

Modern Atomic Theory

Periodic Trends Atomic Size

Atomic Properties and the Periodic Table



Atomic Size

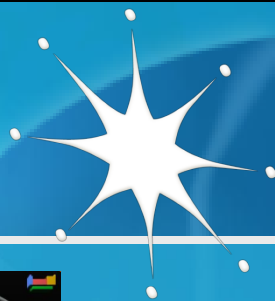
- The sizes of atoms vary.
- Atoms get larger as we go down a group and get smaller as we go from left to right.

atomic size decreases

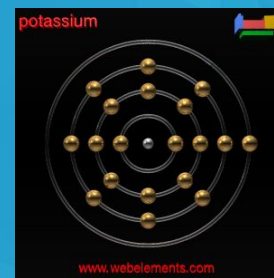
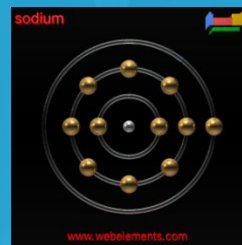
atomic size increases

1	2	3	4	5	6	7	8
H							He
Li	Be	B	C	N	O	F	Ne
Na	Mg	Al	Si	P	S	Cl	Ar
K	Ca	Ga	Ge	As	Se	Br	Kr
Rb	Sr	In	Sn	Sb	Te	I	Xe
Cs	Ba	Tl	Pb	Bi	Po	At	Rn

Atomic Properties and the Periodic Table



- As you go down a group, the average distance of the electrons from the nucleus increases.
- Atoms get bigger as electrons, and thus energy levels, are added.



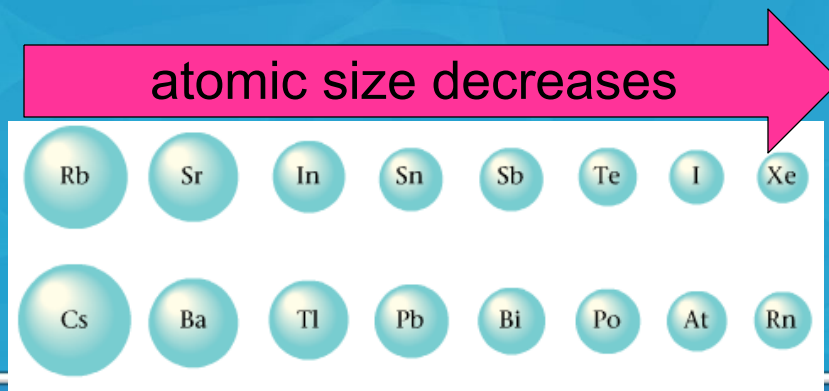
atomic size increases

1	2
H	
Li	Be
Na	Mg
K	Ca
Rb	Sr
Cs	Ba

Atomic Properties and the Periodic Table



- As you go across a row (period) of the periodic table, the atoms are gaining electrons.
 - Since the number of protons also increases, the increase in positive charge pulls the electrons closer to the nucleus.
 - The electron “cloud” is drawn in.



- The End