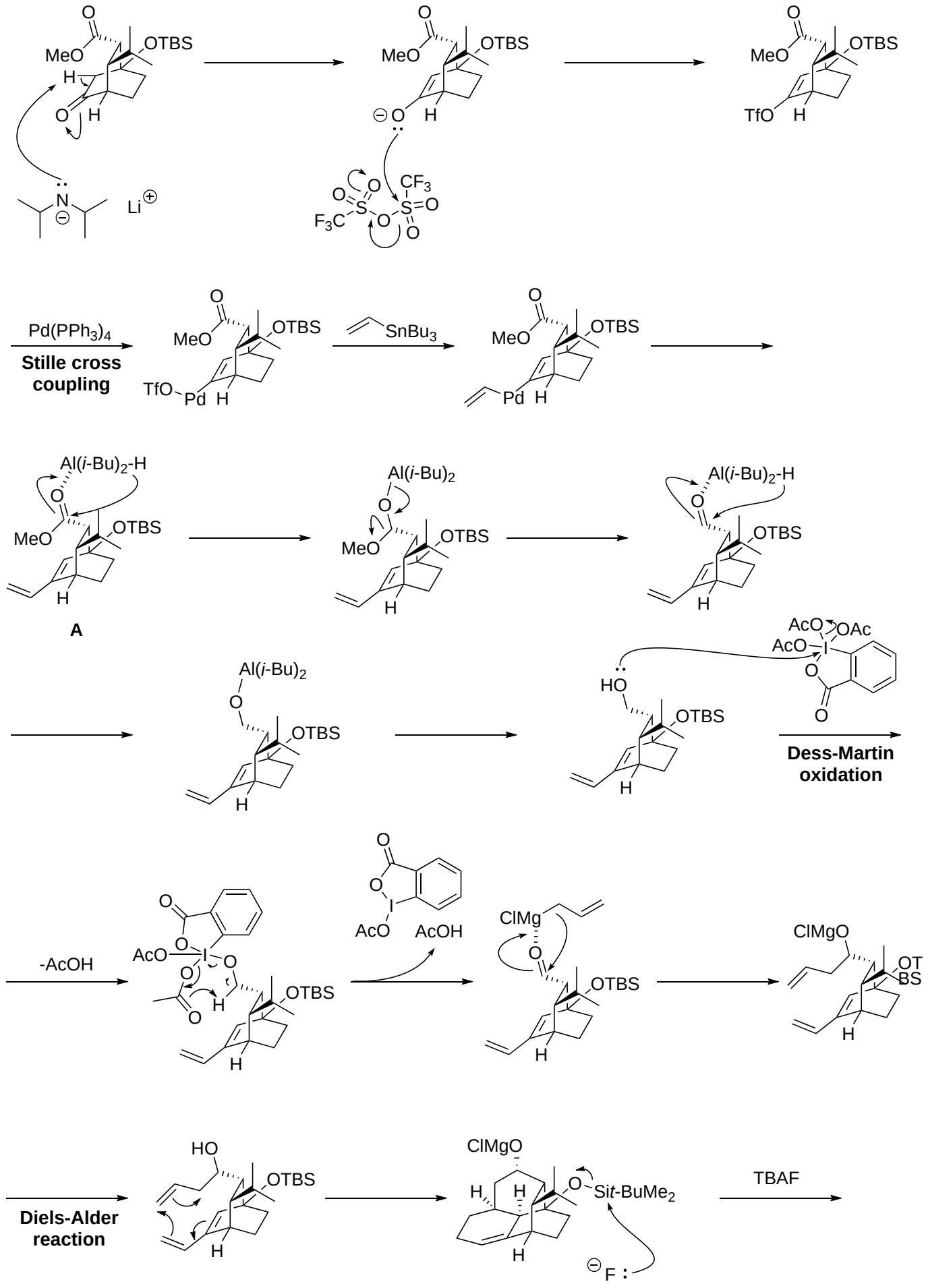
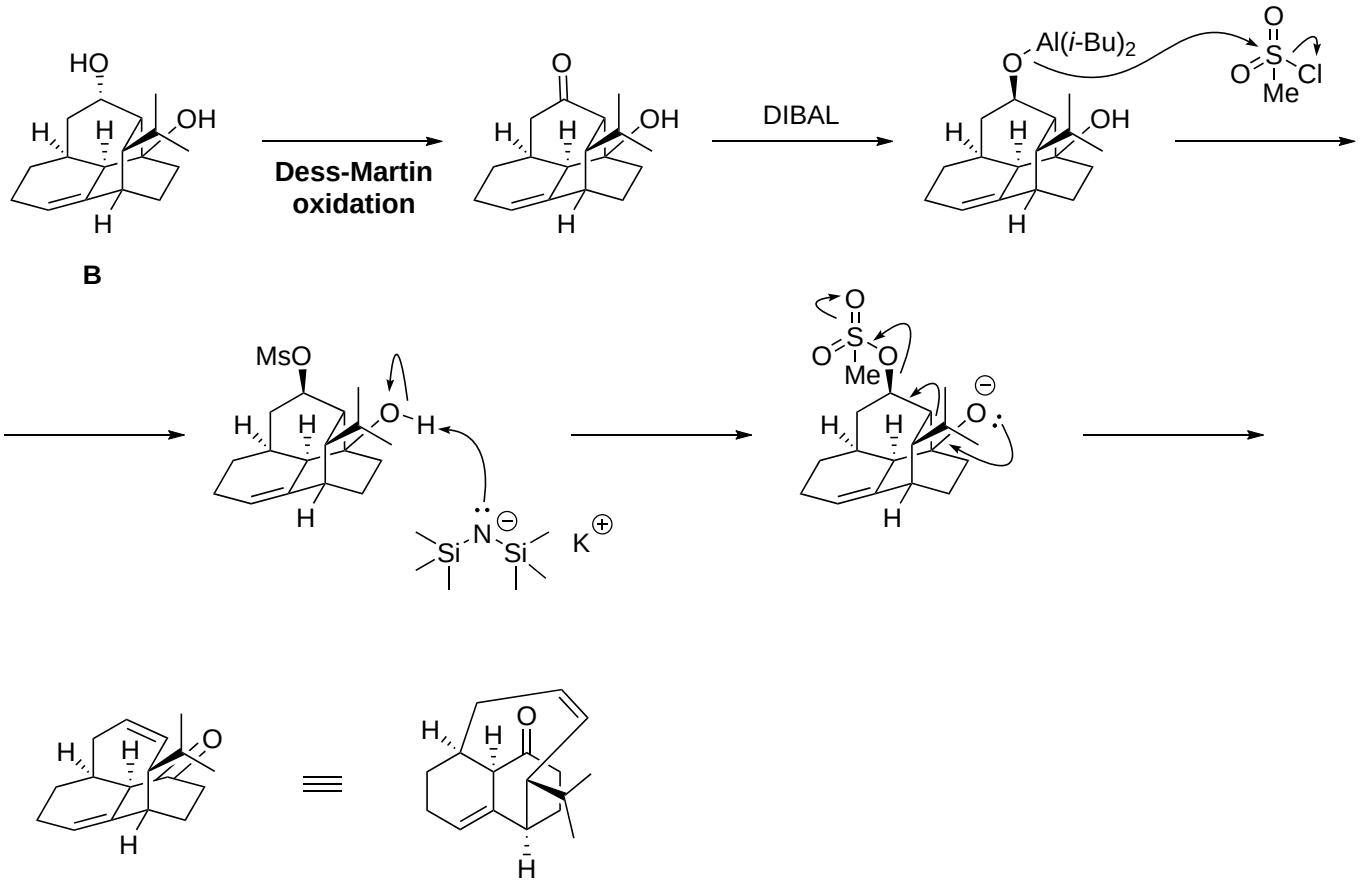
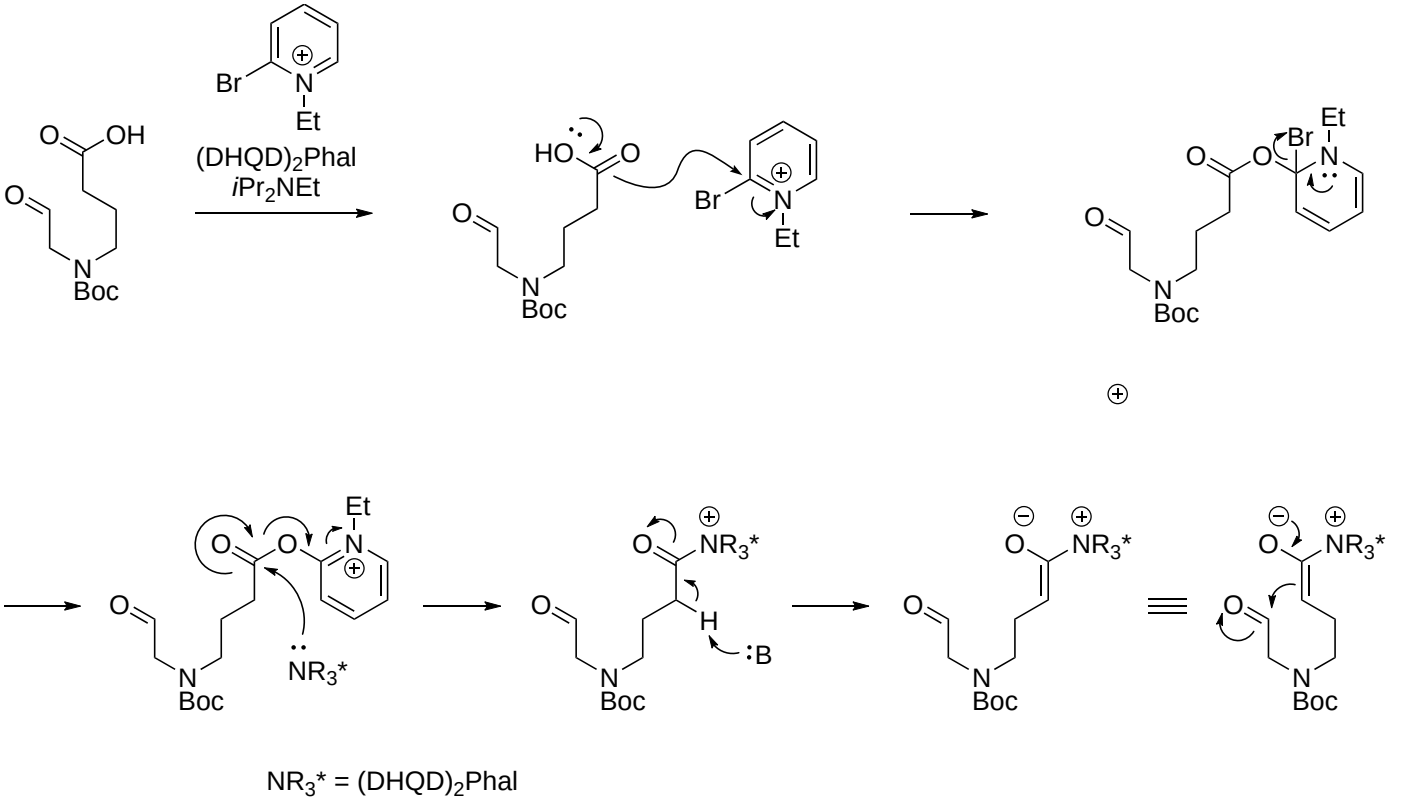
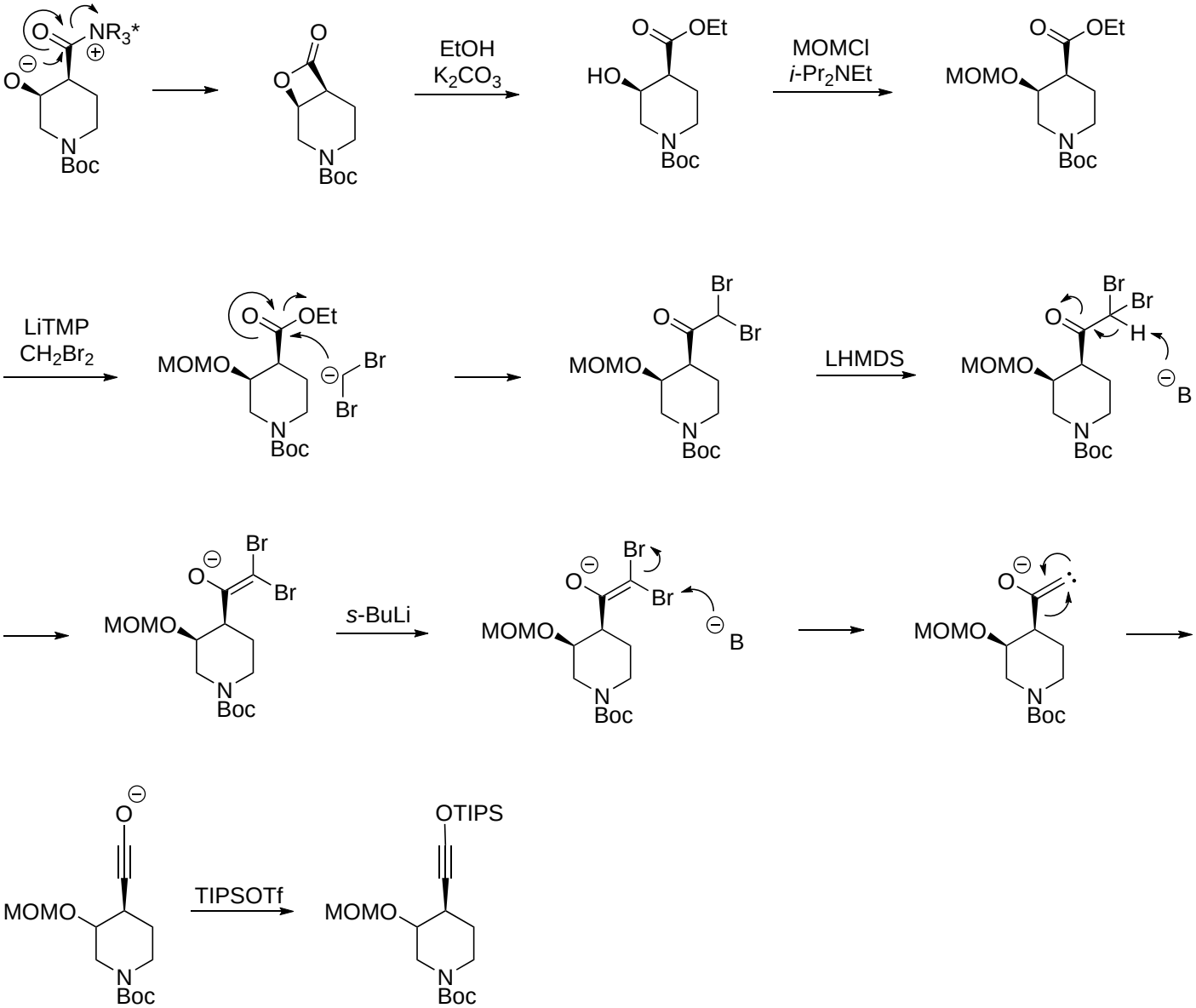
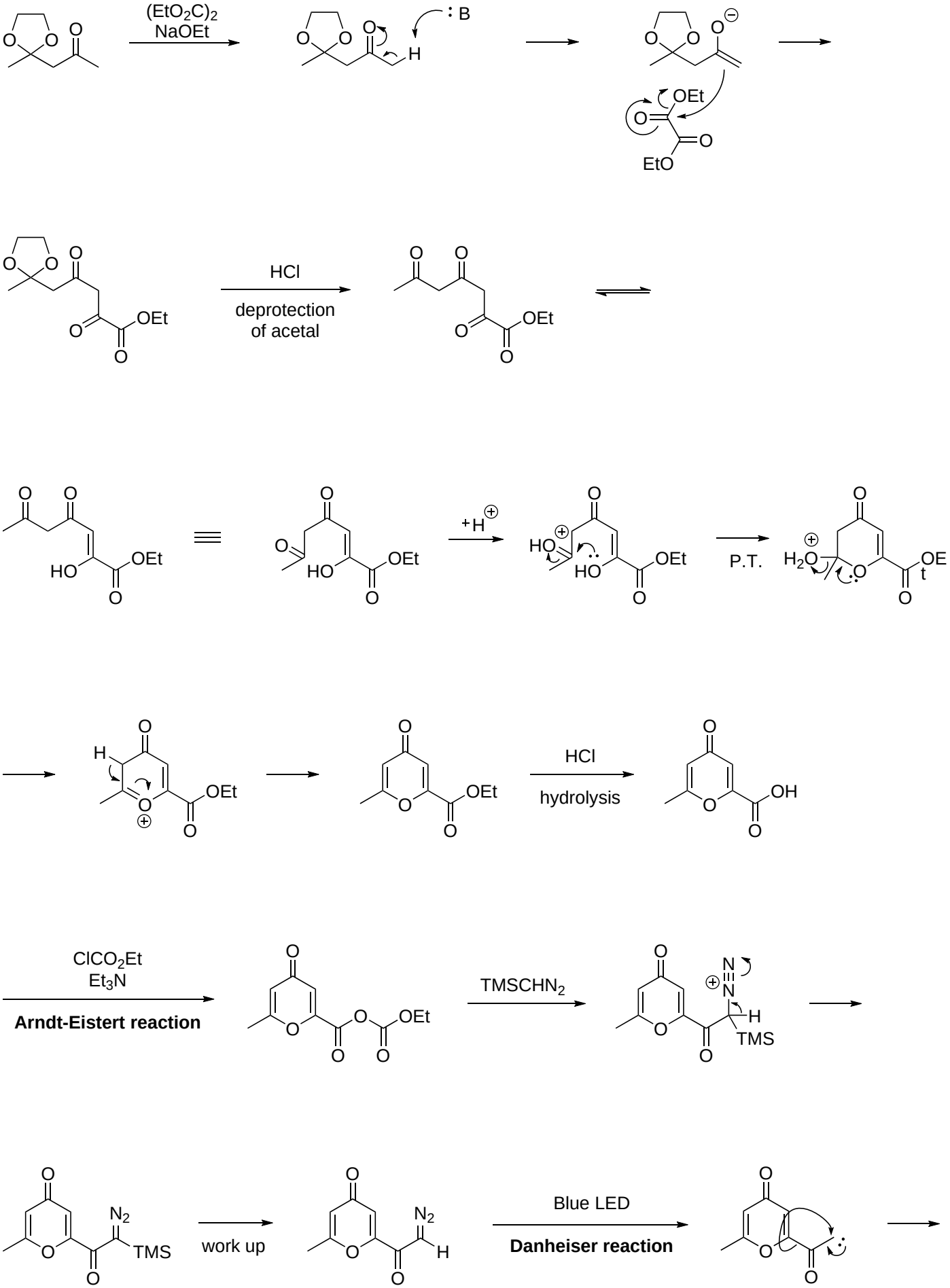
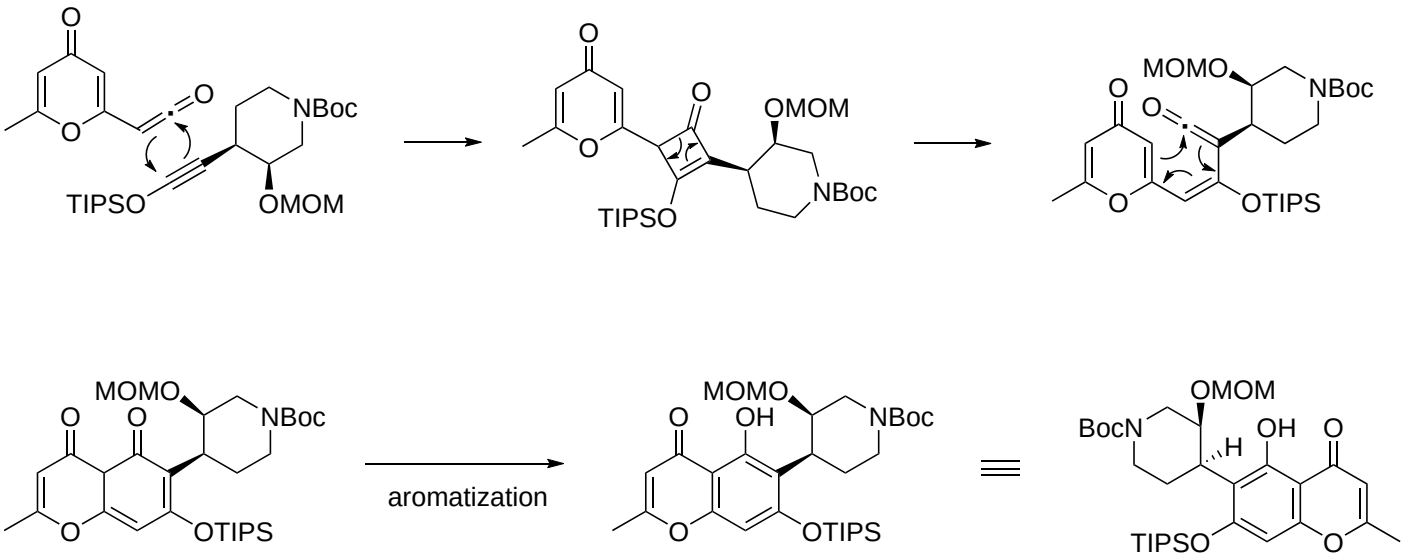

Pd(PPh3)4
Stille cross coupling
SnBu3
A
Al(i-Bu)2-H
Al(i-Bu)2
Dess-Martin oxidation
-AcOH
AcOH
Diels-Alder reaction
TBAF


HO
OH
H
H
H
B
Dess-Martin oxidation
O
OH
H
H
H
DIBAL
O
Al(i-Bu)2
OH
H
H
H
O
S
O
Cl
Me
MsO
O
H
H
H
H
N
Si
Si
K
O
S
O
O
Me
O
H
H
H
H
O
H
H
H
O
H
H
H


(DHQD)2Phal
iPr2NEt
NR3* = (DHQD)2Phal


EtOH
K2CO3
MOMCl
i-Pr2NEt
LiTMP
CH2Br2
LHMDS
s-BuLi
TIPSOTf


(EtO2C)2
NaOEt
: B
H
OEt
EtO
HCl
deprotection
of acetal
OEt
HO
+H
P.T.
H2O
OEt
HCl
hydrolysis
OH
ClCO2Et
Et3N
Arndt-Eistert reaction
TMSCHN2
TMS
N2
TMS
work up
N2
H
Blue LED
Danheiser reaction


O
O
O
NBoc
TIPSO
OMOM
O
O
OMOM
NBoc
TIPSO
MOMO
NBoc
O
O
O
OTIPS
MOMO
O
O
NBoc
O
OTIPS
aromatization
MOMO
O
OH
NBoc
O
OTIPS
OMOM
BocN
H
OH
O
TIPSO
O