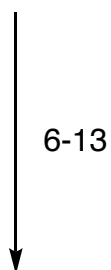
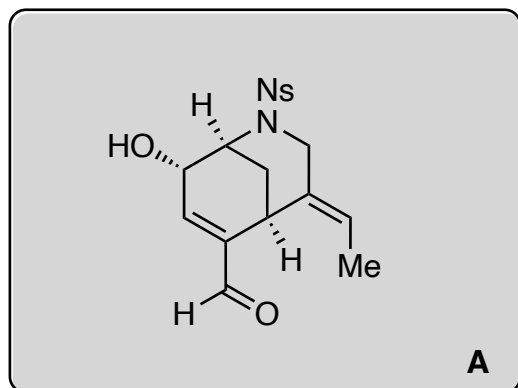
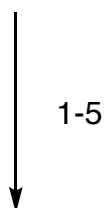
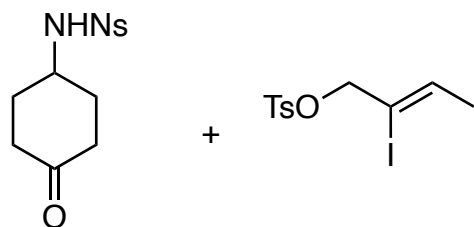


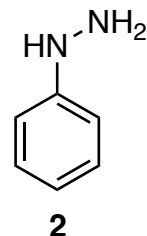
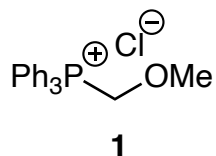
Total Synthesis of the Akuammiline Alkaloid Picrinine

Smith, J. M.; Moreno, J.; Boal, B. W.; and Garg, N.K.

J. Am. Chem. Soc. **2014**, *136*, 4504-4507.



- 1) Cs_2CO_3
- 2) $\text{PdCl}_2(\text{dppf})$, K_2CO_3
- 3) IBX, NMO
- 4) $\text{NaBO}_3 \cdot \text{H}_2\text{O}$
- 5) **1**, KOtBu

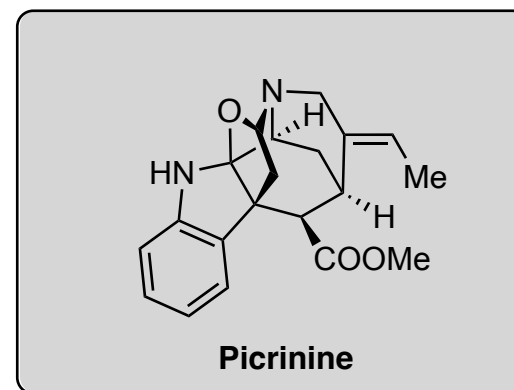


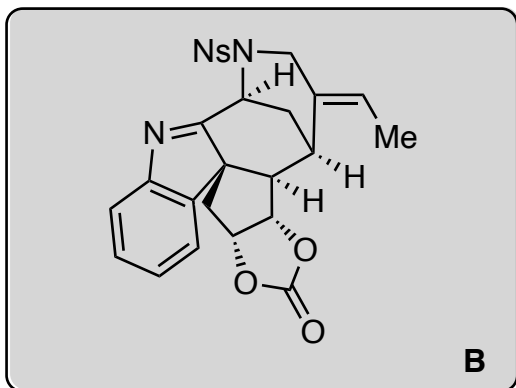
- 6) Bu_3SnH , $\text{Pd}(\text{PPh}_3)_4$, ZnCl_2
- 7) Ph_3PMeBr , KOtBu
- 8) DMP, NaHCO_3
- 9) LHMDS, DMPU *then* allyl iodide
- 10) Hoveyda-Grubbs II (4 mol %)
- 11) $\text{OsO}_4(\text{cat.})$, NMO
- 12) Triphosgene, pyridine
- 13) **2**, TFA

- 3) Structure of IBX? Next Page
- 4) Hint: NaBO_3 in water has similar reactivity to H_2O_2
- 5 & 7) Name of reaction?
Wittig Olefination

- 10) Structure of Hoveyda-Grubbs II?
Next Page

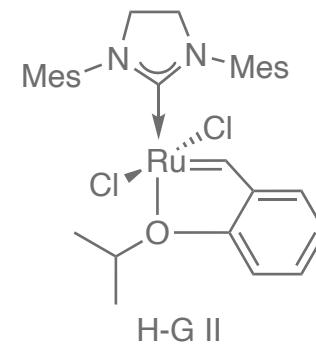
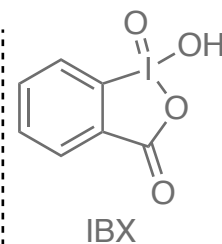
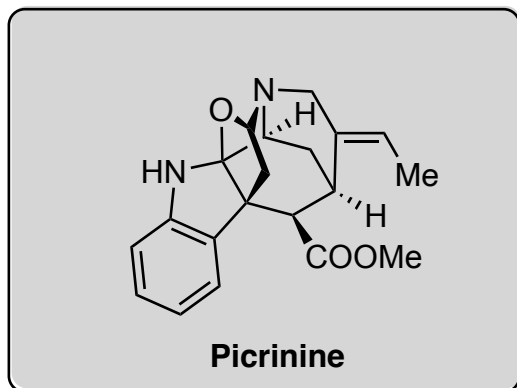
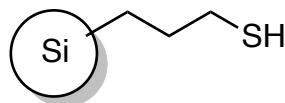
- 13) Name and mechanism of rxn?
Fischer Indolization (Mech on p.3)





14-18

- 14) NaOH, H₂O
- 15) NaIO₄, H₂O
- 16) NaClO₂, NaH₂PO₄, 2-methyl-2-butene
- 17) Me₃SiCHN₂, MeOH
- 18) SiliaMetS[®] Thiol resin(structure below), Cs₂CO₃



16) Name of reaction? Pinnick
Oxidation

18) Hint: Deprotection and cyclization

