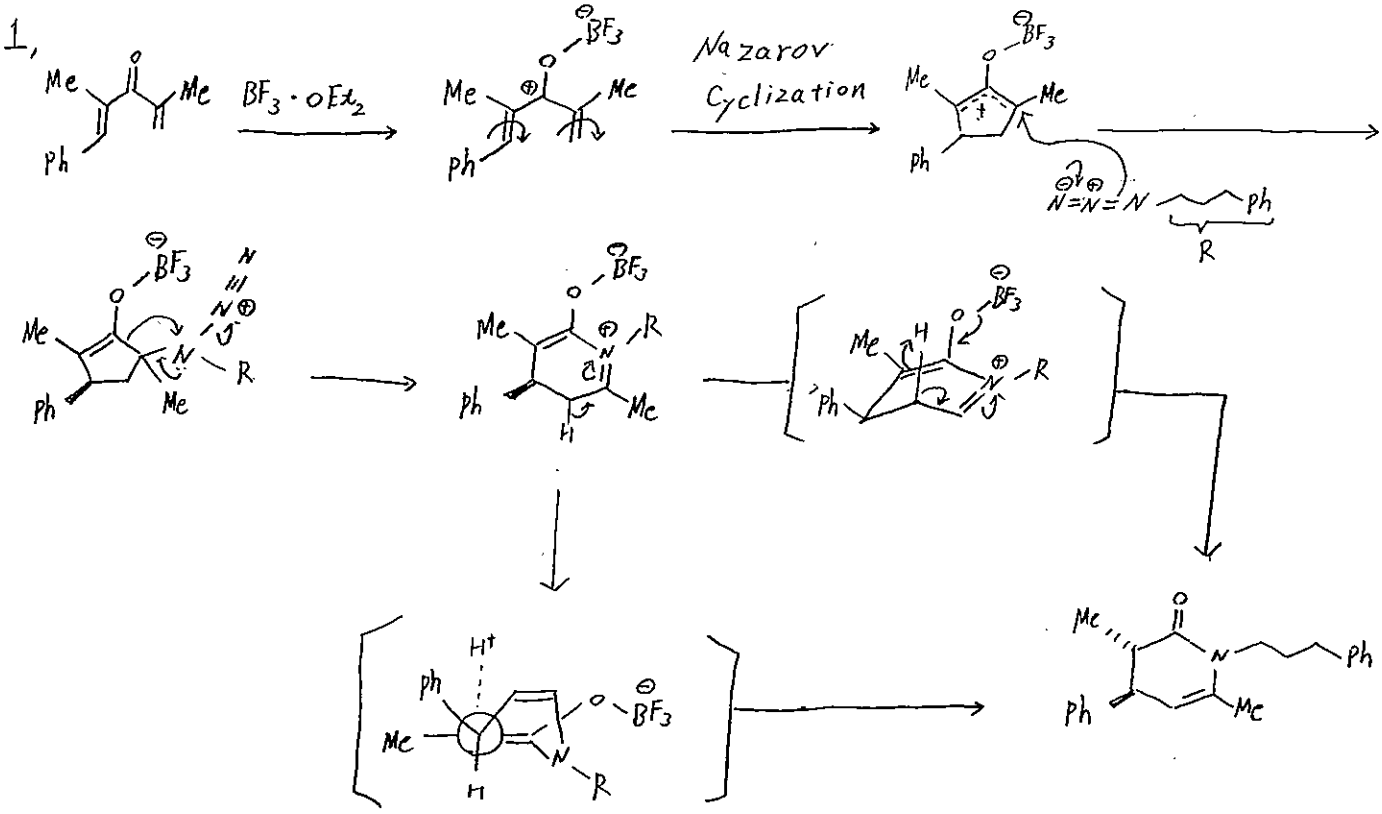
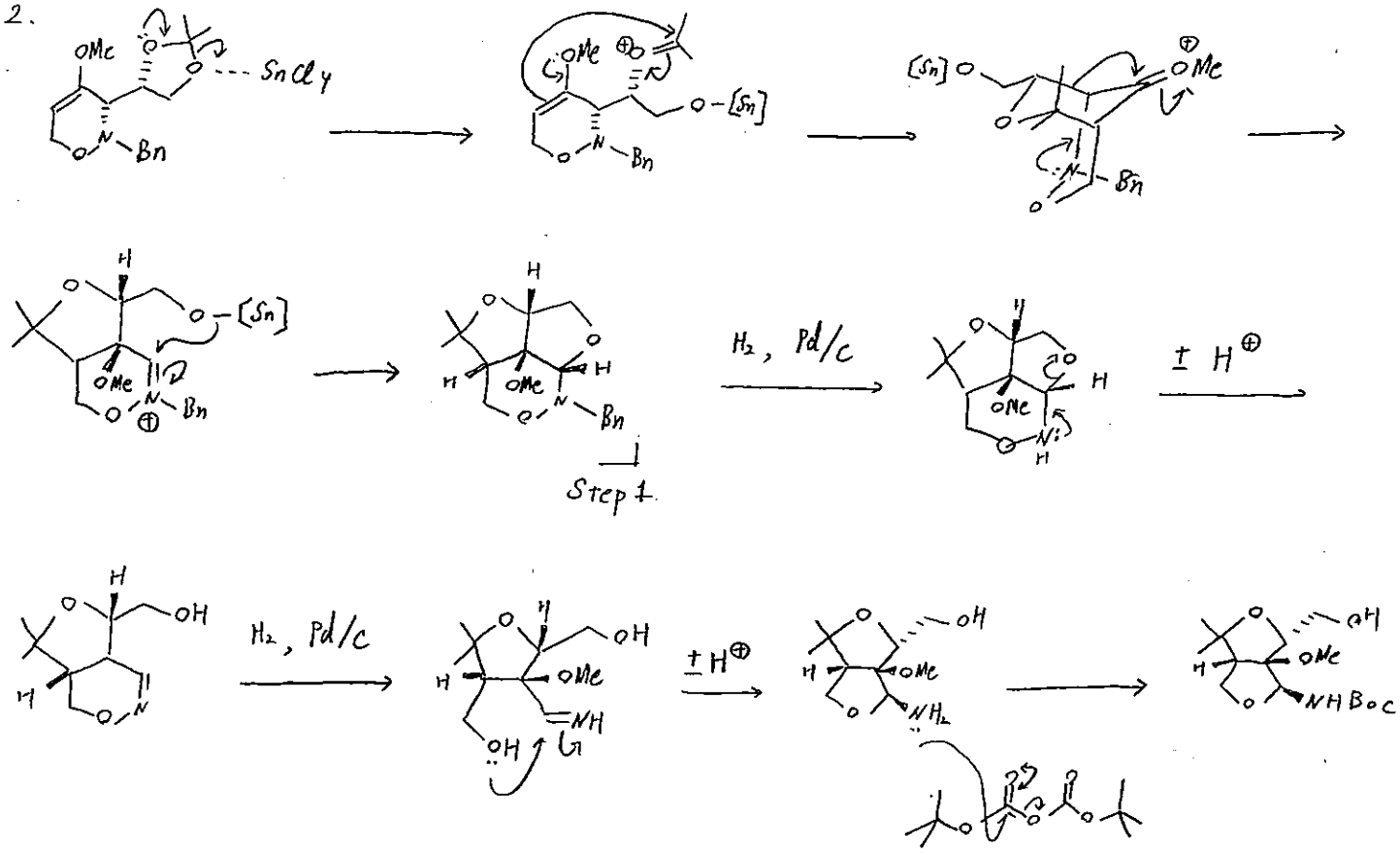
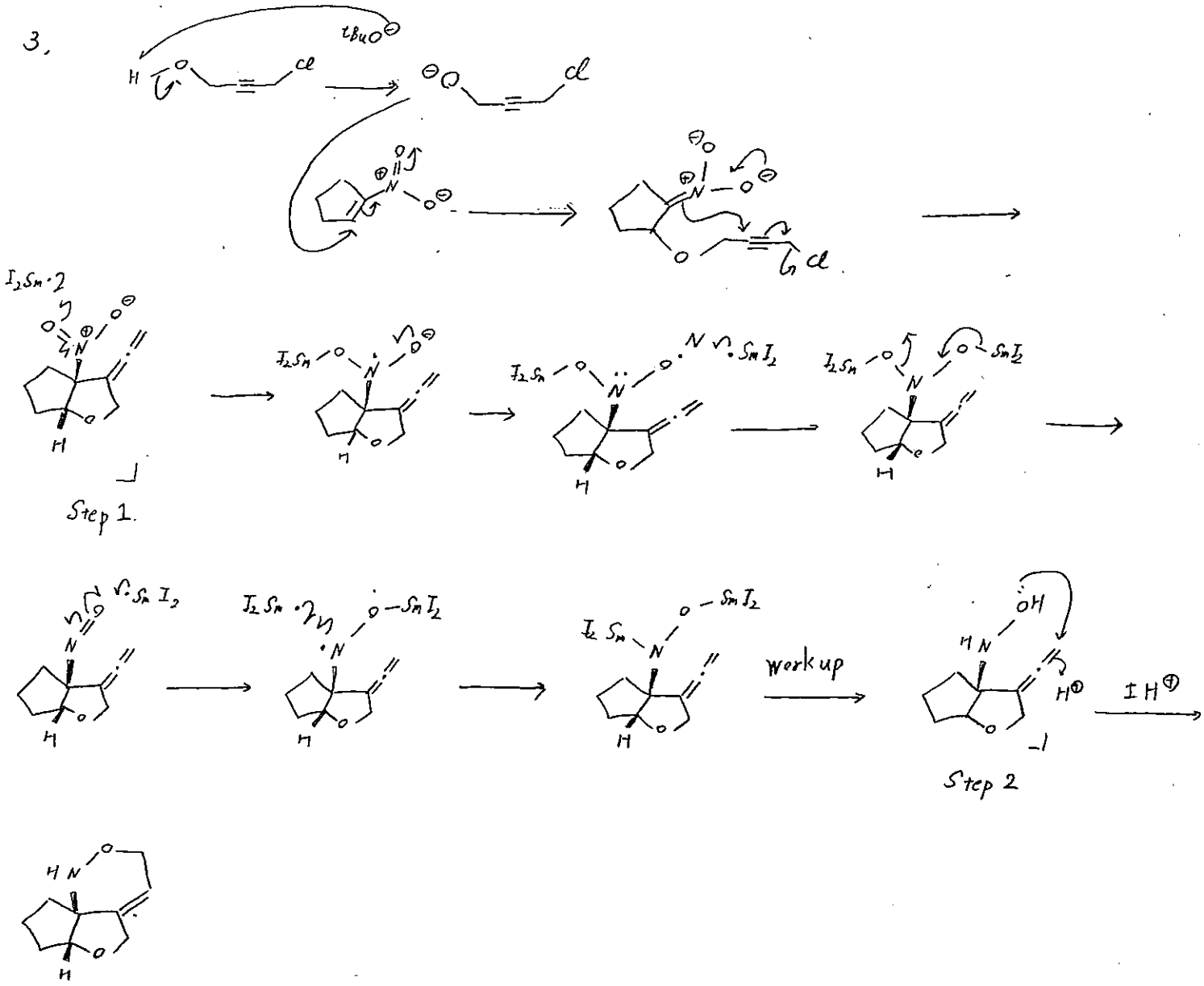
1,



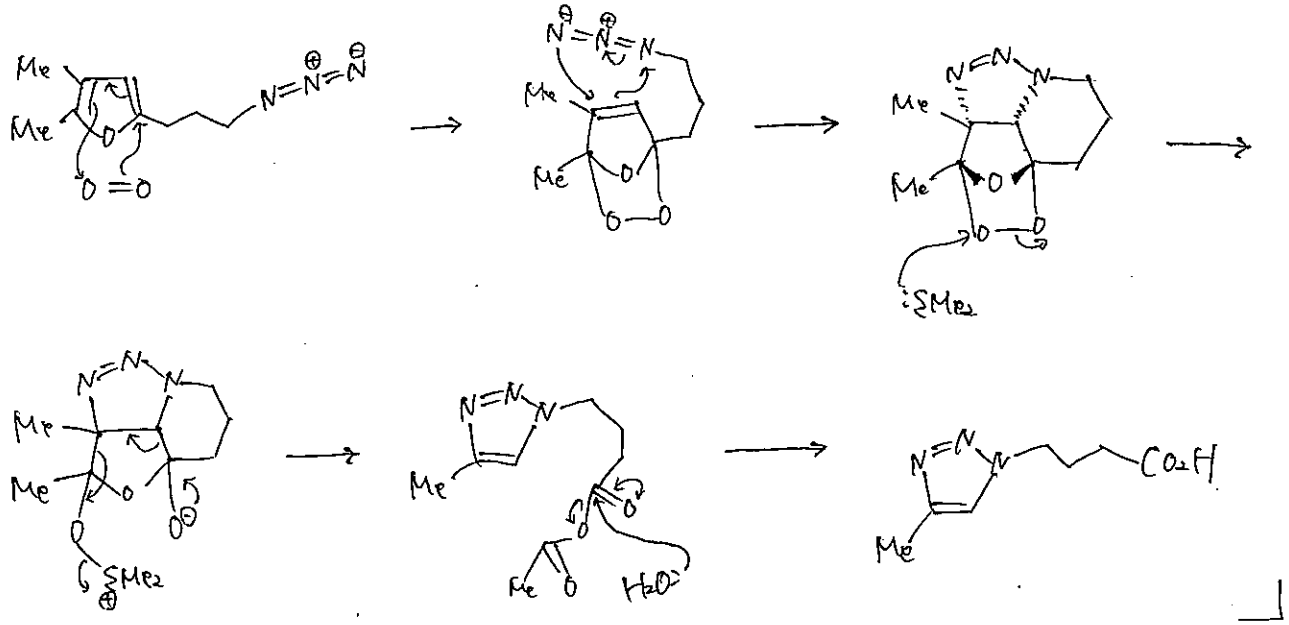

2.



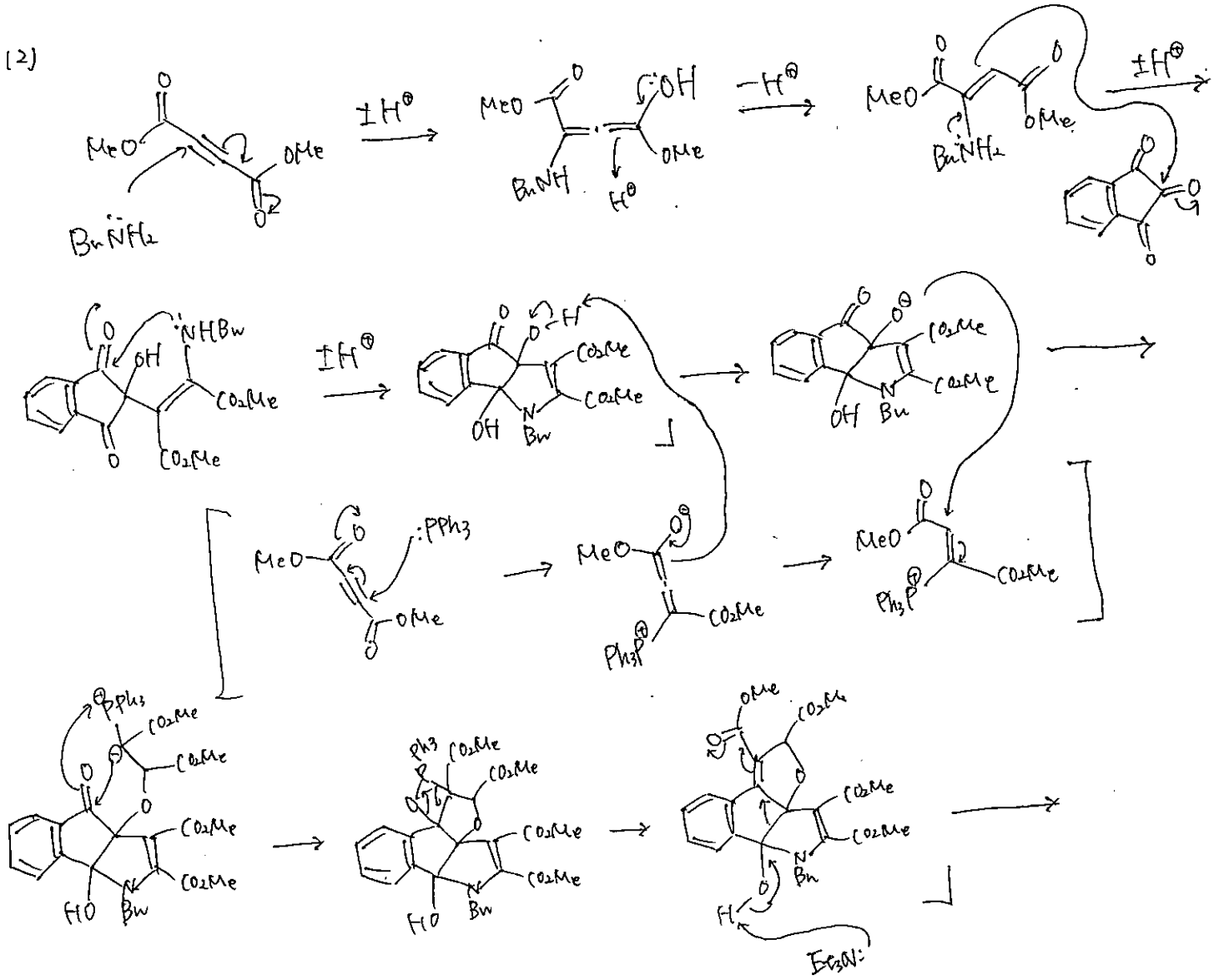
3.

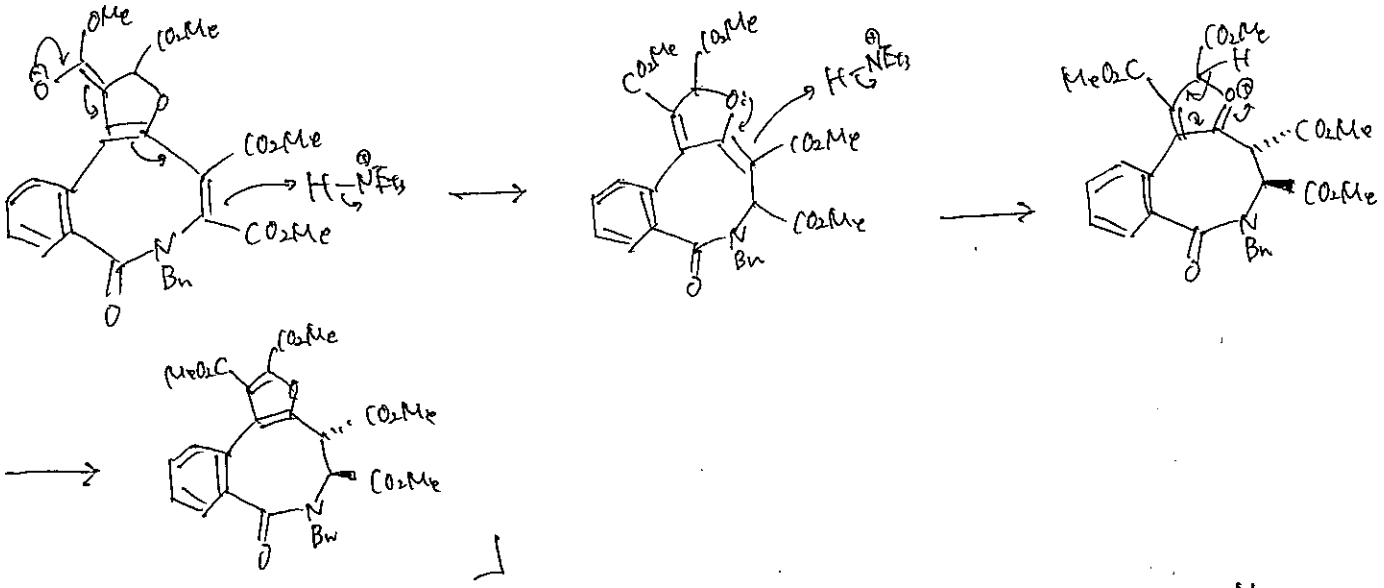


(1)

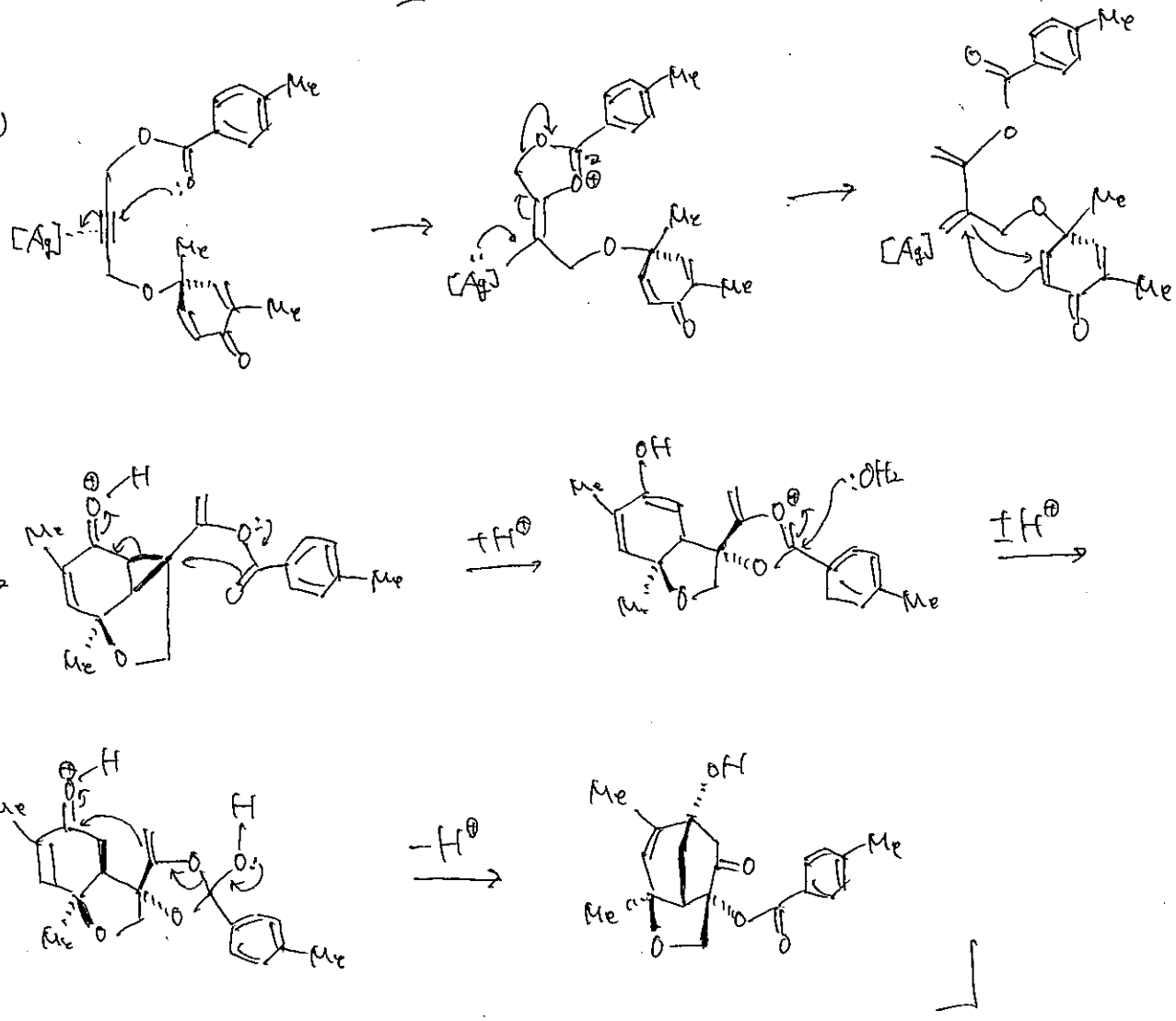


(2)

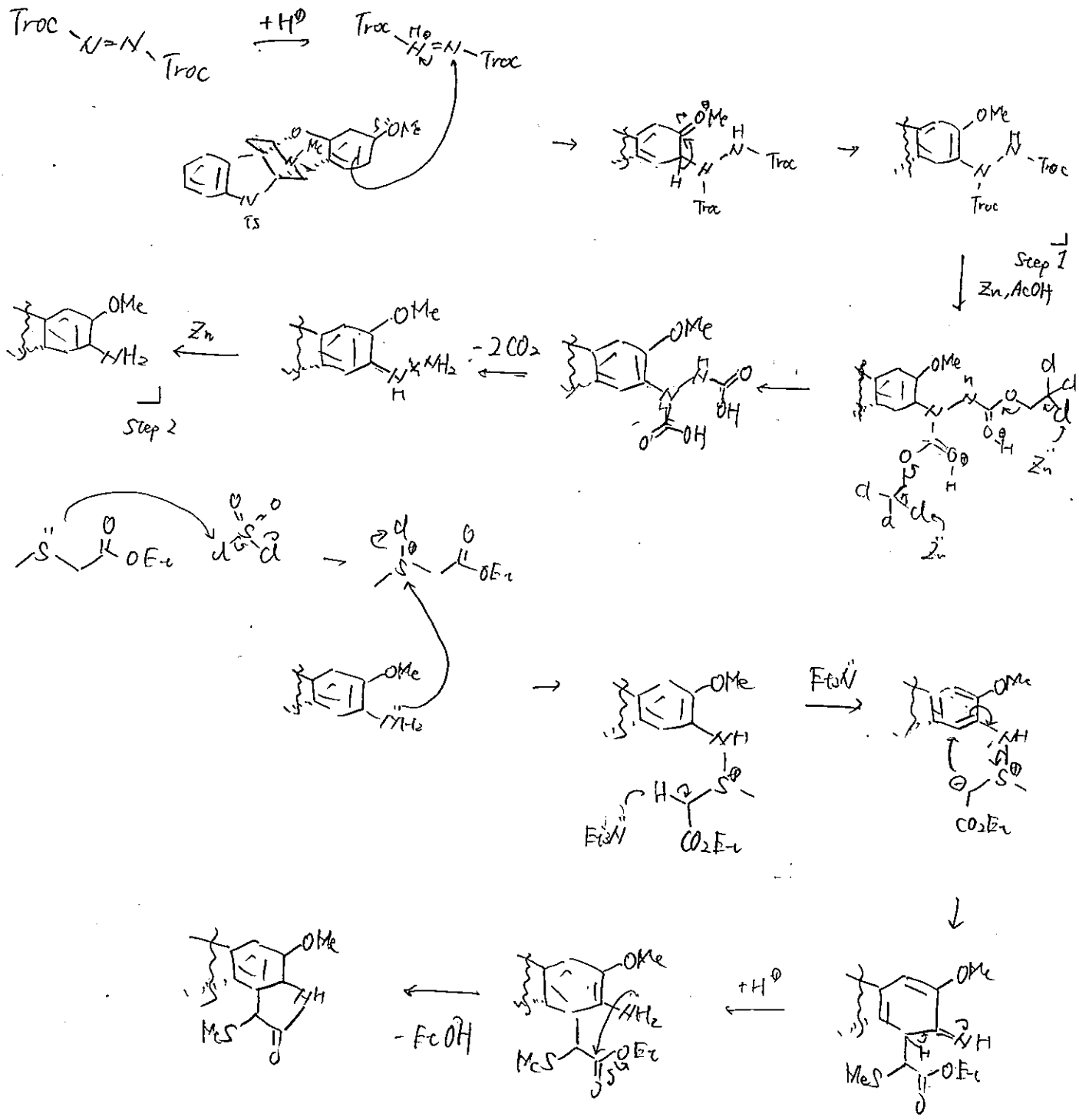




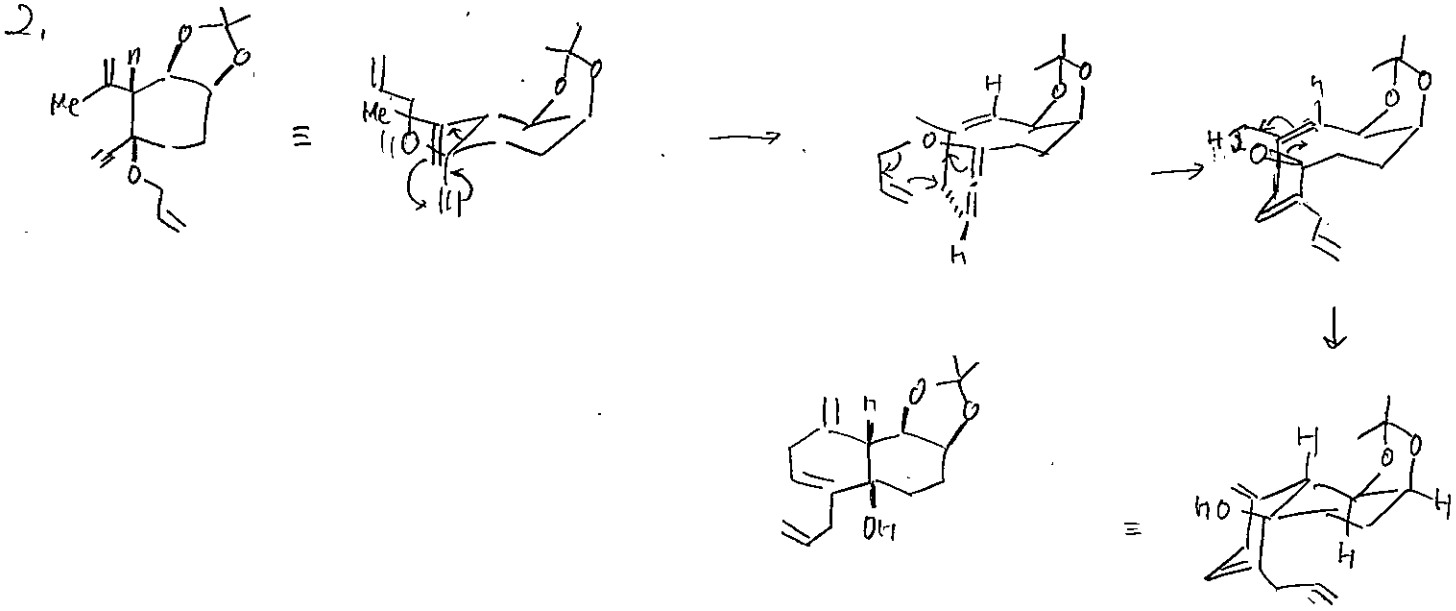
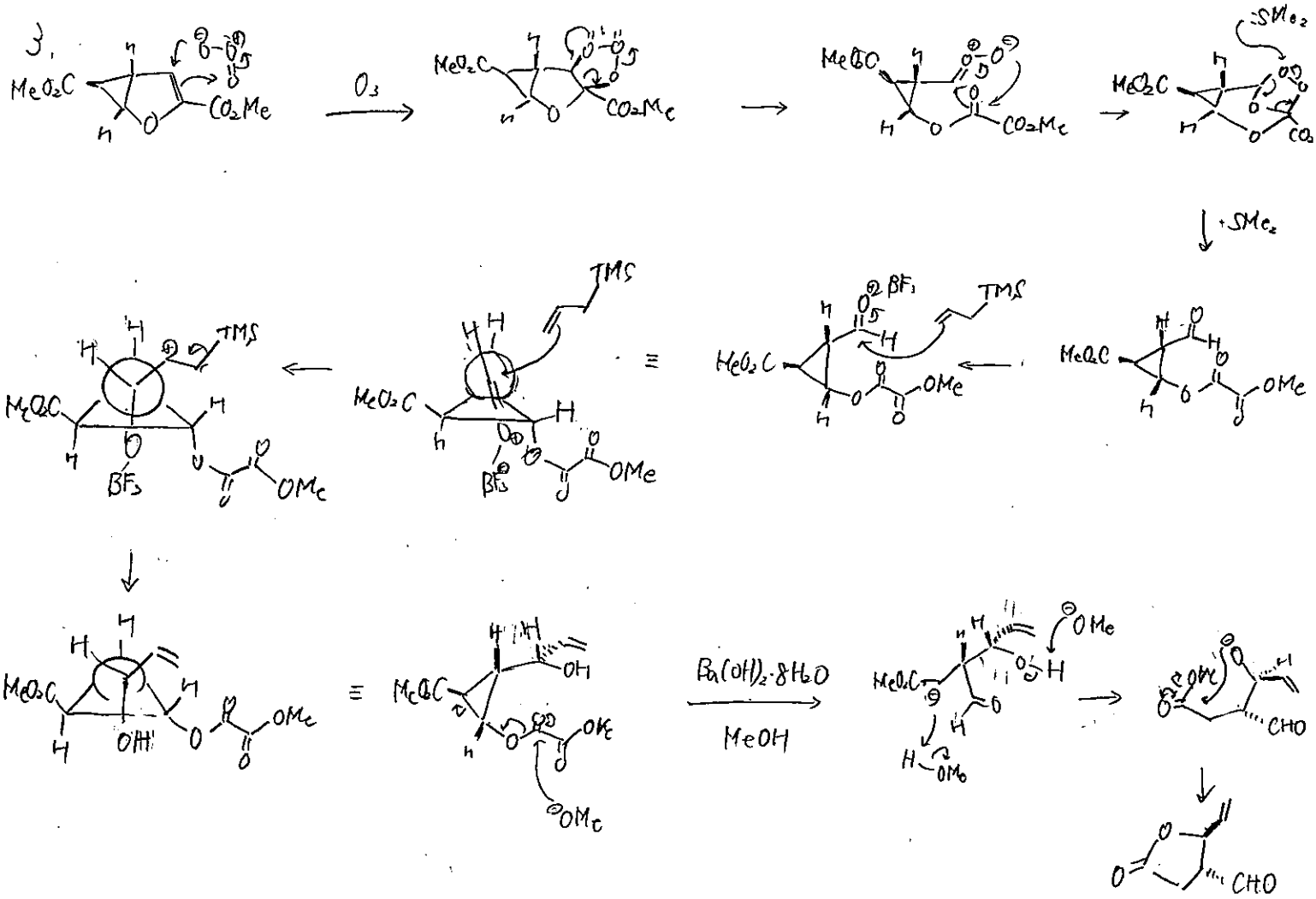
(3)



1.


Troc
Troc
+H⊕
Troc
Troc
OMe
Me
Ts
OMe
Troc
Troc
OMe
Troc
Troc
Step 1
Zn, AcOH
OMe
Zn
OMe
-2CO2
OMe
OMe
Step 2
Zn
Et3N
OMe
OMe
Et3N
CO2Et
OMe
MeS
OMe
MeS
OEt
+H⊕
OMe
MeS
OEt
-EtOH
OMe
MeS

2.



3.