Assegnare il nome tradizionale e IUPAC ai seguenti composti

Cu_2O

+1 -2

+1 OSO

+2 ICO

OSSIDO RAMEOSO

OSSIDO DI DIRAME

N_2O_5

+5 -2

$-2 \cdot 5 + 2x = 0$

+3 OSA

+5 ICA

ANIDRIDE NITRICA

PENTOSSIDO DI DIAZOTO

$Mg(OH)_2$

IDROSSIDO DI MAGNESIO

DI IDROSSIDO DI MAGNESIO

$(NH_4)_2SO_4$

NH_4^+

AMMONIO

SO_4^{2-}

$-2 \cdot 4 + x = -2$

+4 OSO

+6 ICO

ITO

ATO

SOLFATO DI AMMONIO

TETRAOSSO SOLFATO(VI) DI DIAMMONIO

Assegnare il nome tradizionale e IUPAC ai seguenti composti

$CuSO_4 \cdot 5H_2O$

Cu^{2+} SO_4^{2-}

SOLFATO RAMEICO PENTAIDRATO

TETRAOSSOSOLFATO(VI) DI RAME PENTAIDRATO

$Ni(ClO_2)_2 \cdot 7H_2O$

Ni^{2+} ClO_2^- (+3, -2)

$-2 \cdot 2 + x = -1$

+1 IPO-OSO

+3 OSO

+5 ICO

+7 PER-ICO

CLORITO DI NICHEL EPTAIDRATO

DIDIOSSOCLORATO(III) DI NICHEL EPTAIDRATO

Assegnare la formula chimica ai seguenti composti

acido ipoiodoso

+1 +1 -2
H I O

$I_2O + H_2O \longrightarrow H_2I_2O_2 \equiv 2HIO$

nitrato di cromo triidrato

+3 OSA
+5 ICA $N_2O_5 + H_2O \longrightarrow H_2N_2O_6 \equiv 2HNO_3$

Cr^{3+} NO_3^-

$Cr(NO_3)_3 \cdot 3H_2O$

Assegnare la formula chimica ai seguenti composti

triossonitrato(V) di sodio

+1 +5 -2
$NaNO_3$

$+1+5-2\cdot3=0$

tetracloruro di stagno(IV)

+4 -1
$SnCl_4$

$+4-1\cdot4=0$

idrossido di cromo(III)

+3
$Cr(OH)_3$

tetraossofosfato(V) di rame(II) diidrato

+2 +1 +5 -2
$CuHPO_4 \cdot 2H_2O$

$+2+5-2\cdot4=-1$

$XeOF_4$ Xe Z=54

1s
2s 2p
3s 3p 3d
4s 4p 4d 4f
5s 5p 5d 5f
6s 6p 6d 6f

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6$

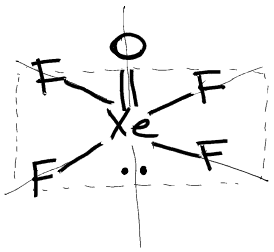
Guscio valenza $5s^2 5p^6$

n°el. = 8(Xe) + 2(O) − 2(O, π) + 1·4(F) = 12 elettroni

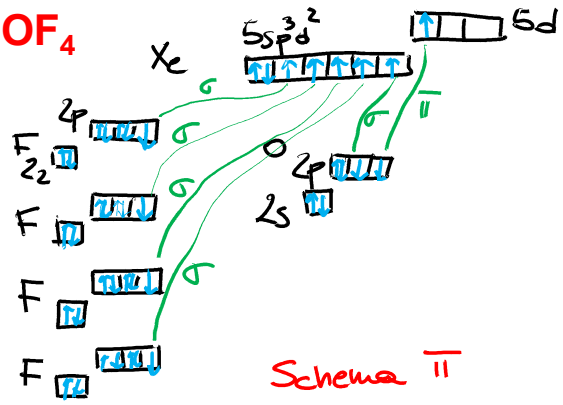
n° coppie STRUTTURALI : 6

Geom. cop. STRUTTURALI AX_6 Xe sp^3d^2

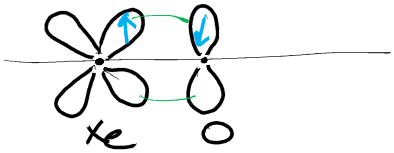
Geom. MOLECOLA AX_5E



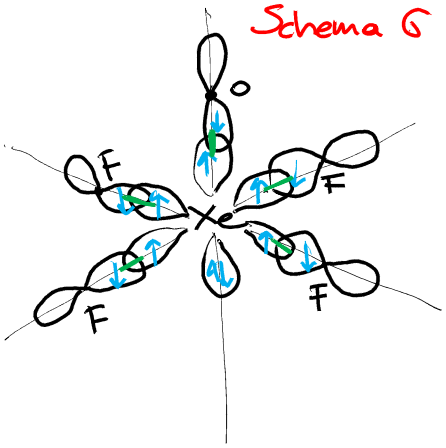
$XeOF_4$



Schema π



Schema σ



XeO_2F_2 Xe Z=54

1s
2s 2p
3s 3p 3d
4s 4p 4d 4f
5s 5p 5d 5f
6s 6p 6d 6f

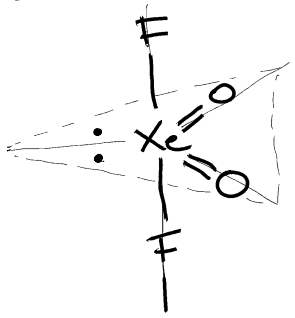
$5s^2 5p^6$

m° el. = 8(Xe) + 2·2(O) − 2·2(O_{II}) + 2·1(F) = 10 el.

m° coppie strutturali 5

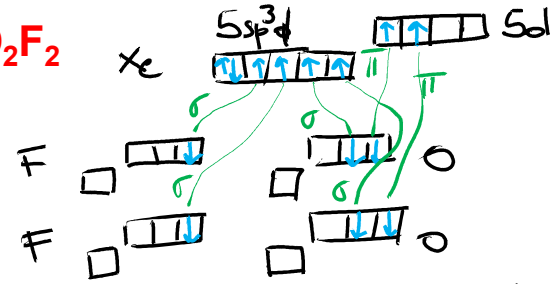
Geom. C. STRUTTURALI AX_5 Xe sp^3d

Geom. MOLECOLA AX_4E

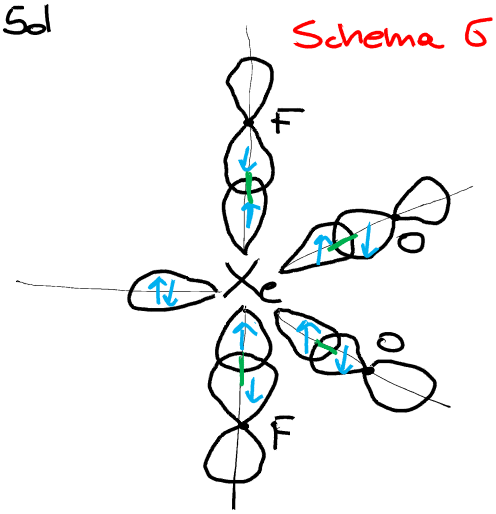


XeO_2F_2

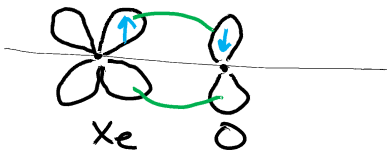
Xe $5sp^3d$ 5d



Schema σ



Schema π



ICl_4^-

I Z=53

$5s^2\ 5p^5$

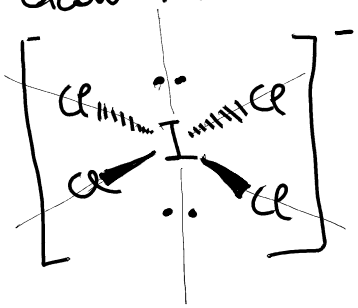
1s
2s 2p
3s 3p 3d
4s 4p 4d 4f
5s 5p 5d 5f
6s 6p 6d 6f

$m_{el.} = 7(I) + 1 \cdot 4(Cl) + 1(\ominus) = 12$ elettroni

6 coppie STRUTTURALI

Geom. Coppie STRUTTURALI AX_6 $I\ sp^3d^2$

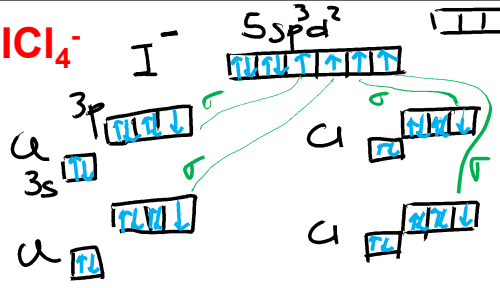
Geom. MOLECOLA AX_4E_2

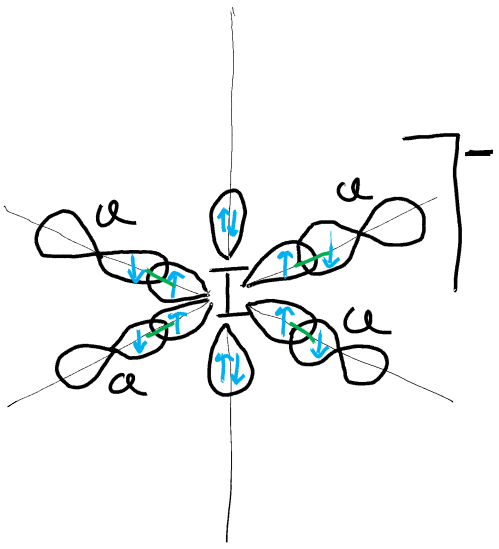


ICl_4^-

I^- $5sp^3d^2$ 5d

3p 3s





H_2SO_4

1s
2s 2p
3s 3p 3d
4s 4p 4d 4f
5s 5p 5d 5f
6s 6p 6d 6f

SO_4^{2-} S Z=16

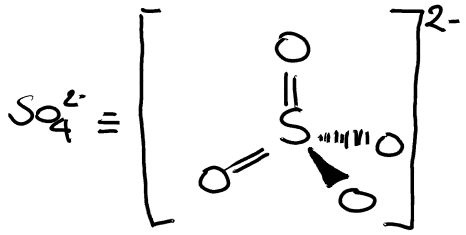
$3s^2 3p^4$

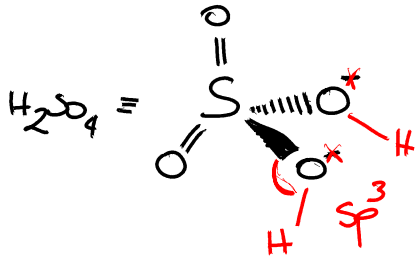
m°el. = 6(S) + 4·2(O) − 4·2($0,\bar{1}$) + 2(⊖) = 8 elettroni

4 coppie strutturali

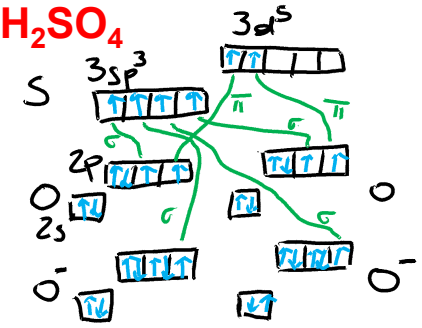
Geom. COPPIE STRUTTURALI AX_4

Geom. molecolare AX_4 S → sp^3

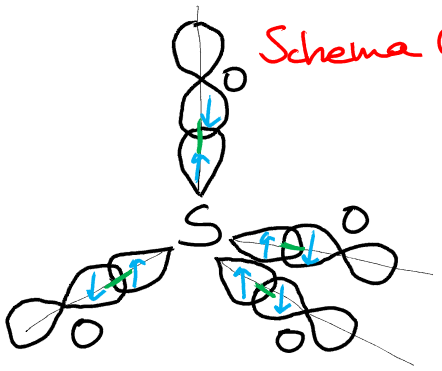




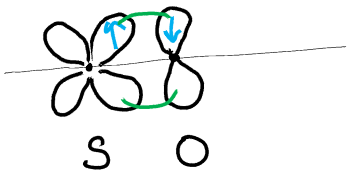
H_2SO_4



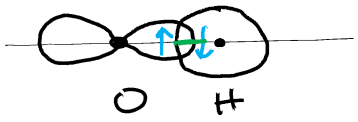
Schema σ



Schema π



Schema O-H (eventuale)

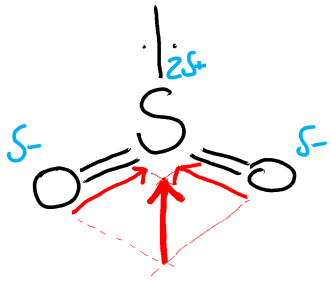


SO_2 $3s^2 3p^4$

6(S) = 6 elettroni

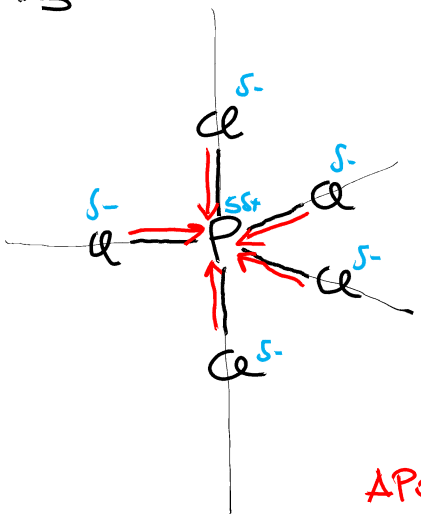
3 C.S. AX_3

Molecola AX_2E



POLARE $\mu \neq 0$

PCl_5 AX_5



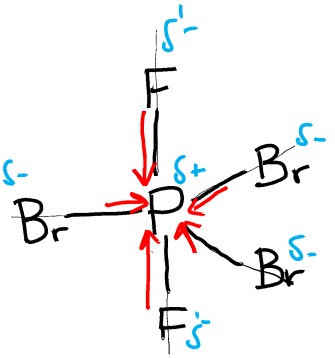
$\mu = 0$

$\mu_{Ax} = 0$

$\mu_{eq} = 0$

APOLARE 120°

PF_2Br_3 $\Delta\chi_S$



$\delta' > \delta^-$

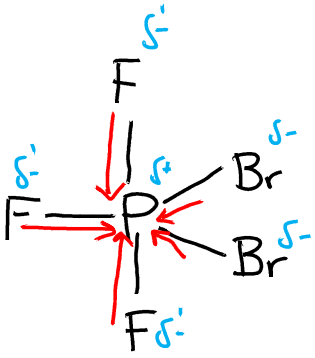
$\mu = 0$

$\mu_{\Delta\chi} = 0$

$\mu_{eq} = 0$

APOLARE

PF_3Br_2



$\delta' > \delta^-$

$\mu_{\Delta\chi} = 0$

$\mu_{eq} \neq 0$

$\mu \neq 0$

POLARE