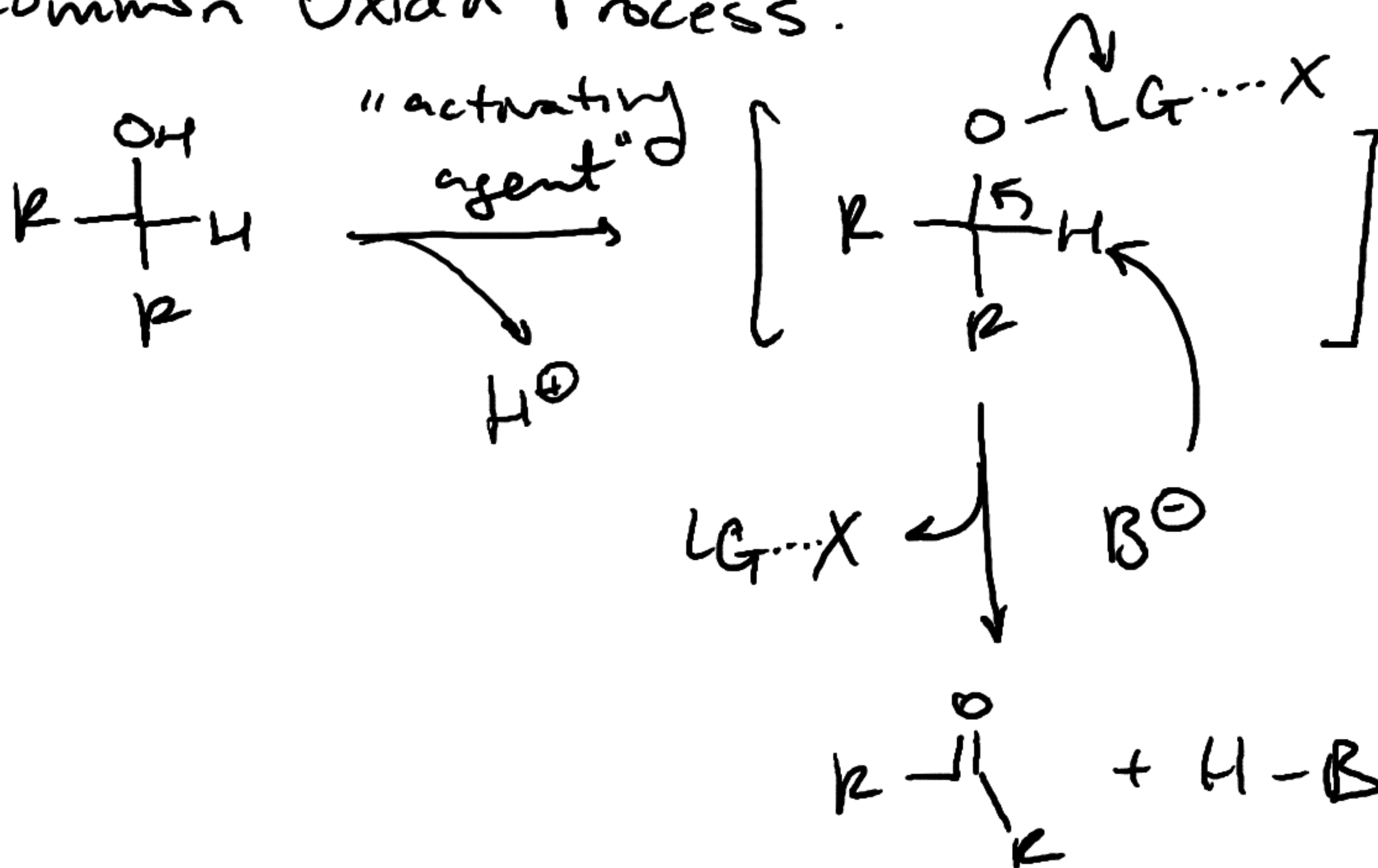


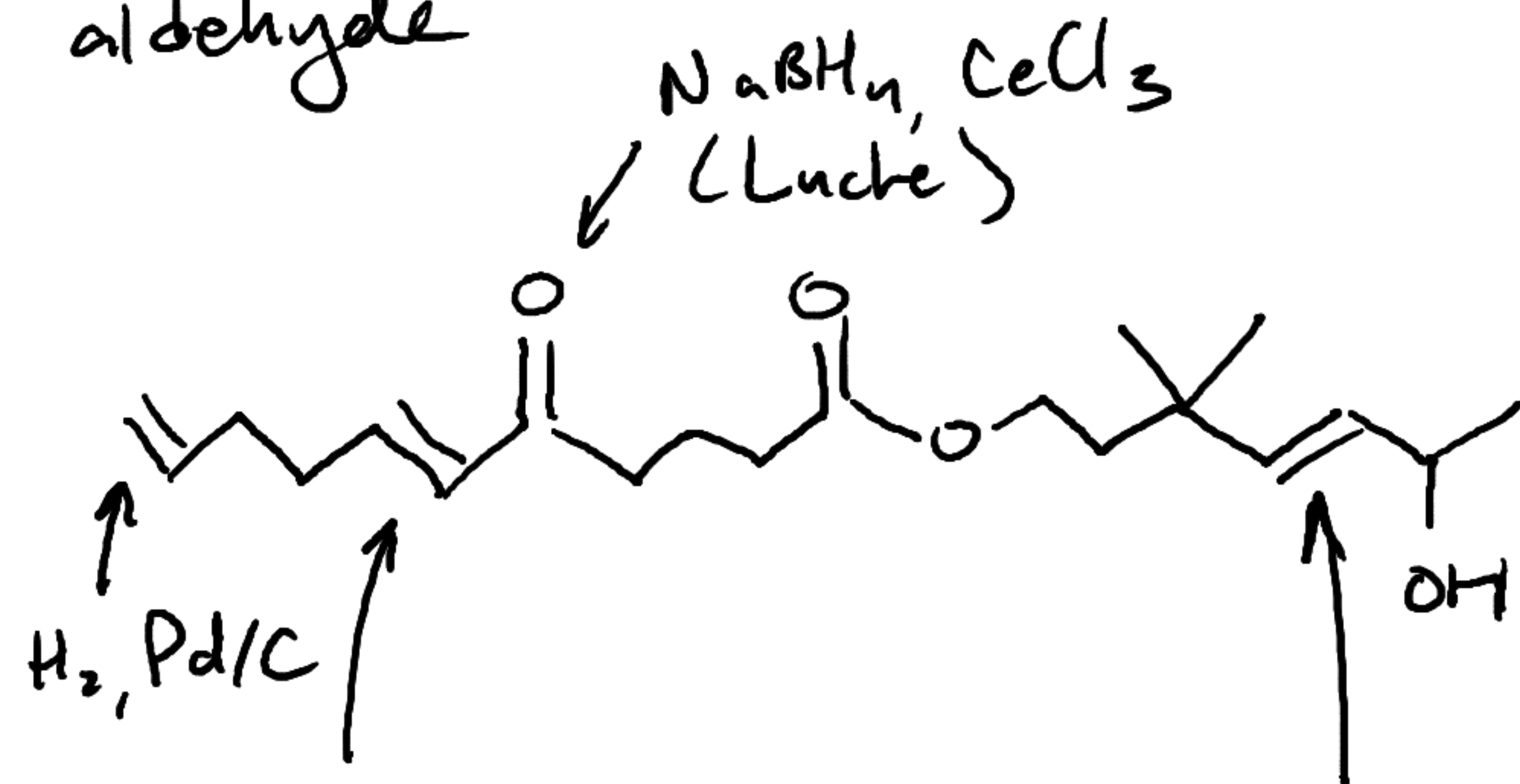
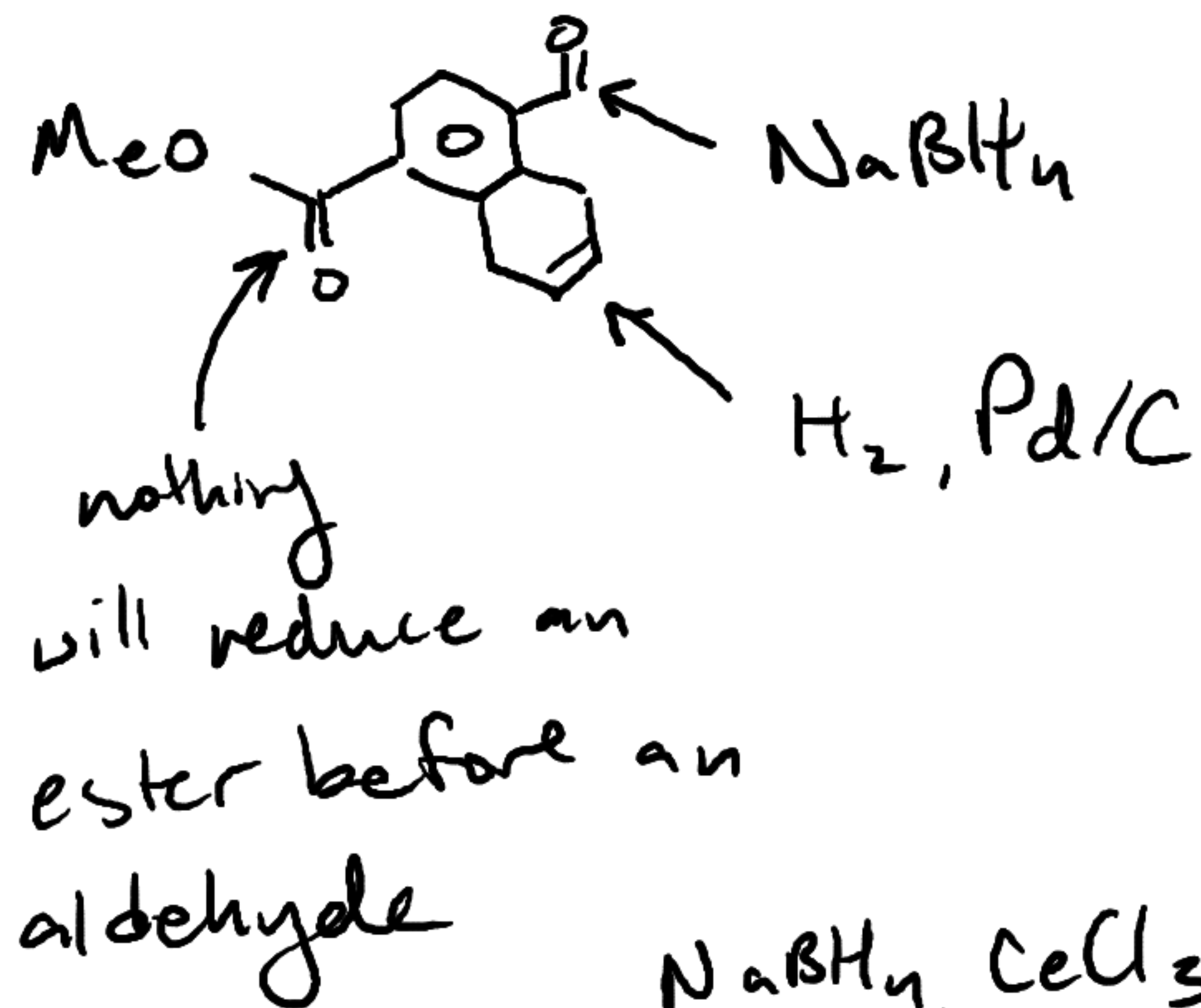
General Pattern: ① easier to reduce then oxidize

② functional groups needed

Common Oxidn Process:



△ Consider "hard / soft" when considering reagents for compatibility

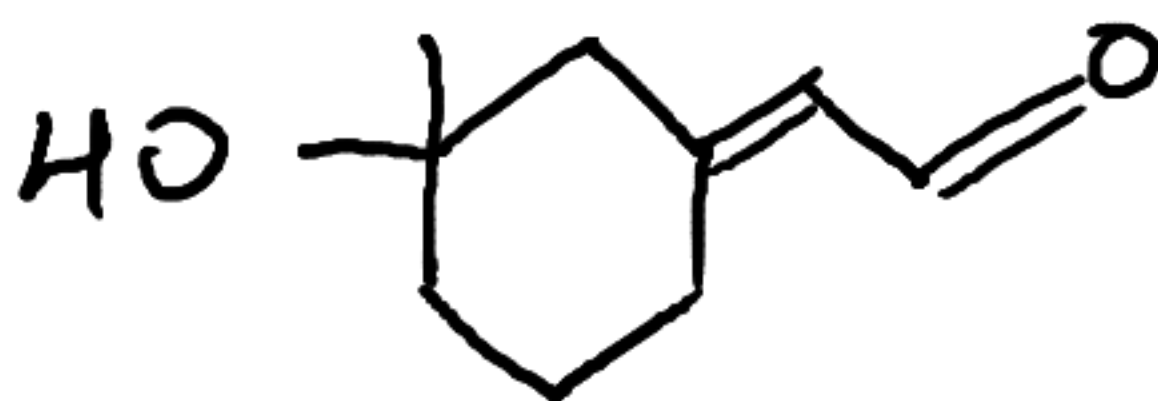
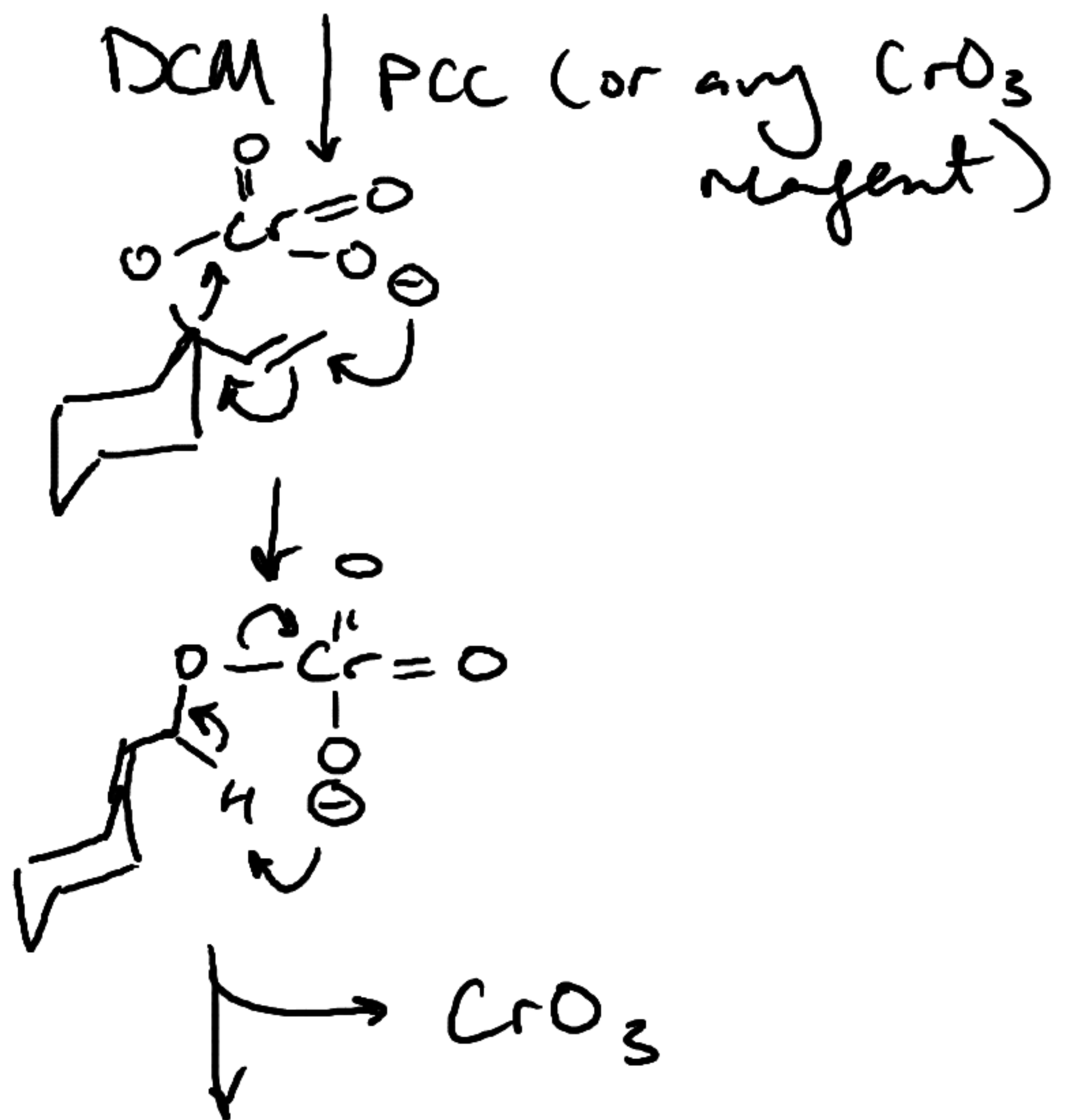
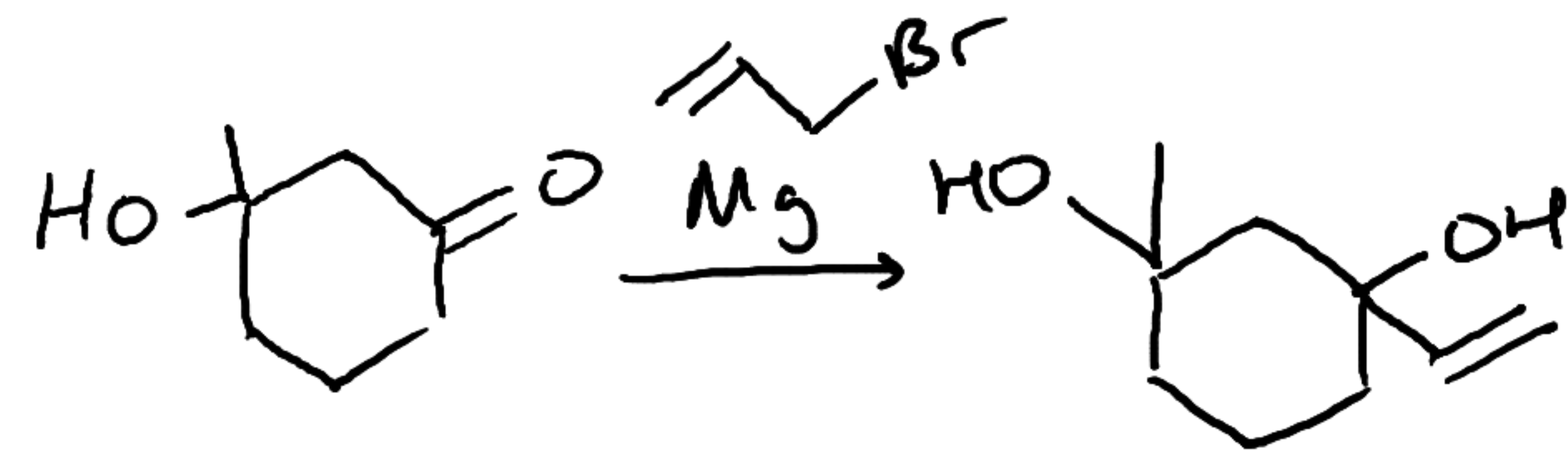


$[CuH(PPh_3)]_6$
 (Stryker)

H₂, RhCl(PPh₃)₃
 (Wilkinson)

OH will never oxidize except allylic alcohols

ex:



Δ presence w/ H_2O further oxidizes to COOH

4 Types of Reduction:

Metal Reduction: Clemmensen ☐
Birch

Radical

Hydrogenation

Hydride

} these 2 known,
but
review Metal

Hydrogenation

- targets "soft" π bonds, hydrides favor "hard" π bonds
- catalysts possible w/

Heterogeneous: Metals

Pt, Pd, Ni

on some solid

(Pd/C)

- solid suspension
- mech not well understood
- surface rxn, so syn addition from least hindered side favored

Homogeneous:

Rh, Ru, Ir

- soluble complexes
- predictable models
- reduction helped by coordination to O directly

R-OMe

↑
hindrance