

Des molécules

VSPER (Structures de Lewis)

Remplir l'orbitale de valence

n
↓

1

H: n° e^{-} de val. = 1
($e^{-}_{v.max}=2$)

H

diagramme de
remplissage



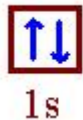
configuration
électronique

H $1s^1$

1

He: n° e^{-} de val. = 2
($e^{-}_{v.max}=2$)

He

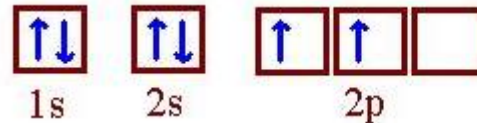


He $1s^2$

2

C: n° e^{-} de val. = 4
($e^{-}_{max}=8$)

C



C $1s^2 2s^2 2p^2$

2

Ne: n° e^{-} de val. = 8

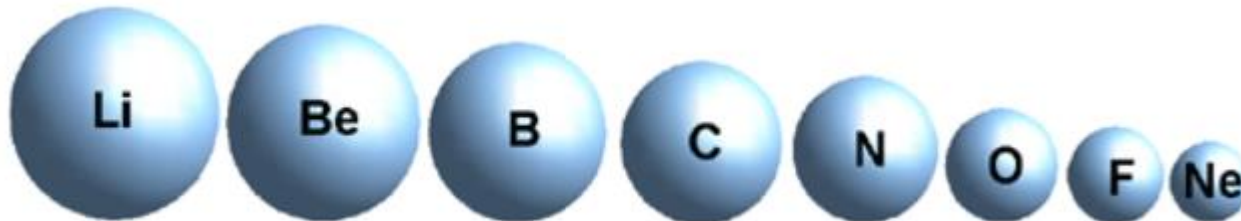
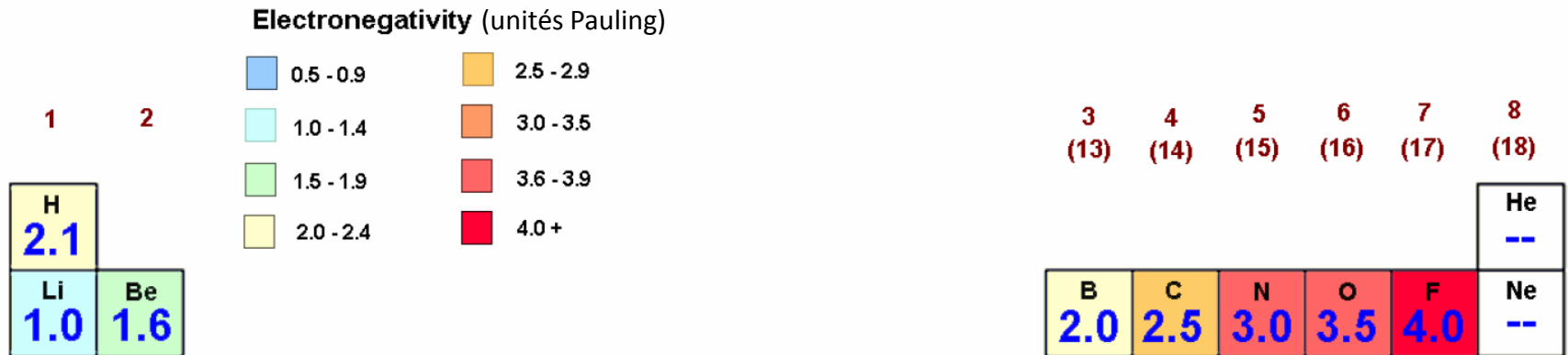
...

...

Diagramme de Lewis

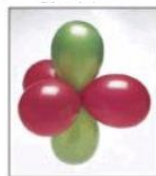
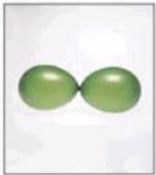
Voir les notes qui sont fait pendant le cours (14)

Électronégativité



Intro à VSEPR

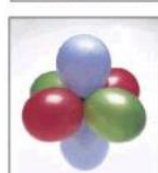
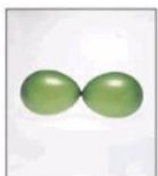
(Valance shell electron pair repulsion)



Octahedral

Intro à VSEPR

(Valance shell electron pair repulsion)



Octahedral

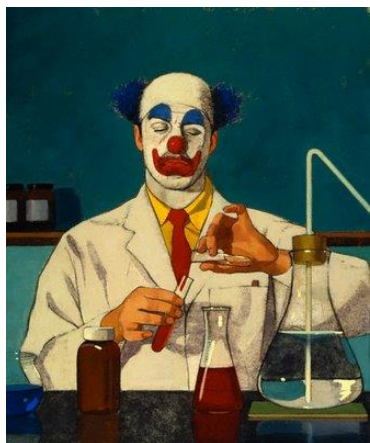
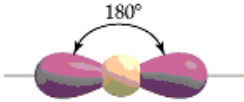
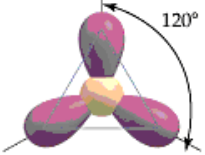
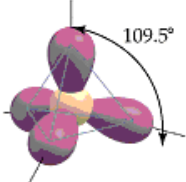
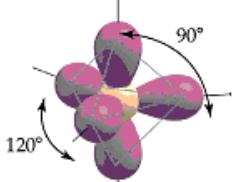
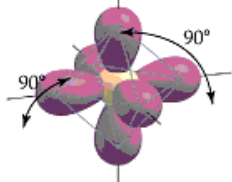
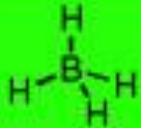
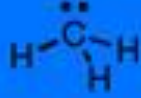

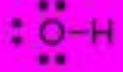

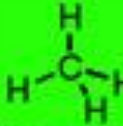
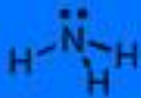


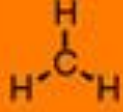
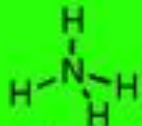
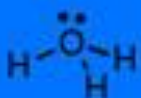


TABLE 9.1 Electron-Domain Geometries as a Function of the Number of Electron Domains

Number of Electron Domains	Arrangement of Electron Domains	Electron-Domain Geometry	Predicted Bond Angles
2		Linear	180°
3		Trigonal planar	120°
4		Tetrahedral	109.5°
5		Trigonal-bipyramidal	120° 90°
6		Octahedral	90° 180°

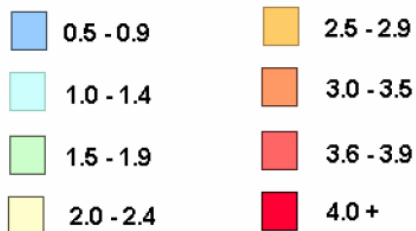
VALENCE

3	4	5	6	
 <p><i>tetrahedral</i> $3 - [4+0] = -1$</p>	 <p><i>trig. pyramidal</i> $4 - [3+2] = -1$</p>	 <p><i>angular</i> $5 - [2+4] = -1$</p>	 <p><i>linear</i> $6 - [1+6] = -1$</p>	-1
 <p><i>trig. planar</i> $3 - [3+0] = 0$</p>	 <p><i>tetrahedral</i> $4 - [4+0] = 0$</p>	 <p><i>trig. pyramidal</i> $5 - [3+2] = 0$</p>	 <p><i>angular</i> $6 - [2+4] = 0$</p>	0
 <p><i>linear</i> $3 - [2+0] = 1$</p>	 <p><i>trig. planar</i> $4 - [3+0] = 1$</p>	 <p><i>tetrahedral</i> $5 - [4+0] = 1$</p>	 <p><i>trig. pyramidal</i> $6 - [3+2] = 1$</p>	+1

CHARGE

Électronégativité

Electronegativity



1	2												3 (13)	4 (14)	5 (15)	6 (16)	7 (17)	8 (18)	
H 2.1																			He --
Li 1.0	Be 1.6												B 2.0	C 2.5	N 3.0	O 3.5	F 4.0		Ne --
Na 0.9	Mg 1.3	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	Al 1.6	Si 1.9	P 2.2	S 2.5	Cl 3.0			Ar --
K 0.8	Ca 1.3	Sc 1.4	Ti 1.5	V 1.6	Cr 1.7	Mn 1.6	Fe 1.8	Co 1.9	Ni 1.9	Cu 1.9	Zn 1.7	Ga 1.6	Ge 2.0	As 2.2	Se 2.6	Br 2.8			Kr --
Rb 0.8	Sr 1.0	Y 1.2	Zr 1.3	Nb 1.6	Mo 2.2	Tc 2.1	Ru 2.2	Rh 2.3	Pd 2.2	Ag 1.9	Cd 1.7	In 1.8	Sn 2.0	Sb 2.1	Te 2.1	I 2.7			Xe 2.6
Cs 0.8	Ba 0.9	La 1.1	Hf 1.3	Ta 1.5	W 1.7	Re 1.9	Os 2.2	Ir 2.2	Pt 2.2	Au 2.4	Hg 1.9	Tl 2.0	Pb 2.3	Bi 2.0	Po 2.0	At 2.2			Rn --
Fr 0.7	Ra 0.9	Ac 1.1	Rf --	Db --	Sg --	Bh --	Hs --	Mt --	Uun --	Uuu --	Uub --		Uuq						