

Chemistry 2C, Spring 2017, Assignment 5:

Posted: 5/6/2017

Due: 5/13/2017

*Please return the homework in class as a hardcopy. The expectation is that you use **letter-size or equivalent paper** for your answers. Staple sheets of papers together. Write your name. Keep answers brief.*

Questions from chapter 19:

1. On page 943, there is a table summarizing some of the properties of the 3d transition elements:

(a) Why do you think the atomic radius decreases from left to right. Hint: Look at the discussion on page 559 of the Effective Nuclear Charge.

(b) What is the trend in the first ionization energy? Does your answer relate to (a) above?

(c) Why does the highest oxidation state of the metals go up, and then fall again after Mn?

2. Look at table 19.3 on page 945: How does this tell us that all the 3d transition elements except Cu will displace H_2 from an acidic solution.

Answer questions:

19.6,

19.12 (note two parts),

19.18,

19.22,

19.26,

19.32,

19.34,

19.42,

19.44,

19.46,

19.52