

Extra Credit to Make up points on Exam II. (9 possible points) Due Thursday (10/28/10)

Use your answer to the last problem to answer the following. Compare the kinetic energy of an electron that arises simply from the zeropoint energy of confinement to a cube with sides 1 pm to the potential energy of an electron and a nucleus separated by 1 pm. What does this say about the possibility of the electron “falling” down to very small distances close to the nucleus?

What is the most probable radius for an electron in a 2p wavefunction in Li^{2+} ?

How would you compute the probability described in the last true false problem?