Chem 155 Homework #8
Reading: Chapter 5, Chapter 6 sections 6.1-6.2
Due at the start of class on Mon. Feb. 29

Chapter 5 Problems:
5.1 – identifying radial and angular nodes from quantum numbers
5.8 – computing radial nodes
5.15 – Aufbau and electron configurations
5.24 – what happens to periodic table if spin was 3-fold degenerate
5.29 – Photelectron spectroscopy and Zeff
5.31 – compare ionic radius
5.36 – gaseous ionization energies
5.46 – wave function of H atom

Additional Problems:
1) Use the radial probability distribution to calculate the most probable distance of finding an electron from the nucleus of a hydrogen atom. Compare with the Bohr model of the atom.

2) Find an image of a *single molecule* taken with a *Scanning Tunneling Microscope* that was published in a scientific journal. Print it out the figure and cite the reference.

Chapter 6 Problems:
6.1 – nodes in H_2+ sigma orbital
6.2 – nodes in H_2+ pi orbital
6.3 – sketching sigma and pi orbitals