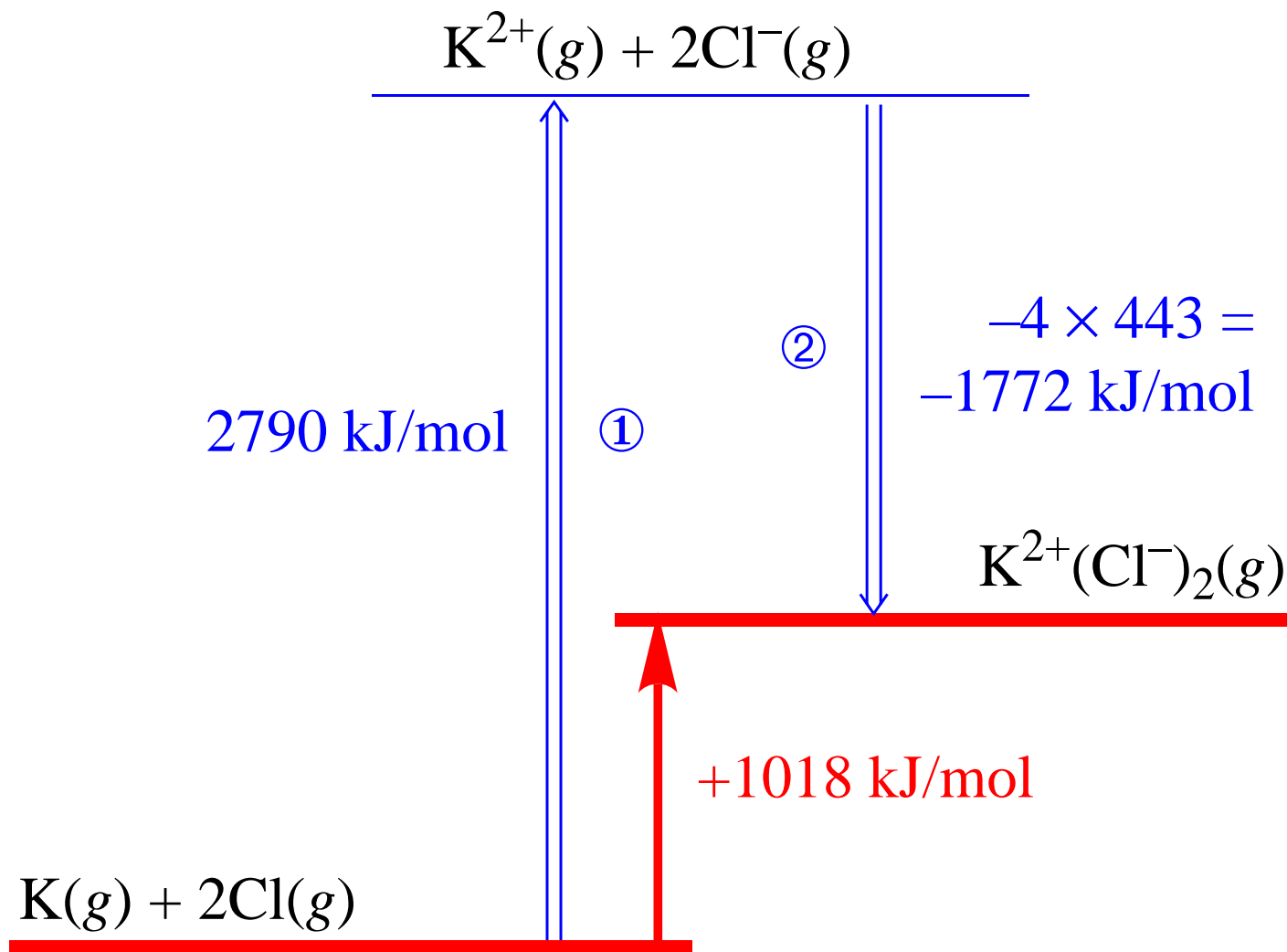
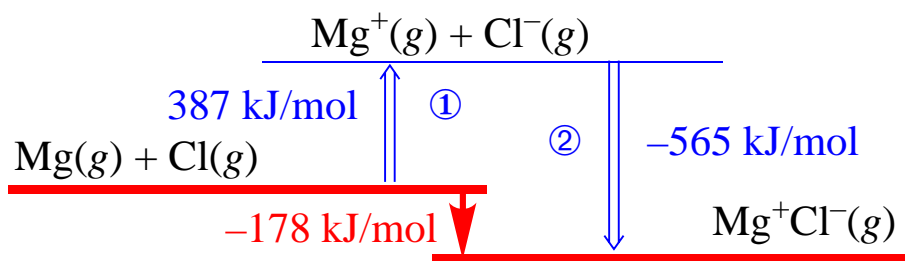


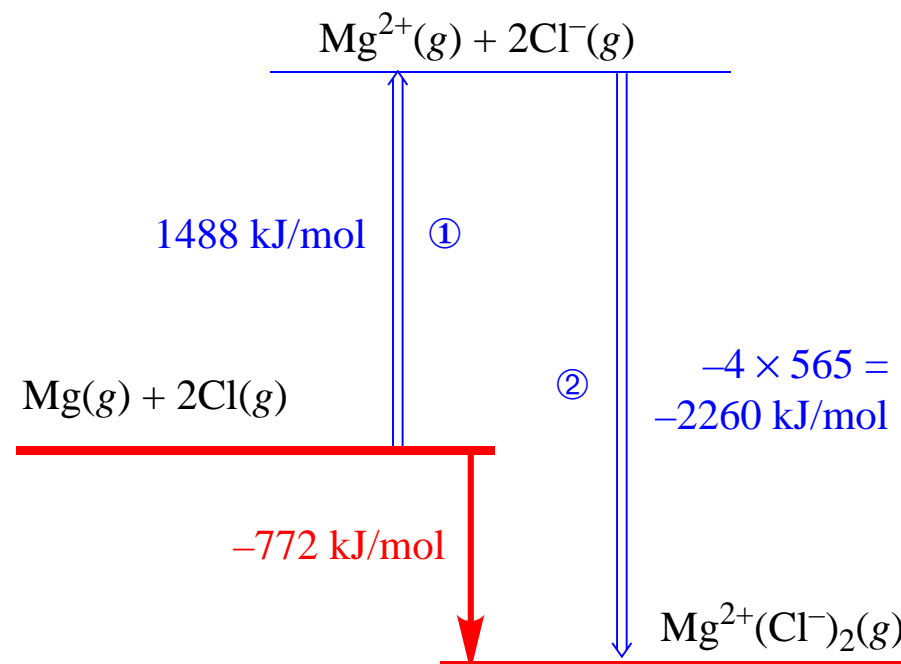
$$\textcircled{1} \Delta H_I(\text{K}) + \Delta H_{EA}(\text{Cl}) = 418 + (-349) = 69 \text{ kJ/mol}$$



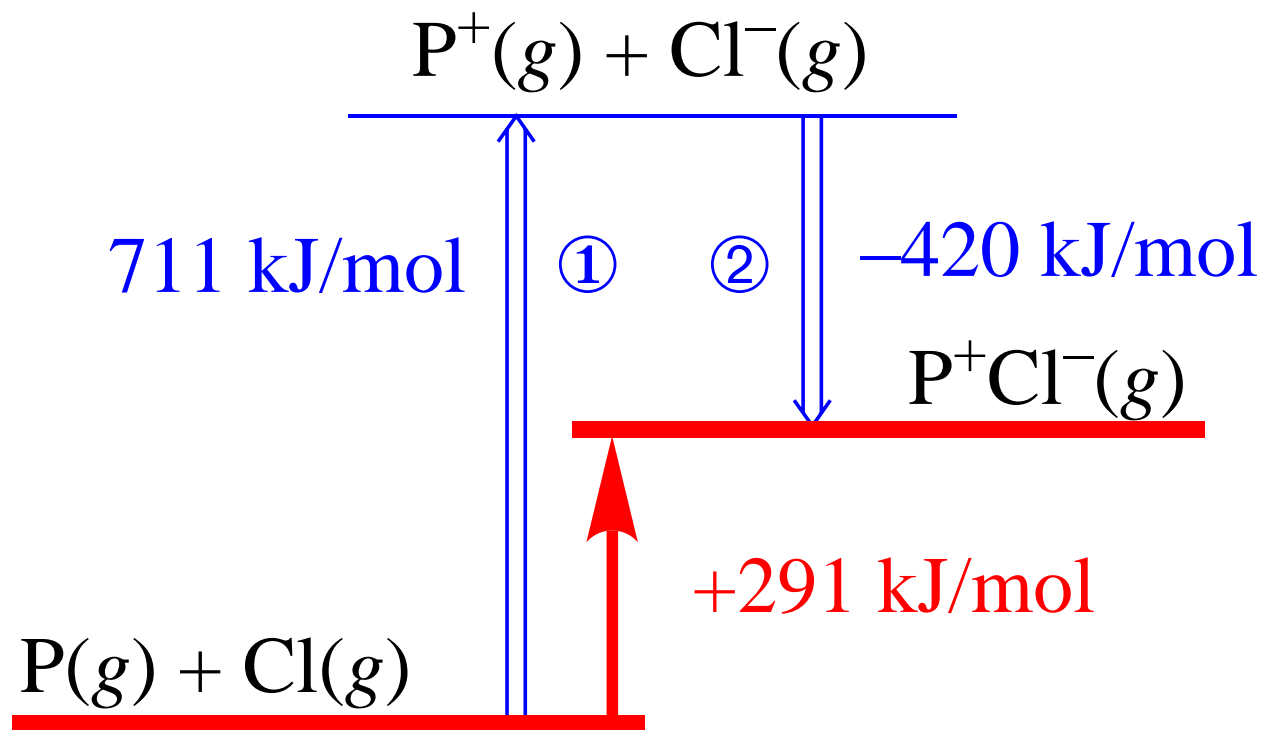
① $\Delta H_{\text{I1}}(\text{K}) + \Delta H_{\text{I2}}(\text{K}) + 2 \times \Delta H_{\text{EA}}(\text{Cl}) =$
 $418 + \mathbf{3070} + 2 \times (-349) = 3488 \text{ kJ/mol}$



$$\textcircled{1} \Delta H_{\text{I1}}(\text{Mg}) + \Delta H_{\text{EA}}(\text{Cl}) = 736 + (-349) = 387 \text{ kJ/mol}$$



$$\textcircled{1} \Delta H_{\text{I1}}(\text{Mg}) + \Delta H_{\text{I2}}(\text{Mg}) + 2 \times \Delta H_{\text{EA}}(\text{Cl}) = 736 + \mathbf{1450} + 2 \times (-349) = 1488 \text{ kJ/mol}$$




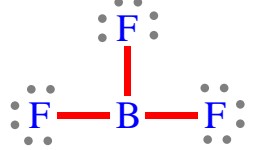
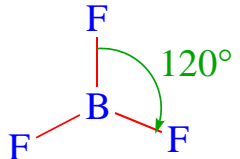
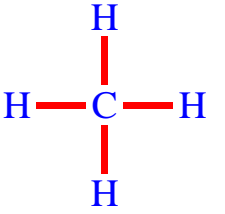
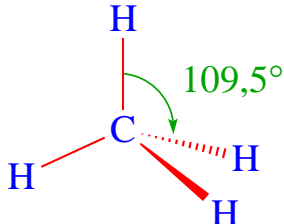
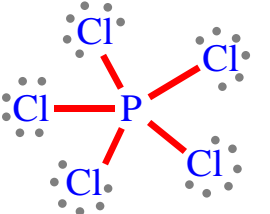
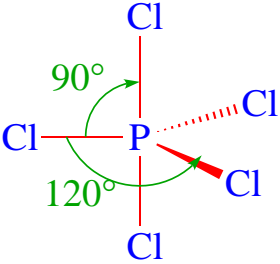
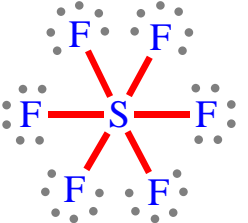
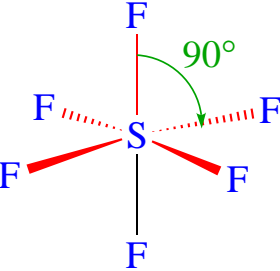
① $\Delta H_I(P) + \Delta H_{EA}(Cl) = \mathbf{1060} + (-349) = 711 \text{ kJ/mol}$

Tabla 2.1. Longitudes medias de enlaces simples y múltiples en ångströms ($1 \text{ \AA} = 10^{-10} \text{ m}$)

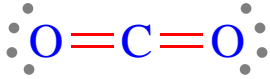
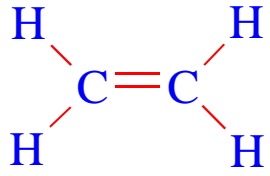
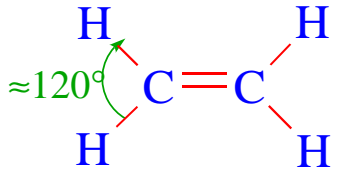
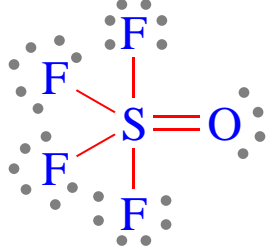
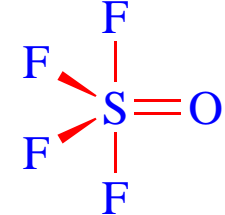
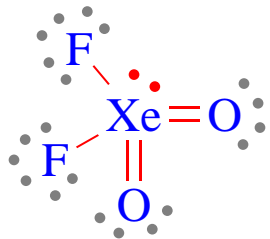
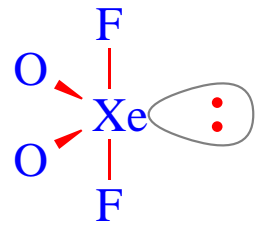
H-H	0,74	F-F	1,28	Cl-Cl	2,00	Br-Br	2,28	I-I	2,66				
H-F	0,92	H-Cl	1,27	H-Br	1,42	H-I	1,61	O-H	0,94	N-H	0,98	C-H	1,10
O-O	1,32	N-N	1,40	C-C	1,54	N-O	1,36	C-O	1,43	C-N	1,47		
				C=C	1,34	N=O	1,15	C=O	1,22	C=N	1,27		
				C≡C	1,21	N≡O	1,08	C≡O	1,13	C≡N	1,15		

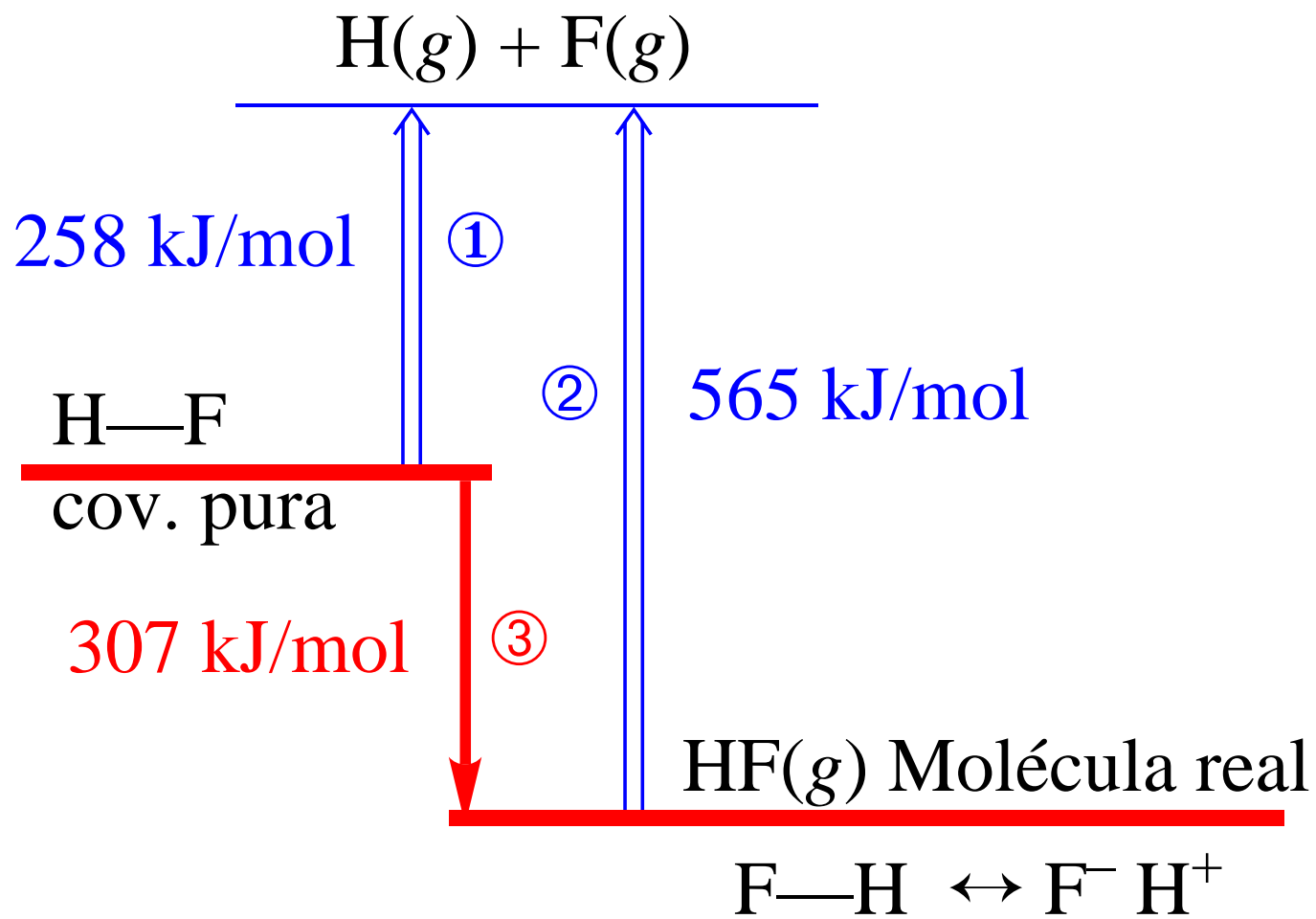
Tabla 2.2. Entalpías medias de enlace en kilojulios por mol

H-H	436	F-F	158	Cl-Cl	242	Br-Br	193	I-I	151				
H-F	565	H-Cl	431	H-Br	366	H-I	299	O-H	463	N-H	388	C-H	412
O-O	157	N-N	163	C-C	348	N-O	200	C-O	360	C-N	305		
O=O	496	N=N	409	C=C	612	N=O	600	C=O	743	C=N	615		
		N≡N	944	C≡C	837			C≡O	1070	C≡N	891		

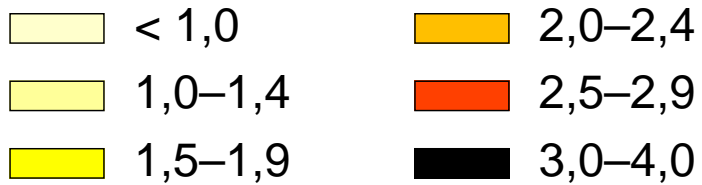
<i>Molécula</i>	<i>Estructura de Lewis</i>	<i>Pares electrónicos</i>	<i>Geometría molecular</i>
BeCl₂		2	Cl—Be—Cl lineal
BF₃		3	 triangular plana
CH₄		4	 tetraédrica
PCl₅		5	 bipirámide trigonal
SF₆		6	 octaédrica

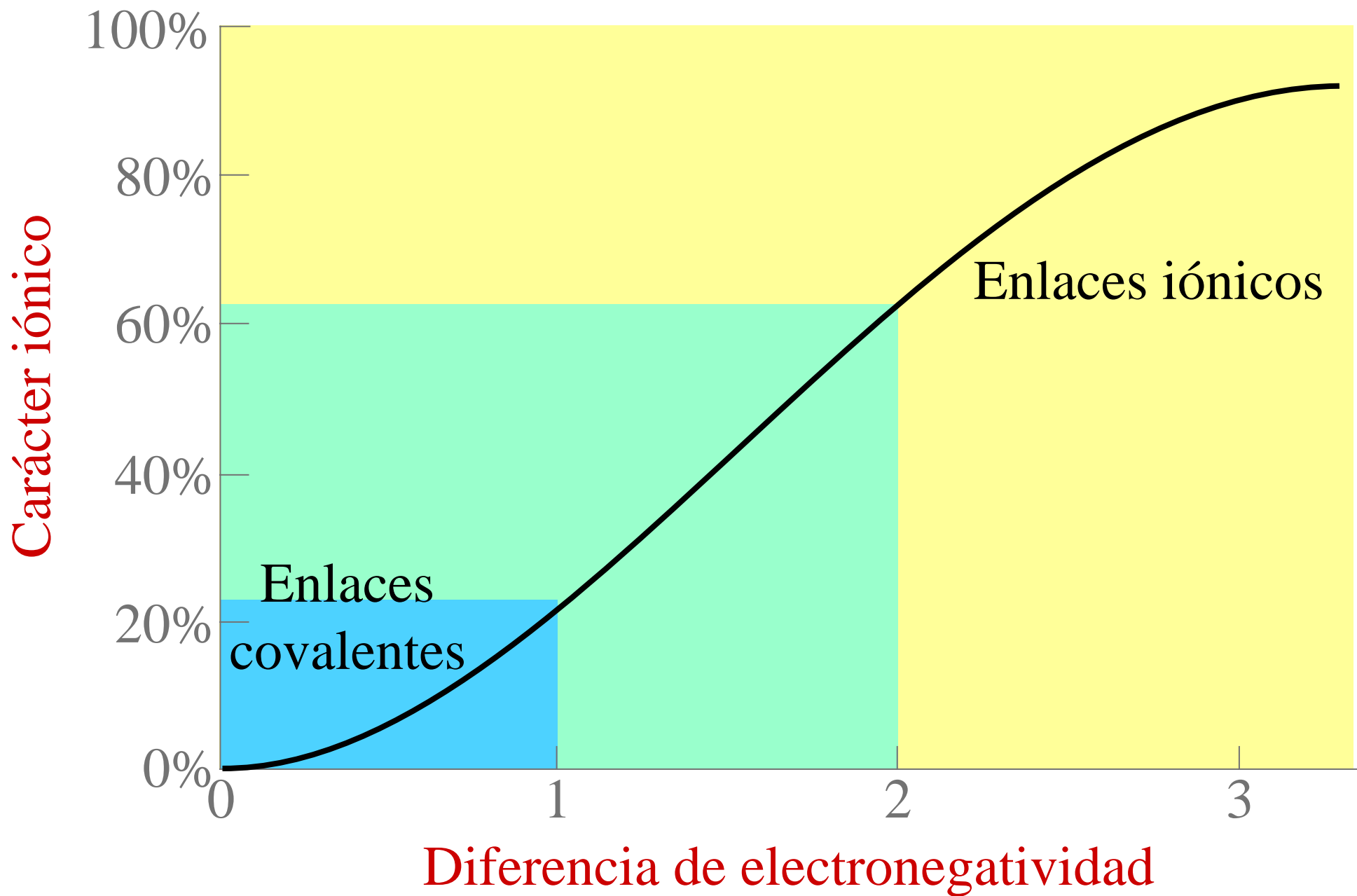
<i>Mol.</i>	<i>Est. de Lewis</i>	<i>PE</i>	<i>PS</i>	<i>P</i>	<i>Geometría electrónica</i>	<i>Geometría Molecular</i>	
SnCl₂		2	1	3	triangular plana		angular
NH₃		3	1	4	tetraédrica		pirámide trigonal
H₂O		2	2	4	tetraédrica		angular
SF₄		4	1	5	bipirámide trigonal		tetraedro deformado o balancín
ClF₃		3	2	5	bipirámide trigonal		forma de T
I₃⁻		2	3	5	bipirámide trigonal		lineal
BrF₅		5	1	6	octaédrica		pirámide cuadrada
XeF₄		4	2	6	octaédrica		plano-cuadrada

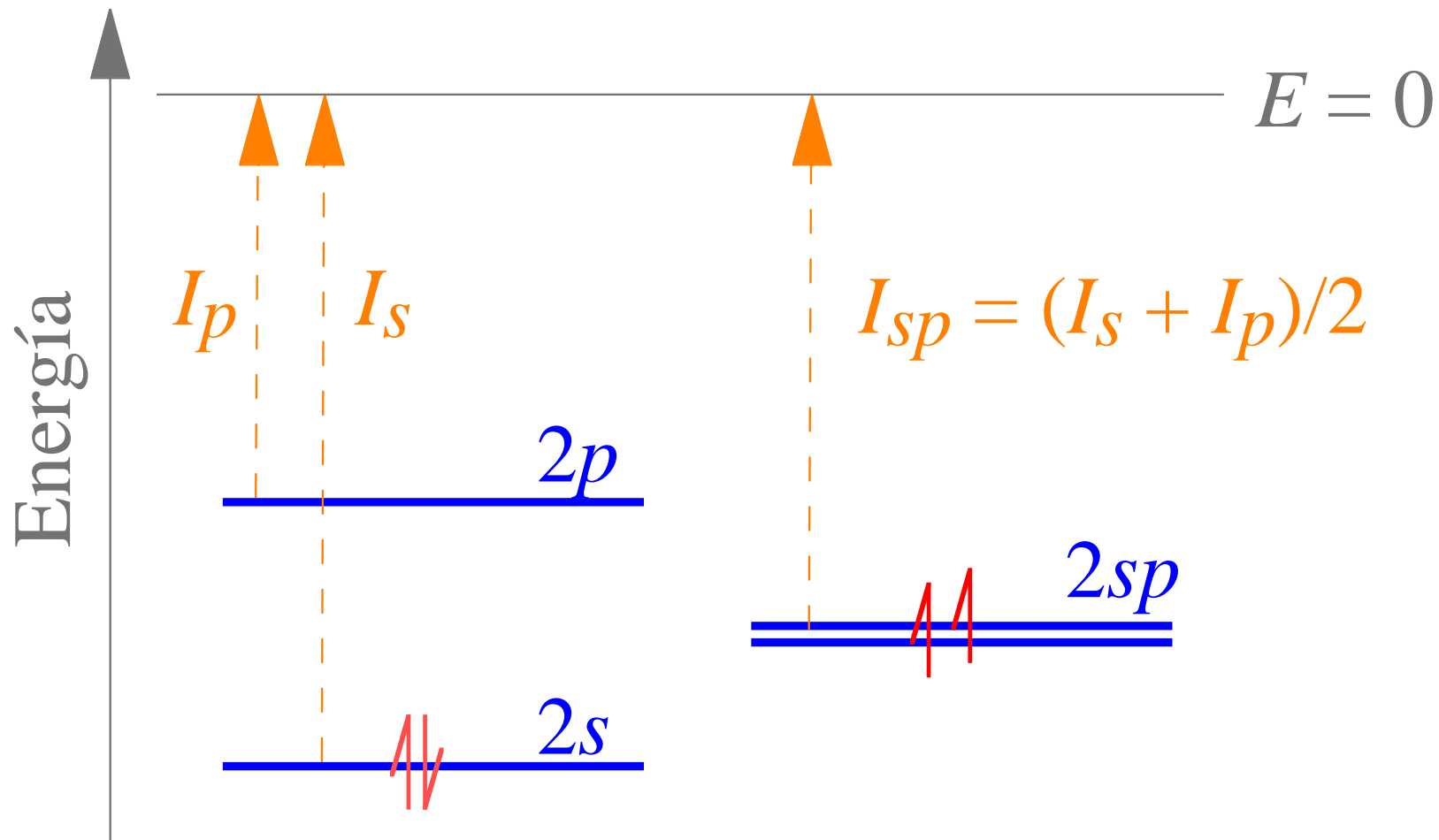
<i>Molécula</i>	<i>Estructura de Lewis</i>	<i>Enlaces</i>	<i>PS</i>	<i>Geometría molecular</i>
CO₂		2	0	O=C=O lineal
C₂H₄		3	0	 triangular plana
SOF₄		5	0	 bipirámide trigonal
XeO₂F₂		4	1	 balancín



1											13	14	15	16	17	18	
H 2,1																He	
Li 1,0	Be 1,5											B 2,0	C 2,5	N 3,0	O 3,5	F 4,0	Ne
Na 1,0	Mg 1,2	3	4	5	6	7	8	9	10	11	12	Al 1,5	Si 1,8	P 2,1	S 2,5	Cl 3,0	Ar
K 0,9	Ca 1,0	Sc 1,3	Ti 1,4	V 1,5	Cr 1,6	Mn 1,6	Fe 1,7	Co 1,7	Ni 1,8	Cu 1,8	Zn 1,6	Ga 1,7	Ge 1,9	As 2,1	Se 2,4	Br 2,8	Kr
Rb 0,9	Sr 1,0	Y 1,2	Zr 1,3	Nb 1,5	Mo 1,6	Tc 1,7	Ru 1,8	Rh 1,8	Pd 1,8	Ag 1,6	Cd 1,6	In 1,6	Sn 1,8	Sb 1,9	Te 2,1	I 2,5	Xe
Cs 0,8	Ba 1,0	La 1,1	Hf 1,3	Ta 1,4	W 1,5	Re 1,7	Os 1,9	Ir 1,9	Pt 1,8	Au 1,9	Hg 1,7	Tl 1,6	Pb 1,7	Bi 1,8	Po 1,9	At 2,1	Rn
Fr 0,8	Ra 1,0	Ac 1,1															







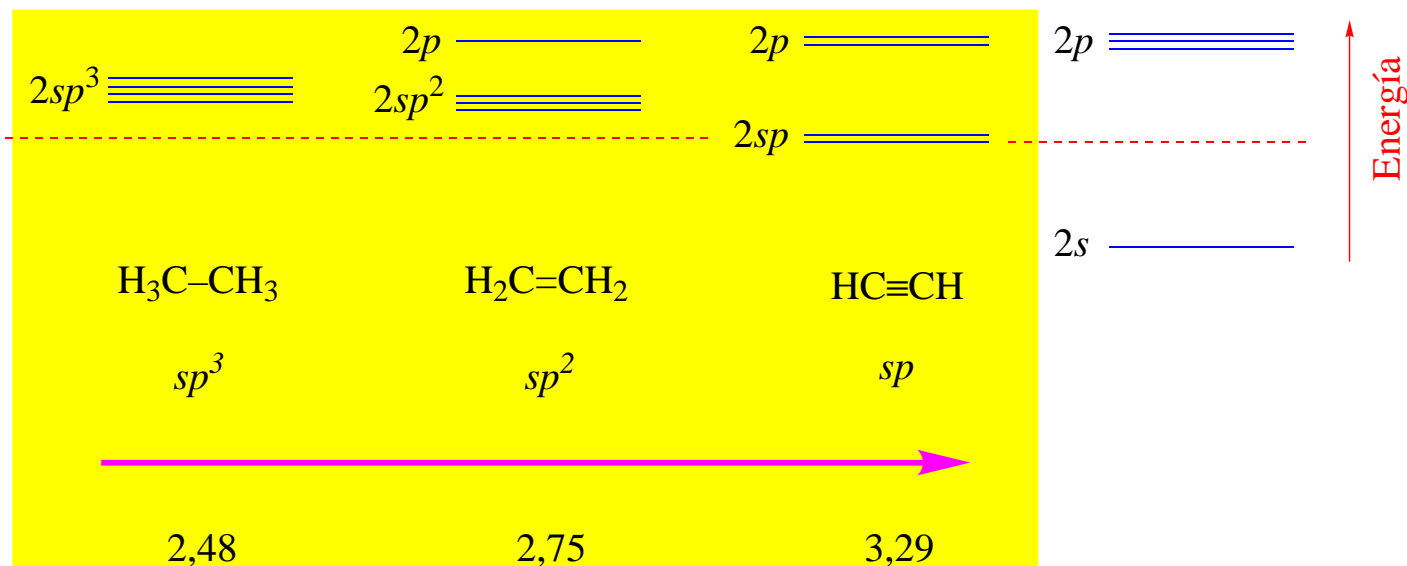
Energía media de los orbitales s y p del átomo de carbono

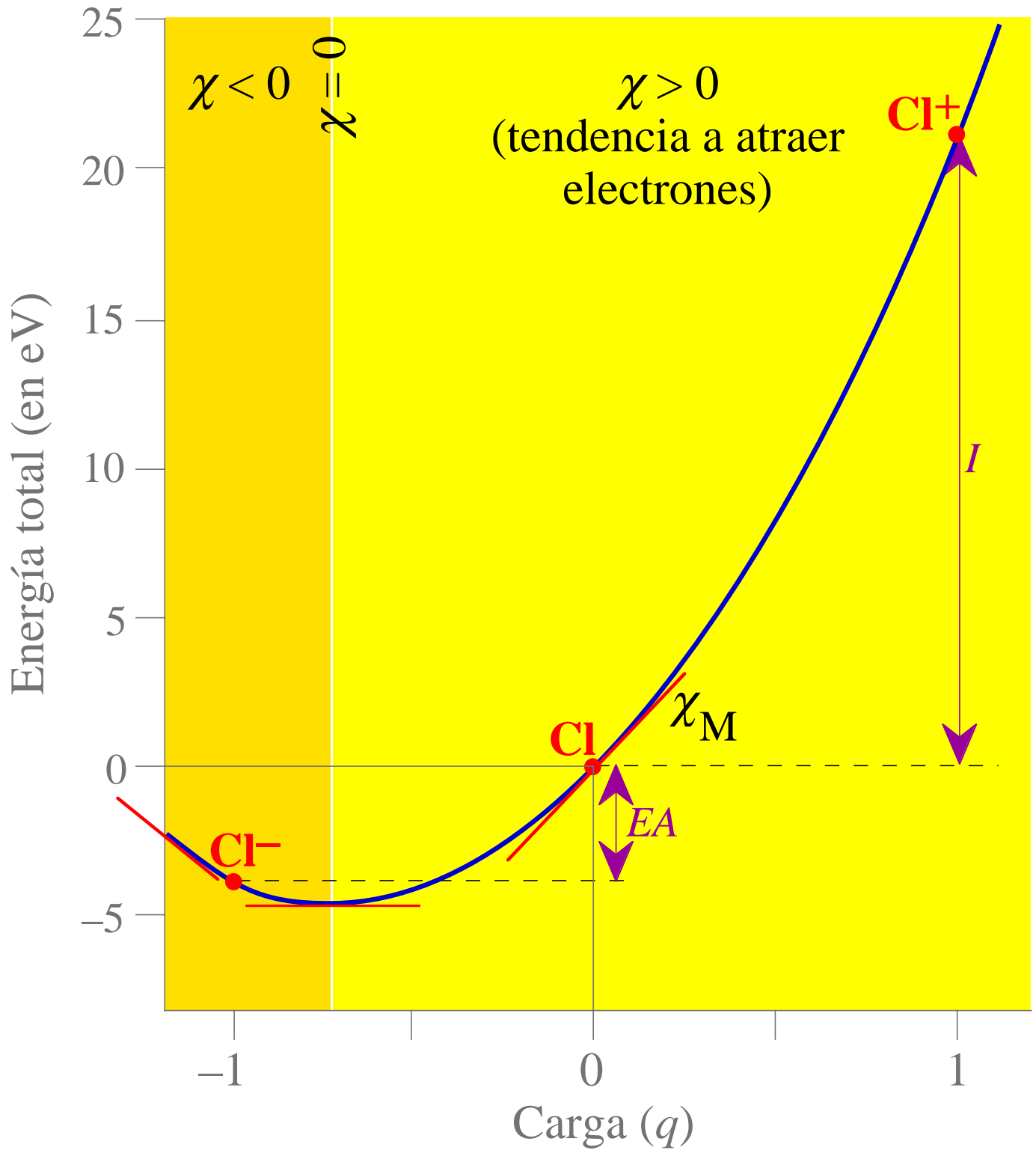
Ejemplo

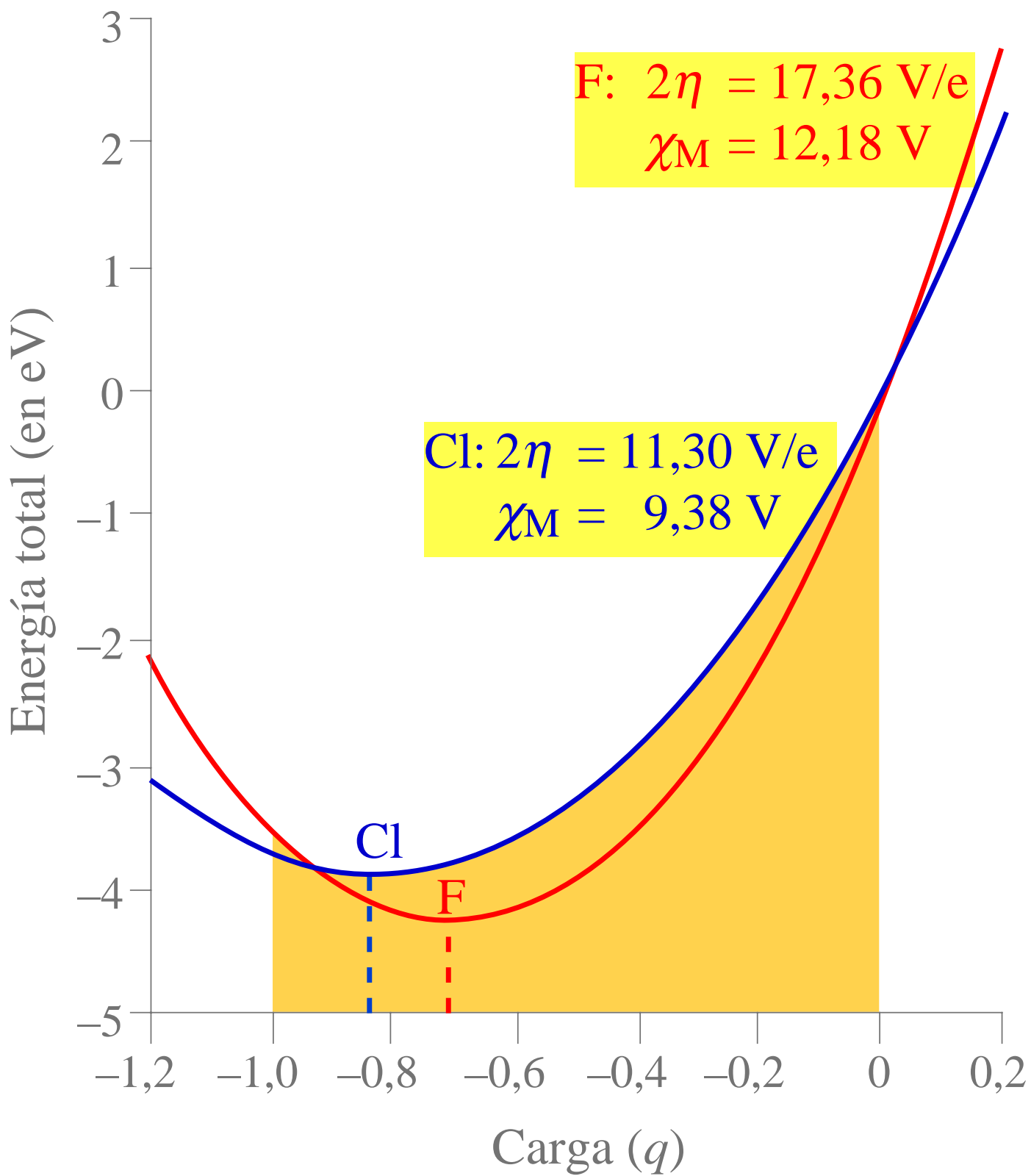
Hibridación del orbital del C unido al H

Orden ascendente de electronegatividad del átomo de carbono

Electronegatividad de Mulliken







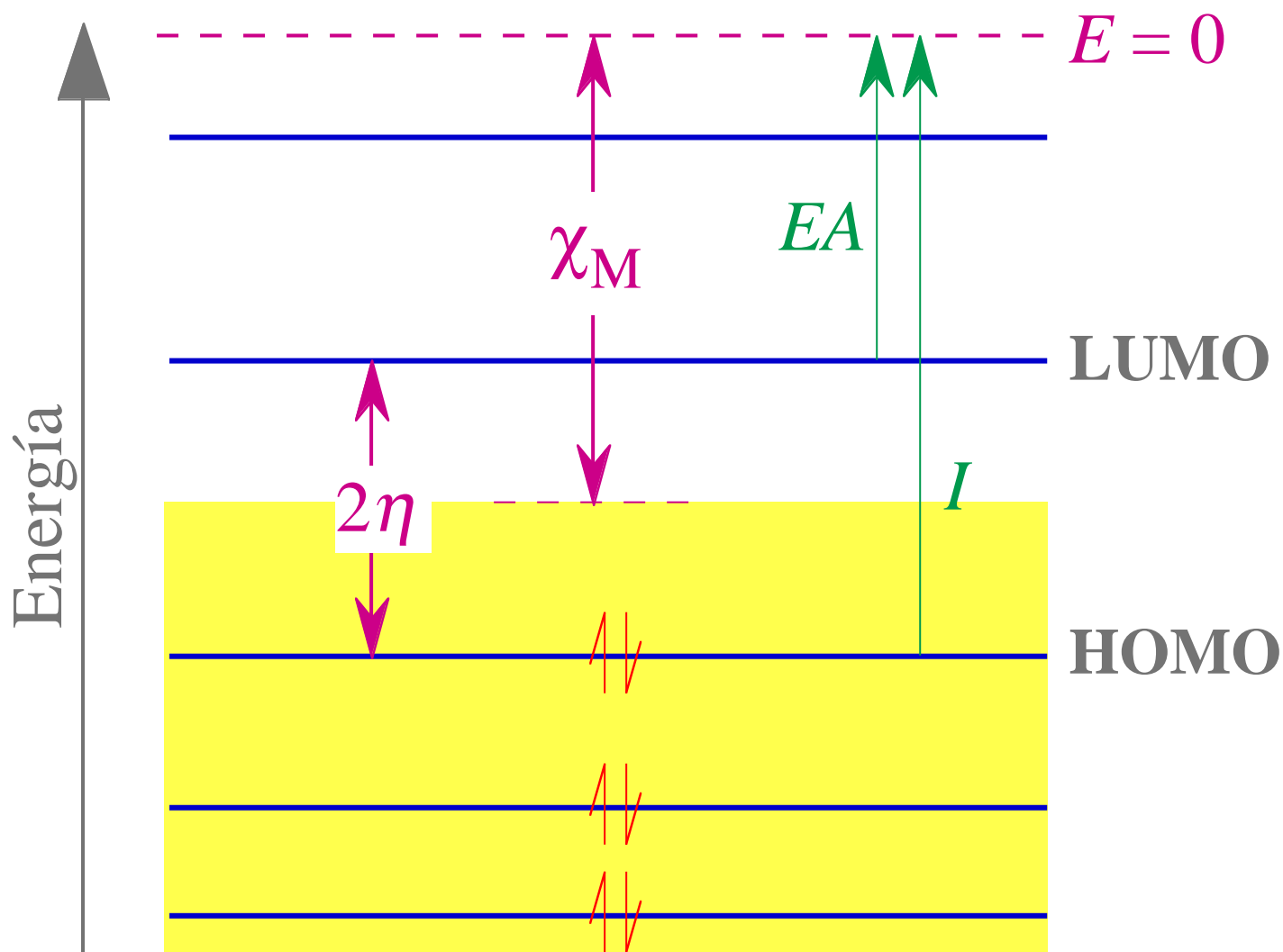
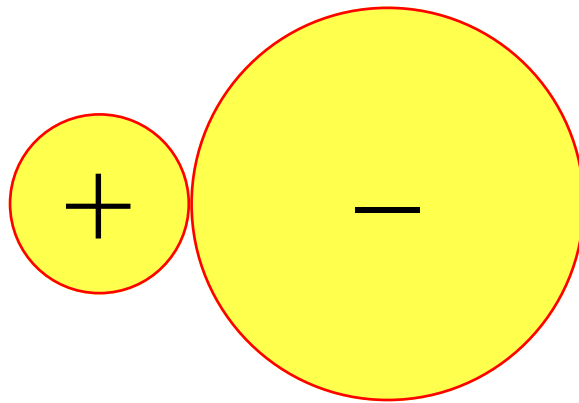


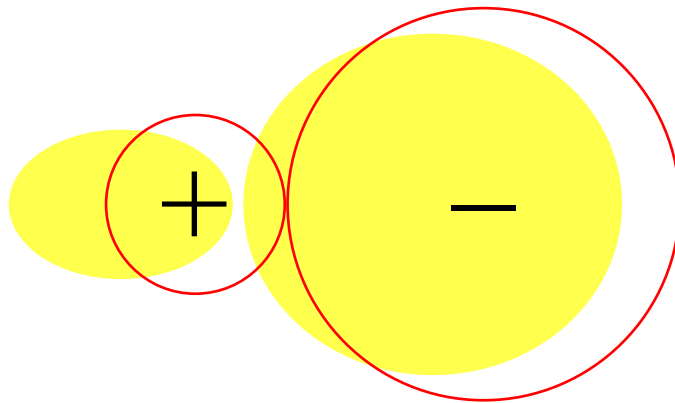
Tabla 2.4. Electronegatividades de algunos grupos

Grupo	χ_M (en unid. Pauling)	χ_M (en V)	2η (en eV)
CH₃	2,28	7,45	4,64
CH₂CH₃	2,29	7,52	3,78
CF₃	3,55	10,50	5,32
CCl₃	2,83	10,12	4,33
CBr₃	2,59	9,87	3,96
CI₃	2,51	9,43	3,77

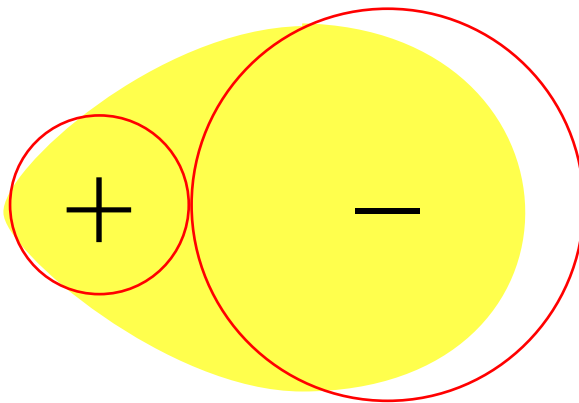
a)



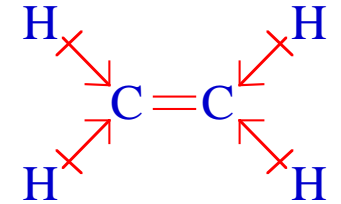
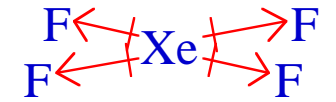
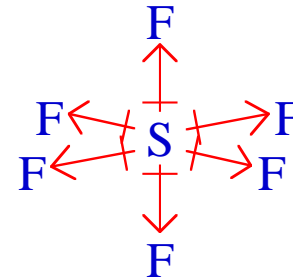
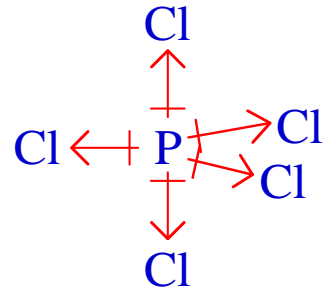
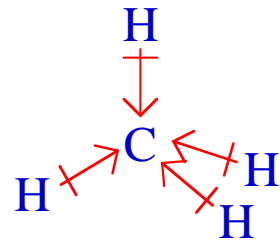
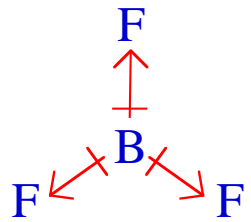
b)



c)



Algunas moléculas apolares



Algunas moléculas polares

