Quiz Review

February 20, 2018 9:40 AM

State the most common ion formed by each of the following atoms:

A) Be					B) O					C) Cl

Be^{2+} O^{2+} Cl^{1-}

State the electron configuration for:

Carbon atom = 6

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

Sodium atom = 11

$1s^2 2s^2 2p^6 3s^1$

Chlorine ION (application question, won't be on quiz) = 19

$1s^2 2s^2 2p^6 3s^2 3p^6$

Briefly describe the difference between the experimentally determined and predicted electr
configurations of the atom copper. (I would know chromium too)

Expected = $[Ar]\ 5s^2\ 4d^9$

Experimental = $[Ar]\ 4d^{10}\ 5s^1$

4d s orbital more stable, fill 9 first.

Which of the following atoms would have the largest electronegativity?

Li Na K Rb

Lithium. As you move down a group, electrons have a weaker electronegativity, shielding effect interferes with the attraction b/n nucleus and valence e^-

Which of the following atoms would have the largest radius?

B C O F

Boron, as you move across a period, radius smaller. Net nuclear attraction, protons ↑, ↑ attraction.

Which is larger, a chlorine ion or a chlorine atom?

Chlorine atom → An ion you are adding electrons which causes a ↓ in net nuclear attraction.

Briefly describe if the following quantum numbers are allowed and why?

n=2 l=2 ml=2 Not allowed, $\ell \neq 2$ if $n=2$

n=4 l=0 ml=0 Allowed.