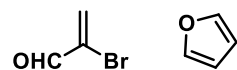


Concise Enantioselective Total Synthesis of (–)-Virosaine A

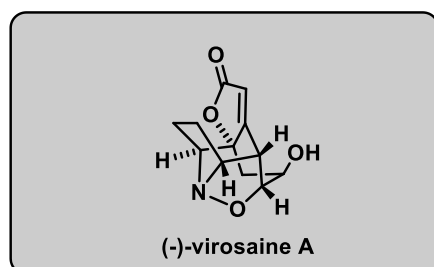
Jonathan M. E. Hughes and James L. Gleason
Angew. Chem. Int. Ed. **2017**, 56, 10830–10834



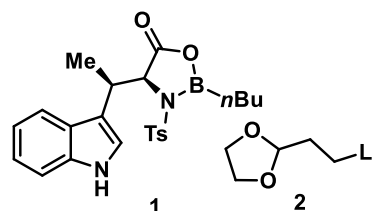
1-4



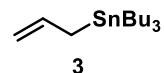
5-10



- 1) **1**, DCM, –78 °C then, **2** –78 °C
- 2) 5% aq. HCl, THF
- 3) NH₂OTBS, DCM
- 4) NaH, THF, 0 °C



- 5) AcOH, MW 120 °C
- 6) CDI, KOH toluene 60 °C, then *n*-BuNH₂
- 7) *s*-BuLi, THF –78 °C then Br₂ –78 °C
- 8) AIBN, **3**, benzene, 85 °C
- 9) LiAlH₄, THF, 70 °C
- 10) O₃, then Me₂S then DMP, pyridine then Al₂O₃, EtOAc



1: Role of 1?

5: Draw the mechanism.
 Hint: 3 Transformations

6: Structure of CDI

8: Structure of AIBN?
 Name 2 alternative radical starters?
 Name of the reaction?