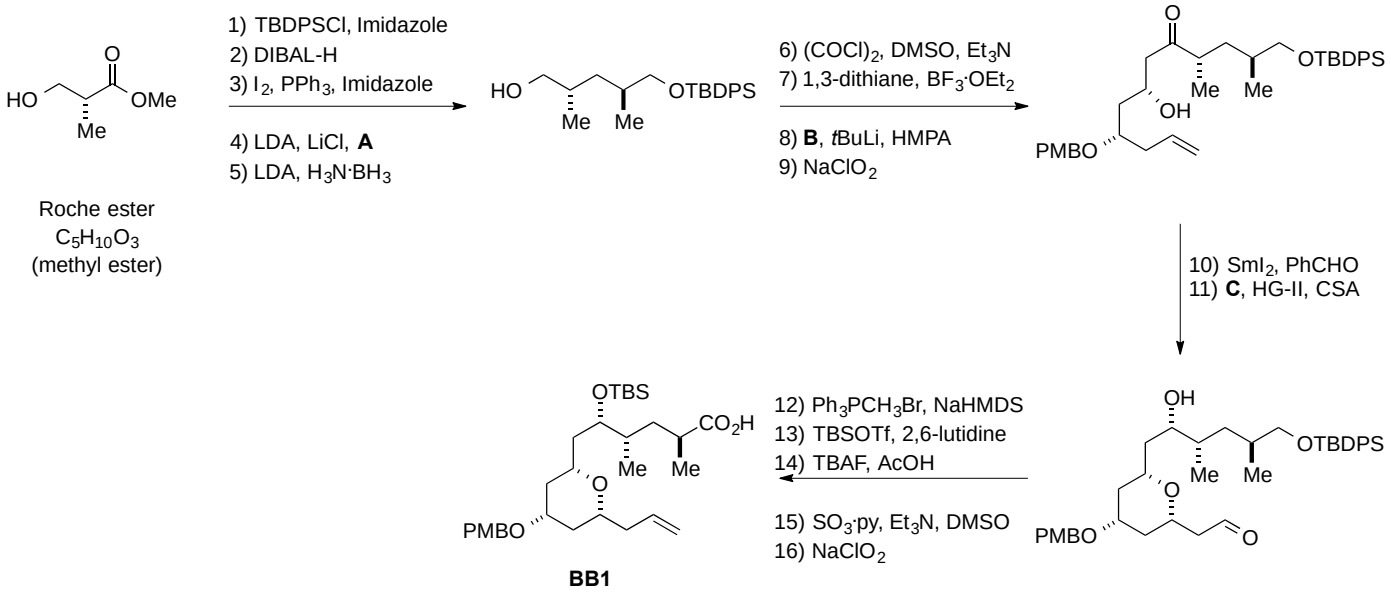
E75: Synthesis of (–)-enigmazole [1-4]



[1] K. Sakurai, M. Sasaki, H. Fuwa, *Angew. Chem. Int. Ed.* **2018**, *57*, 5143–5146 (orig. synthesis); [2] N. Oku, K. Takada, R. W. Fuller, J. A. Wilson, M. L. Peach, L. K. Pannell, J. B. McMahon, K. R. Gustafson, *J. Am. Chem. Soc.* **2010**, *132*, 10278–10285 (isolation); [3] Y. Ai, M. V. Kozytska, Y. Zou, A. S. Khartulyari, A. B. Smith III. *J. Am. Chem. Soc.* **2015**, *137*, 15426–15429 (precursor synthesis) [4] C. Kibayashi, S. Aoyagi, *J. Organomet. Chem.* **2002**, *653*, 229–233.(precursor synthesis)

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Sparr Group Seminar
19.09.2018
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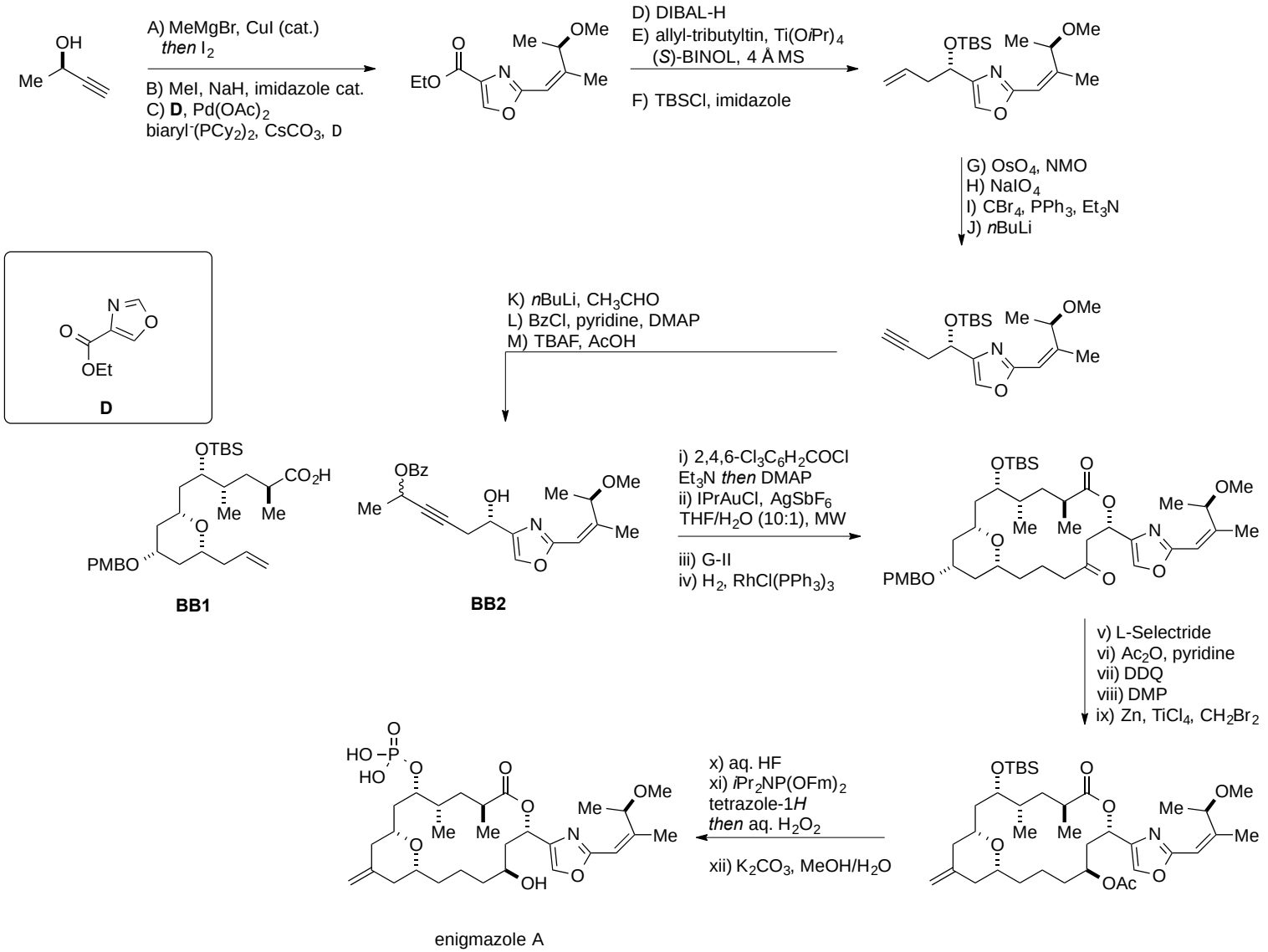
A) MeMgBr, CuI (cat.)
then I2
B) MeI, NaH, imidazole cat.
C) D, Pd(OAc)2
biaryl-(PCy2)2, CsCO3, D
D) DIBAL-H
E) allyl-tributyltin, Ti(OiPr)4
(S)-BINOL, 4 Å MS
F) TBSCl, imidazole
G) OsO4, NMO
H) NaIO4
I) CBr4, PPh3, Et3N
J) nBuLi
K) nBuLi, CH3CHO
L) BzCl, pyridine, DMAP
M) TBAF, AcOH
D
BB1
BB2
i) 2,4,6-Cl3C6H2COCl
Et3N then DMAP
ii) IPrAuCl, AgSbF6
THF/H2O (10:1), MW
iii) G-II
iv) H2, RhCl(PPh3)3
v) L-Selectride
vi) Ac2O, pyridine
vii) DDQ
viii) DMP
ix) Zn, TiCl4, CH2Br2
x) aq. HF
xi) iPr2NP(OFm)2
tetrazole-1H
then aq. H2O2
xii) K2CO3, MeOH/H2O
enigmazole A