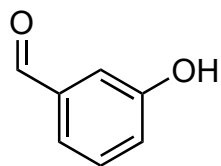
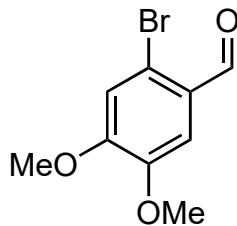
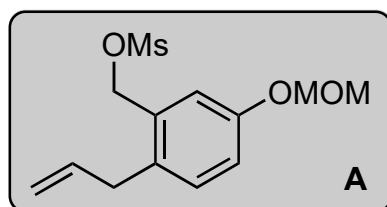


Enantioselective Total Synthesis of (+)-Stephadiamine through Bioinspired Aza-Benzilic Acid Type Rearrangement

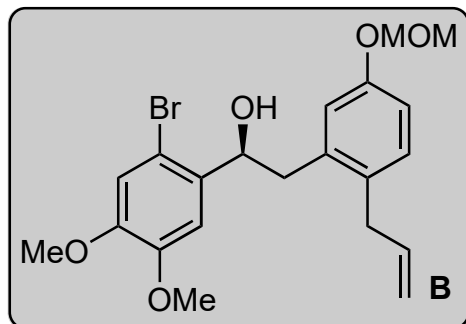
Odagi, M.; Matoba, T.; Hosoya, K.; Nagasawa, K. *J. Am. Soc.* **2021**, *143*, 2699–2704.



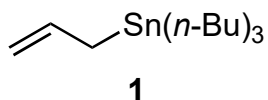
1-5



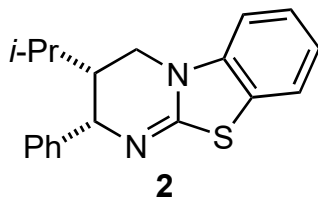
6-10



- 1) MOMCl, DIPEA
- 2) NaBH₄
- 3) NBS
- 4) **1**, Pd(PPh₃)₄
- 5) MsCl, NEt₃



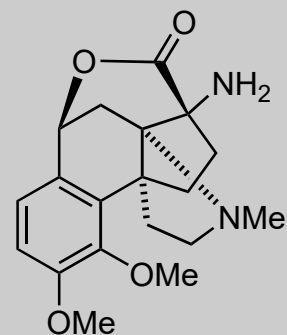
- 6) TMSCN, ZnI₂
- 7) **A**, LiHMDS
- 8) TBAF
- 9) NaBH₄
- 10) **2**, (CO*i*-Pr)₂O, DIPEA



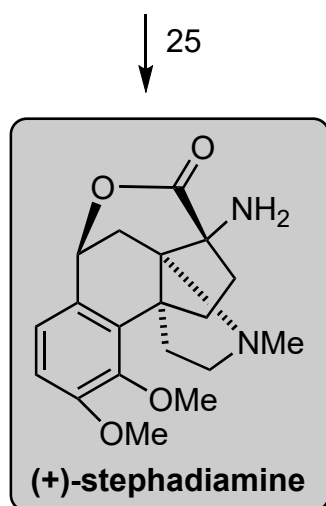
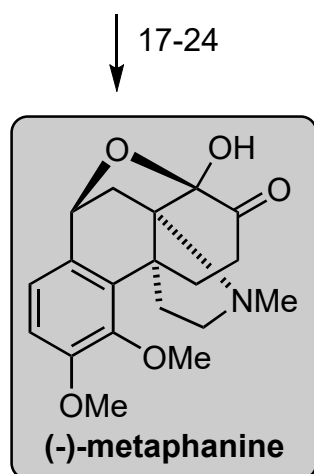
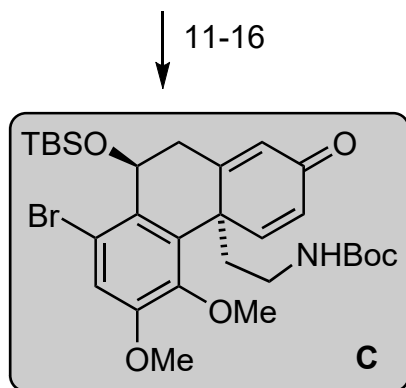
4) Name of the reaction

Stille coupling

10) *hint*: acylative kinetic resolution



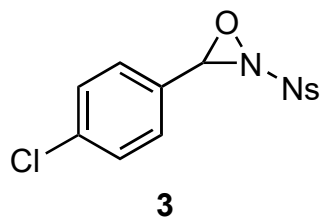
(+)-stephadiamine



- 11) TIPSCl, imH
- 12) O_3 *then* $NaBH_4$
- 13) $MsCl$, NEt_3 *then* NaN_3
- 14) PPh_3 , H_2O *then* Boc_2O
- 15) CBr_4
- 16) PIDA, MeOH

- 17) HCO_2Na , $Pd(PPh_3)_4$
- 18) $KOt-Bu$
- 19) **3**, KHMDS
- 20) DMP, $NaHCO_3$
- 21) 3 $HF \cdot NEt_3$
- 22) H_2 , Pd/C
- 23) HCl
- 24) $HCHO$, $NaBH_3CN$

- 25) NH_3



- 14) Name of the reaction

Staudinger reduction

- 19) Name of reagent **3**, Structure of **Ns**

Davis' oxaziridine

- 24) Name of the reaction

reductive amination

