

CH301 Random Musings, October 27, 2010

1. There will be a major exam in this class on Wednesday, October 27th from 7:30 till 9:30 pm. Details with respect to exam administration are as they were presented for the last exam; in a nutshell, show up on time, stop when you are told to stop. Bring a pencil, your UT identification, and as little else as possible. Your exam locations are as follows:

WEL 2.224 Last name A through M

UTC 2.112A Last name N through Z

I may decide to have the exam administered in Welch 2.224 if enough students will be taking the Sunday exam. Stay tuned.

2. Make up exam. I am allowing unfettered access to the make-up exam (in other words, anyone can take it.) But I need a fairly firm head count today in class. So make you mind up now so we can print the accurate number of exams. If you are taking the make-up, please show up **Sunday night from 6 to 8 pm in this classroom.**

3. Here is a repeat of the question types on the exam, the chapter from which the material originates, and the worksheet where you can find similar questions.

| number | chapter | Worksheet | Problem type |
|--------|-----------|-------------|---|
| 1 | Chapter 3 | Worksheet 6 | Ranking bond polarity |
| 2 | Chapter 3 | Worksheet 6 | Assigning molecule polarity from VSEPR |
| 3 | Chapter 3 | Worksheet 6 | Assigning molecule polarity from VSEPR |
| 4 | Chapter 3 | Worksheet 6 | Bond angles from VSEPR |
| 5 | Chapter 3 | Worksheet 6 | VB theory of hybrid orbits |
| 6 | Chapter 3 | Worksheet 6 | Electronic geometry from VSEPR |
| 7 | Chapter 3 | Worksheet 6 | Molecular geometry from VSEPR |
| 8 | Chapter 3 | Worksheet 7 | Number of s and p bonds in molecule |
| 9 | Chapter 3 | Worksheet 7 | AOs that comprise MOs in a bond |
| 10 | Chapter 3 | Worksheet 7 | MO theory |
| 11 | Chapter 3 | Worksheet 7 | Filling MOs of diatomic molecules |
| 12 | Chapter 3 | Worksheet 7 | Calculating bond order from MO |
| 13 | Chapter 3 | Worksheet 7 | Assigning paramagnetism from MO |
| 14 | Chapter 3 | Worksheet 7 | Ranking bond length from bond order |
| 15 | Chapter 3 | Worksheet 6 | Identifying delocalization (resonance) |
| 16 | Chapter 4 | Worksheet 8 | Ideal gas law history |
| 17 | Chapter 4 | Worksheet 8 | Gas law change of state calculation |
| 18 | Chapter 4 | Worksheet 8 | Calculating MW, M or r from $PV=nRT$ |
| 19 | Chapter 4 | Worksheet 8 | Reaction stoichiometry and $PV=nRT$ |
| 20 | Chapter 4 | Worksheet 8 | Calculation of relative ratio of gas speeds |
| 21 | Chapter 4 | Worksheet 8 | Ranking non-ideality of gases |
| 22 | Chapter 4 | Worksheet 8 | Gas non-ideality theory |
| 23 | Chapter 5 | Worksheet 9 | IMF theory |
| 24 | Chapter 5 | Worksheet 9 | Assigning IMF to molecules |
| 25 | Chapter 5 | Worksheet 9 | Assigning IMF to molecules |
| 26 | Chapter 5 | Worksheet 9 | Defining physical properties |
| 27 | Chapter 5 | Worksheet 9 | Ranking physical properties by IMF |
| 28 | Chapter 5 | Worksheet 9 | Ranking physical properties by IMF |
| 29 | Chapter 5 | Worksheet 9 | Ranking physical properties by IMF |
| 30 | Chapter 5 | Worksheet 9 | Assigning type of solid to compounds |
| 31 | Chapter 2 | Worksheet 5 | Ranking lattice energies |
| 32 | Chapter 2 | Worksheet 5 | Assigning formal charge |
| 33 | Chapter 2 | Worksheet 5 | Assigning structure based on formal charge |
| 34 | Chapter 2 | Worksheet 5 | Ranking bond length, energy and EN |

4. I held a review session on last night. The notes are posted on line in the ChemPortal Assignments. Travis will hold a review session tonight: **Tuesday, October 26 9:00 pm - 10:00 pm WCH 1.120**

5. All of the worksheets, practice exams and answer keys for the upcoming exam are now posted. Details for the four worksheets are below:

- Worksheet 6 from the beginning of Chapter 3 was the subject of quiz 3—it covered 3-D drawing of covalent compounds using VSEPR and VB theory. Eight questions from the exam will come from this worksheet.
- Worksheet 7 covers VB and the MO theory from the end of Chapter 3 and contributes 7 questions to Exam 2.
- Worksheet 8 is on gases from Chapter 4 and contributes 7 questions to Exam 2.
- Worksheet 9 on IMF and liquids from Chapter 5 contributes 8 questions to Exam 2.

6. I have provided a couple of practice exams:

- On Friday I posted a practice exam on the ChemPortal. It is likely harder than the exam.
- On Sunday the TAs posted a practice exam 2 based on the 34 question types I provided.

I encourage you to take these practice exams under normal testing conditions only after you have learned a significant amount of the material so that you can more accurately test what you know.

7. This may sound like a broken record, but as we begin preparation for the exam 2, please do not give up if you are doing poorly. There are still 6 weeks until the final and if you can figure the course out by then, you can receive the grade you want. Those of you discouraged that your study habits have not yet yielded results need to keep after things. Please contact me and I will arrange for you to make an appointment so we can discuss ways to improve in time for the final.

8. Dave longs for simpler times.

Halloween used to be so simple. You put on a cheap plastic costume with a mask that made you smell your own breath, walked around your neighborhood for an hour on the 31st getting candy, went home and listened to the horror stories about the kid in Iowa who got a pin in his Milky Way bar or the one in Illinois with a razor blade in an apple, and then carefully ate your candy while wondering if you were going to die. And then around age ten, while trick or treating by pulling your shirt over your head to be the headless guy, some old lady tells you that you are too old to trick or treat and you slink home, what a loser. And Halloween was over.

These days it seems that Halloween goes on for a full week with all the safe parties at schools that seem more dangerous than actual trick or treating and your kids go home with massive amounts of plastic crap and bad candy you have to throw away before going in the house. And you have to decorate your yard with realistic severed limbs and freeze to death with 100,000 people on 6th street. I really don't get it the appeal.

By the way, I once gave a lecture dressed as a super sized Slurpee from 7-11. Surrounding yourself in cardboard and placing a giant red bean bag on your head does not make for the easiest of lecturing styles—but it got me Judy as an assistant—she wasn't sure she wanted to work for me until she read an article somewhere that mentioned my Slurpified lecture. These days, I dress in orange with a big belly so I look like a pumpkin.

Every Halloween for many years I have done a chemistry circus at Longhorn Halloween, with hundreds of people watching the demos I do in class. Here are some pictures from a couple year's ago when I had a kid jump into a couple gallons of glue and red food coloring which wasn't exactly what I wanted to happen.



The world is a very different place these days.

Anyway, a Halloween poems for your reading pleasure.

I have gone out a possessed witch,
haunting the black air, braver at night;
dreaming evil, I have done my hitch,
over the plain houses, light by light:
lonely thing, twelve-fingered, out of mind.
A woman like that is not a woman, quite.
I have been her kind.
I have found the warm caves in the woods,
Filled them with skillets, carvings, shelves,
Closets, silks, innumerable goods;
Fixed the suppers for the worms and the elves:
Whining rearranging the disaligned.
A woman like that is misunderstood.
I have been her kind.
I have ridden in your cart, driver.
Waved my nude arms at the villages going by,
Learning the last bright route, survivor
Where your flames still bite my thigh
And my ribs crack where your wheels wind.
A woman like that is not ashamed to die.
I have been her kind.

Anne Sexton

