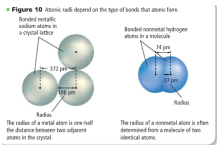
Atomic Radius – size

-Measured as half the distance between the nuclei of adjacent atoms

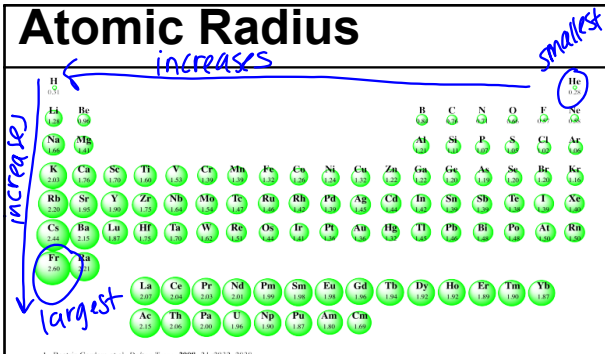


-Tends to decrease across a period because L-R
-nuclear charge (# of protons) increases
-no new energy levels or shielding

-Tends to increase down a group because
-energy levels are being added which increases shielding

Oct 3-3:01 PM

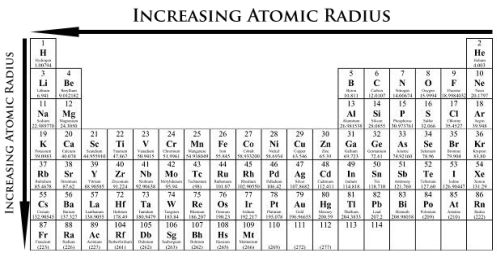
Atomic Radius



1. Beatriz Cordero et al. *Dalton Trans.* **2008**, *21*, 2832–2838.

- Which element has the largest atomic radius? Fr
- Which element has the smallest atomic radius? He

Oct 4-7:40 AM



Oct 4-7:41 AM

Practice:

a. Na or Li

b. Na or F

c. Fr or He

d. Cl or Ar

e. F or Br

Oct 4-12:39 PM

Electronegativity

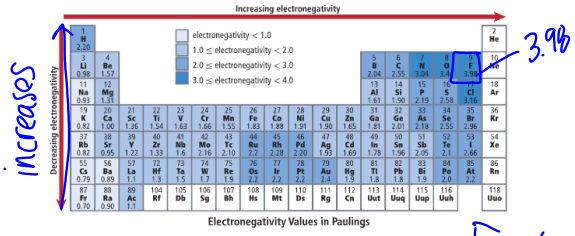
-- The ability of an element to attract electrons.

Which elements would really like additional electrons? Why? — halogens (17)
— top group

Which elements would not like to have additional electrons? Why? — noble gases (do not have electrons)
— alkali — lose 1e⁻

Oct 4-7:42 AM

Electronegativity



Which element is the most electronegative? Why? F

Which element is the least electronegative? Why? Fr / He

Why do the noble gases not have electronegativity values?
full octet

Oct 4-7:43 AM

Practice:

Which element has a higher electronegativity?

a. Mg or O

b. N or As

c. Cl or Ne

d. Si or Sn

Oct 4-12:54 PM