Table 1Electron counting for commonly encountered ligands

nVE	Ligands
1-electron	Ligands which in the free state would be a radical:
ligands	H, F, Cl, Br, I, OH, NR ₂ , OR, SR, CN, N ₃ , NCS, bent NOCR ₃ alkyl, aryl, alkenyl, alkynyl, formyl, acyl
2-electron	Ligands which in the free state would have an even number of valence electrons:
ligands	OH_2 , NH_3 , ethers, amines, thioethers, phosphines, alkenes, alkynes CO, CNR, CS, CR_2 , C= CR_2
	Molecules which bind side-on through a multiple bond:
	O_2 , SO_2 , CS_2 , $RP=PR$, $R_2Si=CR_2$
3-electron	Linear NO, nitride (N)
ligands	R K H C
	$RC \xrightarrow{\bigcirc} CR$ $M \xrightarrow{\frown} M H_2C \xrightarrow{\frown} CH_2 \cdot$ η^3 -cyclopropenyl μ -X η^3 -allyl
4-electron	
ligands	η ⁴ -cyclobutadienyl diene
5-electron	
ligands	
	η ⁵ -cyclopentadienyl
6-electron	
ligands	
7-electron	
ligands	
8-electron	
ligands	