

## Homework 8

Complete Part I first, by taking notes that you will keep for yourself. (*Do not turn these in.*) Type up your answers to each of the questions in Part II and submit it in one double-spaced, Word document with your name on the top under the title. Use 12-point Times New Roman Font with 1" margins on all sides. If you have to do a calculation, solve the problem by hand on a separate sheet of paper. Then take a picture of your work and paste it into your word document in an appropriate place. When you are done upload this into the Dropbox on Blazeview. If you are unable to use Word for the assignment, you may use another software package and upload a pdf instead.

### **PART I: Notes**

1. Read and take notes on the video "Chemical Energy".

### **PART II: Assignment (25 points total)**

1. Which one of John Dalton's Atomic theory statements is incorrect? Why is it wrong? (4 *points*)
2. What is a chemical reaction? (3 *points*)
3. Describe in your own words the three types of chemical bonds. (6 *points*)
4. What are the key differences between acids and bases? (4 *points*)
5. Using stoichiometry, balance the following reactions: (2 *points each*)
  - a.  $\text{CO} + \text{O}_2 \rightarrow \text{CO}_2$
  - b.  $\text{Na} + \text{N}_2 \rightarrow \text{NaN}_3$
  - c.  $\text{Fe} + \text{O}_2 \rightarrow \text{Fe}_2\text{O}_3$
  - d.  $\text{O}_3 \rightarrow \text{O}_2$