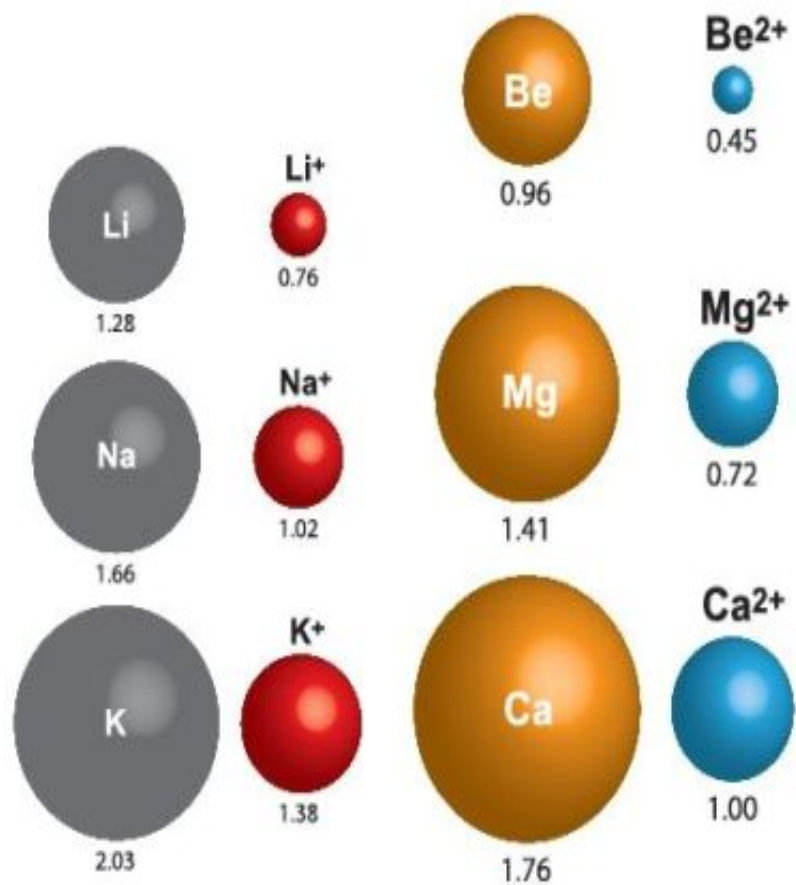




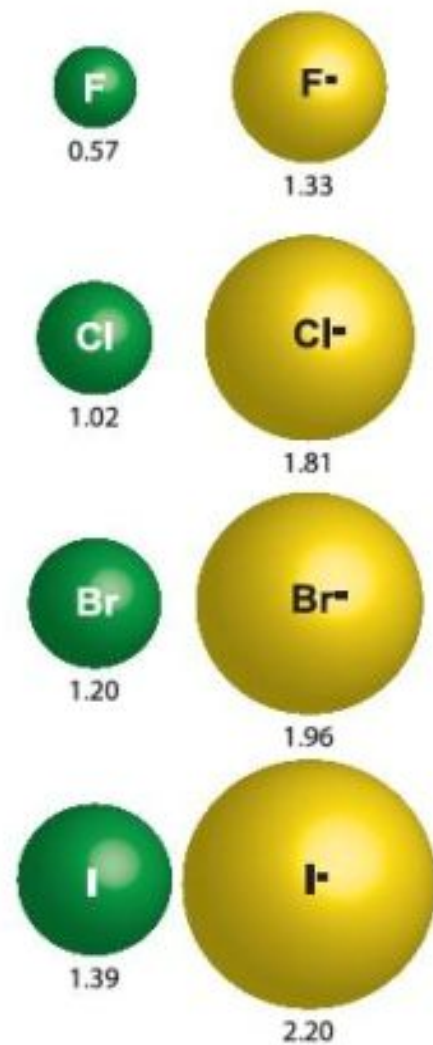
# **You will:**

- describe the patterns of change in the properties of atoms of chemical elements;
- know the terms: atomic radius, ionization energy, electron affinity, electronegativity and degree of oxidation.

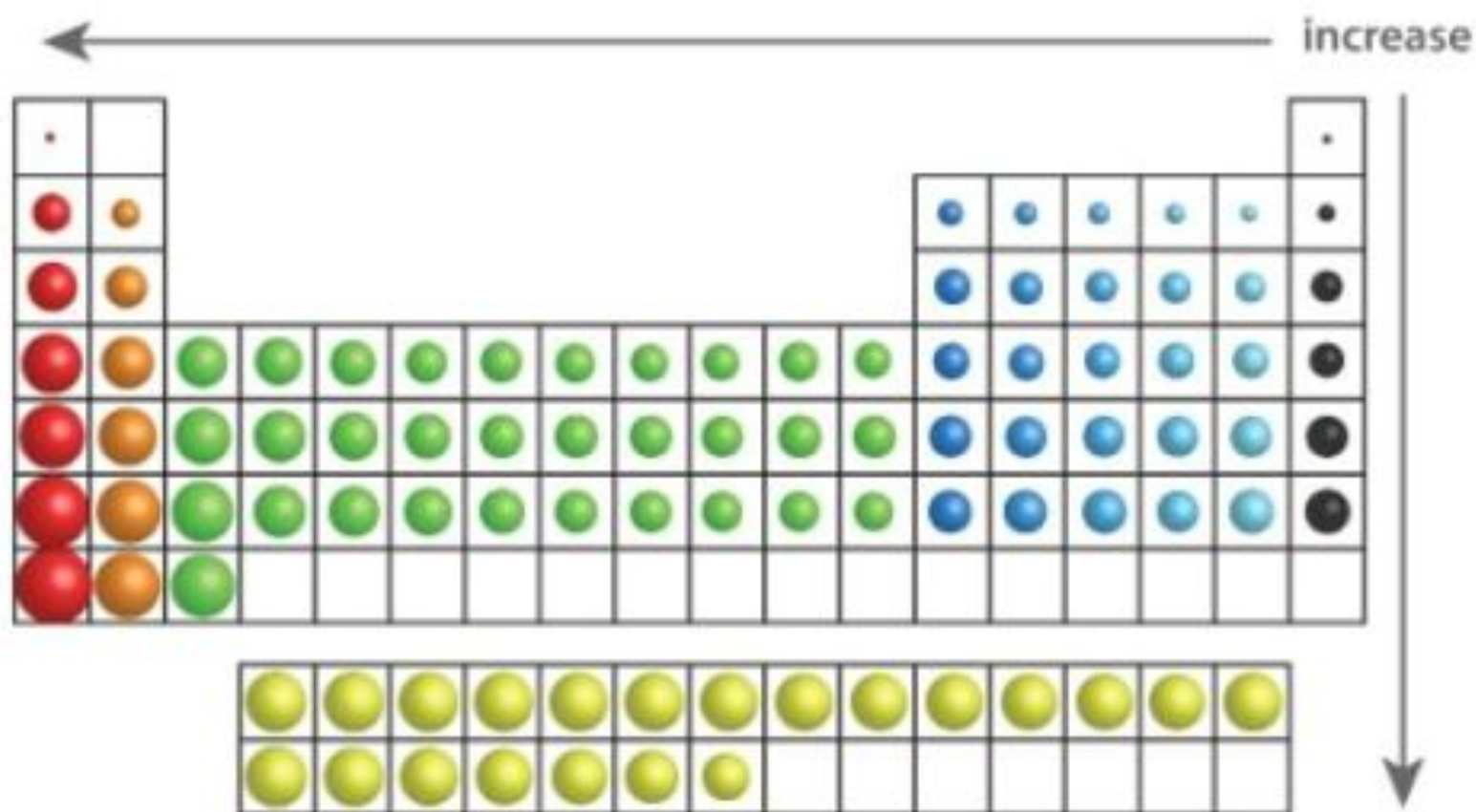


Atomic radii of alkali metals and their ions  
(values in  $10^{-10}$  m)

Atomic radii of alkaline earth metals and their ions  
(values in  $10^{-10}$  m)



Atomic radii of halogens and their ions  
(values in  $10^{-10}$  m)



Atomic radius increases from right to left and from top to the bottom.

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 1,2											Al 1,5	Si 1,8	P 2,1	S 2,5	Cl 3,0	Ar
K 0,8	Ca 1,0	Sc 1,3	Ti 1,5	V 1,6	Cr 1,6	Mn 1,5	Fe 1,8	Co 1,9	Ni 1,9	Cu 1,9	Zn 1,6	Ga 1,6	Ge 1,8	As 2,0	Se 2,4	Br 2,8	Kr
Rb 0,8	Sr 1,0	Y 1,2	Zr 1,4	Nb 1,6	Mo 1,8	Tc 1,9	Ru 2,2	Rh 2,2	Pd 2,2	Ag 1,9	Cd 1,7	In 1,7	Sn 1,8	Sb 1,9	Te 2,1	I 2,5	Xe
Cs 0,7	Ba 0,9	La 1,0	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 1,8	Pb 1,9	Bi 1,9	Po 2,0	At 2,1	Rn

low

medium

high



Periodic table of elements with electronegativity values