

Q905 Explain these hybridizations using electron box diagrams (18pts)

sp hybridization

Beryllium Chloride (BeCl_2)

sp² hybridization

Boron trichloride (BCl_3)

sp³ hybridization

Methane (CH_4)

sp³d hybridization

Phosphorous pentachloride (PCl_5)

sp³d² hybridization

Sulfur hexafluoride (SF_6)

sp³d³ hybridization

Iodine heptafluoride (IF_7)