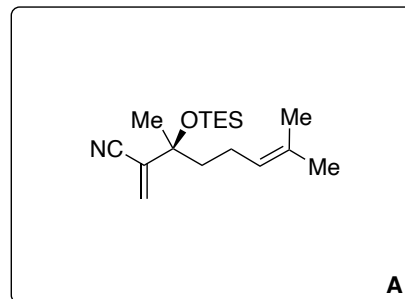
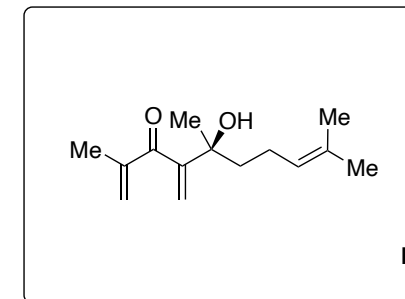


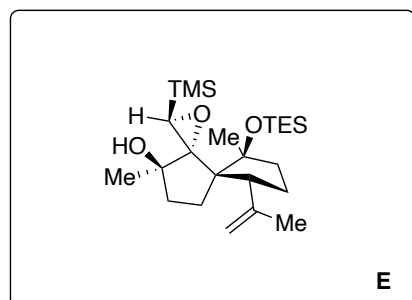
1) Ni(acac)₂, L₁
Zn(CN)₂, Mn(0)
MeCN/H₂O, 50 °C
2) TESOTf, 2,6-lutidine
DCM, 0 °C
59% (2 steps)



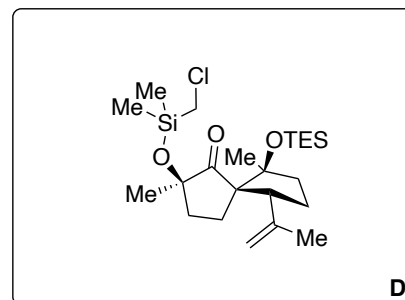
1) DIBAL-H,
tol, -78 °C, **61%**
2) 2-bromopropene
t-BuLi, Et₂O, -78 °C
3) TBAF, THF, 0 °C
4) IBX, DCM/DMSO, r.t.
66% (3 steps)



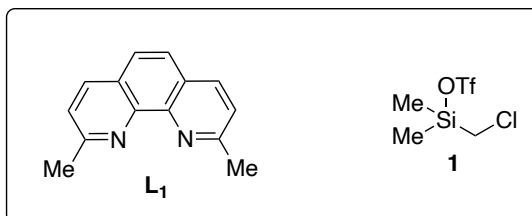
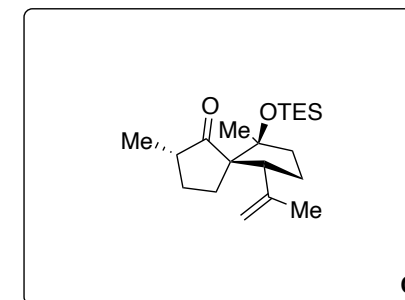
B(C₆F₅)₃, tol, r.t.
then TESOTf
2,6-lutidine
0 °C to r.t.
Tandem Nazarov/ene

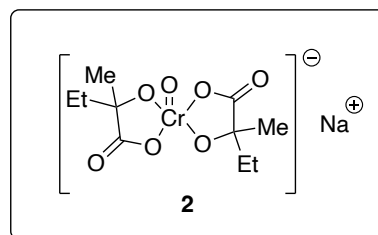
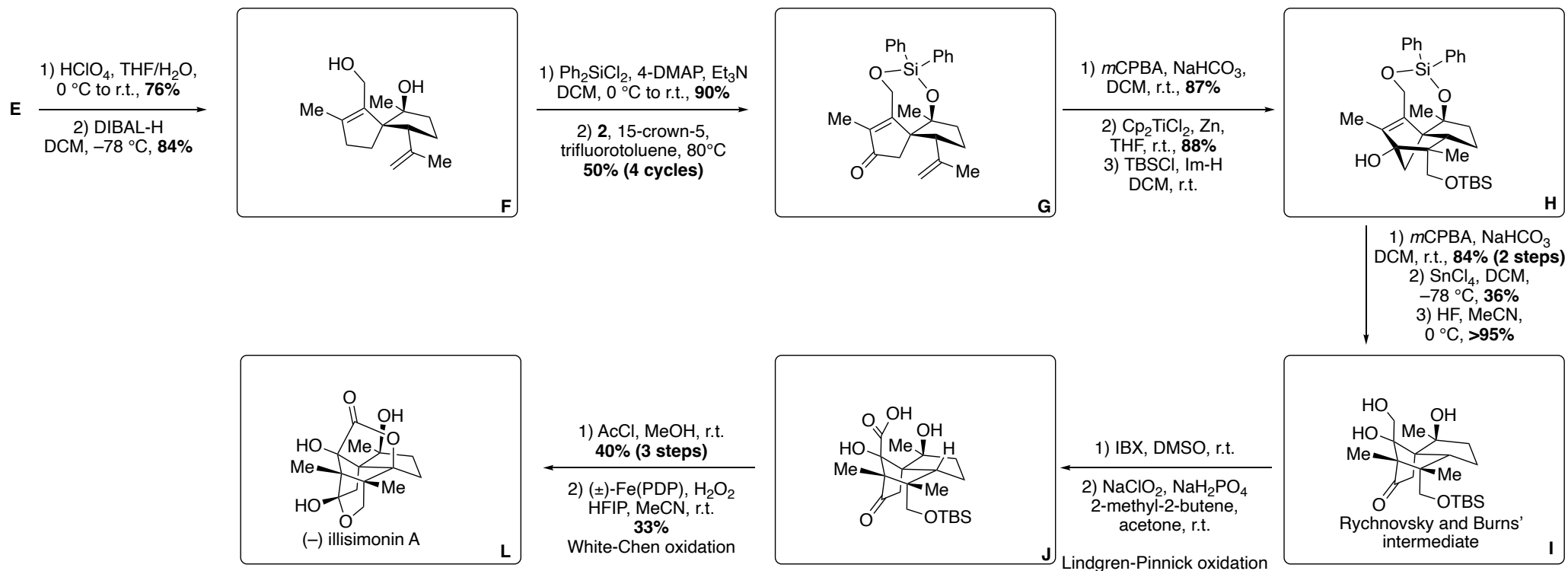


1) LDA, THF, -30 °C
81% (2 steps)
2) MeMgCl
MTBE, -12 °C, **76%**



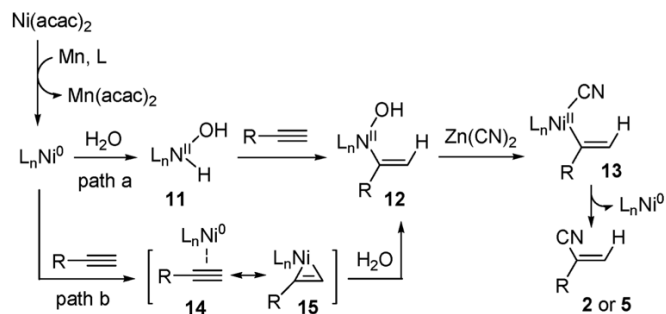
1) KHMDS, THF
then O₂, P(OEt)₃
28% (2 steps)
2) **1**, 2,6-lutidine
DCM, 0 °C



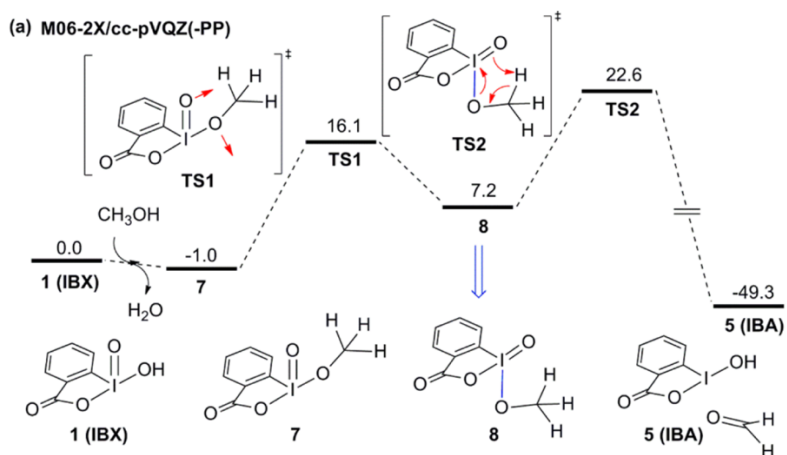


Proposed reaction mechanism to prepare **A**:
J. Am. Chem. Soc. **2018**, *140*, 7385–7389

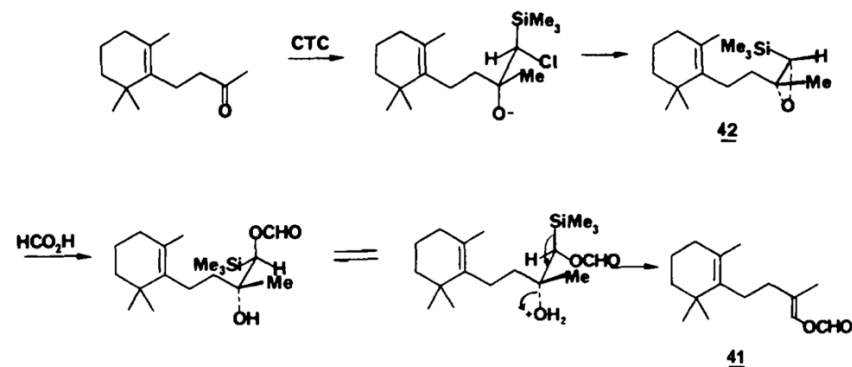
Scheme 4. Possible Reaction Mechanism



Proposed IBX oxidation mechanism
Org. Lett. **2017**, *19*, 6502–6505



Proposed reaction mechanism to prepare **F**:
Tetrahedron **1983**, *39*, 867–876



Proposed reaction mechanism of Lindgren-Pinnick oxidation:
Acta Chem. Scand. **1973**, *27*, 888–890

