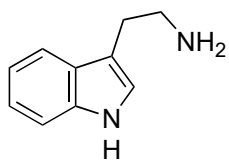
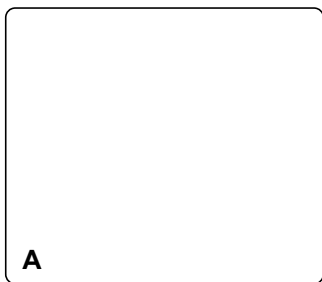


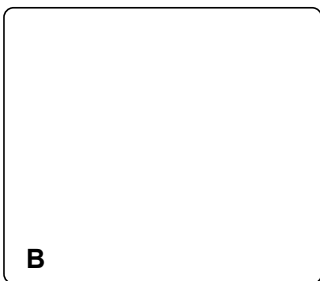
Asymmetric Total Syntheses of Schizozygane Alkaloids
 Wenqiang Zhou, Tao Zhou, Mengxing Tian, Yan Jiang, Jiaojiao Yang, Shuai Lei, Qi Wang,
 Chongzhou Zhang, Hanyue Qiu, Ling He, Zhen Wang, Jun Deng, and Min Zhang*
J. Am. Chem. Soc. 2021



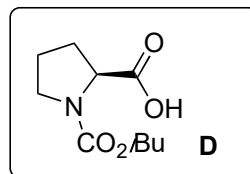
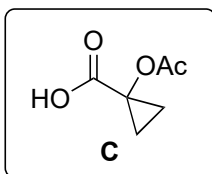
1-5



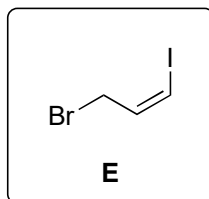
6-10



- 1) C, EDCI, HOBT
- 2) POCl₃
- 3) D, NaBH₄ then Boc₂O
- 4) Boc₂O, DMAP
- 5) DIBAL-H



- 6) Fe(NO₃)₃·9H₂O
- 7) Pd/C, H₂
- 8) Ph₃P=CH₂
- 9) BF₃·E, K₂CO₃

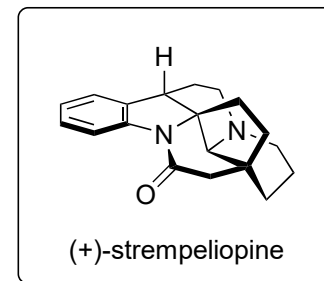


Step 2: Name the reaction

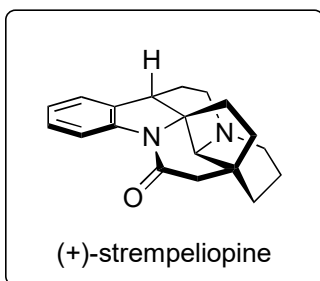
Step 3: Role of D in the reaction?

Step 6: propose mechanism for this step.
 Hint: cyclization occurs in this step

Step 8: Name the reaction



11-12



11) Pd(OAc)₂, CO
12) Pd/C, H₂

Step 11: propose mechanism for this step.