

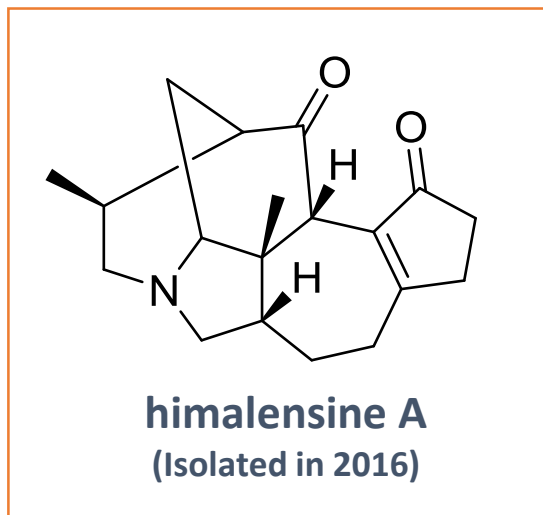
# Total synthesis of (-)-himalensine A

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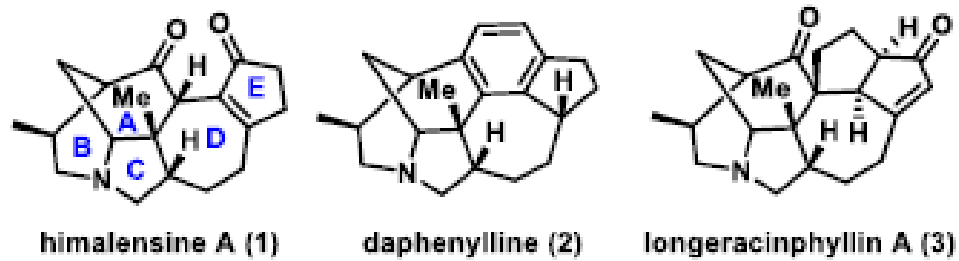
**Darren Dixon**  
**Professor of Chemistry**  
**University of Oxford, UK**

- D. Phil, University of Oxford, 1993-1997 (Prof. S. G. Davies)
- Postdoc, University of Cambridge, 1997-2000 (Prof. S. V. Ley)

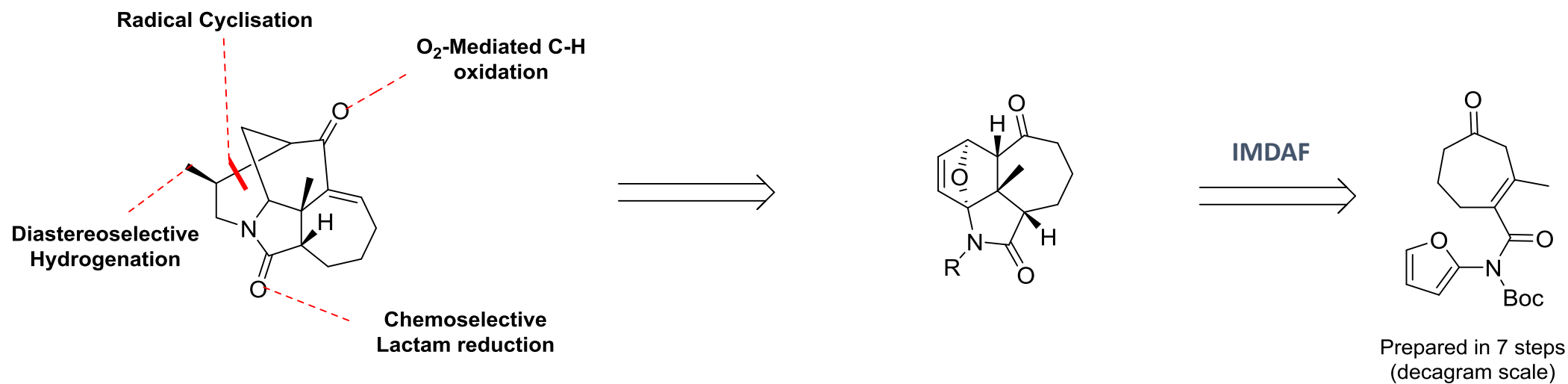


**Camilo Meléndez**  
**Journal Club**  
**Group Renaud, UniBe**

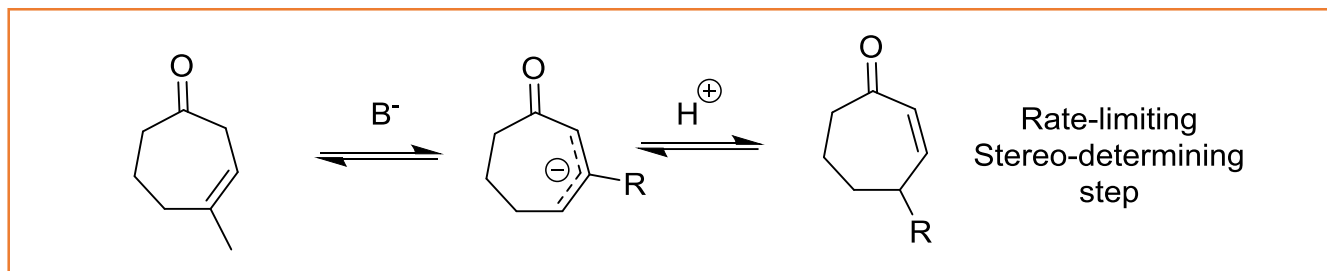
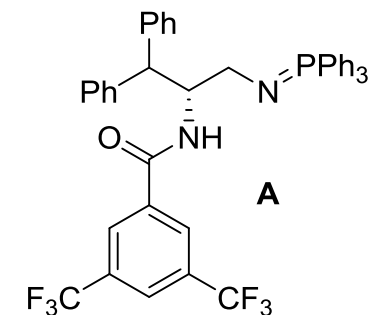
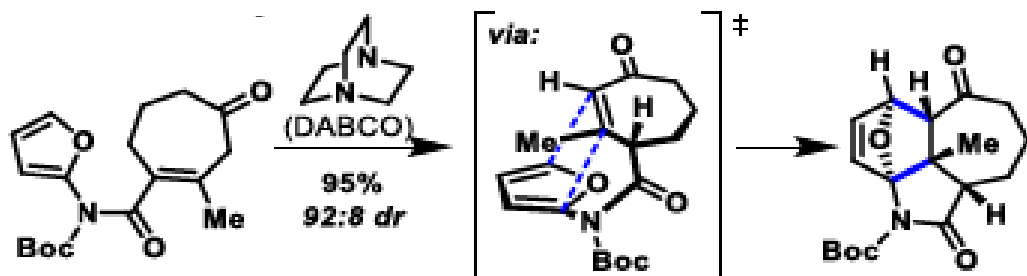
# Retrosynthetic analysis



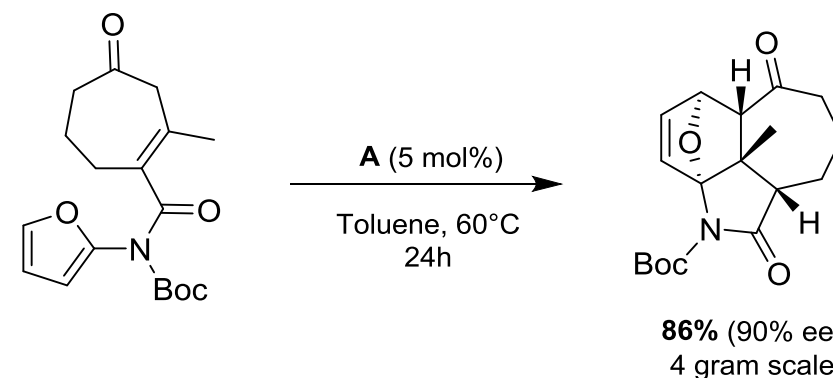
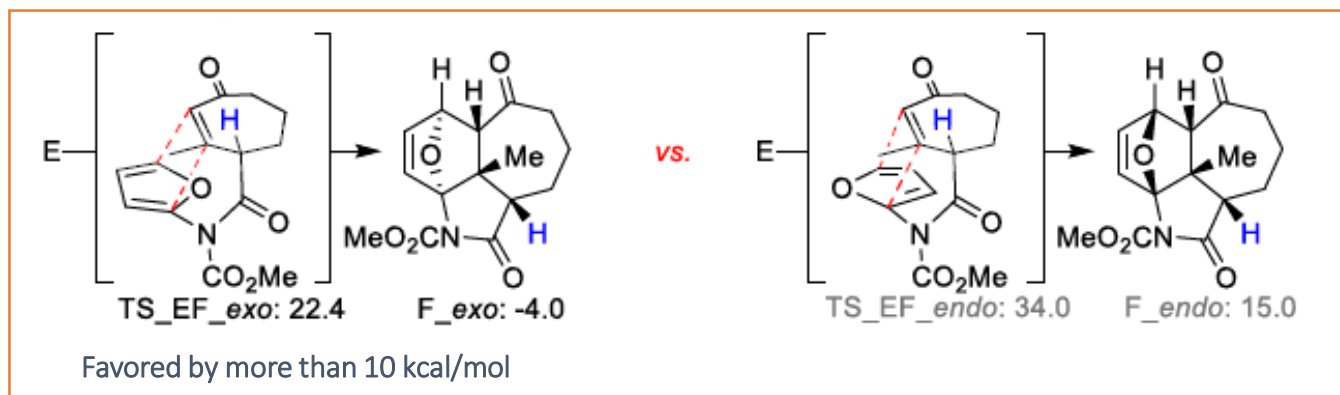
## *Daphniphyllum* alkaloids

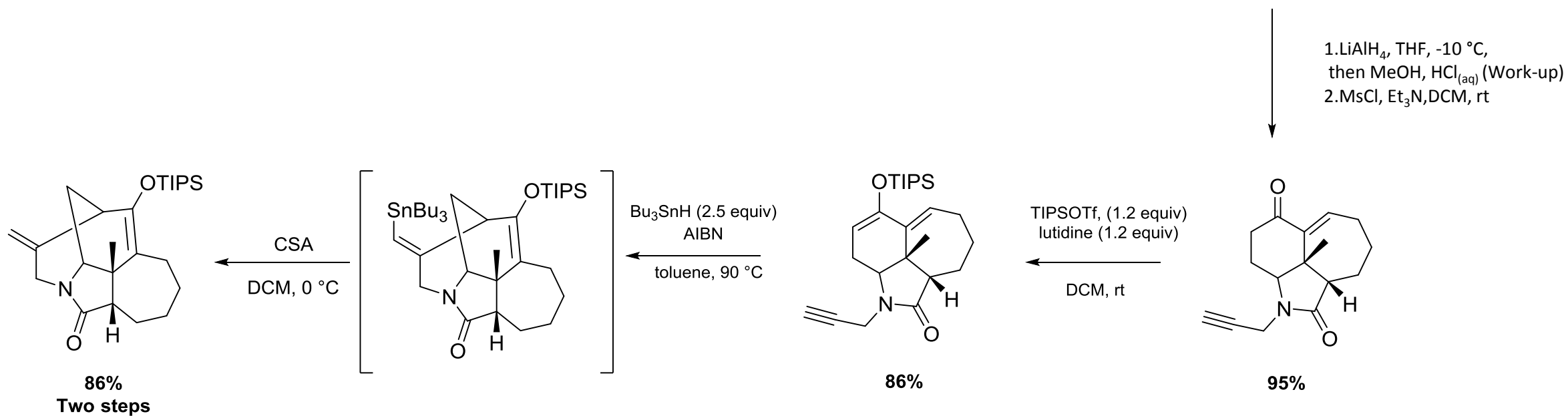
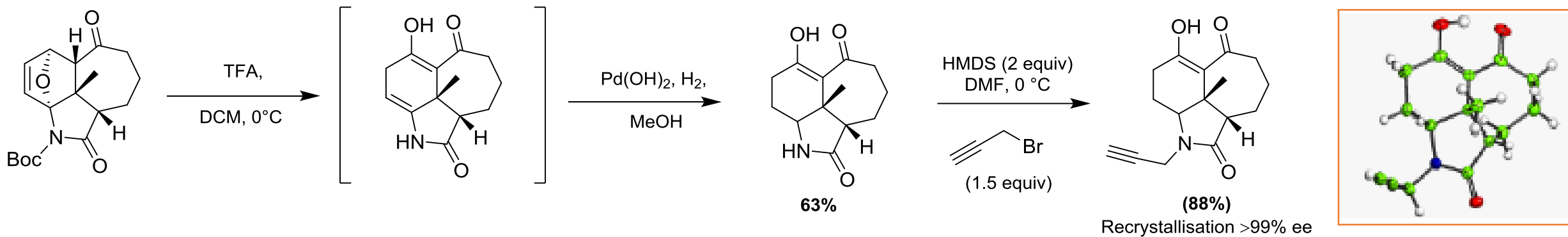


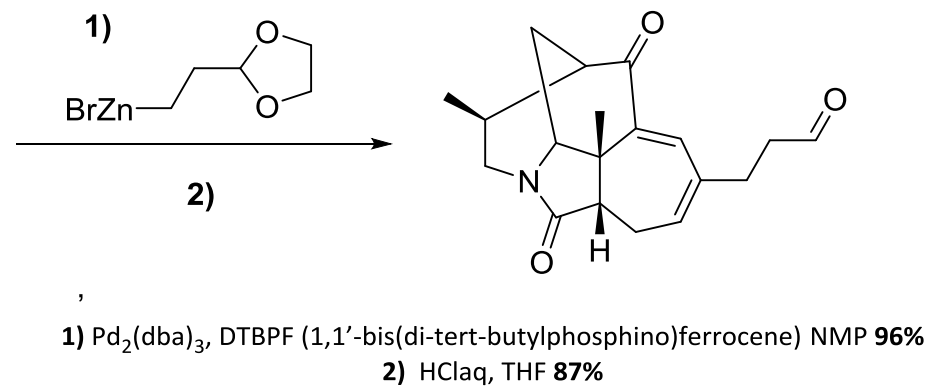
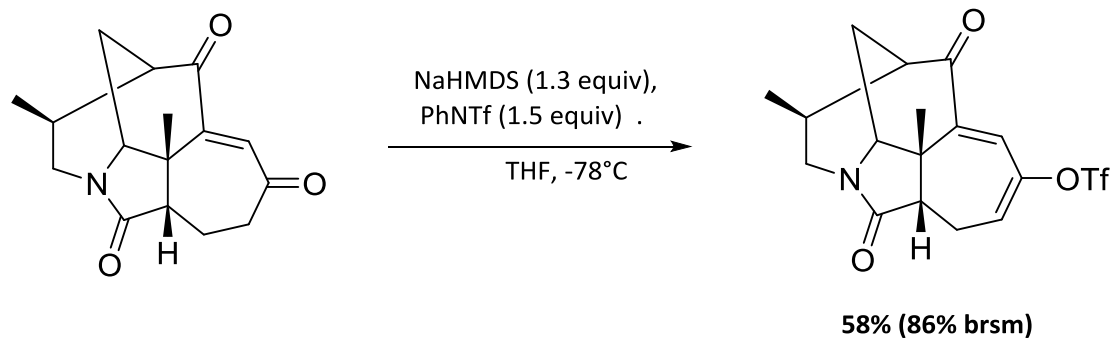
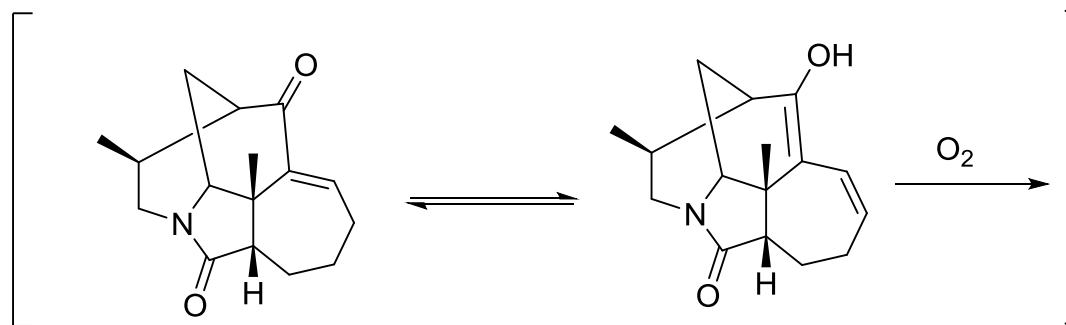
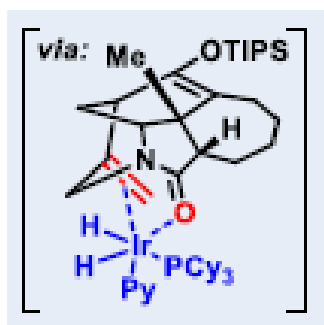
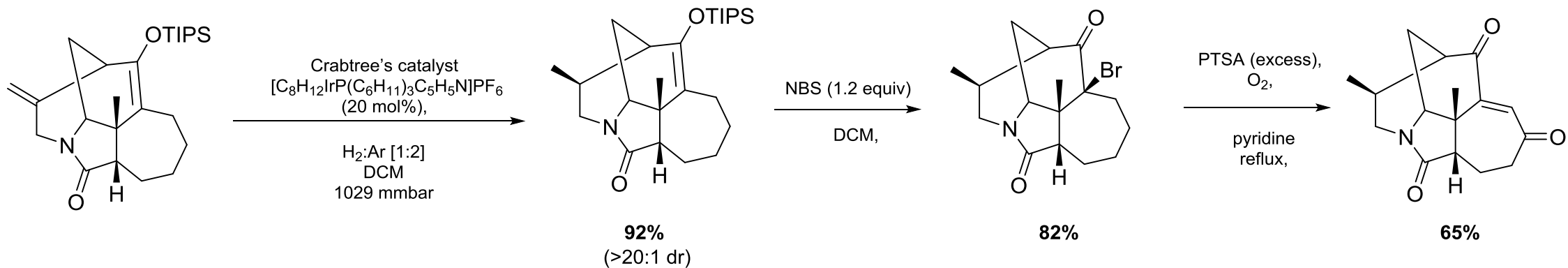
# Intramolecular Diels–Alder furan (IMDAF) reaction



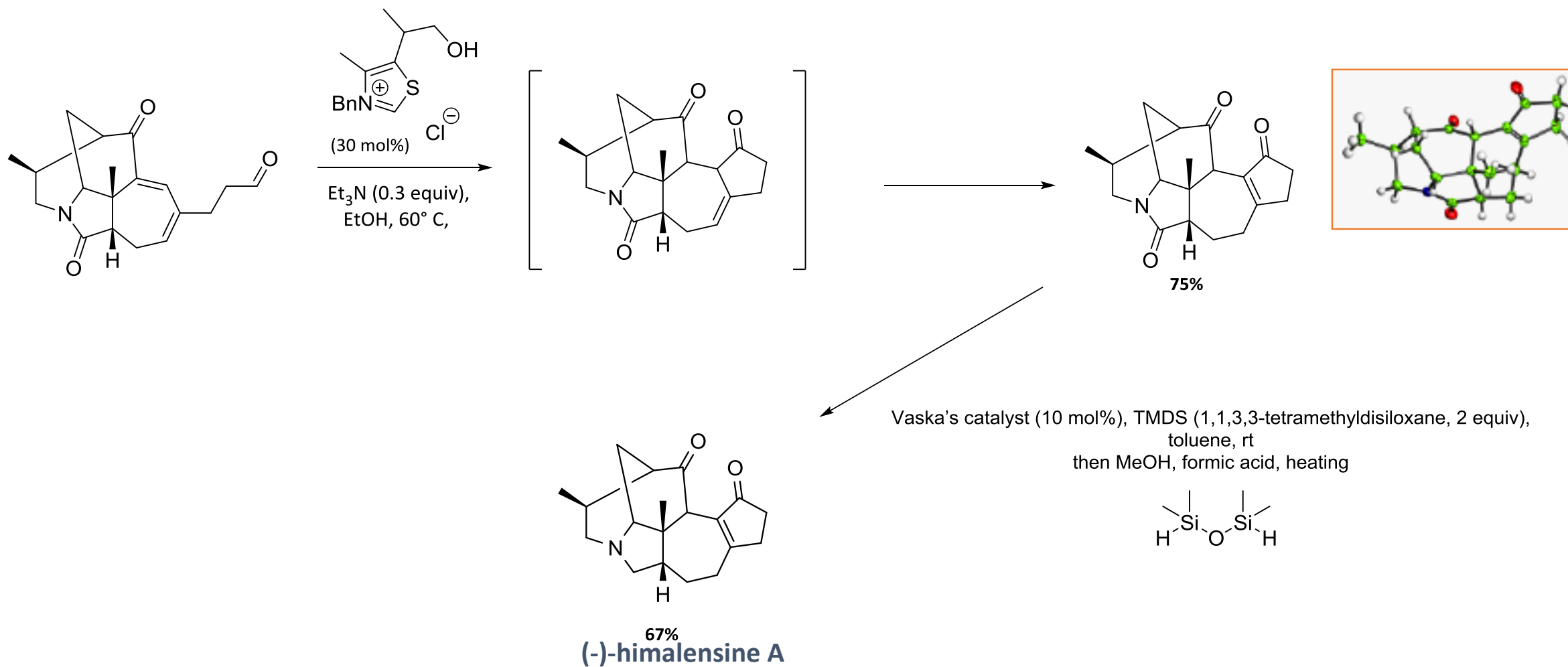
At 50°C  
 Deprotonation: 23.6 kcal/mol  
 Cycloaddition: 22.4 kcal/mol







# End of the Game



# Conclusion

- First enantioselective total synthesis of (–)-himalensine A in 22 steps  
(Highly efficient and scalable steps)
  - First enantioselective IMDAF reaction
- O<sub>2</sub>-mediated remote functionalization (C-H oxidation)

**Thanks for your attention!**