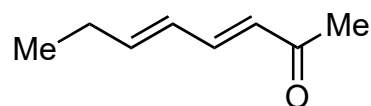


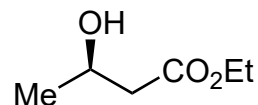
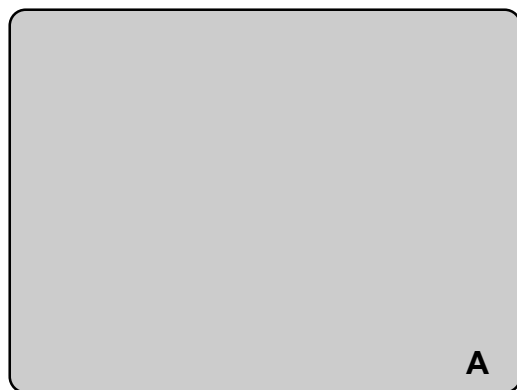
Asymmetric Total Synthesis of Asperones A and B Through Organocatalyzed Quinone [5+2] Cycloaddition

Qu, C.; Chen, L.; Wang, P.; Zhang, J.; Ding, Y.; Long, X.; Zhang, T.; Zhao, Y.; Deng, J.

J. Am. Chem. Soc. **2025**, *147*, 6739–6746.

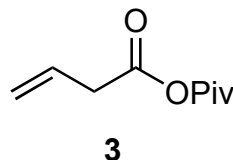
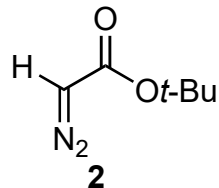
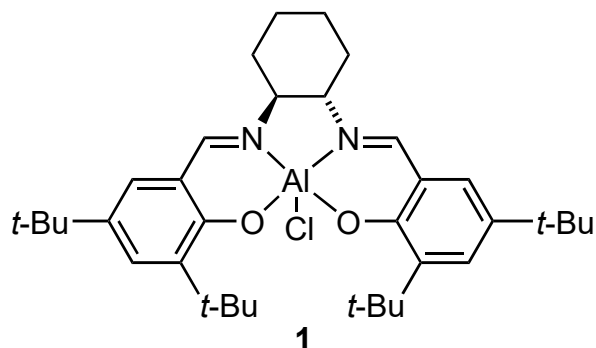


1-4



5-11

- 1) TMSCN (2.0 eq.), **1** (0.05 eq.), Ph₃PO (0.5 eq.)
- 2) DIBAL-H
- 3) SnCl₂, **2**
- 4) NaH, **3** then TBAF



- 5) LDA (3.0 eq), MeI
- 6) TBSCl, imidazole
- 7) DIBAL-H (2.5 eq.)
- 8) DMSO, (COCl)₂ then NEt₃
- 9) PPh₃, CBr₄
- 10) *n*BuLi, ClCO₂Me
- 11) **4**, neat, 180°C then Silica gel

- 1) Hint: *R*-enantiomer obtained

- 3) Name of reaction?

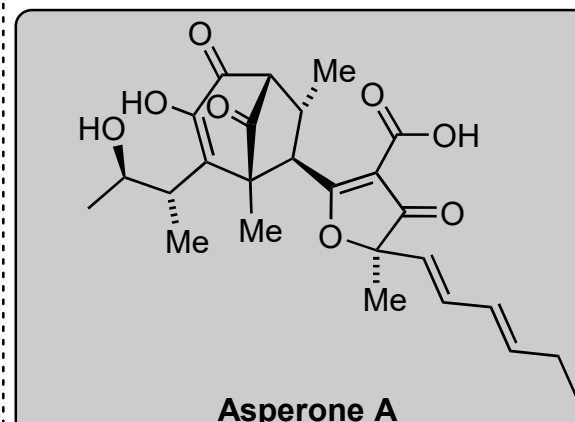
- 4) Name of reaction?

Hint: Cyclization after TBAF addn.

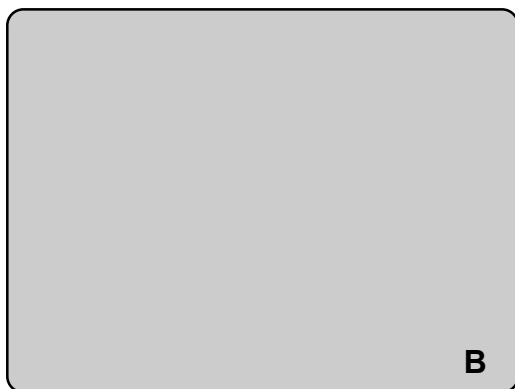
- 8) Name of reaction?

- 9) Name of reaction?

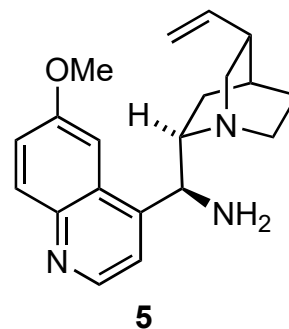
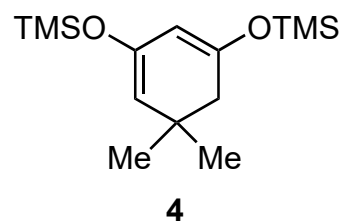
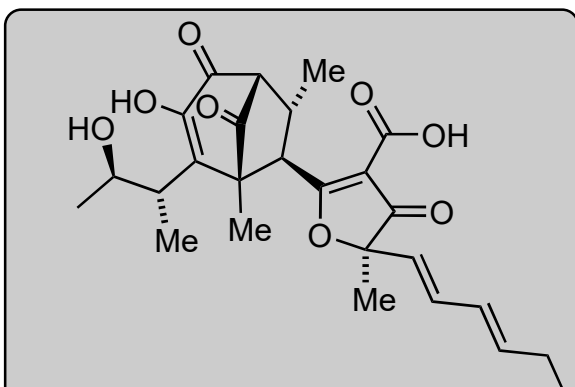
- 11) Name of reaction(s)?



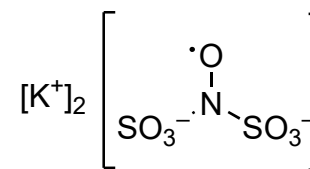
Asperone A



12-18



- 12) TBSOTf (3 eq.), NEt₃ (3 eq.)
- 13) DIBAL-H (2.5 eq.)
- 14) BF₃•OEt₂, Et₃SiH
- 15) TBAF (2.0 eq.), THF 0 °C
- 16) Fremy's Salt
- 17) **A**, **5**, DMSO
- 18) HF (aq.)



Fremy's salt

17) Hint: See title