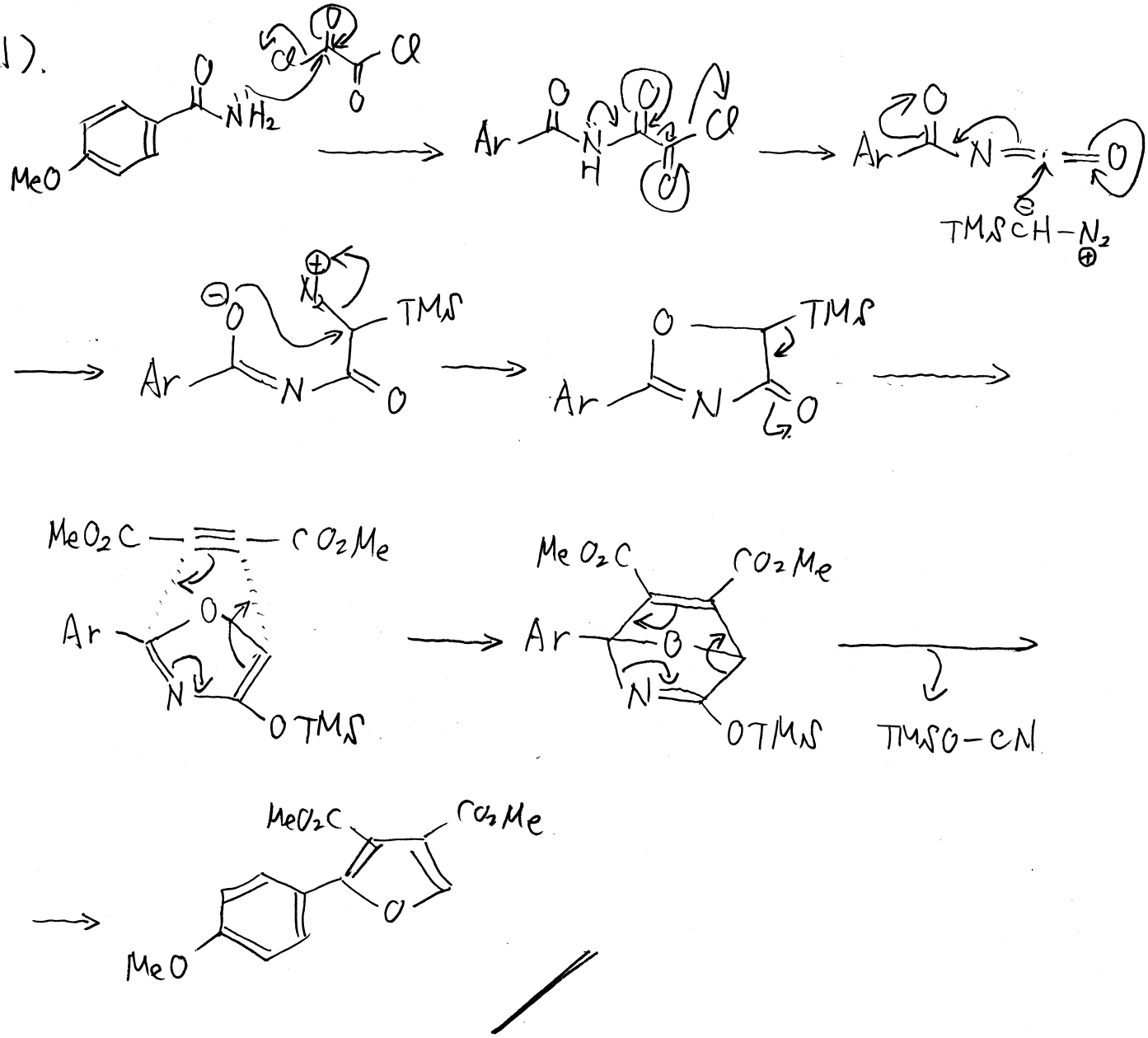
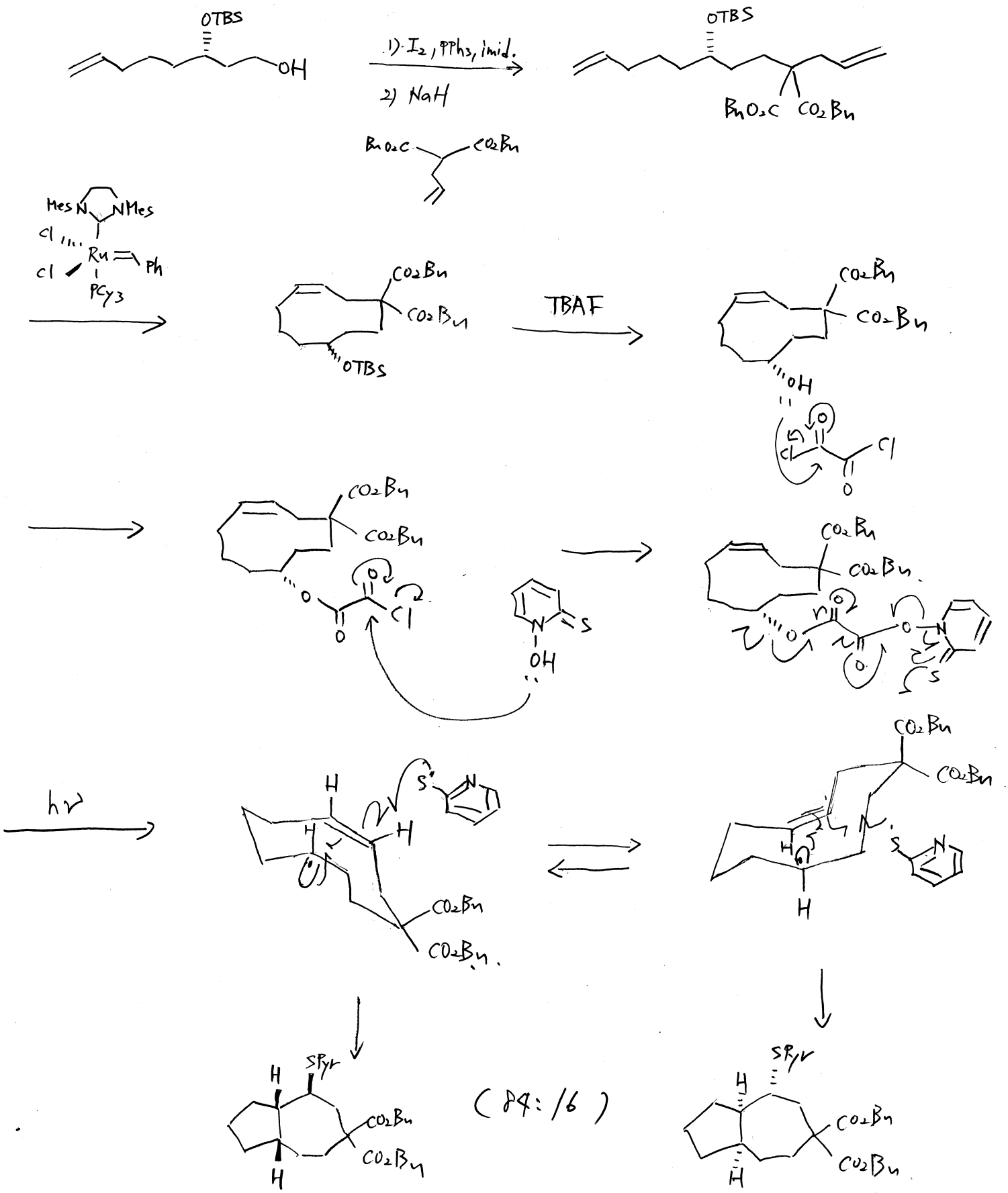
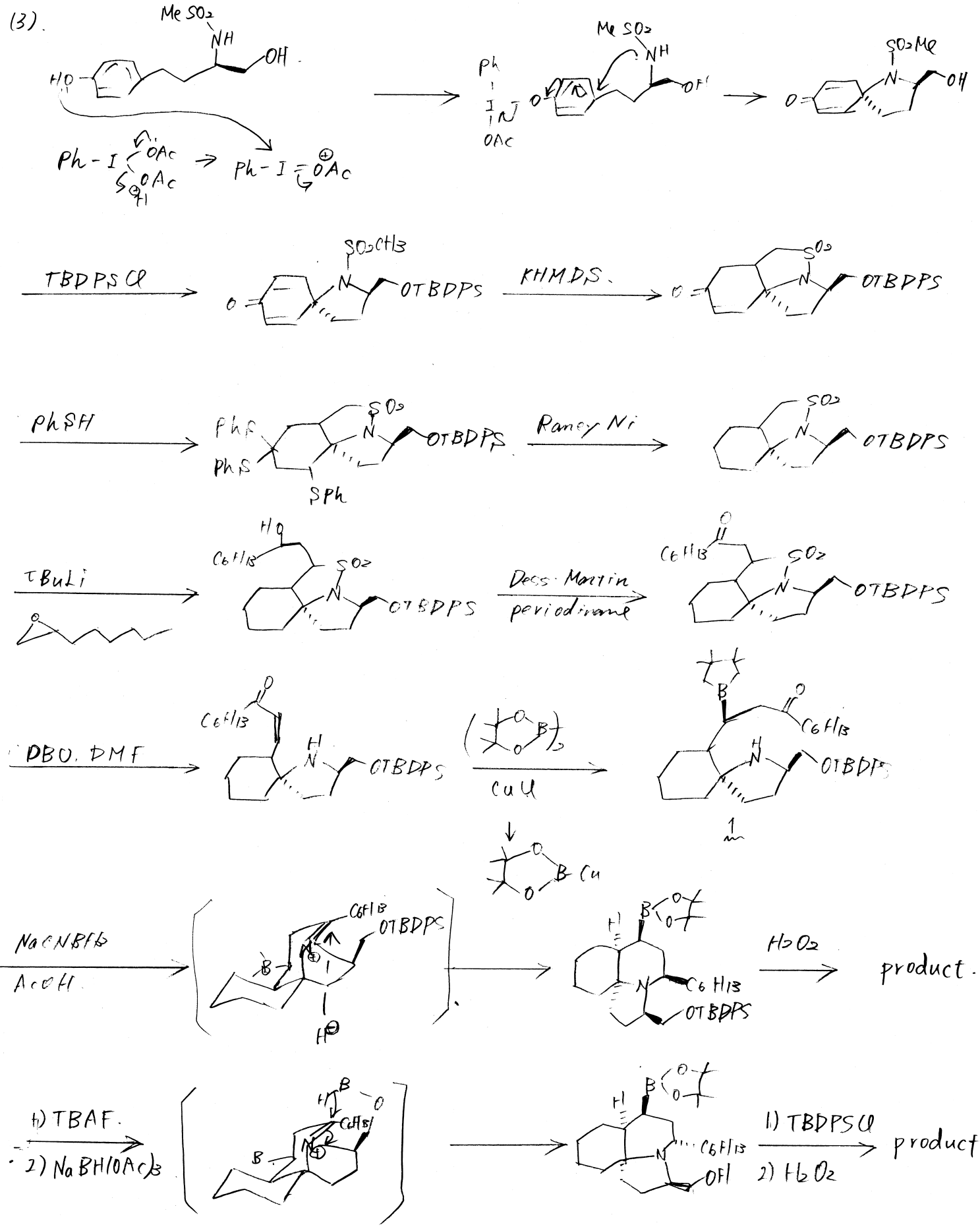
(1).


MeO
NH2
Cl
Cl
Ar
N
H
Ar
N
TMSCH-N2
TMS
Ar
N
TMS
Ar
N
MeO2C
CO2Me
Ar
N
OTMS
MeO2C
CO2Me
Ar
N
OTMS
TMSO-CN
MeO2C
CO2Me
MeO

2)


OTBS
OH
1) I2, PPh3, imid.
2) NaH
BnO2C CO2Bn
Mes N NMes
Cl
Ru
Ph
PCy3
TBAF
hν
SPyr
(84:16)

(3).


Me SO2
NH
OH
HO
Ph - I
OAc
OAc
Ph - I
OAc
Ph
I
N
OAc
SO2Me
N
OH
TBDPS Cl
SO2CH3
OTBDPS
KHMDS.
PhSH
PhS
PhS
SPh
Raney Ni
TBuLi
C6H13
Dess-Martin
periodinane
DBU, DMF
CuCl
B
Cu
NaCNBH3
AcOH
C6H13
OTBDPS
H2O2
product.
1) TBAF.
2) NaBH(OAc)3
1) TBDPS Cl
2) H2O2
product.