



Oppenauer Oxidation

Name Reactions

★ Tricks to remember ★

Pdf attached in
description Box.



It is reverse of Meerwein-Ponndorf Verley Reaction

Oxidation of 2° alcohol to Ketone in presence of aluminium alkoxide with the help of hydride acceptor like acetone is Oppenauer oxidation

2° Alcohol

Opp. Oxidation



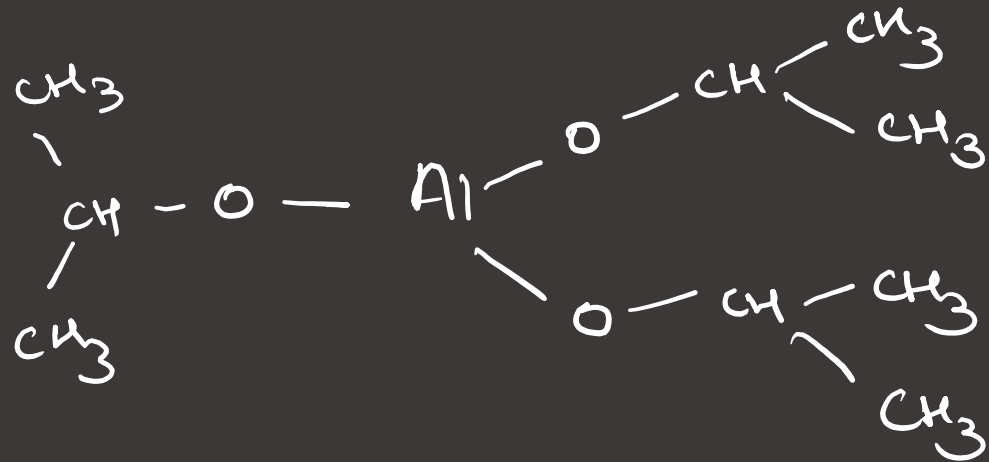
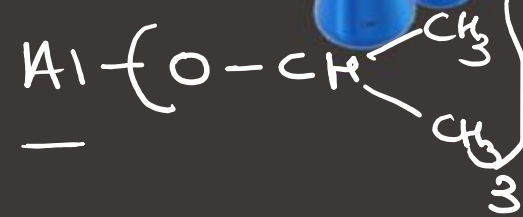
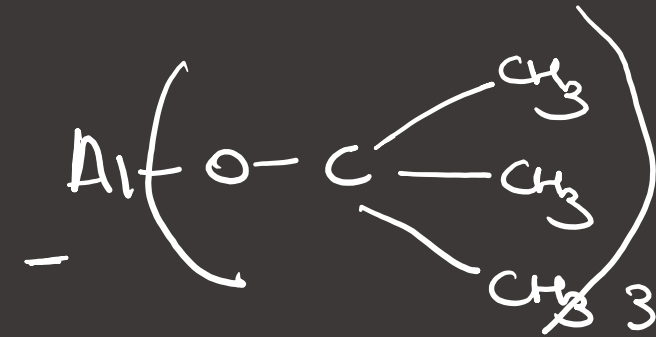
Ketone (A-OK)

M.P.V oxidation





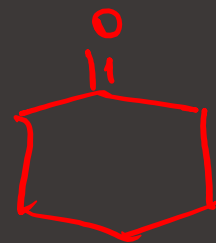
Aluminium alkoxide

Aluminium
isopropoxideAluminium
tert-butoxide

\rightarrow 1° alcohols are also oxidised to aldehyde
 but in presence of more better hydride
 acceptor like p-benzoquinone or
 aromatic ketone.

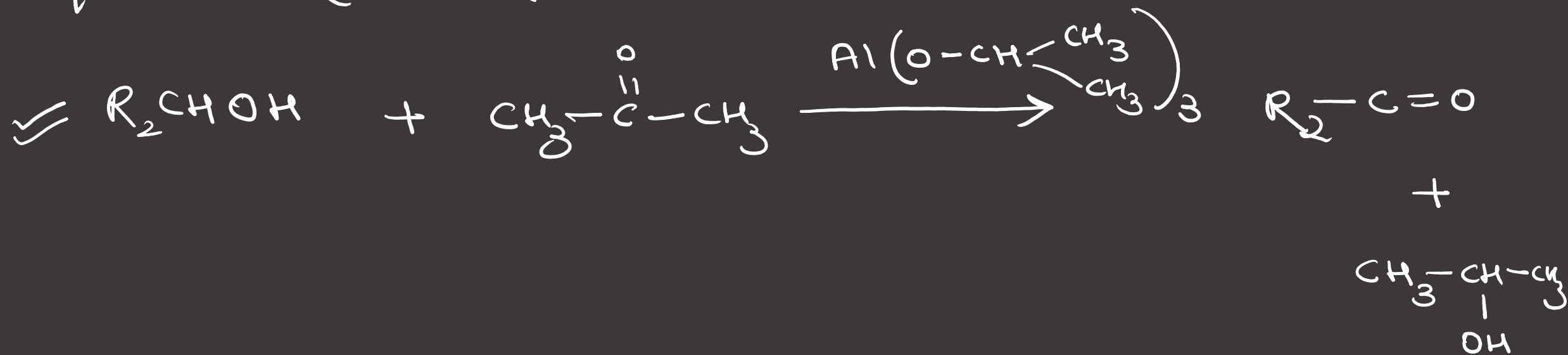


Benzoinone



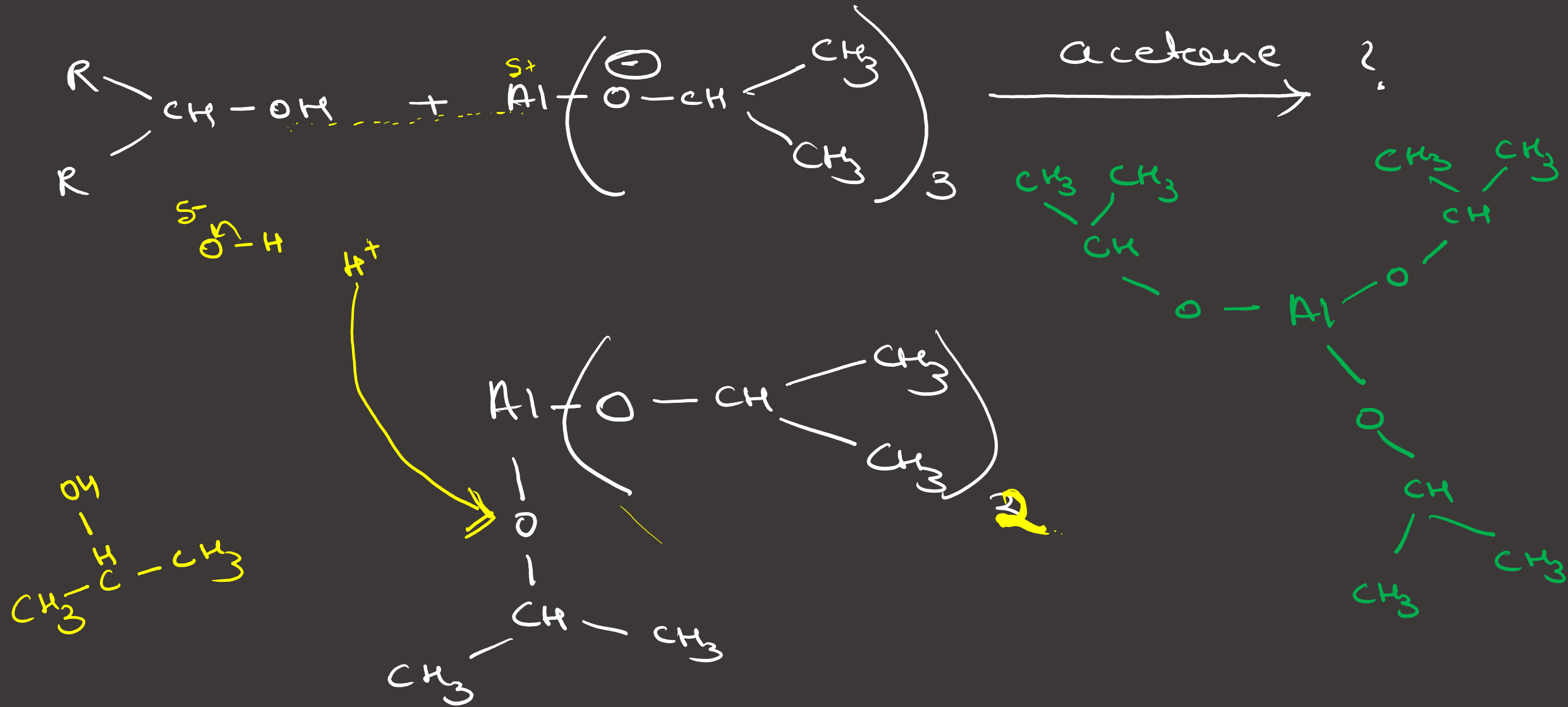
Aromatic Ketone.

General Reaction :-





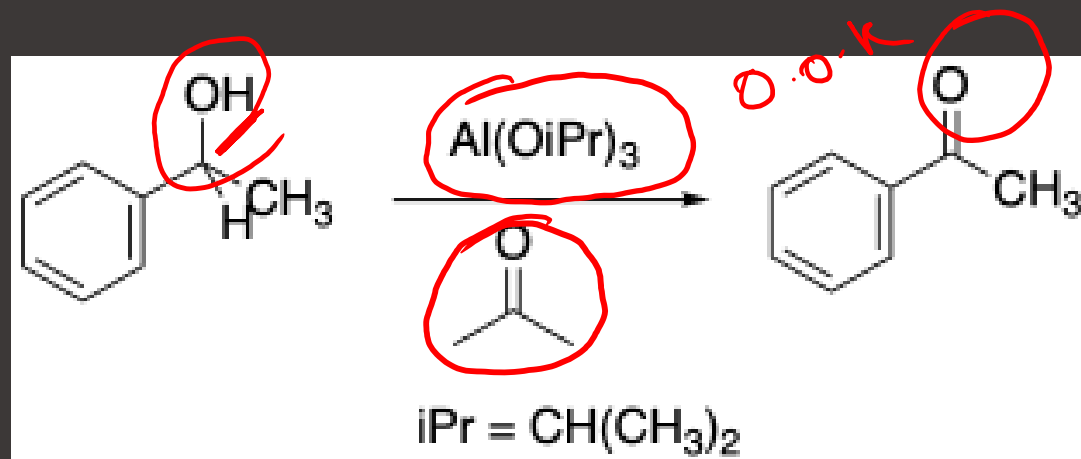
Mechanism:-





Application

eg 1



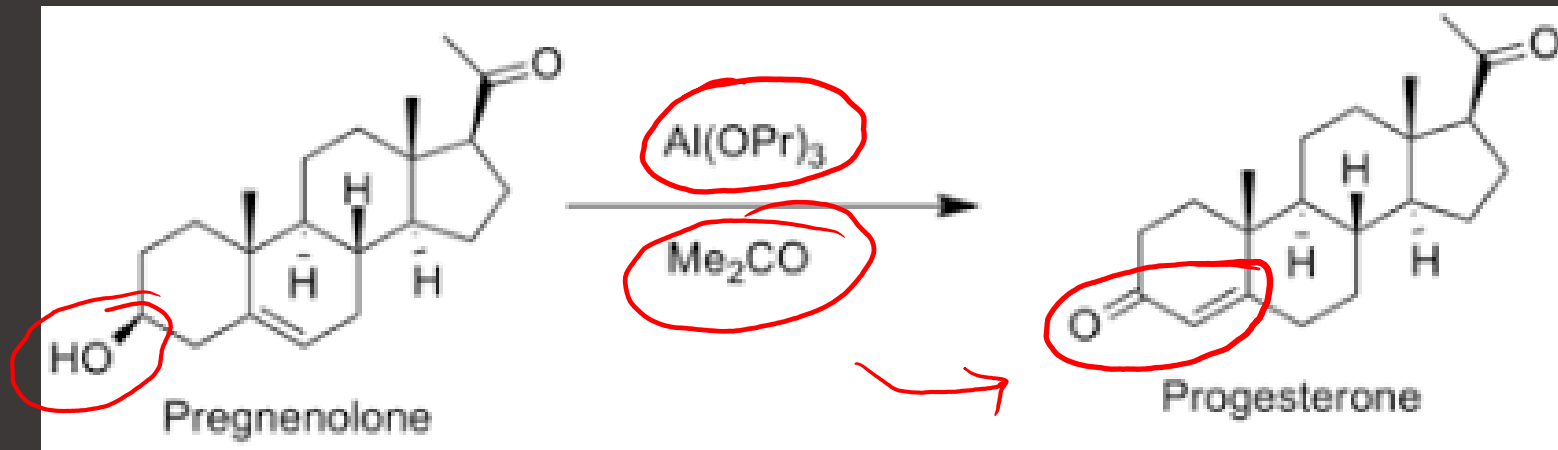


For oxidation of Steroids :-

Allylic 2° Alcohol \longrightarrow ketone.

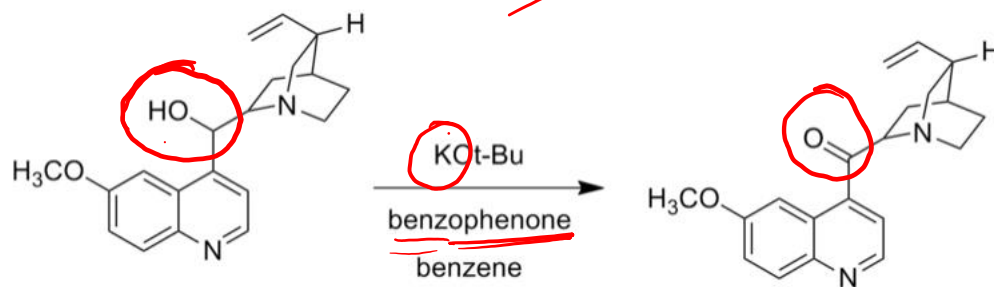
α, β unsaturated ketone

Wittstein-Oppenauer reaction





Woodward modification



metal alcohol \rightarrow 2° Alcohol
 \rightarrow Al alcohol
 \rightarrow acetone (u accept)
2° Alcohol \rightarrow Ketone



Thank - You

