Week 6 - Recitation (2nd for test 2)

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# Week 6 - Recitation (2nd for test 2)

Sep 21, 2016

* Which reaction below represents the electron affinity of Li?
  + Li(g) + e- -> Li^-(g)
  + Li(g) -> Li^+(g) + e-
  + Li(g) + e- -> Li^+(g)
  + Li^+(g) -> Li(g) + e-
  + Li^+(g) + e- -> Li(g)

The electron affinity is just adding an electron.

* Place the following in order of increasing metallic character
  + Rb Cs K Na
  + K < Cs < Na < Rb
  + Na < K < Rb < Cs
  + Cs < Rb < K < Na
  + K < Cs < Rb < Na
  + Na < Rb < Cs < K
* Why does an electron found in a 2s orbital have a lower energy than an electron found in a 2p orbital in multi-electron systems?
  + Electrons in the 2s orbital are shielded by electrons in the 2p
  + There are more nodes found in the 2s orbital
  + Electrons in the 2s orbital can penetrate the 1s orbital and be closer to the nucleus
  + The larger number of electrons found in the 2p orbital leads to greater repulsion
  + The shape of the orbital ultimately determines the energy of the electrons
* Which ion has the largest radius?
  + Na+
  + Ga3+
  + K+
  + Mg2+
  + Ca+
* Place the following in order of increasing atomic radius
  + As O Br
  + As < Br < O
  + O < As < Br
  + Br < As < O
  + As < O < Br
  + O < Br < As
* Place the following in order of decreasing radius
  + Te2- F- O2-
  + F- > O2- > Te2-
  + F- > Te2- > O2-
  + Te2- > O2- > F-
  + Te2- > F- > O2-
  + O2- > F- > Te2-
* Place the following in order of increasing IE
  + N F As
  + N < As < F
  + As < N < F
  + F < N < As
  + As < F < N
  + F < As < N
* Identify the number of valence electrons in Cl-
  + 6
  + 7
  + 8
  + 5
  + 4
* Give the ground state electron configuration for Se2-
  + [Ar] 4s2 3d10 4p4
  + [Ar] 4s2 3d10 4p2
  + [Ar] 4s2 4p6
  + [Ar] 4s2 3d10 4p6
  + [Ar] 4s2 3d8 4p6
* Give the name for SnO
  + tin I oxide
  + tin II oxide
  + tin III oxide
  + tin IV oxide
* Write the name for Sn(SO4)2
  + tin (I) sulfite
  + tin (IV) sulfite
  + tin sulfide
  + tin (II) sulfite
  + tin (I) sulfate

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## CH101-008 UA Fall 2016

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Notes and study materials for The University of Alabama's Chemistry 101 course offered Fall 2016.