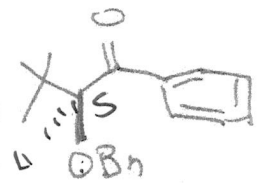
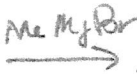
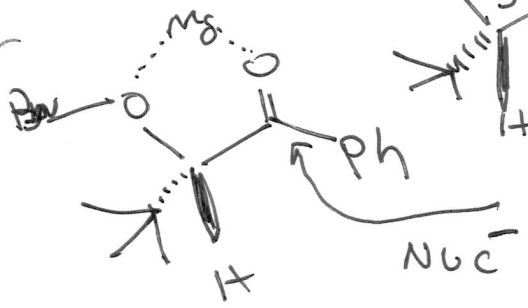
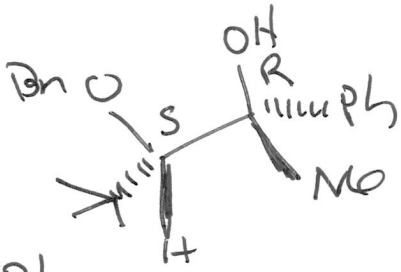
Give the product

5









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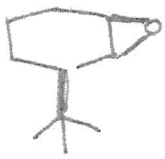

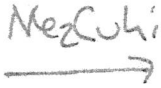

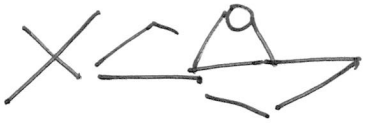

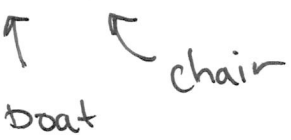

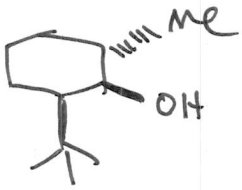

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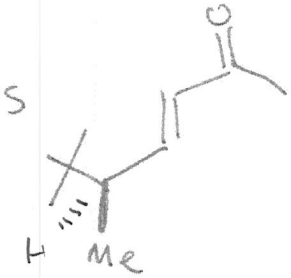
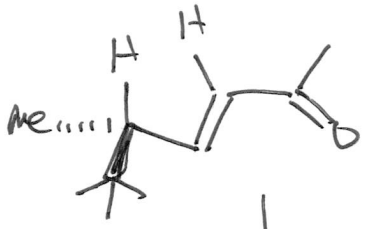
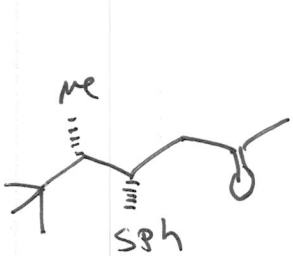
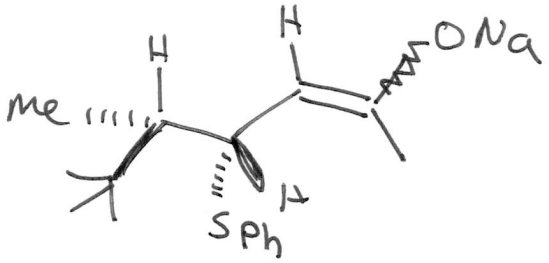
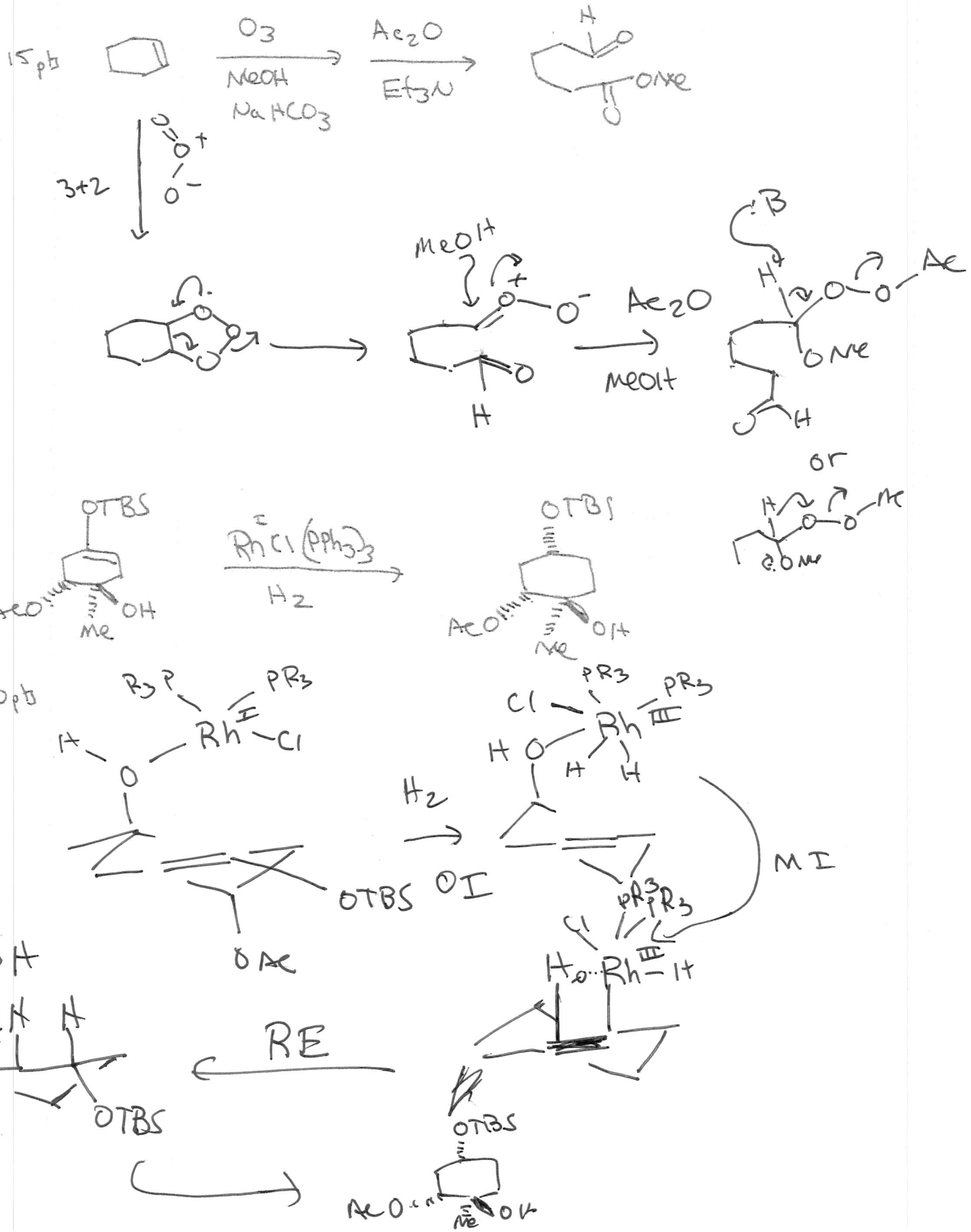




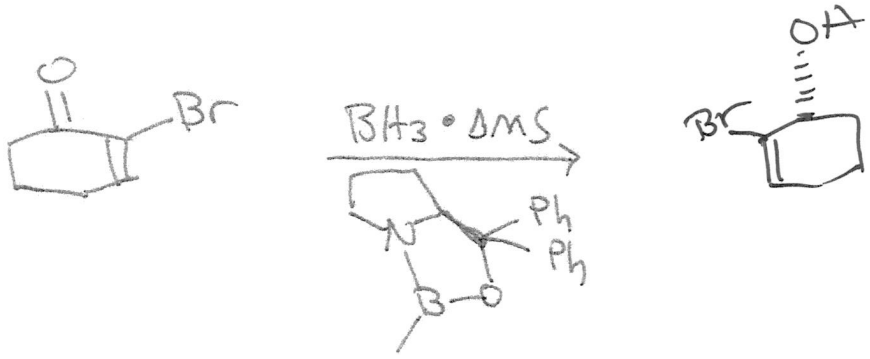




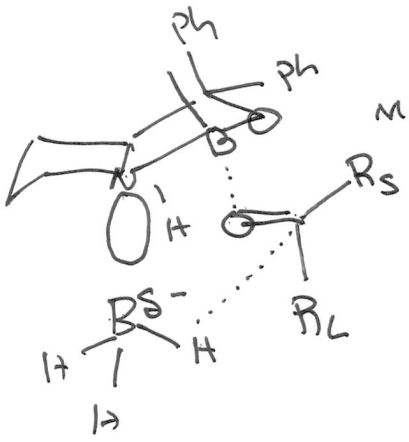
Give the Mechanism



Draw TS and Predict the product

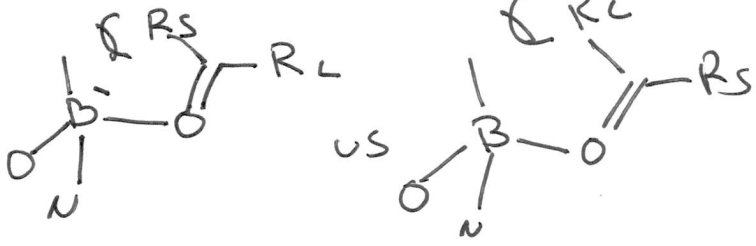


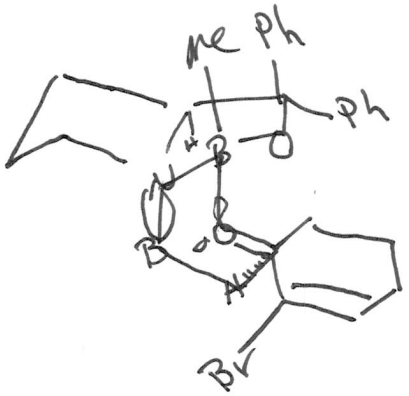
p454



S,S
must be cis fused

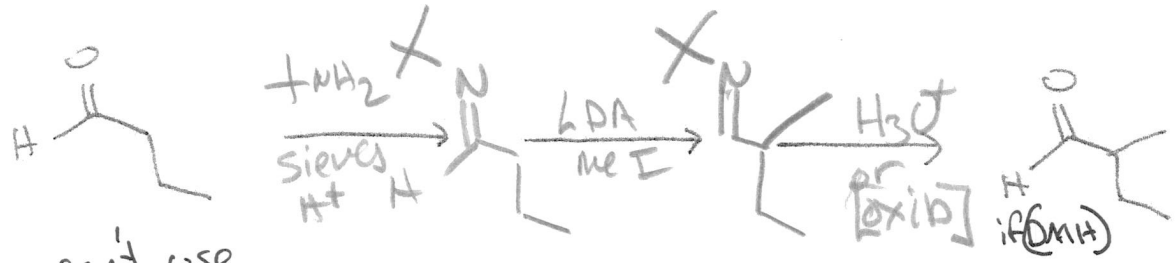
R_S is where it is because of interaction





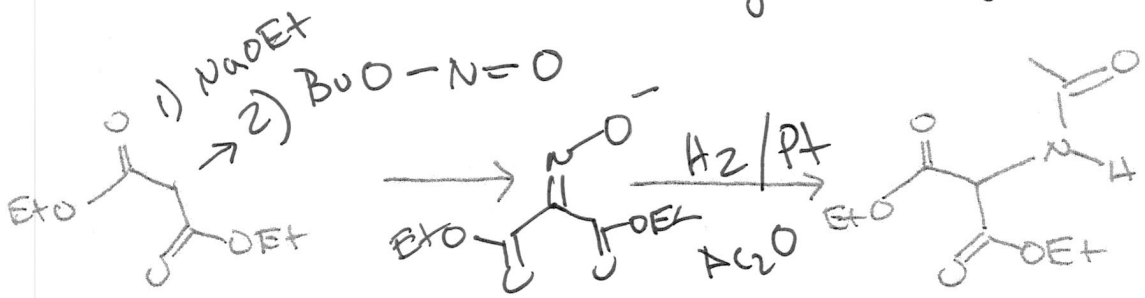
(30 pts)

Give all reagents necessary and the order of addition

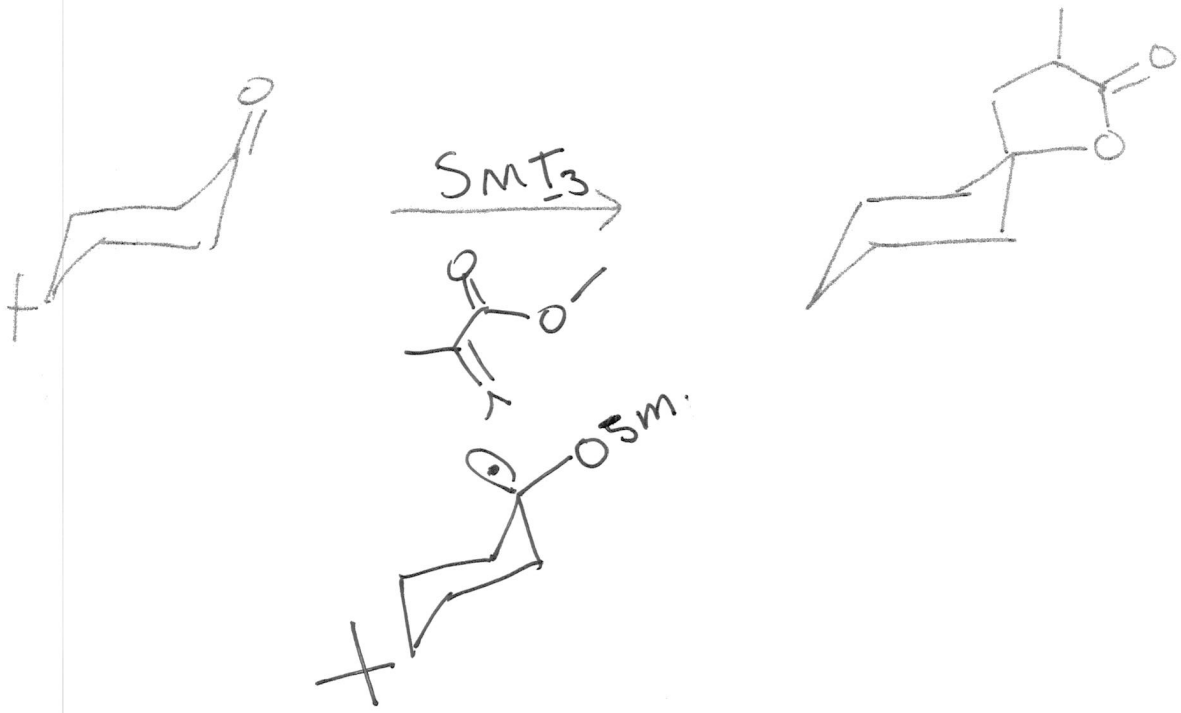


can't use LDA with RCHO

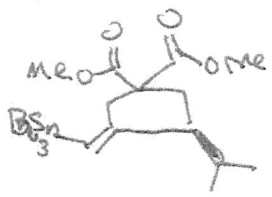
use aldimine or dimethyl hydrazone (DMH)

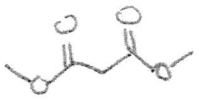


in your notes source of N+R



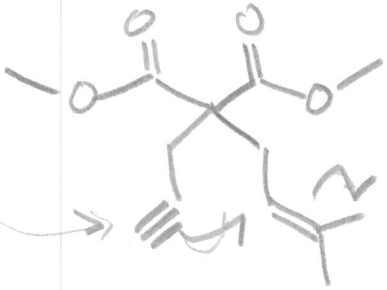
Propose a Synthesis and show all reagents and solvents with optimal timing of events



from   and other reagents

radical

$\Downarrow$ $\bullet SnBu_3$

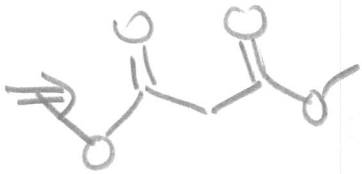


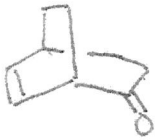
from 

$AiBN$ $SnBu_3$

10 pts

$\Longrightarrow$ NaOMe 

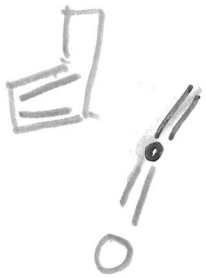




from 

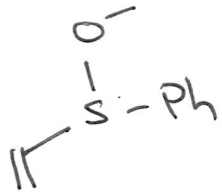
10pts

$\Downarrow$

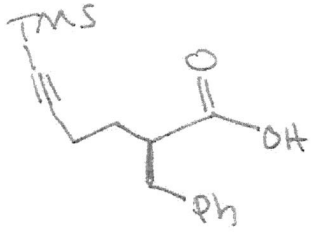


Ketone or its equiv.

the Nef



then pummerer

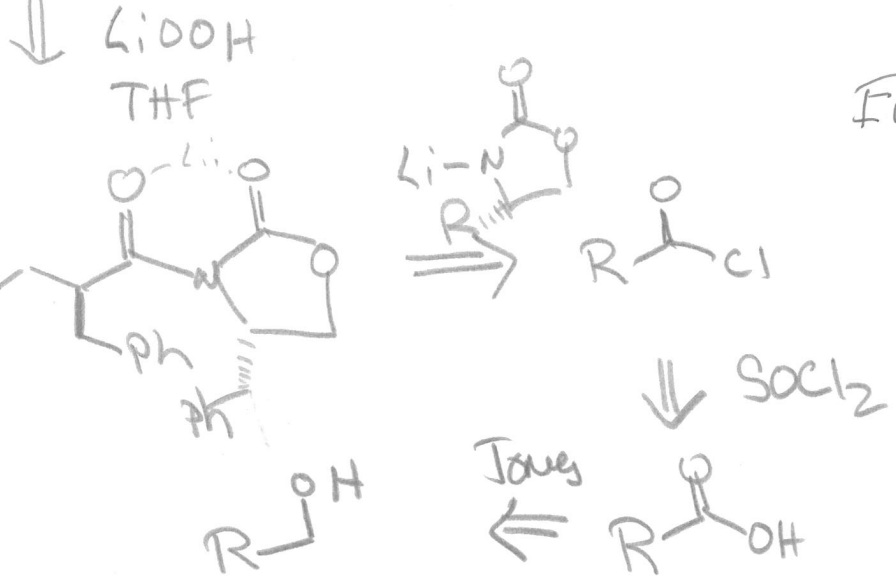


optically active

from 

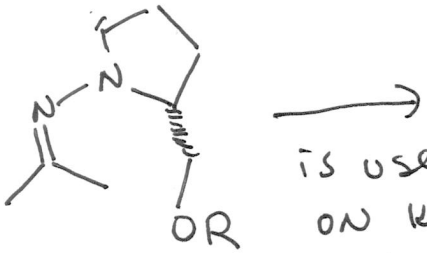
25pts

+ any reagents you require



Evan's oxazolidinone

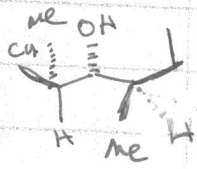
This is an evans alkylation



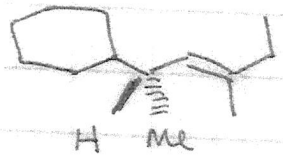
is used on ketones not acids!

Partial Key

Give the MAJOR Product with Stereochem and the TS leading to it.

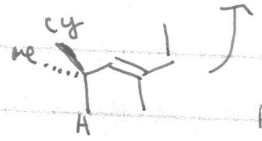


5/5



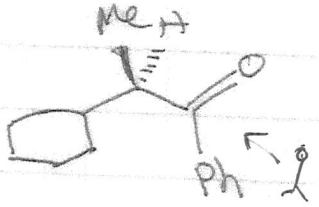
$BH_3 \cdot THF$

H_2O_2/THF

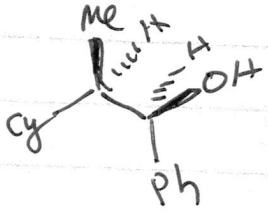


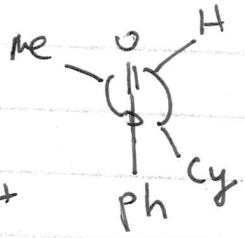
Allylic Strain

5/5

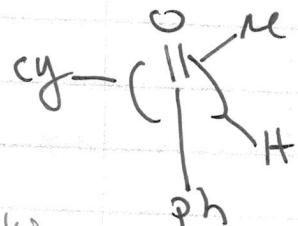


LAH





Felkin



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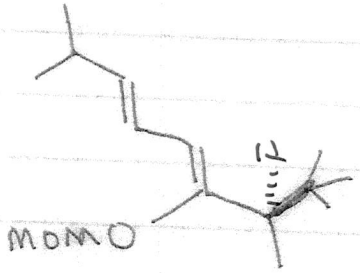

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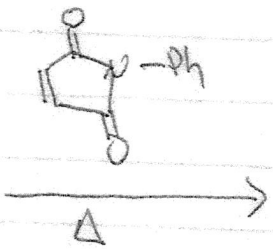

Allylic strain
endo Diels-Alder