

Office hours:

ERJ: Tuesday June 4, 10-11am

ERJ: Wednesdays, 2pm, NS1 4114

Kirsten: Tuesdays, 9am, RH 523

Tristan: Wednesdays, 11am, RH 523

Alissa: Fridays, 2pm, RH 52

Peer tutors Final Review: Monday June 3 5-7

pm @ BS3 1200

Will go through final from S18

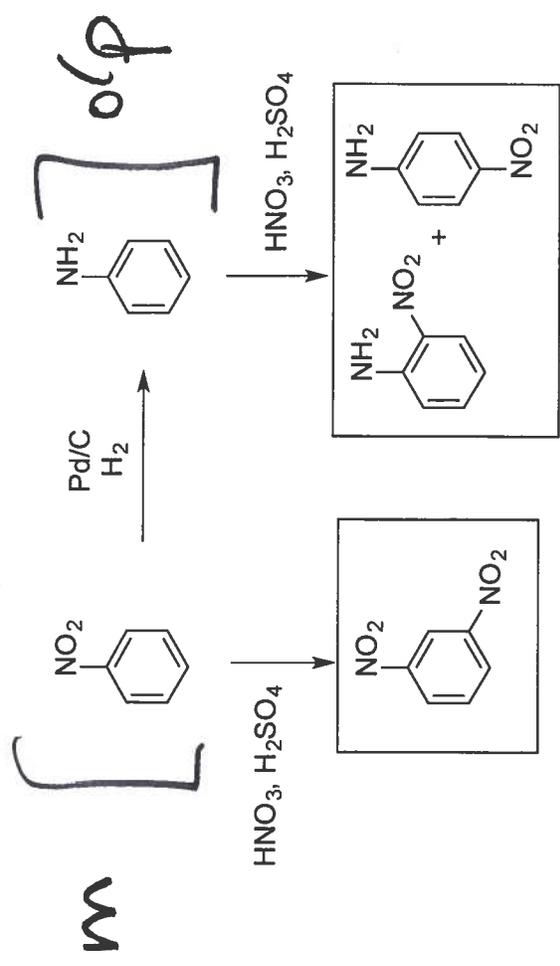
FAQ: Is final cumulative? Yes

Is Ch 18 on the final? Yes

Is the final longer than the midterms? Yes, see the sample finals on the website

Teaching evaluations online, please fill out

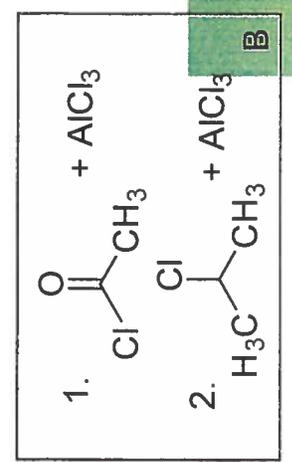
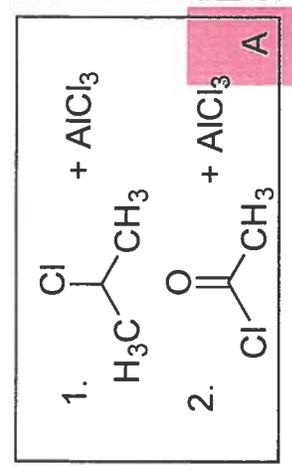
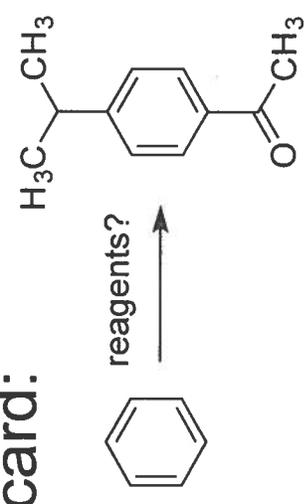
Lecture 25, Ch 18: Substituted arenes



Night Changes (One direction)
 Even when the night changes,
 It will never change you and me

We are going to learn (and revisit) a few reactions that we can use on the substituents of aromatic rings. But, no worries, after we interconvert (EAS) will proceed the same way it always does.

Capercard:



A and B both work

C

B

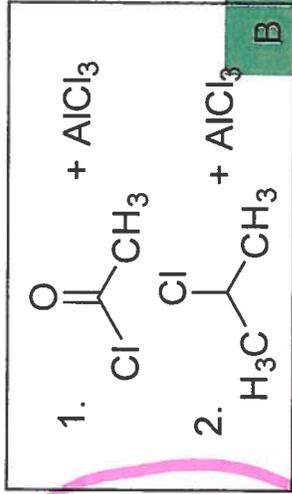
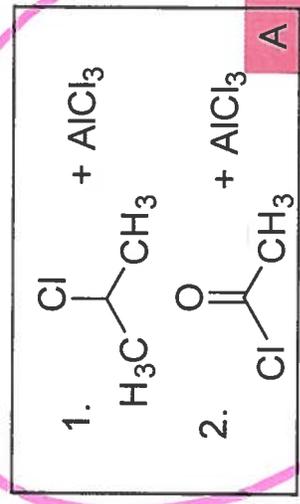
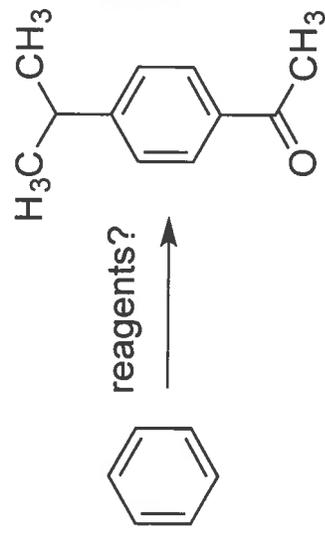
A

Today: Finish new chemistry

Wed + Fri: Synthesis strategy

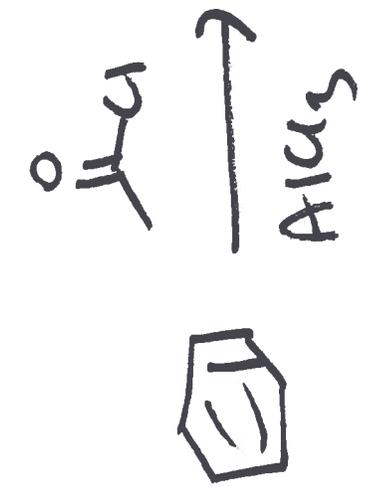
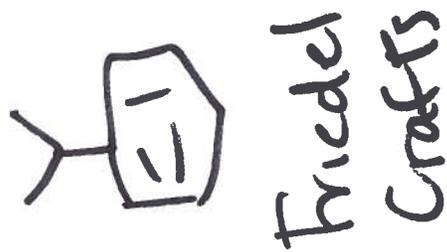
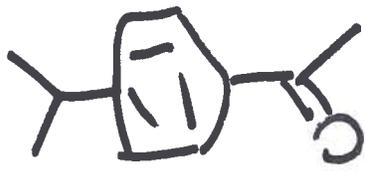
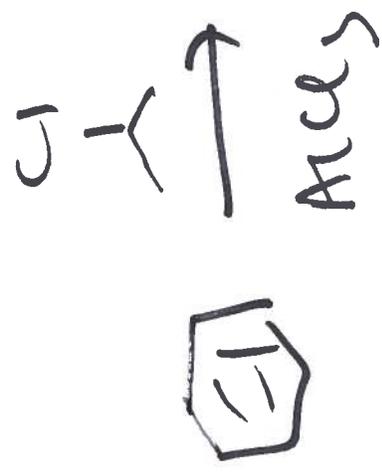
Practice problems.

3



A and B both work

C



o/p.



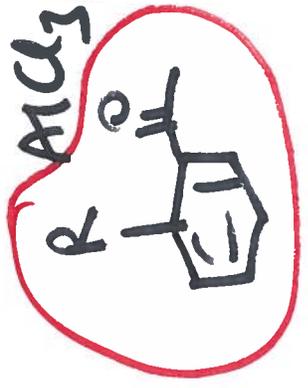
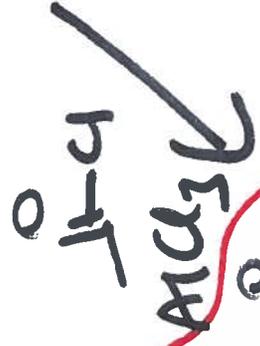
Many sections skip

18.10

18.11

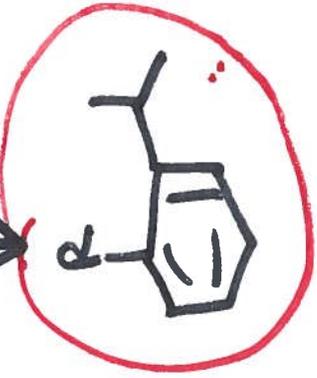
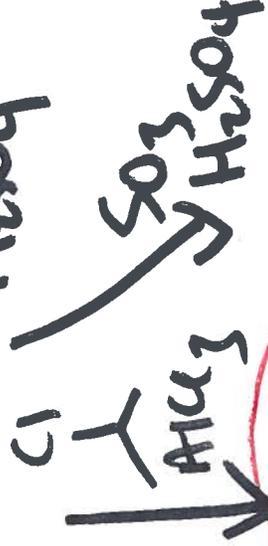
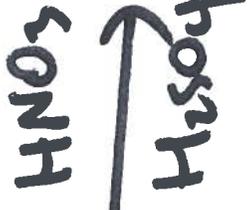
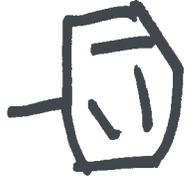
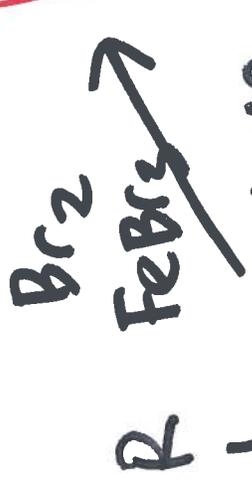
18.13

EAS

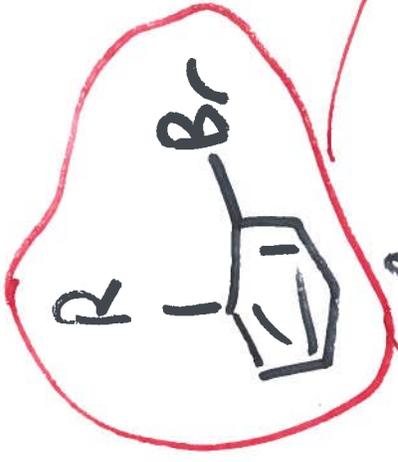


R = EDG or X:

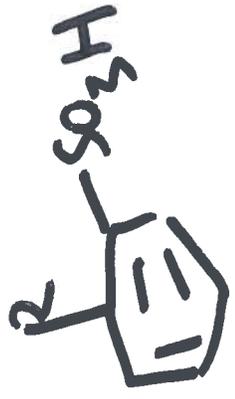
ortho/para



New reaction



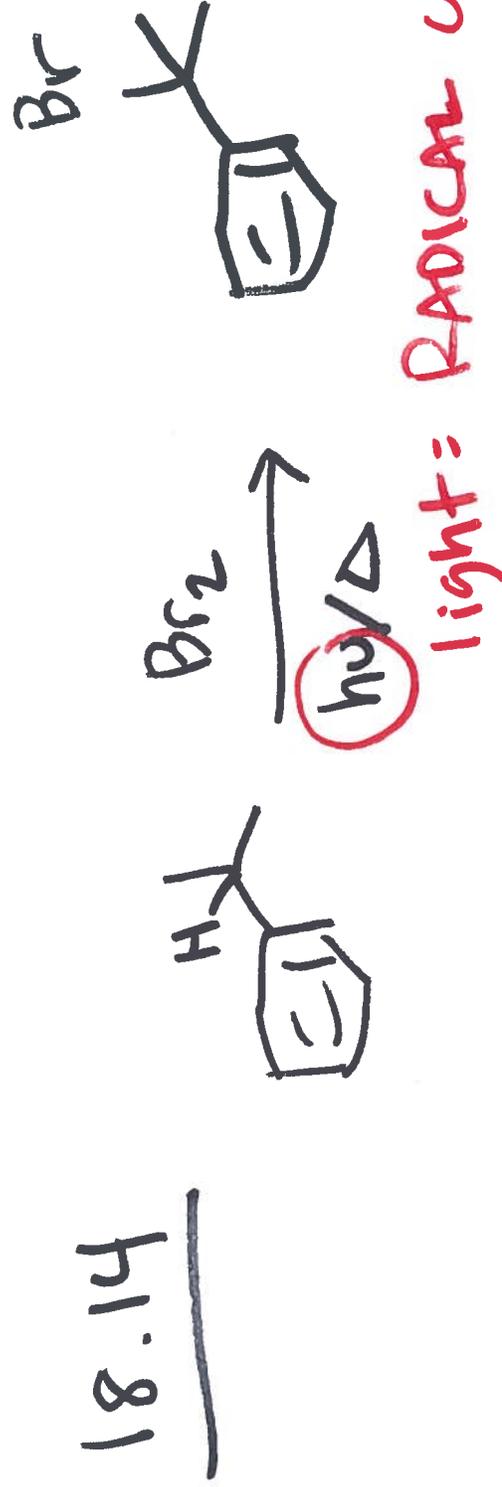
New reaction



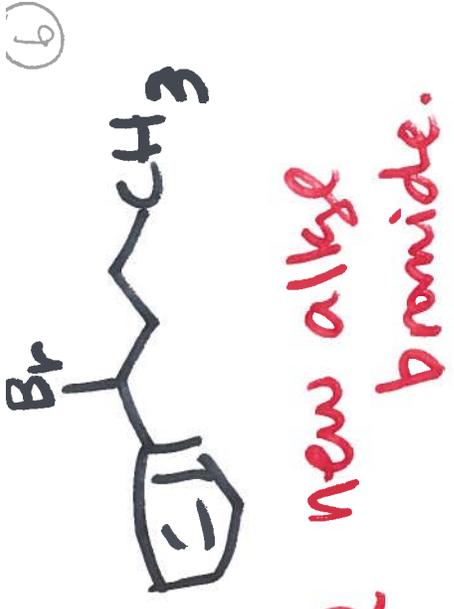
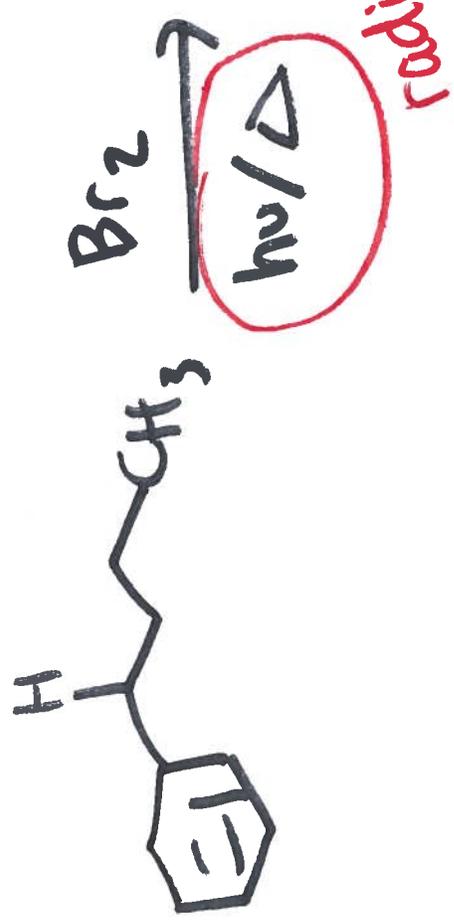
5

R = EWG (electron withdrawing group)
meta

New Reactions: How to employ our
new nitroarenes
alkyl arenes?

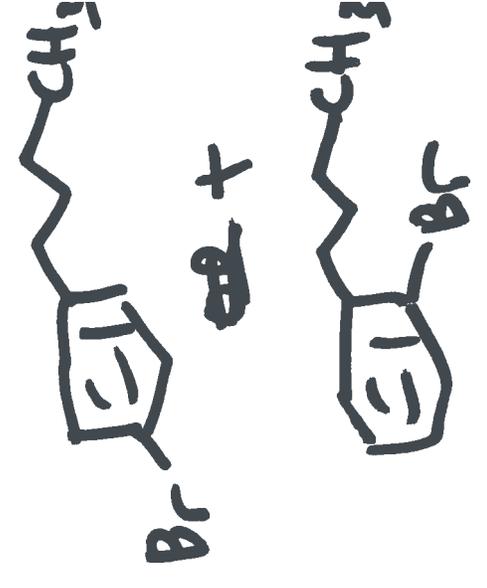
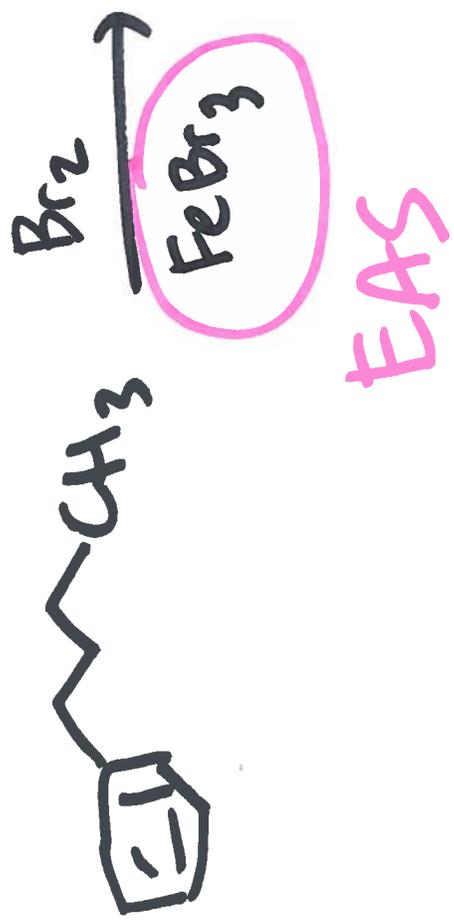


(6)



radical new alkyl bromide.

Do Not confuse w EAS



EAS

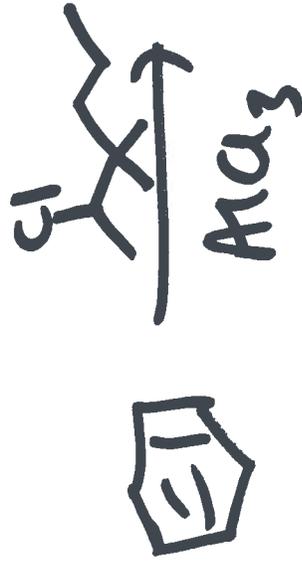
No full mechanism

Proceeds via:

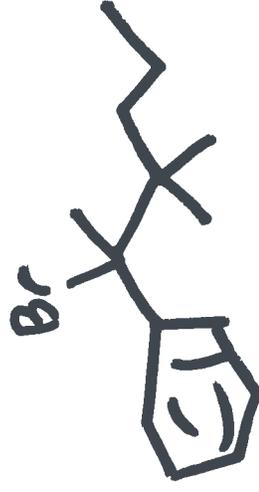
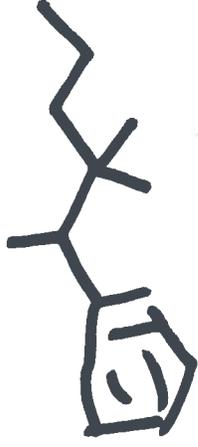


benzylic radical!

this reaction is AWESOME!



made
C-C
bond



- grignard ←
- allyl lithiums...
- cuprates...
- elimination
- Wittig.

18.15A Ox to carboxylic acids.

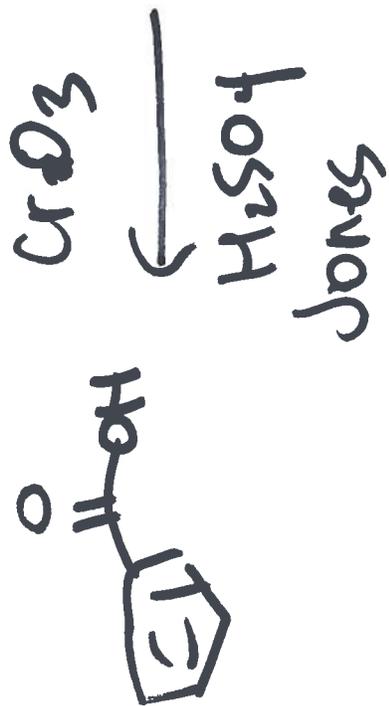
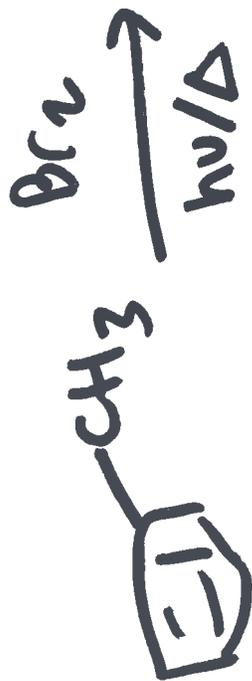
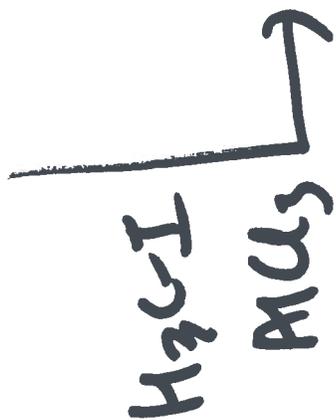
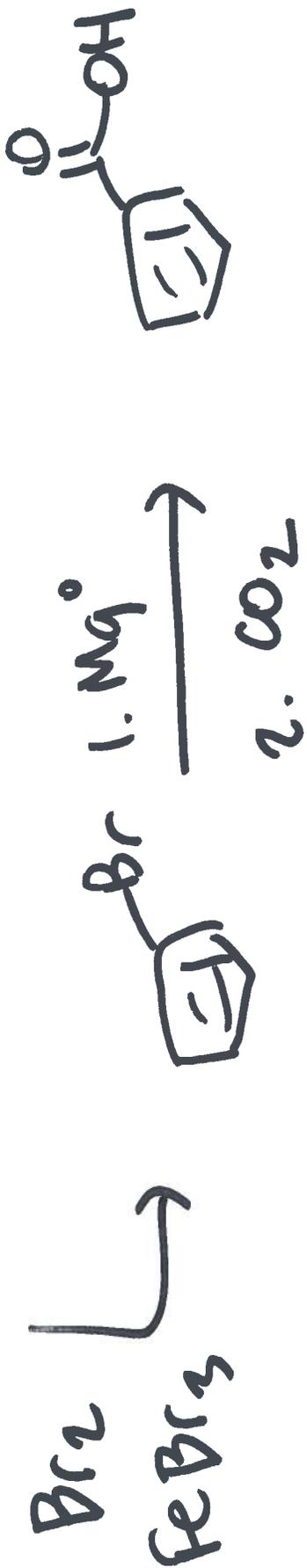


VERY
strong
oxidant!

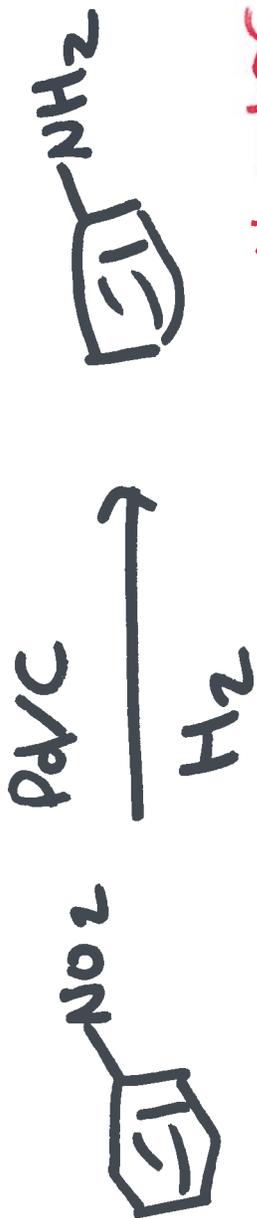


any substrate
with benzylic
C-H

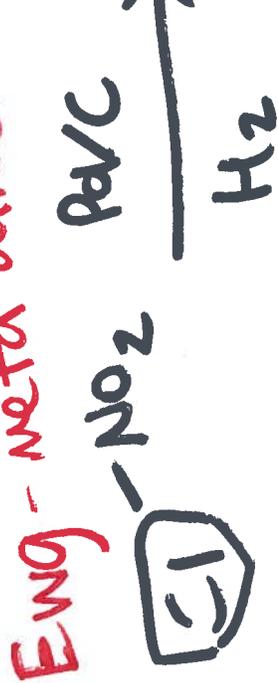
BROKE A C-C bond!!!!



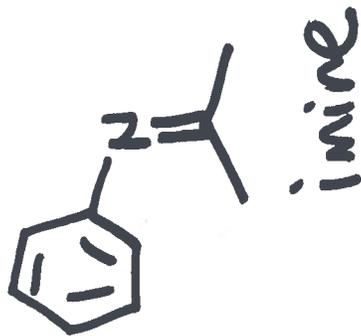
Reaction of nitro arene... 18.15C



EDG
o/p director!



ENG - meta director



Mannich ←

Strecker ←

reductive amination ←

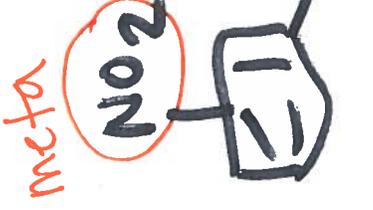
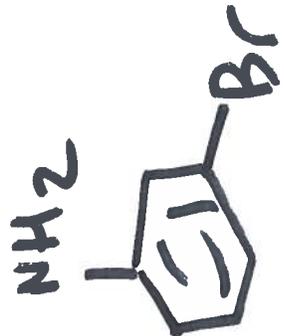
other amines ↓

E.g.



meta!

Both ortho/para directors...

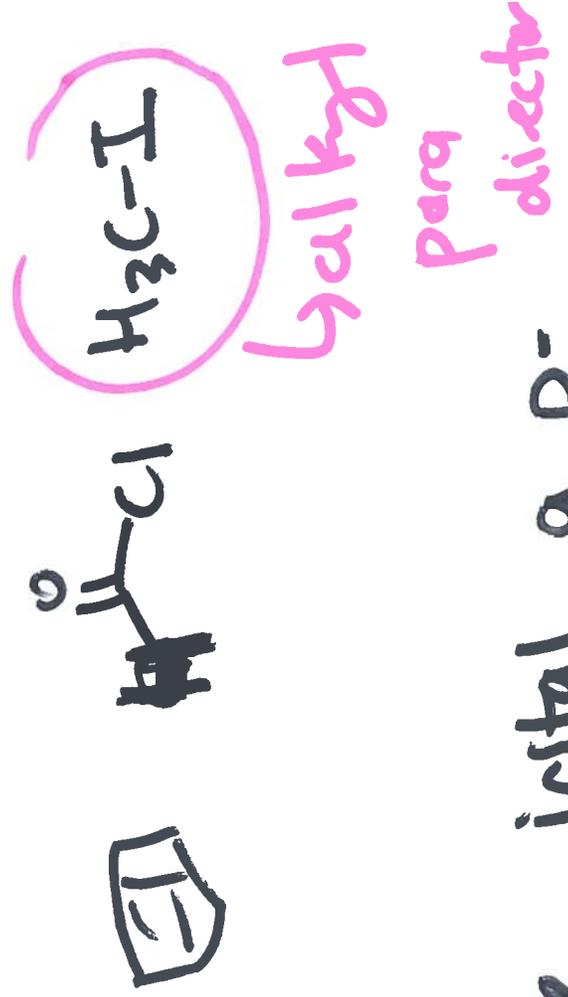
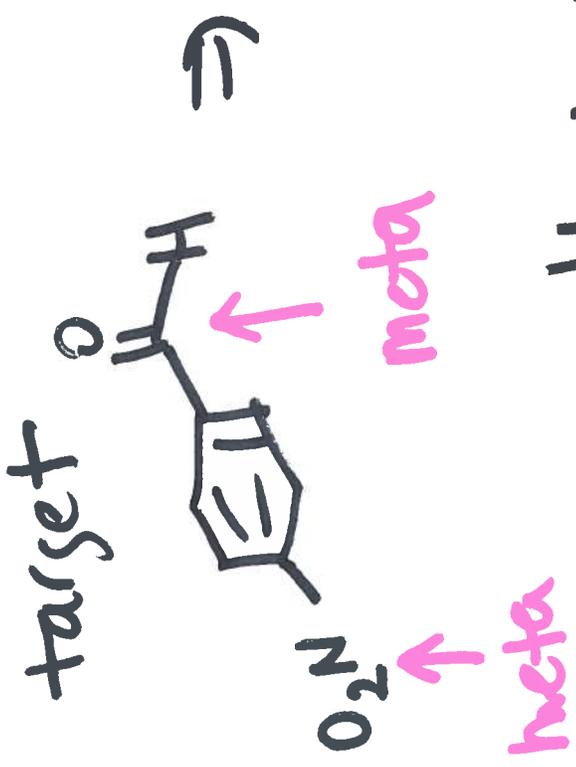


Pd/C
H₂

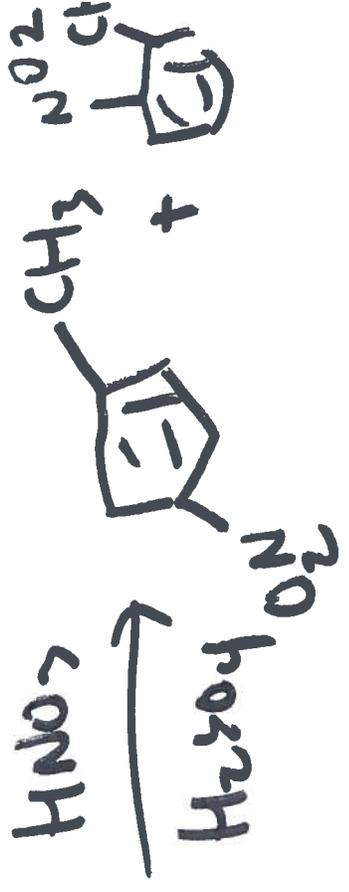
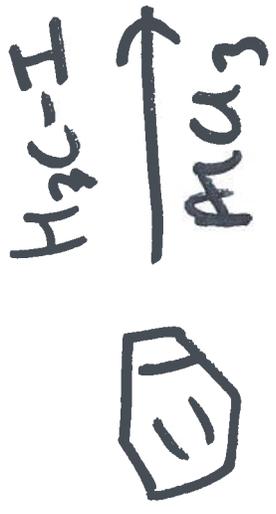
Br₂
FeBr₃

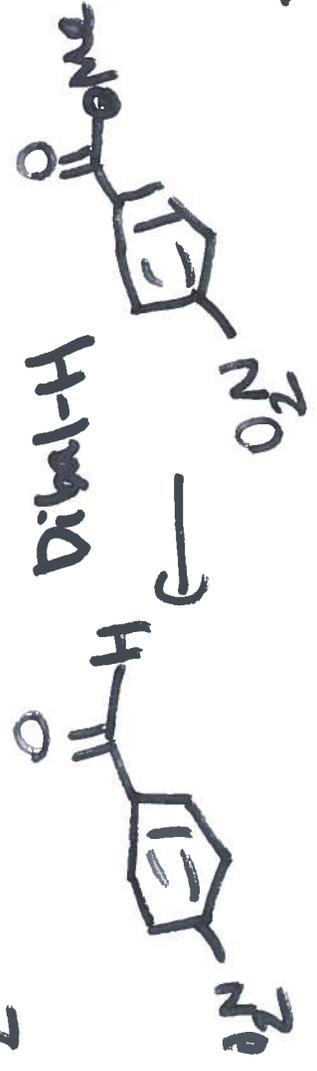
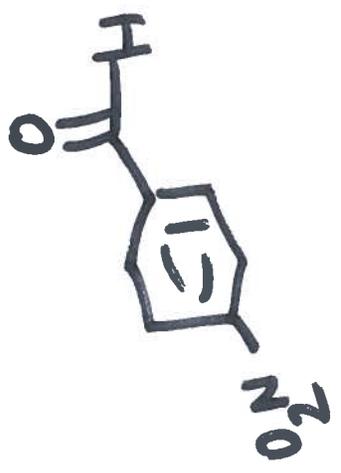
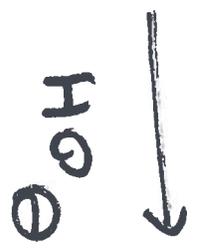
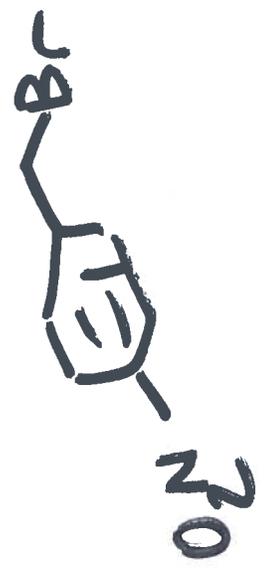
HNO₃
H₂SO₄

Synthesis:



How do we install a p- directing group....



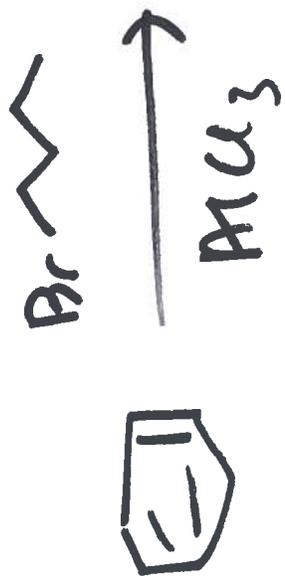
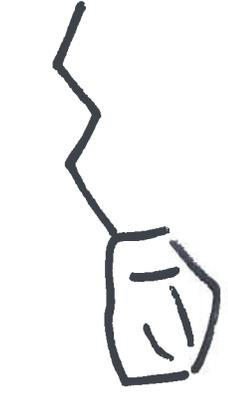
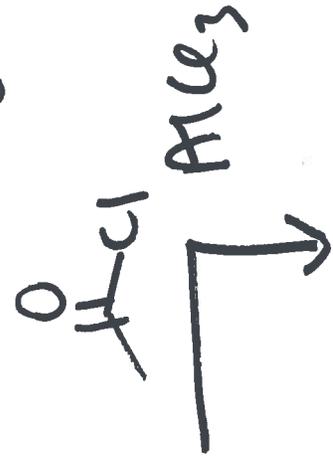
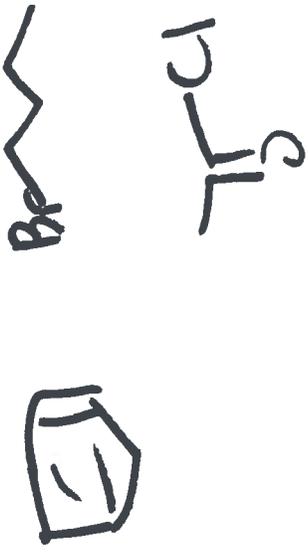
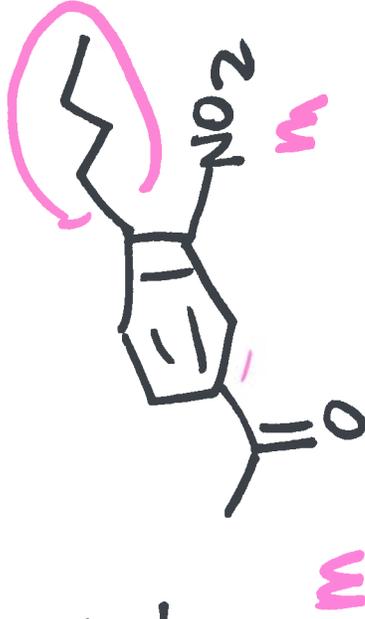


Fisher
esterifikation

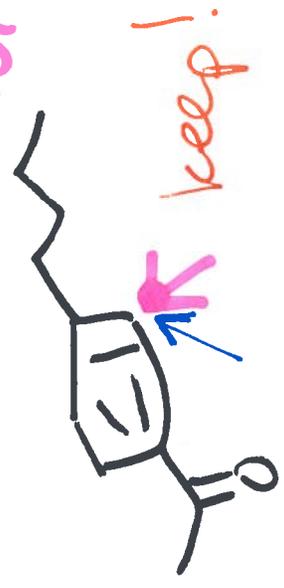
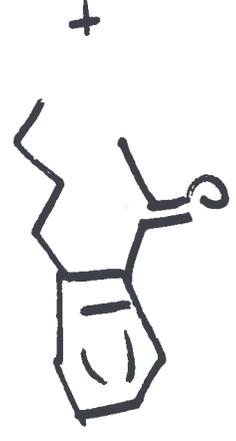


target

o/p.



o/p.



Consider:

