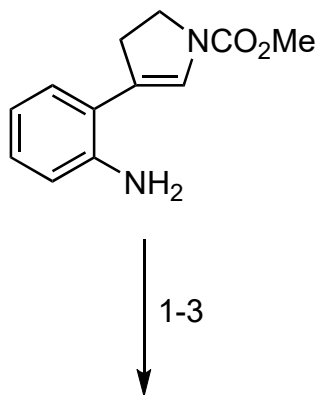


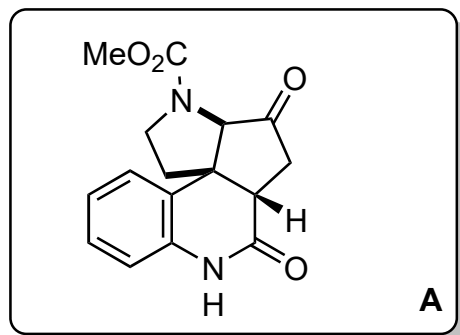
Total Synthesis of (±)-Meloscine

Y. Hayashi, F. Inagaki, C. Mukai, Organic letters 2011, 13, 1778.
DOI:10.1021/ol200311y



1-3

- 1) Propionic acid, EDC•HCl
- 2) $\text{Co}_2(\text{CO})_8$ then TMANO•2H₂O
- 3) Pd-C H₂



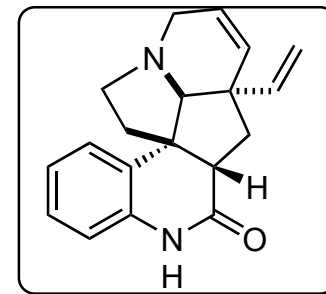
- 4) TMSCl, NaI, reflux 4) *Hint: Deprotection*
- 5) allyl bromide, K₂CO₃
- 6) vinylmagnesium chloride
- 7) H₂SO₄ conc, AcOH
- 8) K₂CO₃, MeOH
- 9) MeC(OMe)₃ hydroquinone, 200 °C microwave

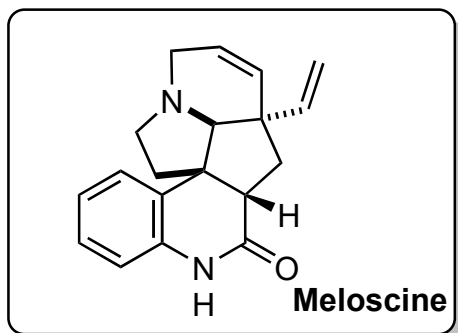
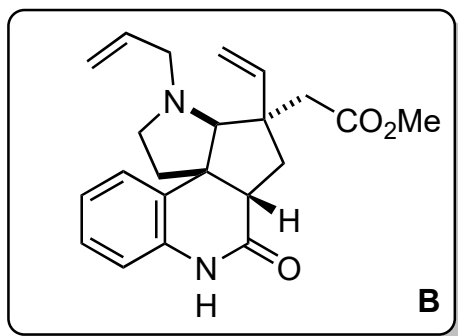
- 3) Structure TMANO ?
What does it do ?

Trimethylaminoxid
"oxidation of a cobalt
CO ligand to CO₂"
[https://doi.org/10.1016/S0040-4039\(00\)98052-3](https://doi.org/10.1016/S0040-4039(00)98052-3)

- 9) Name of this Reaction ?
Please draw a mechanism

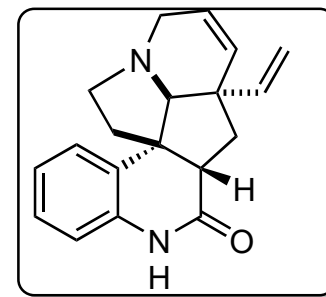
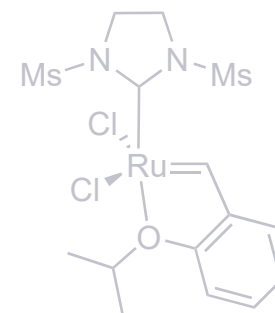
Johnson-Claisen-Rearrangement
mech: see below





- 10) LAH
- 11) TsCl, NEt₃
- 12) PhSeSePh, NaBH₄
- 13) NCS MeOH/CH₂Cl₂ 13) *Hint: Oxidation*
- 14) benzene 70 °C
- 15) Hoveyda Grubbs-II

15) What is the structure of the catalyst?



Mech. Johnson-Claisen-Rearrangement:

