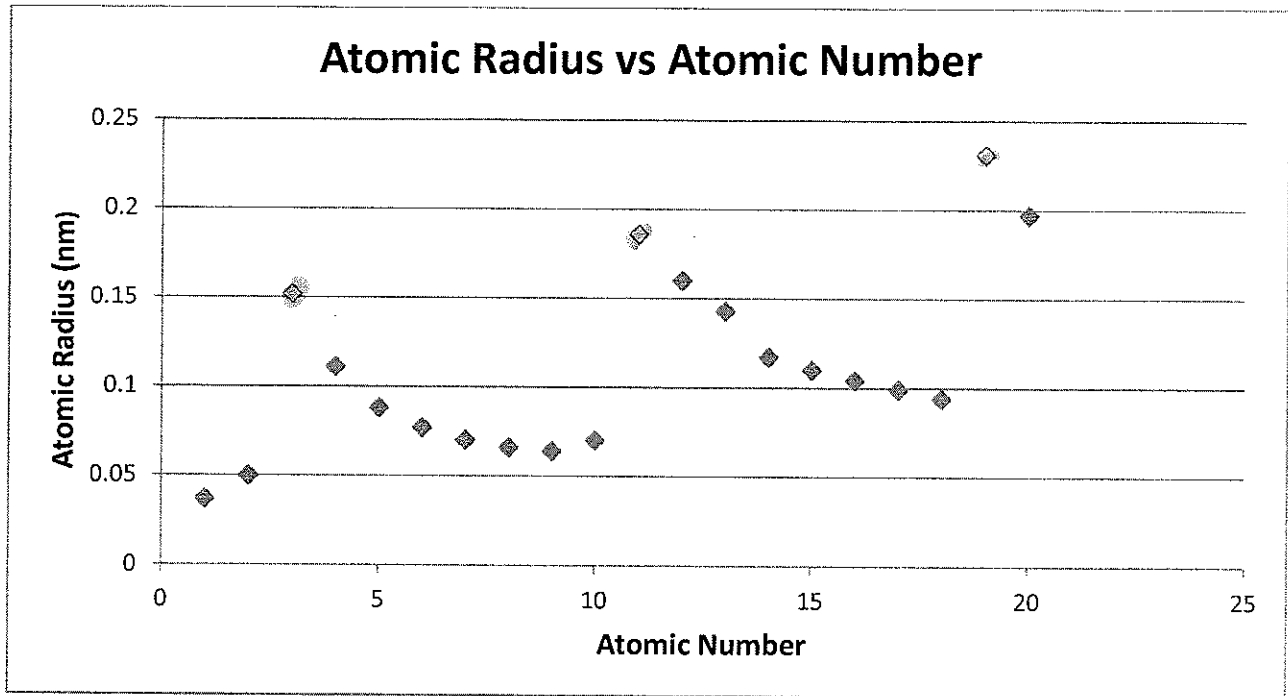


The scatter plot above shows how atomic number and the first ionization energy are related. Ionization is how easily an electron can be taken away from its valence electron cloud. As the atomic radius increases, ionization decreases. When atomic radius decreases ionization increases. This happens because when the atomic radius is big and has an extra energy cloud it is easy to take an electron away because the atom doesn't have as much pull. The yellow points on this graph are from the 8a group as you start at the low points of the graph which is 1a you move to the right through the periodic table you gain ionization. When the graph drops back down its because we are restarting at group 1a again then moving back up to group 8a.



The scatter plot above shows the relationship between Atomic number and Atomic Radius. Atomic radius increases going down a group and decreases as you go across a period. As you can, see when you go across the periods the Atomic radii decreases, which in the above scatter plot is how the dots go from the high point to the lower points. The Atomic radii decreases because there are more protons in the middle which pulls the atom together making it tighter and not as loose so the radius would become smaller. But when you come back to group 1a the atomic radius is big (yellow points on top of graph) because you gain another energy level.