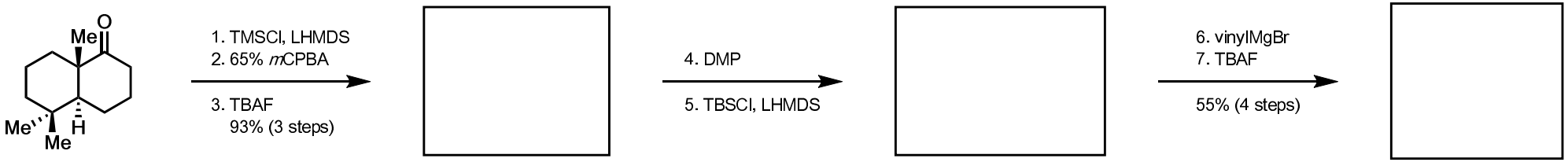
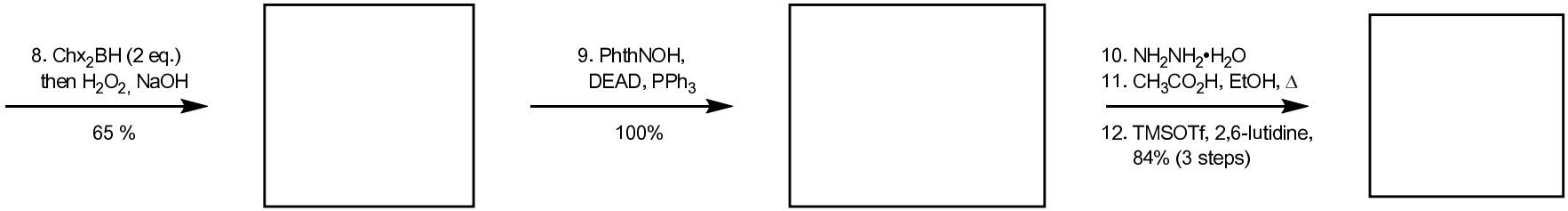
Total Synthesis of (-)-Chamobtusin A

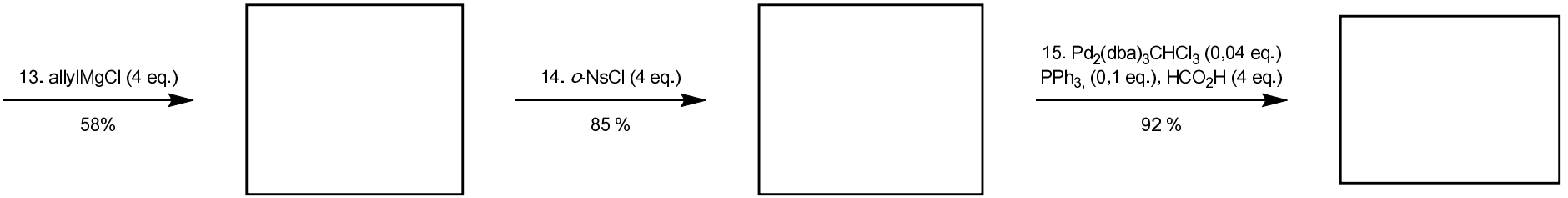
H. Suzuki, S. Aoyagi, *Org. Lett.* **2012**, *14*, 6374.

'Denksport'

Richter 24.08.2016





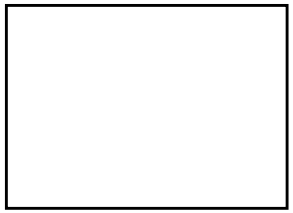


16. OsO_4 (0,15 eq.), NMO (2 eq.)
17. $NaIO_4$

80 % (2 steps)

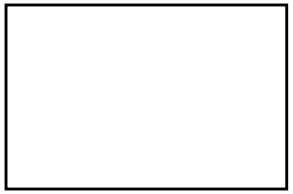
18. Ph_3PCHMe_2I (4 eq.),
n-BuLi (3.9 eq.)

86 %



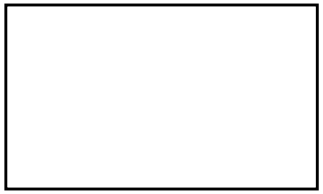
19. TBAF
20. Burgess reagent (3 eq.)

92 % (2 steps)



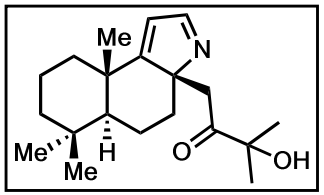
21. OsO_4 (0.15 eq.),
NMO (2 eq.)
22. TPAP, NMO, 4Å MS

72 % (2 steps)



23. PhSH, Cs_2CO_3
24. iodosobenzene (2.5 eq.)

78% (2 steps)



(-)-chambotusin A ($C_{20}H_{31}NO_2$ 317.4730 g/mol)
exhibits in vitro activity against different human tumor cell lines
isolated in 2007 *Chamaecyparis obtusa* cv. *tetragon*
first diterpene alkaloid from Pinales (=Nadelholz) and
first alkaloid from *Cupressacea* (=Zypressen)