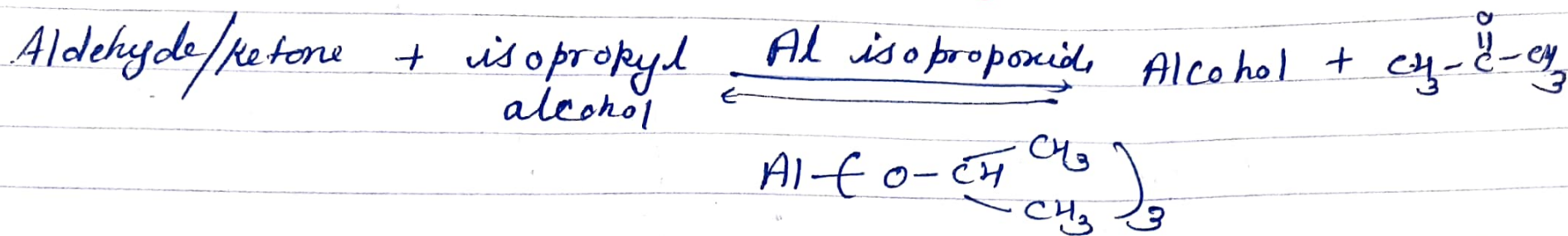


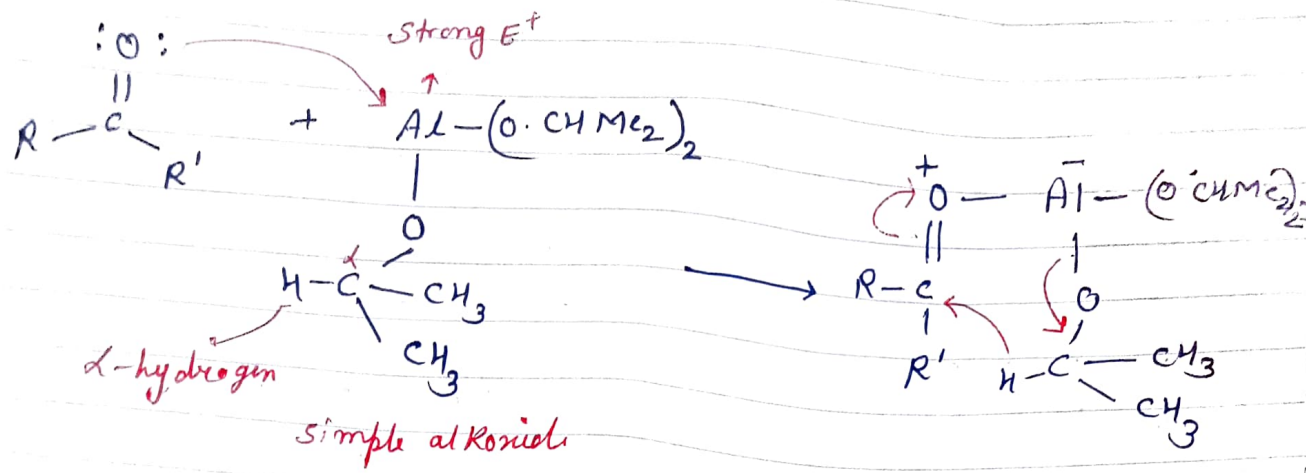
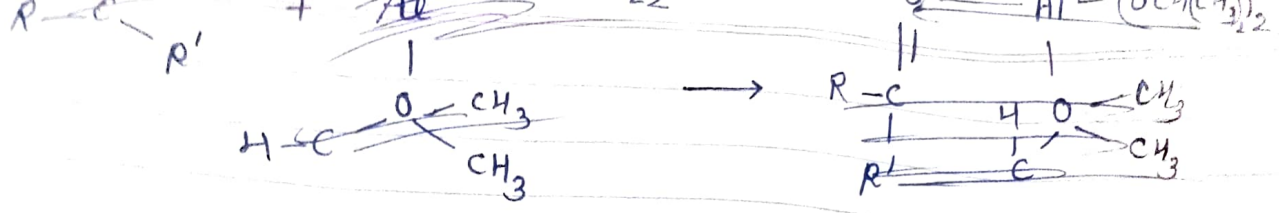


Meerwein - Ponnovf - Verley (MPV) Reduction

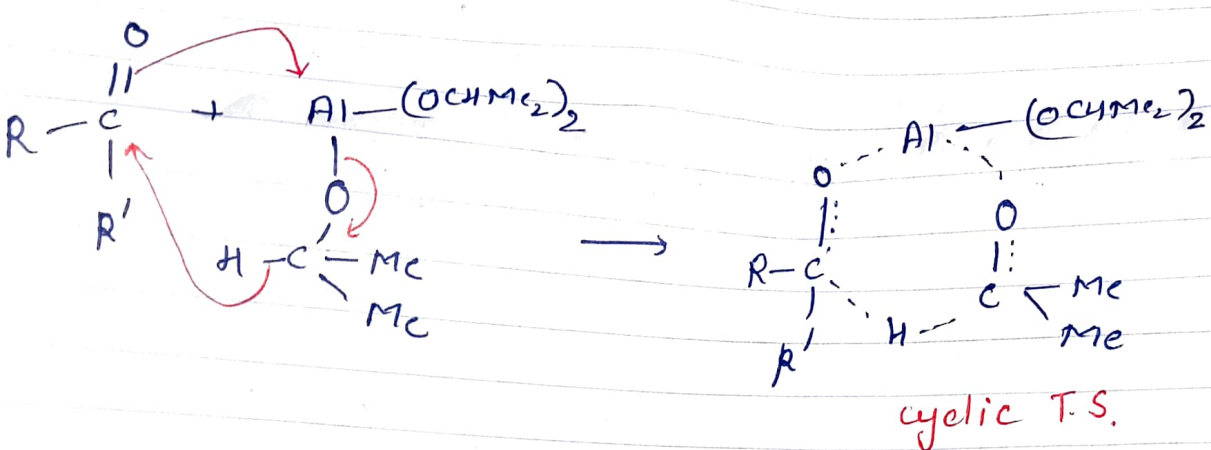


- Reverse Reaction $\rightarrow$ Oppenauer's oxidation
- For forward Rxn $\rightarrow$ remove acetone by distillation.
 $\rightarrow$ isopropyl alcohol $\rightarrow$ in excess
- mild conditions
- Negligible side products
- high yield and rapid reacⁿ
- inert towards $\text{C}=\text{C}$, $\text{C}\equiv\text{C}$, NO_2 , $-\text{COOH}$, COOR , CONH_2
- Specific for carbonyl group.

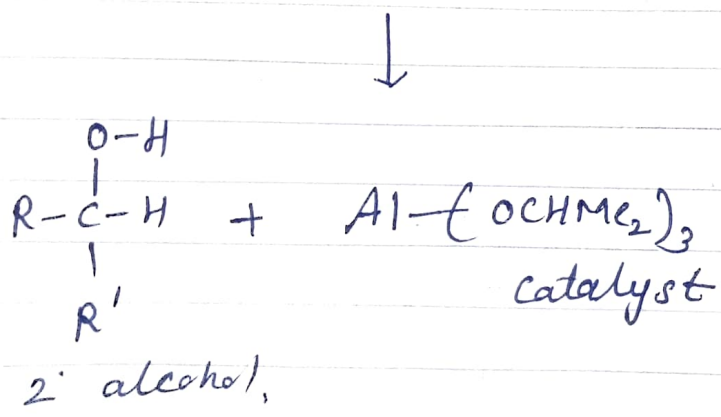
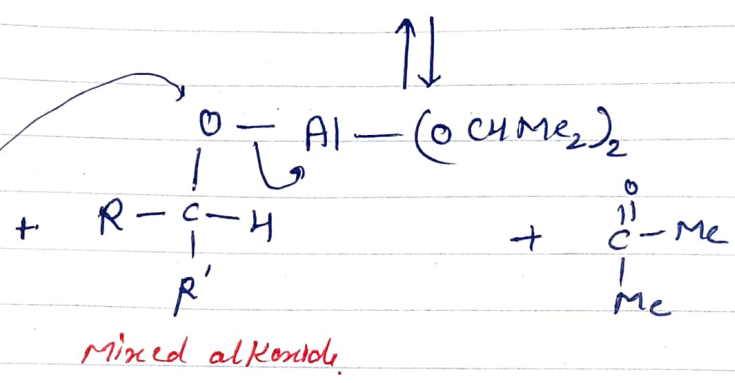
$\begin{array}{l} \text{O} \\ \parallel \\ -\text{C}-\text{CH}_2-\text{C}- \\ \parallel \quad \text{(enol)} \quad \parallel \end{array} \rightarrow \text{B-diketone, } \beta\text{-Ketoesters}$

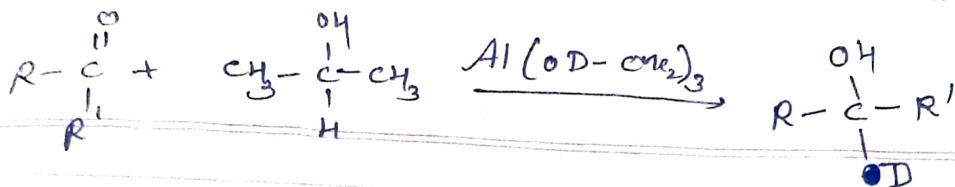


OR



Solvent
 Isopropyl alcohol
 $\text{CH}_3-\text{CH}(\text{CH}_3)-\text{OH}$
 more polar



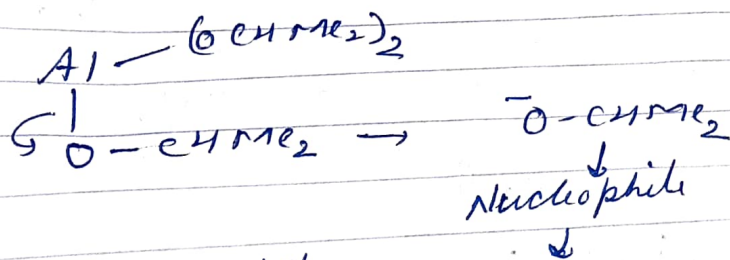


Specificity of Aluminium isopropoxide

much less polar than alkali metal oxides

(Al-O bond is nearly covalent)

Hence very less dissociation to give alkoxide ion.



We need H^- nucleophile.

B.P is $140-150^\circ C$, acetone (b.p. $56^\circ C$) distills easily.

Right side byproduct easily
 ee ghat di rxn right side se
 proceed krta.

