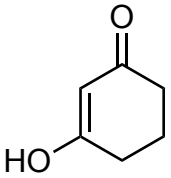
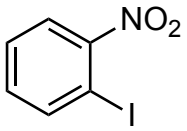
Total Synthesis of (±)-Aspidophylline

W. Ren, Q. Wang, J. Zhu, *Angew. Chem. Int. Ed.* **2014**, *53*, 1818–1821.



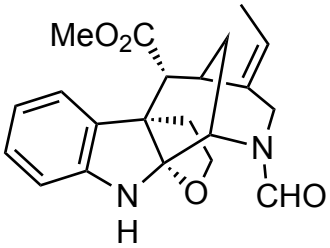
1) K_2CO_3, **1**
2) K_2CO_3, allyl bromide
3) Toluene, 180 °C
4) TMSCl, DMAP, Et_3N
5) CsF, $PhNTf_2$
6) NH_4OAc, $TiCl_3$



1

3) Named reaction?

A



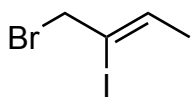
(±)-Aspidophylline

A

7) NaH, $ClCO_2Me$
8) OsO_4, NMO *then* $NaIO_4$
9) $NaBH_4$ *then* HCl (1 M)
10) $Pd(PPh_3)_4$, Et_3N, CO, MeOH
11) TMSOTf, 2,6-lutidine

8) Named reaction?
9) Two reactions take place

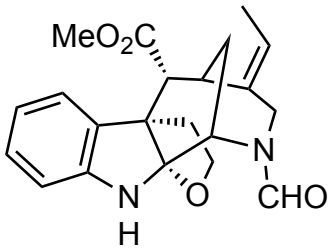
B



2

12) NaN_3, CAN
13) PPh_3, H_2O
14) Cs_2CO_3, **2**
15) *t*-BuLi, HMPA, TMSCl
16) Ac_2O, formic acid
17) NaOMe, MeOH

12) Azidoalkoxylation
13) Named reaction?



(±)-Aspidophylline