# Announcements

- Turn on the Clicker (the red LED comes on).
- Push “Join” button followed by “20” followed by the “Send” button (switches to flashing green LED if successful).

- Quiz through section 15.3 in discussion tomorrow.
- Worksheet on equilibria tomorrow.

- Official scores for exam 2 are on D2L.
- Let me know of potential grading errors in writing ASAP.
- The exam average was about 69%.
- My correction of the typo in the following questions seems to have confused people. The correction was that the following choices should have read $\Delta G < 0$ instead of $\Delta G > 0$: Form A #15E, Form B #21D, Form C #24A, Form D # 1B. If you bubbled in the choice for which I provided a typo correction thinking it was the correct answer and can provide me with a written explanation of why the answer on the answer key is correct, I will give you credit for that question.

# Review

- Chemical equilibria are <u>dynamic</u> equilibria
  - the forward reaction rate exactly balances the reverse reaction rate. ($R_f = R_r$)
- Considered RXN: $N_2 + O_2 \rightleftharpoons 2NO$
  - $R_f = R_r \Rightarrow k_f [N_2][O_2]^{-1/2} = k_r [NO]^2/[O_2]^{1/2}$
    - Where all [..] are the equilibrium concentrations.
  - can solve for $K = k_f/k_r = [NO]^2/([N_2][O_2])$
  - K is an equilibrium constant
- Knowing all but one [..] can solve for the missing one.
- Can compare K with Q to determine which way the reaction will go to reach equilibrium.
- $K_{reverse} = K^{-1}$

15_05.jpg

Figure 15.5