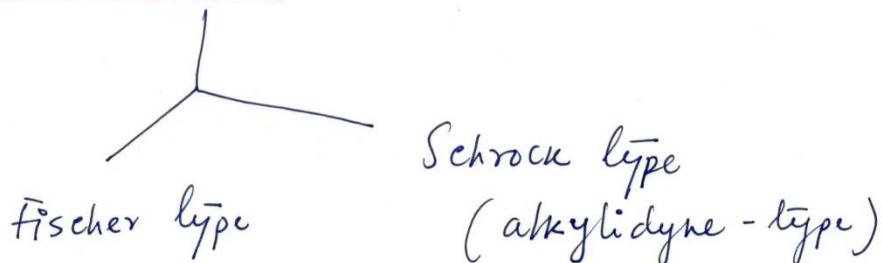
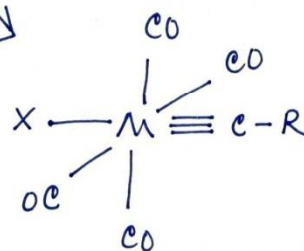
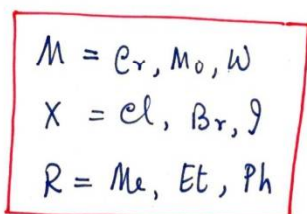
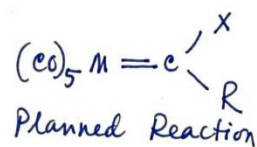
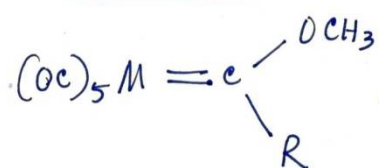


- Carbyne Complexes : $M \equiv C - \text{moiety}$



- Carbyne complexes are important in
 - Organic Synthesis
 - Synthesis of Organometallic CLUSTERS

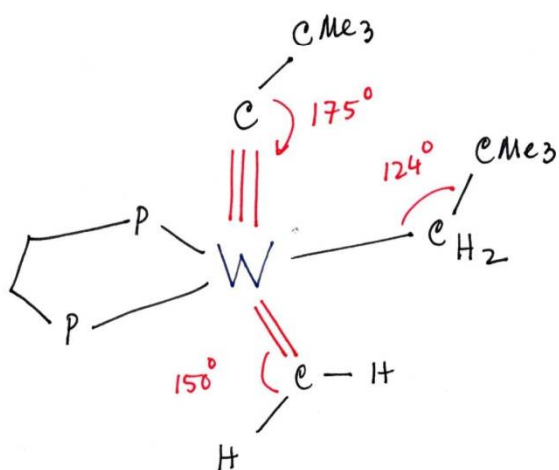
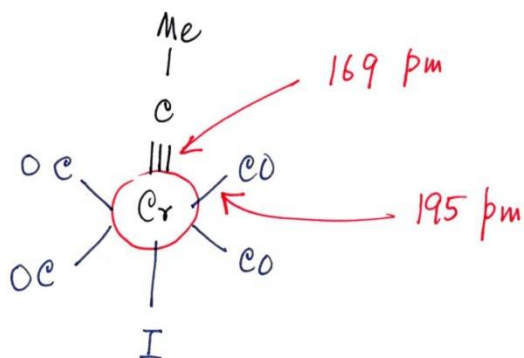
- First Synthesis —



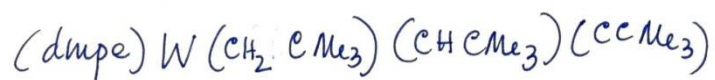
Features

- Substitution always involves the CO gr. trans- to the Carbene lig.
- indicates the character of the CARBENE ligand which is ABNORMALLY HIGH π -accepting which is HIGHER than CO-ligand

Structure & Bonding



$d_{W-C} : 225 \text{ pm}$
 $d_{W=C} : 194 \text{ pm}$
 $d_{W\equiv C} : 178 \text{ pm}$



- Bonding of
- TM-Carbene Complexes : Best explained by Dewar-Chat-Duncanson (DCD) Model

