



<i>O_h</i> (<i>m3m</i>)	<i>E</i>	8 <i>C</i> ₃	6 <i>C</i> ₂	6 <i>C</i> ₄	3 <i>C</i> ₂ (= <i>C</i> ₄ ²)	<i>i</i>	6 <i>S</i> ₄	8 <i>S</i> ₆	3σ _h	6σ _d		
A _{1g}	1	1	1	1	1	1	1	1	1	1	1	$x^2 + y^2 + z^2$
A _{2g}	1	1	-1	-1	1	1	-1	1	1	-1		
E _g	2	-1	0	0	2	2	0	-1	2	0		$(2z^2 - x^2 - y^2, \sqrt{3}(x^2 - y^2))$
T _{1g}	3	0	-1	1	-1	3	1	0	-1	-1	(<i>R_x</i> , <i>R_y</i> , <i>R_z</i>)	
T _{2g}	3	0	1	-1	-1	3	-1	0	-1	1		(<i>xy</i> , <i>xz</i> , <i>yz</i>)
A _{1u}	1	1	1	1	1	-1	-1	-1	-1	-1		
A _{2u}	1	1	-1	-1	1	-1	1	-1	-1	1		
E _u	2	-1	0	0	2	-2	0	1	-2	0		
T _{1u}	3	0	-1	1	-1	-3	-1	0	1	1	(<i>x</i> , <i>y</i> , <i>z</i>)	
T _{2u}	3	0	1	-1	-1	-3	1	0	1	-1		

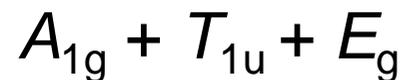
Molecole ipervalenti: SF₆ (gruppo O_h)

O _h	E	8C ₃	6C ₂	6C ₄	3C ₂ (= C ₄ ²)	i	6S ₄	8S ₆	3σ _h	6σ _d
A _{1g}	1	1	1	1	1	1	1	1	1	1
A _{2g}	1	1	-1	-1	1	1	-1	1	1	-1
E _g	2	-1	0	0	2	2	0	-1	2	0
T _{1g}	3	0	-1	1	-1	3	1	0	-1	-1
T _{2g}	3	0	1	-1	-1	3	-1	0	-1	1
A _{1u}	1	1	1	1	1	-1	-1	-1	-1	-1
A _{2u}	1	1	-1	-1	1	-1	1	-1	-1	1
E _u	2	-1	0	0	2	-2	0	1	-2	0
T _{1u}	3	0	-1	1	-1	-3	-1	0	1	1
T _{2u}	3	0	1	-1	-1	-3	1	0	1	-1

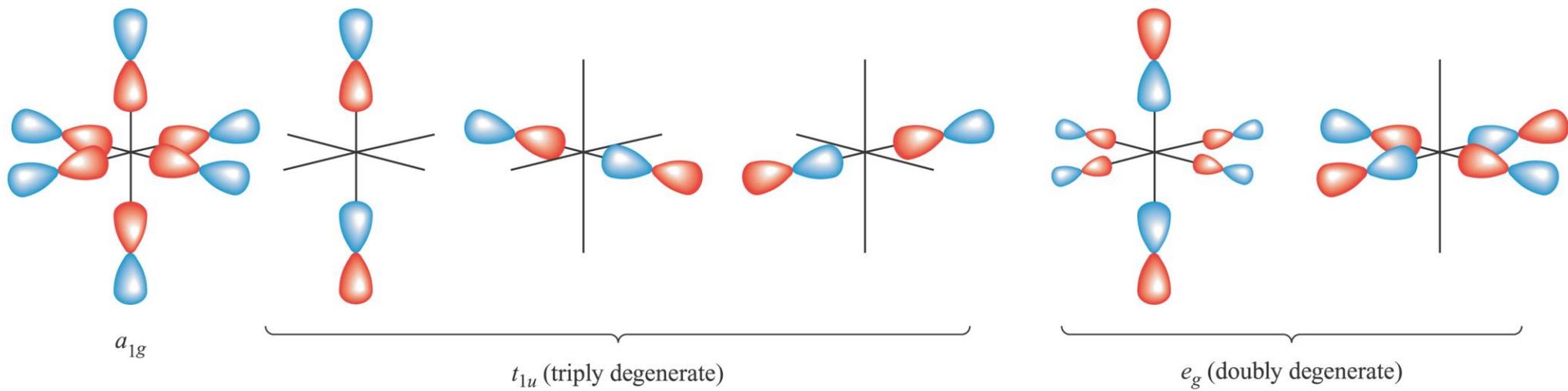
E	8C ₃	6C ₂	6C ₄	3C ₂	i	6S ₄	8S ₆	3σ _h	6σ _d
6	0	0	2	2	0	0	0	4	2

sei 2p_z radiali =

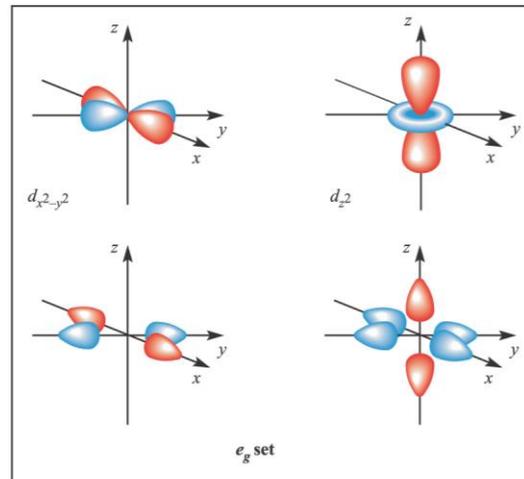
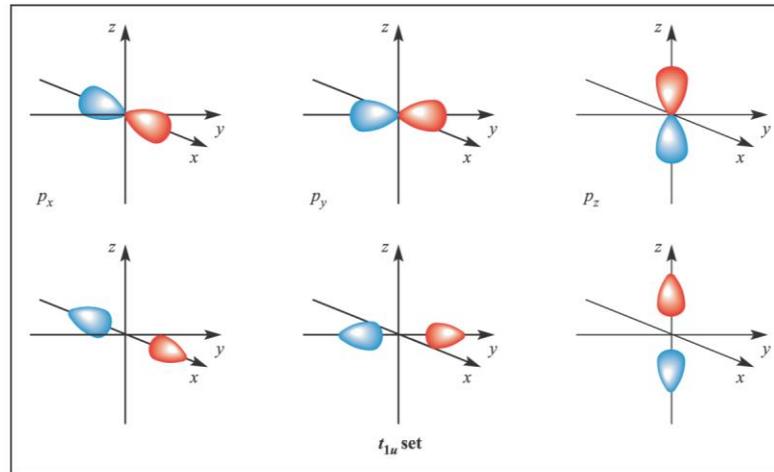
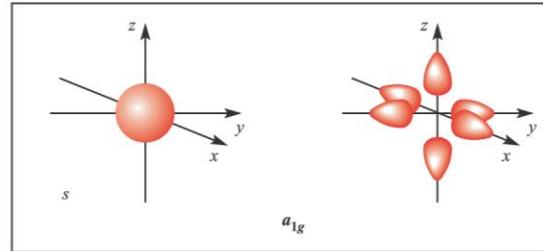
sei lone pairs delle molecole di NH₃



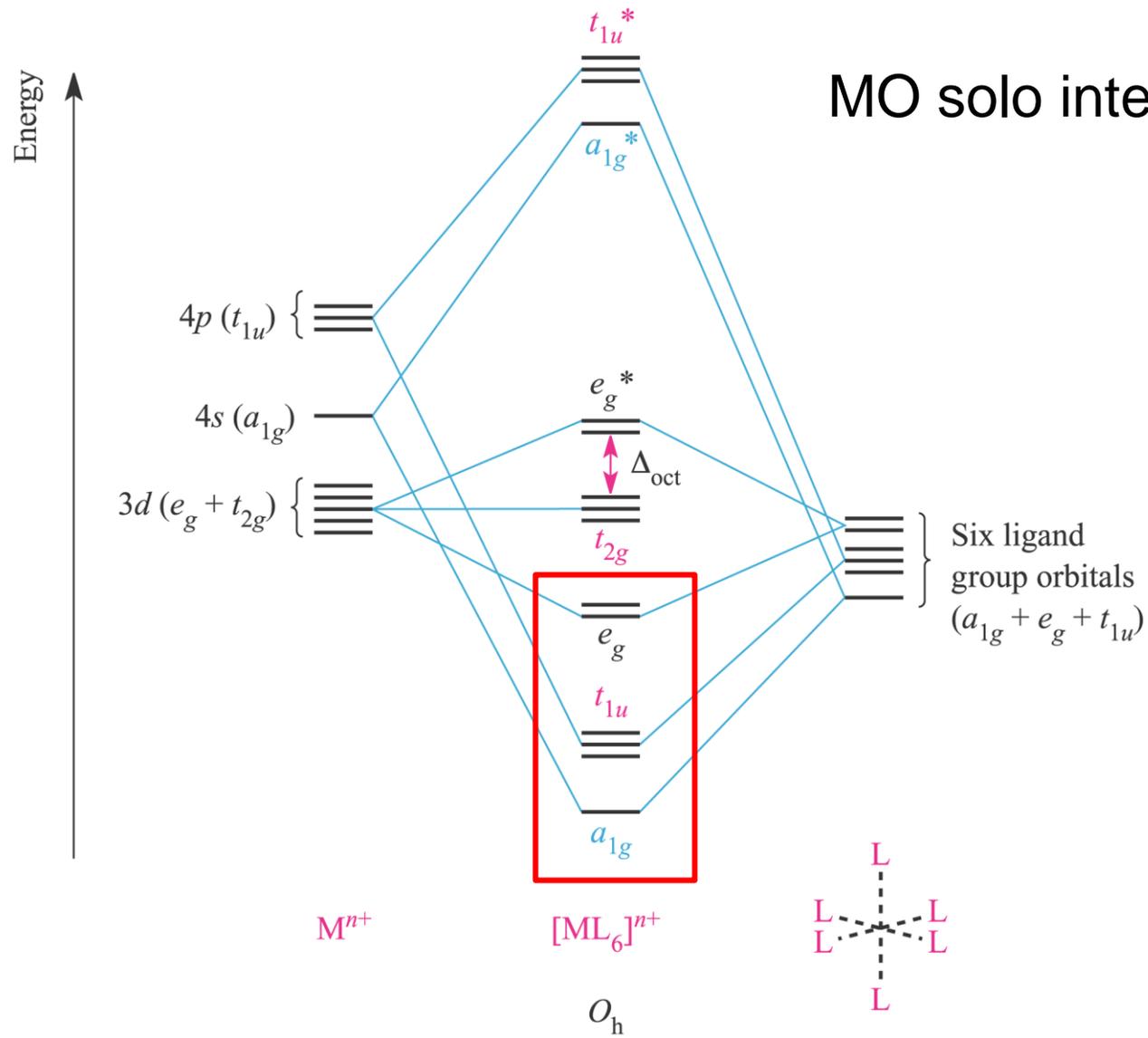
LGO del gruppo F_6 in SF_6

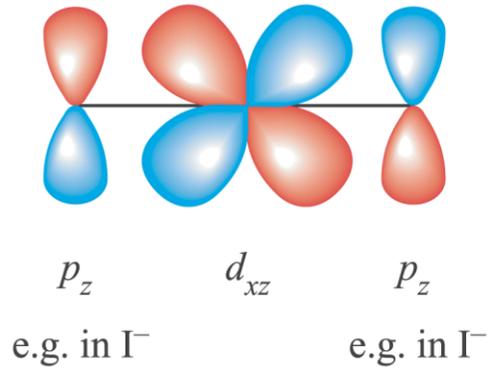
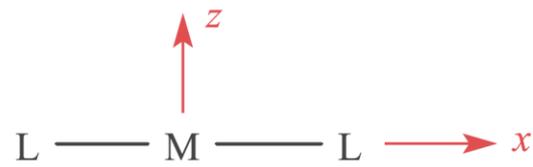


LGO di $[\text{Co}(\text{NH}_3)_6]^{3+}$

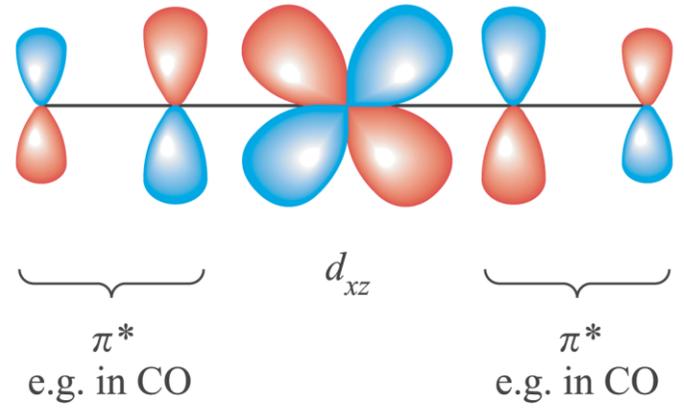


MO solo interazioni σ



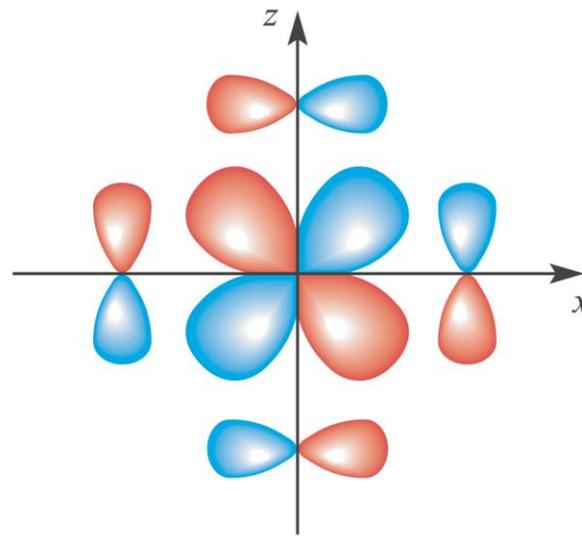
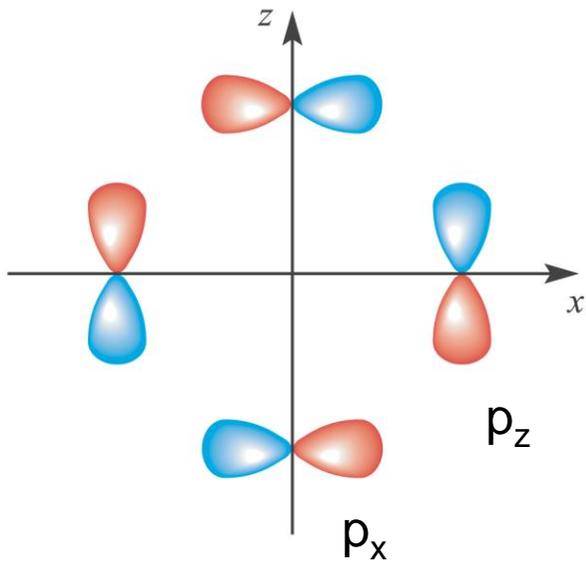


π -donatore

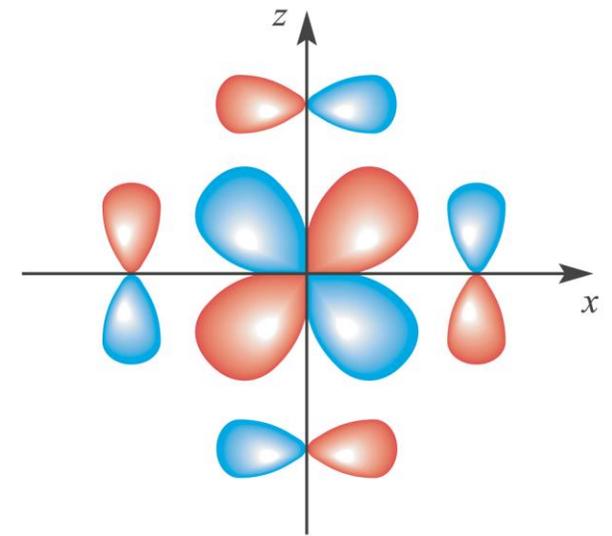


π -accettore

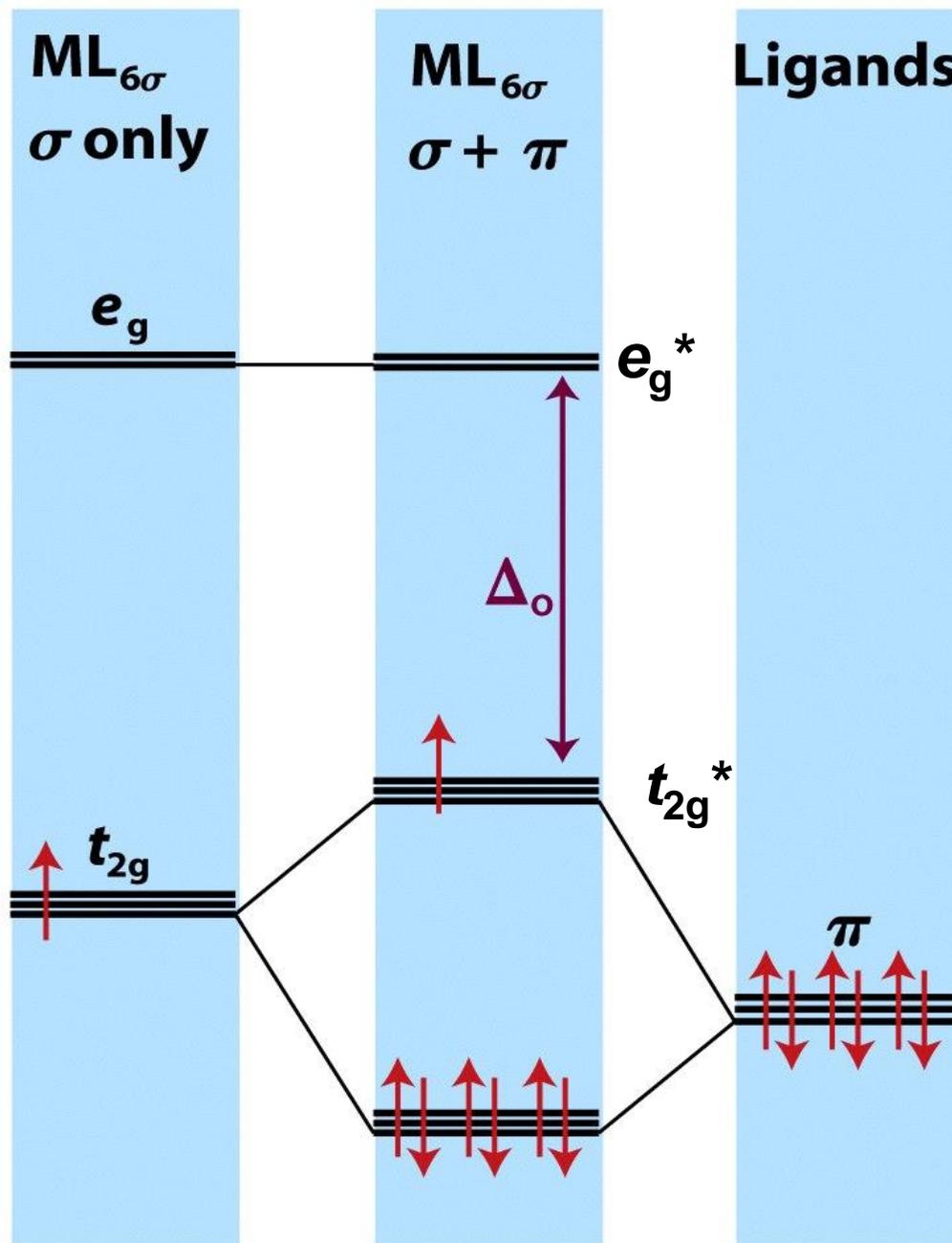
LGO π in un piano di un ottaedro



combinazione legante

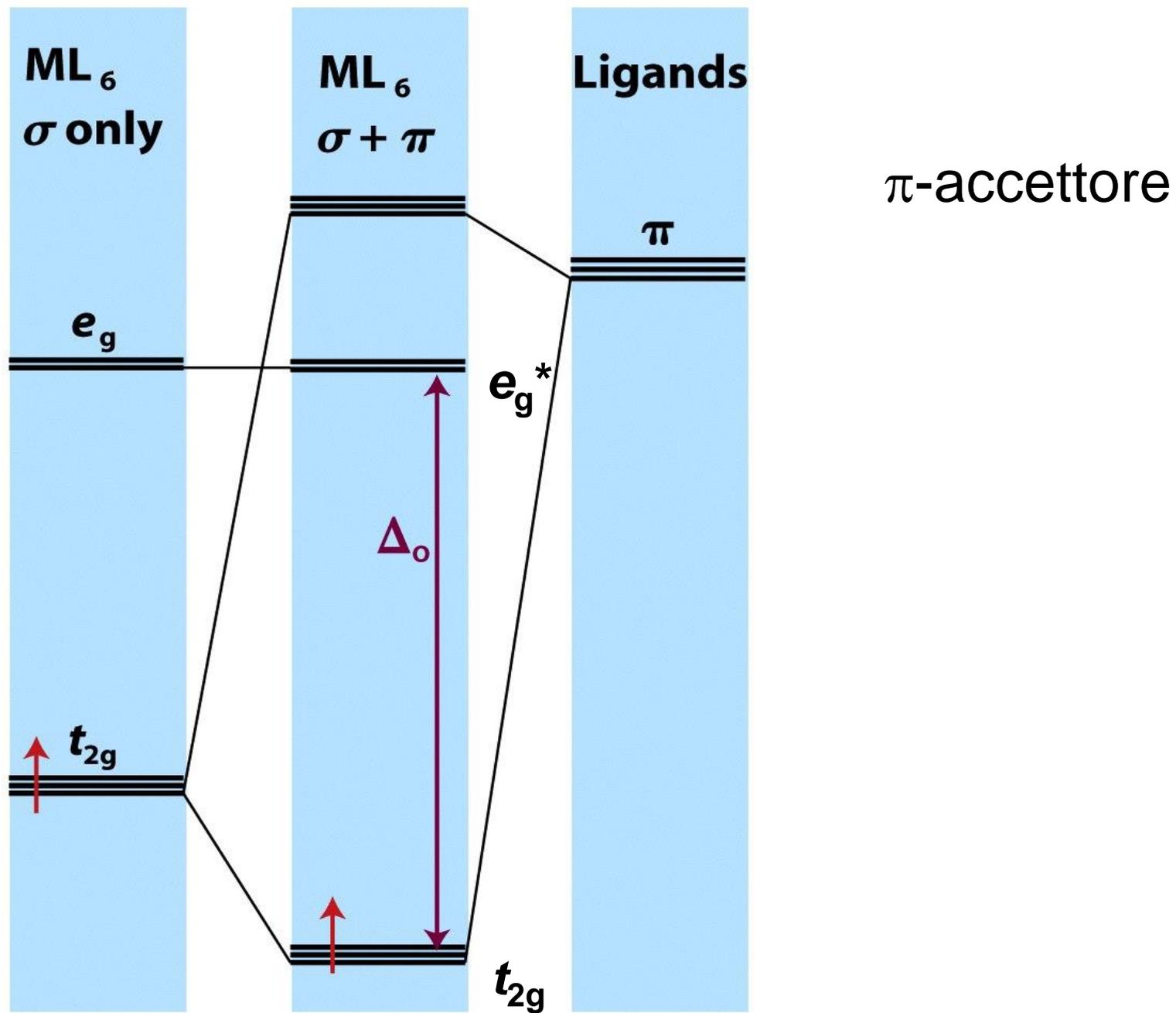


combinazione antilegante

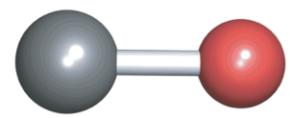
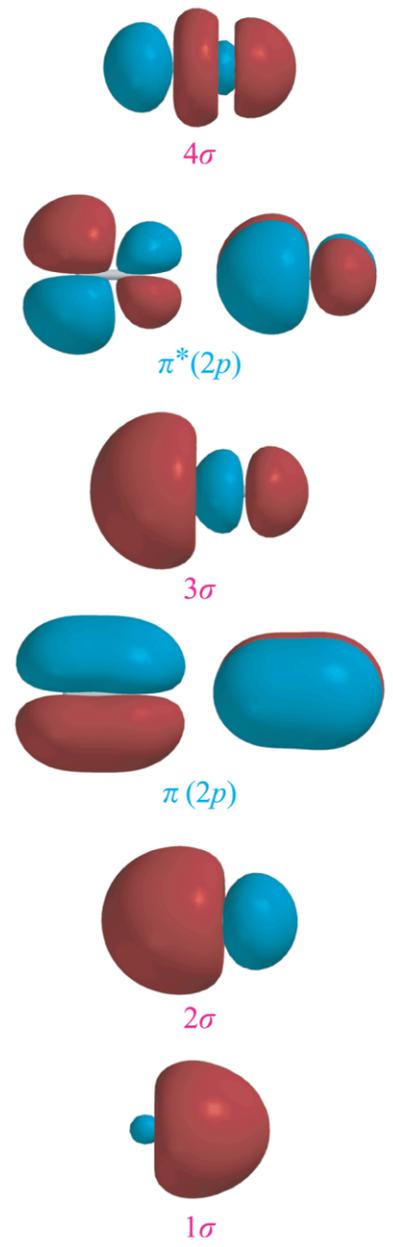
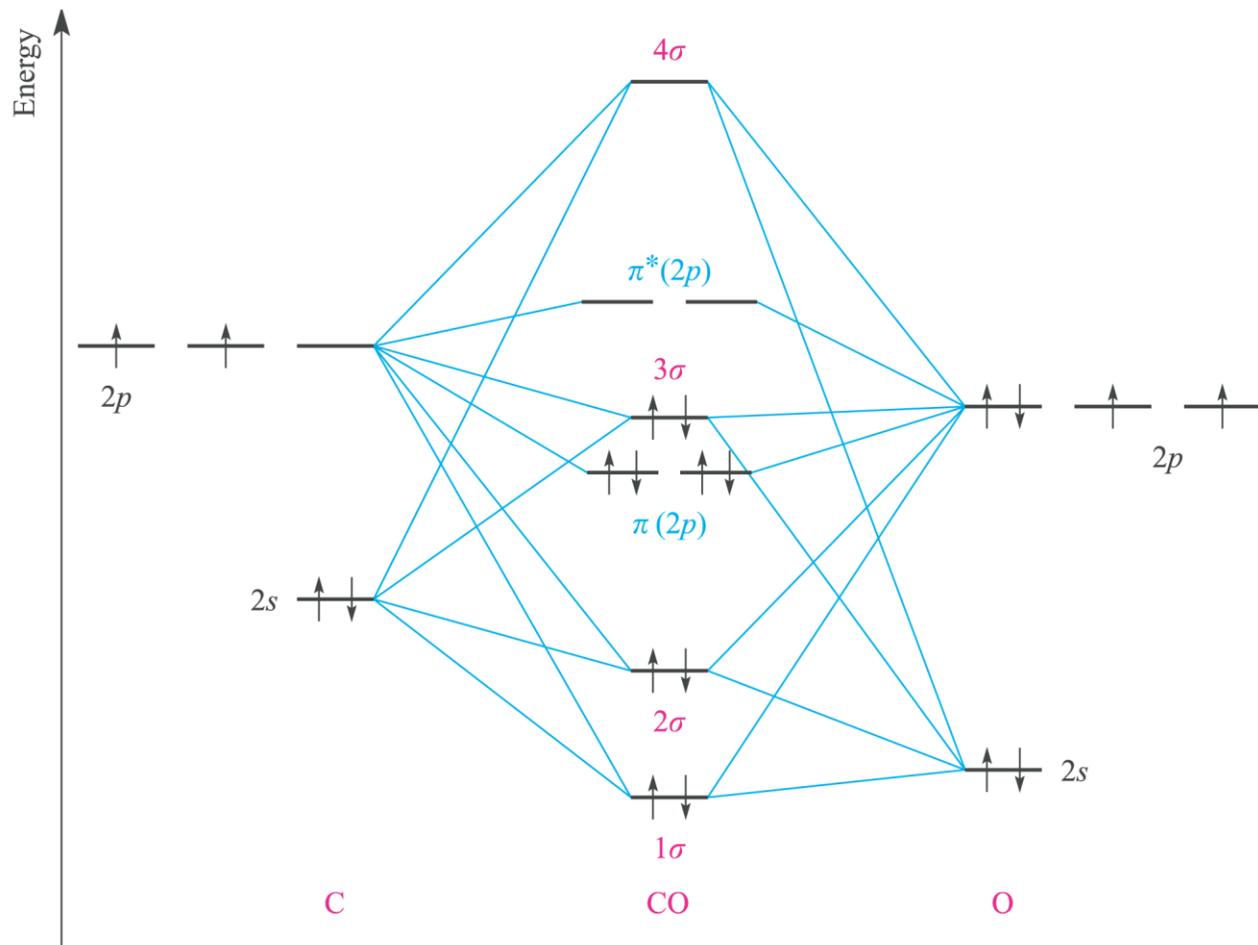


π -donatore
e.g. $[\text{CoF}_6]^{3-}$

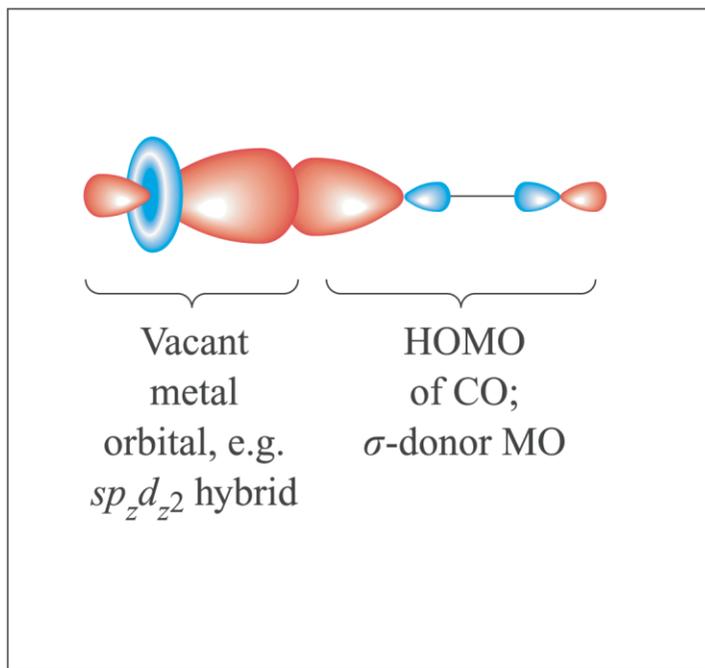
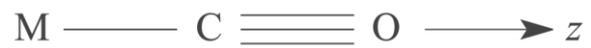
LGO t_{2g}
(t_{1u} t_{2u} t_{1g})



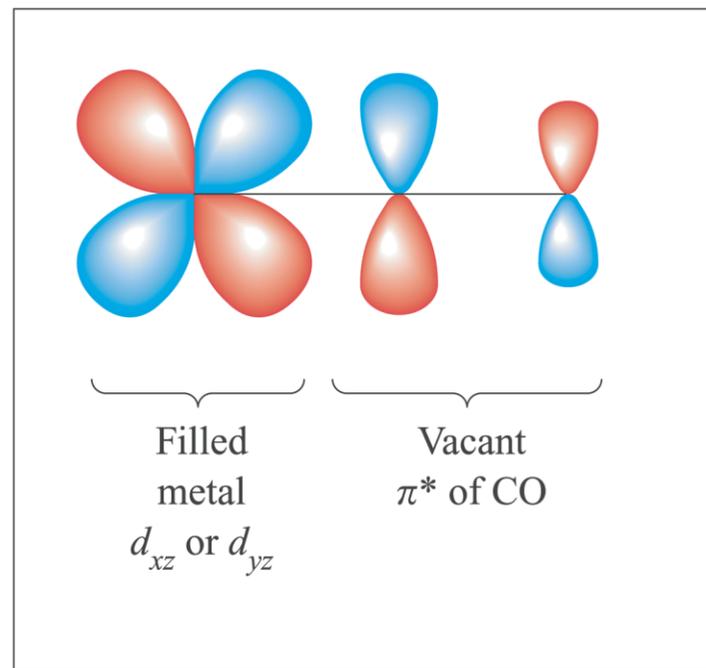
Leganti π -accettori stabilizzano metalli in basso stato di ossidazione



(b)

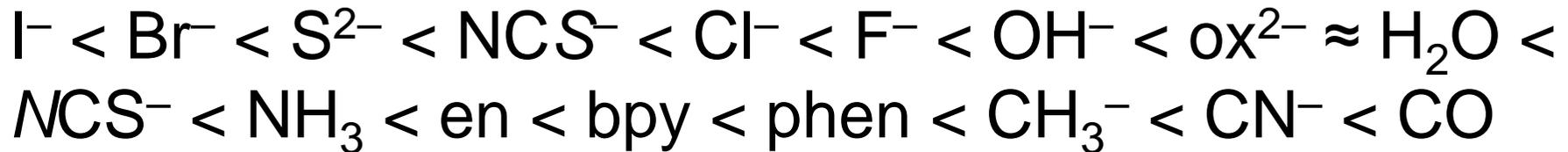


CO-to-M donation
(a)



M-to-CO back-donation
(b)

Serie spettrochimica dei leganti



Campo debole

Campo forte

π donatori < π donatori deboli < nessun contributo π < π accettori