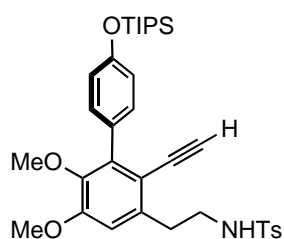
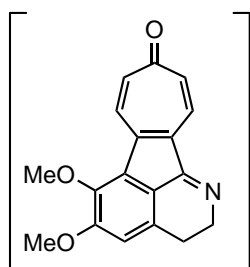


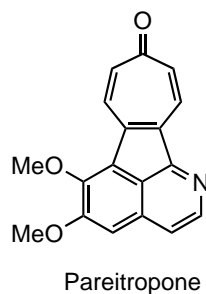
- 1) TBSCl
- 2) PDC
- 3) LDA, TMSCHN₂
- 4) HF
- 5) TsNHFmoc, PPh₃, DEAD (67% overall)



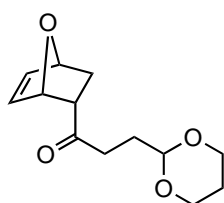
- 1) n-BuLi, Bu₃SnCl
- 2) $\text{Ph}-\overset{\text{OTf}}{\text{I}}-\text{CN}$
CH₂Cl₂, -40 °C
- 3) LiNTMS₂, DME, -40 °C (64% for 3 steps)
- 4) KF on Al₂O₃, -78 °C



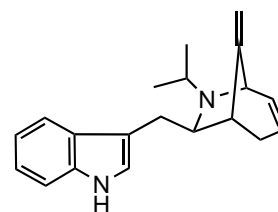
- air, -78 °C to r.t.
(57%)



Feldman, K. S. and Cutarelli, T. D.
JACS, **2002**, *124*, 11600



1. NH₂OH•HCl, pyridine, EtOH, rt (quant)
2. C₆F₅COCl, Et₃N, CH₂Cl₂, (95%)
3. CuBr•SMe₂, LiBr, 1,4-dioxane, rt, (98%)
4. Lithium naphthalenide, THF, -100 °C; MeOH
5. AllocCl, pyridine, CH₂Cl₂, -40 °C (73%, 2 steps)
6. SO₃•py, Et₃N, DMSO, CH₂Cl₂ (80%)
7. Et₃SiCH₂MgCl, Et₂O, -78 °C to rt (81%)
8. NaBH₃CN, AcOH, CH₂Cl₂, 0 °C to rt (85%)
9. KH, THF, rt (87%)
10. Pd(PPh₃)₄, piperidine, CH₃CN, rt
11. i-PrI, Hünig's Base, CH₂Cl₂, 50 °C (72%, 2 steps)
12. PhNHNH₂•HCl, cat. H₂SO₄, H₂O reflux (63%)



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Bull. Chem. Soc. Jpn. **2006**, *79*, 1552