CH302 Random Musings, April 22, 2010

0. **Dr. Laude gets embarrassed**. I know I shouldn't do things that embarrass others, because on those occasions when I get embarrassed, it doesn't feel good. Well it happened to me yesterday. I finally went over to the Dark Side and purchased a smart phone. And with it in my possession, and thinking it would be great to purchase an "ap" as you all call it, I went to the iTube store, signed up, and bought what will probably be my first, and last "ap." For 99 cents I got my very own scientific calculator. I really don't need anything else, I don't think.

So during office hours yesterday I was explaining, quite proudly, my success in purchasing a scientific calculator "ap" for just 99 cents, and made fun of my smart phone provider for providing just a basic four function calculator rather than a scientific calculator. And one of your classmates, whom I know to very nice, suggested that if I turned my smart phone sideways, I would have a scientific calculator, which seemed like just about the dumbest thing anyone could say, except that he was right, and I was humiliated.

By the way, I tried this strategy out on the ChemPortal calculator which also isn't fully functional, and turned the computer on its side. But it didn't work for that case.

1. **Quiz 5** had an unsurprisingly high average of near 88 as I tossed the one ambiguous question on oxidizing and reducing agents, and for the rest of the questions, basically mimicked my Chemportal quiz. Congratulations.

2. **The final quiz is next Tuesday the 27th**. It will cover the material on kinetics from the last two weeks lectures. Here are the question types:

- assigning rate expressions
- method of initial rates
- identifying order of reaction from rate constant
- Arrhenius calculation
- integrated rate law calculation
- half life calculation
- kinetic theory--collision and transition state concepts
- reaction mechanism

3. As usual, the following are true as we prepare for the quiz:
The quiz will be calculator free
It will look a lot like the practice quizzes provided in the Chem Portal on Friday night and by the TAs on Sunday
Office hours Monday and Tuesday for me will be in the classroom.

4. **In preparing for the quiz, the following worksheets were recommended**. While they may not be essential material for the quiz, which will be relatively easy, the problems on the exam are much more in keeping with the worksheets questions in content and difficulty.

Two nice 20 question worksheets on kinetics covering approximately the same material. Either is good to get complete coverage of the topics on the exam.

http://laude.cm.utexas.edu/courses/ch302/ws13s08.pdf
http://laude.cm.utexas.edu/courses/ch302/ws13s08key.pdf

http://laude.cm.utexas.edu/courses/ch302/ws8s09.pdf
http://laude.cm.utexas.edu/courses/ch302/ws8s09key.pdf

Also, here is the "real kinetics" worksheet I started in class. While not essential, it is a nice way to see how kinetics works and how you might tackle the same kind of calculations in your freshman chemistry lab.

http://laude.cm.utexas.edu/courses/ch302/ws12s08.pdf
http://laude.cm.utexas.edu/courses/ch302/ws12s08key.pdf

5. **The extra credit train** has left the station, and at this point, the following is true:
   Spring Break Extra Credits Received: 482
   Scholarly Lecture Extra Credits Received: 132
   Research Extra Credits Received: 83

A reminder that you have until sometime in the wee hours of the morning the Saturday after the last class day to get these in, and that not to do so means you either are among the 4% of students blowing up in this class or you don't care about your grade.

6. **And now for something completely different—knowing without thinking.** The material the last three weeks is mostly telling you a lot of facts, some of them mildly interesting, so that you can appreciate the enormity of chemistry and get prepared for next year's organic course. This week's lectures on main group chemistry will include material found lecture 25. At this point you are required to learn everything in lecture 25. The amount of material required to learn will probably decrease as I better define what will be on the exam (what the lecture closely for hints).

Also, starting next week we will learn how to draw and name organic molecules, basically covering the first fourth of the course in a couple lectures. For those of you going into organic, it will be a gratifying experience to have learned this stuff a few months ahead of time.

7. **The How To Get an A Sunday evening—Instructions.** The session is Sunday evening from 7 till 8 pm in this room. All are welcome, whether to get an A on the final or on the third exam. After this weekend, though, we will be moving into final exam mode in the rest of the sessions.

Important--To belong to the club, you need to have done the following by Sunday at 7 pm.

- Memorize the 21 question types for electrochemistry and kinetics on the next exam.
- Have the question types written on cards or paper.
- Have at least one, but preferably two, examples of each question type taped to the card. These examples can come from any exam or quiz, practice or real, on the subject.
- Have the cards separated into two stacks, the stack that you think you can do, and the stack that you don't think you can do.
- Practice writing recipes for the questions you think you can do. On each card, right down a step by step strategy for solving the problem. Try to think independent of a specific question, and more generally. Here are some examples. Try and do as many as you can, but a minimum of 5 by Sunday. We will work on recipe generation on Sunday night in preparation for writing down all 21 recipes for kinetics and electrochemistry problems on exam 3.

Here are two examples:

Recipe for question type on E_{cell} standard calculation:

1. Determine if the cell is E+ or E- (spontaneous or non-spontaneous.)
2. Subtract the two half cell potentials from each other.
3. Choose the number that is the sign asked for in step 1.

Recipe for question type on assigning rate expressions:

1. Write down $\Delta[X]/\Delta[t]$
2. Subtract the two half cell potentials from each other.
3. Choose the number that is the sign asked for in step 1.

l**Poetry Corner.** So one of the reasons people go to College is to fall in and out of love. And that all goes on as I attempt to teach you how cool the chemical industry is. You can see why some times I seem to take a back seat to your primary concern, which is more often matters of the heart.

Well nothing is truer about relationships than that they end, and when they end, 98% of the poetry in the world gets written. So here is a poem by one of your classmates describing such an issue. Personally I have only written one poem in my life, in the parking lot of an HEB after such a failing. And I think it sounded a lot like this one too. Isn't love grand?

A clock tells time
but I took the batteries out.
Every second. minute, hour, day, week, month
that ticks away is the same,
everything beats the same..every moment feels and sounds the same
without you.

When I'm laughing with you those many times in your room,
I look at you
and I watch your eyebrows raise,
and your dimples form,
and your goofy grin forming
and your eyes light up.
It does something to me.
I only see perfection.

Last night I thought about you.
In the morning I thought of you.
The moments in between, you were there too.

I want you out!
But I can't get rid of the
tall
simple
blue jean wearing
dark-haired
smart
caring
beautiful
guy.

While I'm thinking of you
and what we could be
and the memories we could make
and the places we could go
and the things we can discover and create
you are thinking
you are salvaging your past
with another girl.

- sucker for him