Day 1 Aug 28, 2017

8/28/17

$$\% = \frac{\text{Part}}{\text{whole}} \times 100$$

Grades

$$\frac{\text{points earned}}{\text{points possible}} \times 100$$

Example

$$\frac{5+5+40+80+30+40+0}{5+5+40+100+40+40+40} \times 100$$

200

270

$= 74\%$ C

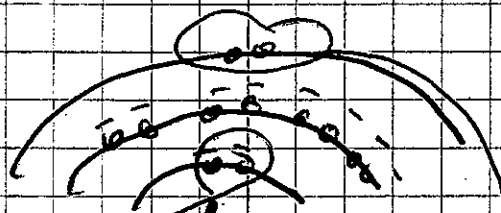
Day 4 Aug 31, 2017

Z effect Z_{eff}

$^{A}_{Z}X$ nuclear notation

Z = atomic #, # of protons

Z_{eff} ≡ the control that protons have ~~over~~ over e^-



The protons have less control over the valence e^-

Z_{eff} ↓

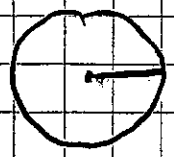
The protons have more control over e^-

Z_{eff} ↑

shielding effect ≡ when an e^- blocks another e^- from the protons

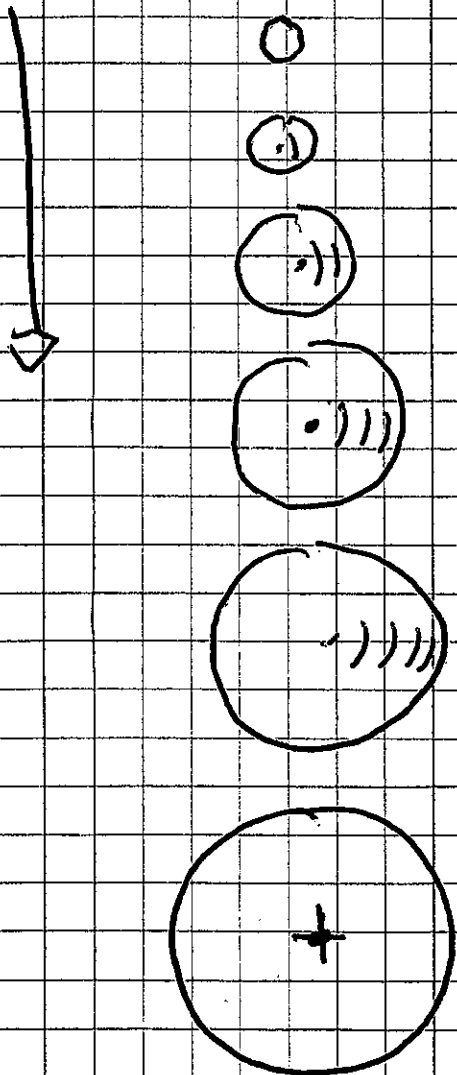
Day 4 cont

atomic radius



atomic radii trend

Group trend



why? do they get larger

- more energy levels
- shielding effect ↑
- Zeff ↓

left to right

Why?

- No new energy levels
- Zeff ↑

9/1/17 Sept 1, 2017

Day 5

H
Li
Na
alkali metals

Be
Mg
Ca
Sr
alkaline Earth metals

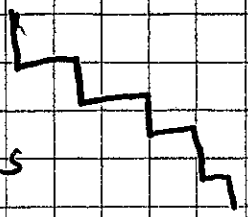
F
Cl
Br
I
Halogens

He
Ne
Ar
Kr
Noble gases

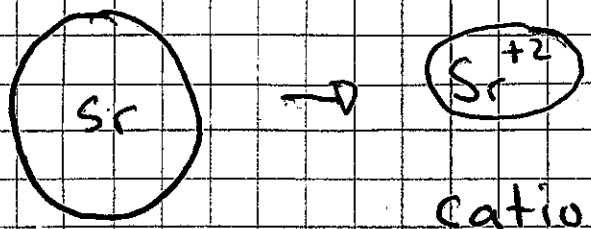
Day 7 Sept 6, 2017

Ionic Radii

Cation (+)



$Sr \rightarrow Sr^{+2} + 2e^-$



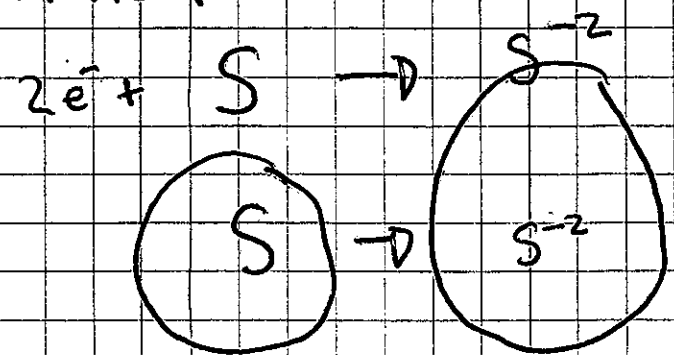
Cations become smaller than the atom they formed

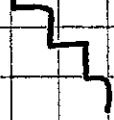
Why?

- loss of an entire energy level
- Z_{eff} ↑ #p > #e

~~Anion~~

Anion





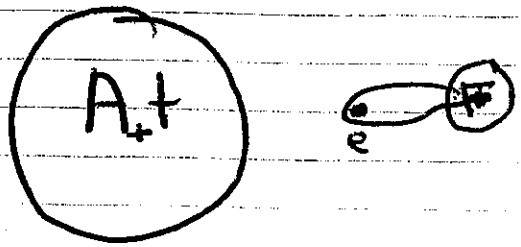
anions become bigger

Why?

- Z_{eff} ↓ #p < #e$^-$

Day 8 Sept 7, 2017

Electronegativity ≡ a measure of an atom's ability to attract e^-

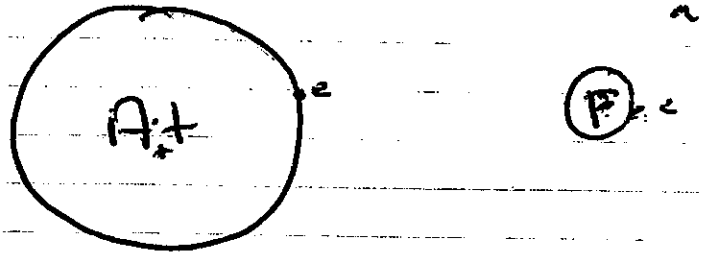


Scale 0 to 4

Inc → F

Inc ↑

Ionization Energy ≡ the energy needed to remove an e^- from an atom



Inc → F

Inc ↑

He
Ne
Ar

Very High