

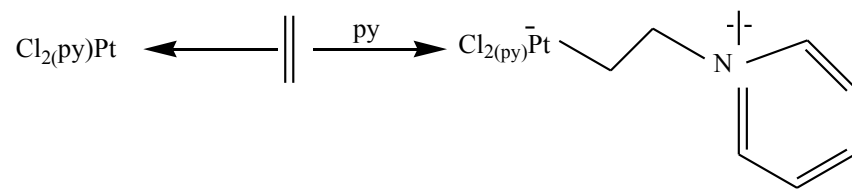
# NUCLEOPHILIC AND ELECTROPHILIC ADDITION IN ORGANOMETTALIC COMPOUNDS

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- ⦿ Types of Reactions
- ⦿ The attacking reagent is either electrophile or Nucleophile.
- ⦿ Nucleophilic attack is favoured when the metal fragment is poor pi-base or good sigma-acid.
- ⦿ Electrophilic attack is favoured when metal is weak sigma acid and strong pi-base.

- ⦿ Nucleophilic attack
- ⦿ The complex bears net positive charge or having electron withdrawing Ligands.
- ⦿ The one of the attached ligand is depleted of electron density in such a case Nucleophile can attack Ligand.

# NUCLEOPHILIC ADDITION



## NUCLEOPHILIC ADDITION TO CO

CO is very sensitive to Nucleophilic attack when coordinated to metal to low pi-basidity.

Co carbon is positively charged because L-to- M sigma donation which is not comensated by back donation.

The CO pi-star orbital are open to attack by Nucleophile.

