

CH302 Random Musings April 15, 2010

1. We are rolling downhill to the finish line. A reminder that the last random musings was a *tour de force* of important information--all the questions for the rest of the course and all the extra credits for the rest of the course are found in that musings. So rather than repeat all of them, I respectfully point you to that musings.
2. There is a quiz 5 today--the question types and format will look staggeringly like my practice quiz, so I hope you referenced it when preparing for the quiz.
3. Today is the last day of kinetics and I will work a kinetics worksheet for you to try and summarize how you use kinetics data (concentration-time data at a given temperature) to find important kinetics parameters (order, rate, rate constant, amount, activation energy, pre-exponential factor.)
4. It would be a good idea to prepare for the upcoming kinetics quiz that is on April 27. Toward that end I will post the worksheets and a first practice kinetics quiz on Friday evening or early Saturday morning.
5. After today, the lectures for the rest of the course are a bunch of descriptive chemistry presentations across the main group elements, organic chemistry and biochemistry. Nary a calculation to be found, you just get to memorize a bunch of stuff as we watch the stuff taught this semester come alive!!!!
6. A reminder that the research forum is Friday from 11 to 3 pm outside this building and that you can earn 1% of your grade by going for awhile and later writing to me about it following the instructions in last week's musings.
7. I went over to the dark side last night and purchased a smart phone. So far I have been able to resist using it in the middle of the street while walking or driving, and I have only sent one random photograph of nothing important in a text message. Promise me this--If you see me texting while walking, shame me, perhaps by making a video of It and putting it on YouTube or something.

7. I want to get an A study group. Update.

First, who can be part of this. I don't care whether you will use this study group to get an A on the final, get ready for a kinetics quiz, or try to ace exam 3. Anyone can show up.

Now based upon the willingness to send me an e-mail from your cell phone while standing in line at an HEB, there has been wild enthusiasm for this effort to assist students in preparing for the final. However from what I gather the enthusiasm for saying you want to get an A, and the actual willingness to do the work, are possibly two different things. So here is a serious statement:

Only students serious about doing what I say will be allowed to attend the study group. If I ask that something be done by the time the group meets and you haven't done it, then drop out of the group. I can't waste time cajoling students to do what others have done.

Assignment for Sunday at 6 pm in Welch 1.308. Getting electrochemistry and kinetics learned for the final. Show up on Sunday having accomplished the following four bulleted items. Total time should be about 2 to 3 hours of preparation.

- Memorize the 21 question types on electrochemistry and kinetics for the final exam.

Question Types for Electrochemistry

33. relating E, ΔG and K
34. balancing redox equations
35. ranking oxidizing and reducing agents
36. stoichiometry calculation from current
37. interpreting electrochemical cell diagrams
38. cell convention: electrolysis versus voltaic
39. understanding standard reduction potentials
40. calculating cell potentials (not Nernst)
41. calculating cell potentials (Nernst)
42. famous batteries

Question Types for Kinetics

43. assigning rate expressions
44. calculating reaction rates
45. method of initial rates
46. integrated rate law calculation
47. extracting information from straight line plots
48. kinetic theory
49. Arrhenius equation theory
50. combined Arrhenius calculation
51. reaction mechanisms
52. E_a and energy profiles
53. famous catalysts

- Write the question types on large cards or half sheets of paper.
- Cut out at least one example of these question types from old exams or quizzes and tape to the back of the card or page.
- Separate the questions into those that you think you will easily be able to learn to do and those that seem like a real challenge.

Remember, don't come Sunday if you can't accomplish the four bulleted items above.

Who can be part of this. I don't care whether you will use this study group to get an A on the final, get ready for a kinetics quiz, or try to ace exam 3. Anyone can show up. Just don't come if you are not ready.

11. Poetry Corner. I wasn't going to do any more depressing poetry this year, but then one of your class mates asked me to include part of Eliot's *The Waste Land*, which got me to thinking about how in college I hung around with a guy that spent his time walking around reciting the entire poem, which is like 400 lines long. And as I reread the poem, which I think has to do with the hopelessness of your future, I noticed that not only is it April, but he also talks about tubers—talk about being relevant to our class. Here is the first section.

The Burial of the Dead

by *T. S. Eliot*

April is the cruellest month, breeding
Lilacs out of the dead land, mixing
Memory and desire, stirring
Dull roots with spring rain.
Winter kept us warm, covering
Earth in forgetful snow, feeding
A little life with dried tubers.
Summer surprised us, coming over the Starnbergersee
With a shower of rain; we stopped in the colonnade,
And went on in sunlight, into the Hofgarten,
And drank coffee, and talked for an hour.
Bin gar keine Russin, stamm' aus Litauen, echt deutsch.^[1]

And when we were children, staying at the archduke's,
My cousin's, he took me out on a sled,
And I was frightened. He said, Marie,
Marie, hold on tight. And down we went.
In the mountains, there you feel free.
I read, much of the night, and go south in the winter.

What are the roots that clutch, what branches grow
Out of this stony rubbish? Son of man,^[2]
You cannot say, or guess, for you know only
A heap of broken images, where the sun beats,
And the dead tree gives no shelter, the cricket no relief,^[3]
And the dry stone no sound of water. Only
There is shadow under this red rock,
(Come in under the shadow of this red rock),
And I will show you something different from either
Your shadow at morning striding behind you
Or your shadow at evening rising to meet you;
I will show you fear in a handful of dust.

Frisch weht der Wind
Der Heimat zu
Mein Irisch Kind,
Wo weilest du?^[4]

“You gave me hyacinths first a year ago;
They called me the hyacinth girl.”

—
Yet when we came back, late, from the Hyacinth garden,
Your arms full, and your hair wet, I could not
Speak, and my eyes failed, I was neither
Living nor dead, and I knew nothing,
Looking into the heart of light, the silence.
Od^[5] und leer das Meer.^[6]

Madame Sosostris, famous clairvoyante,
Had a bad cold, nevertheless
Is known to be the wisest woman in Europe,
With a wicked pack of cards. Here, said she,^[7]
Is your card, the drowned Phoenician Sailor,
(Those are pearls that were his eyes. Look!)
Here is Belladonna, the Lady of the Rocks,
The lady of situations.
Here is the man with three staves, and here the Wheel,
And here is the one-eyed merchant, and this card,
Which is blank, is something he carries on his back,
Which I am forbidden to see. I do not find
The Hanged Man. Fear death by water.
I see crowds of people, walking round in a ring.
Thank you. If you see dear Mrs. Equitane,
Tell her I bring the horoscope myself:
One must be so careful these days.

Unreal City,^[8]
Under the brown fog of a winter dawn,
A crowd flowed over London Bridge, so many,
I had not thought death had undone so many.^[9]
Sighs, short and infrequent, were exhaled,^[10]
And each man fixed his eyes before his feet.
Flowed up the hill and down King William Street,
To where Saint Mary Woolnoth kept the hours
With a dead sound on the final stroke of nine.^[11]
There I saw one I knew, and stopped him, crying "Stetson!
"You who were with me in the ships at Mylae!
"That corpse you planted last year in your garden,
"Has it begun to sprout? Will it bloom this year?
"Or has the sudden frost disturbed its bed?

"Oh keep the Dog far hence, that's friend to men,^[12]
"Or with his nails he'll dig it up again!
"You! hypocrite lecteur!—mon semblable,—
mon frere!"^[13]

