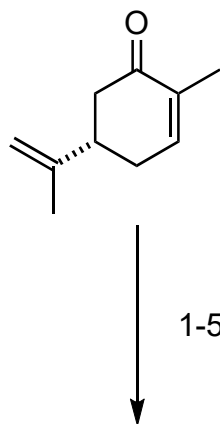


# Total Synthesis of (of (-)-Daphnezomines A and B

Xu, G.; Wu, J.; Li, L.; Lu, Y.; Li, C.\*

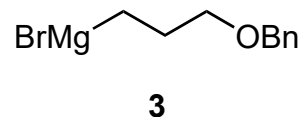
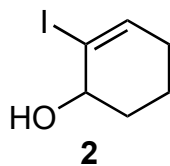
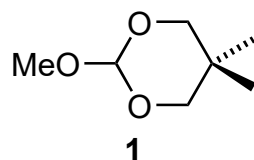
*J. Am. Chem. Soc.* 2020, *142*, 15240-15245.



6-10



- 1) H<sub>2</sub>, Rh/Alumina  
*then* TIPSOTf, Et<sub>3</sub>N
- 2) Se, Chloramine-T
- 3) allyl bromide, NaH
- 4) Pd(OAc)<sub>2</sub>, O<sub>2</sub>
- 5) **1**, *p*-TsOH



- 6) 9-BBN, *then* **2**, Pd(dppf)Cl<sub>2</sub>  
aq. NaOH, AsPh<sub>3</sub>
- 7) TFA, *then* aq. NaOH
- 8) LaCl<sub>3</sub>•2LiCl, **3**
- 9) Na, naphthalene  
*then* Boc<sub>2</sub>O, Et<sub>3</sub>N, *then* DMP
- 10) Burgess reagent

What is the name of the starting material?

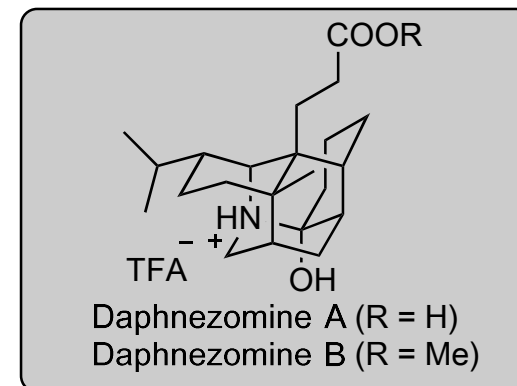
**Step 2:** Name the reagent and propose a mechanism

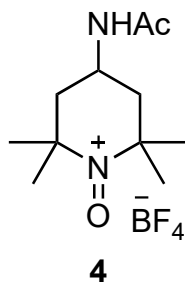
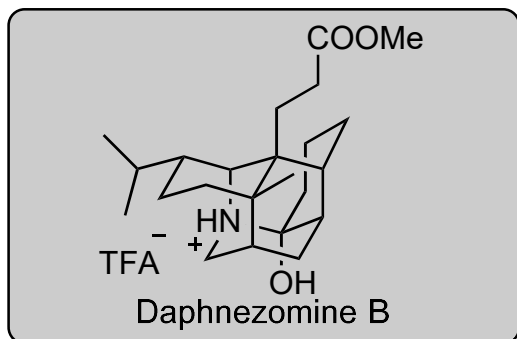
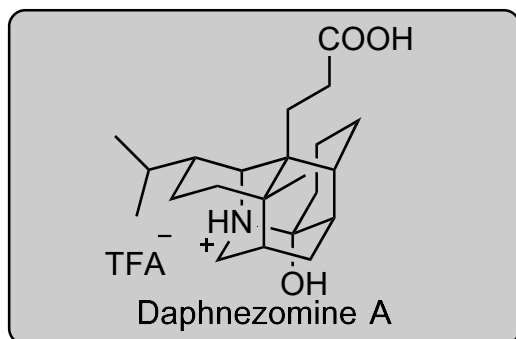
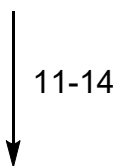
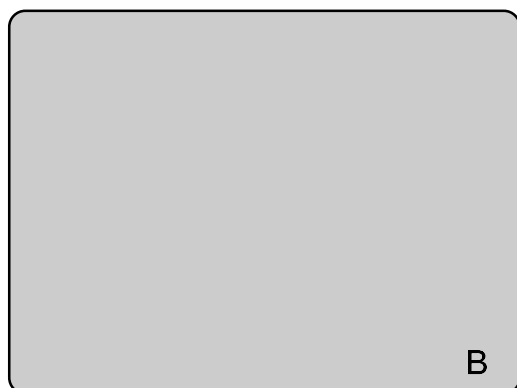
**Step 4:** Propose a mechanism  
*hint: another ring forms*

**Step 6:** Name of the reaction?

**Step 8:** Name of this salt?

**Step 10:** Structure of Burgess reagent?





- 11) 4
- 12) TMSCHN<sub>2</sub>, then TFA
- 13) Fe(acac)<sub>3</sub>, Ph(*i*-PrO)SiH<sub>2</sub>
- 14) TFA

**Step 11:** Name of reagent 4?

**Step 13:** How would you classify this reaction according to Baldwin's rule? What could be a potential competing side reaction? Provide a mechanism

**Step 14:** *hint - epimerization*