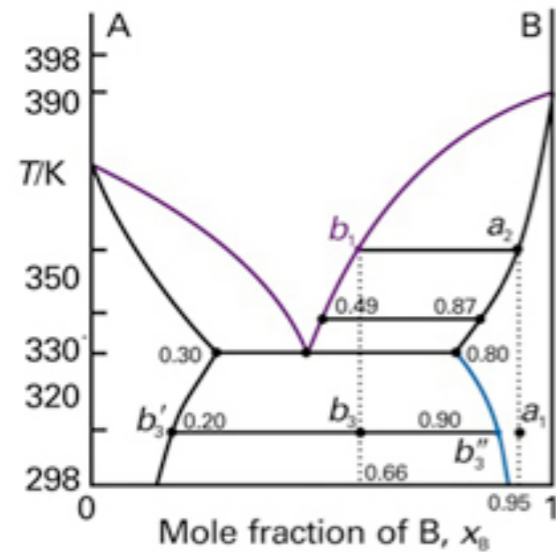


Wednesday, November 12



Last Time:

- Phase diagram practice problems
- Thermo wrap-up
- Kinetics: reactions, rates, and rate laws

Today:

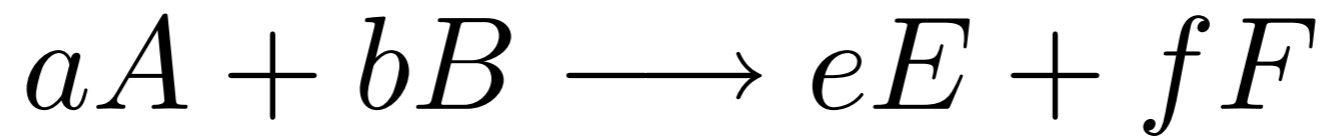
- Measuring reaction rates
- Integrated rate laws
- Temperature effects

Readings:

- Levine: 16.1–4

Handouts:

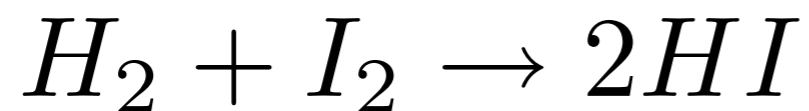
Reminders: Homework due Friday



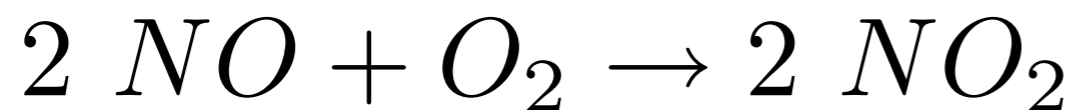
$$rate = -\frac{1}{a} \frac{d[A]}{dt} = \frac{1}{e} \frac{d[E]}{dt} = \frac{1}{\nu_i} \frac{d[i]}{dt} = kF\{[]\}$$

$$rate = k[A]^\alpha [B]^\beta [L]^\lambda$$

1. $k(T)$ – rate constant is a function of temperature
2. **NOT** from stoichiometry
3. Only valid over a certain concentration range



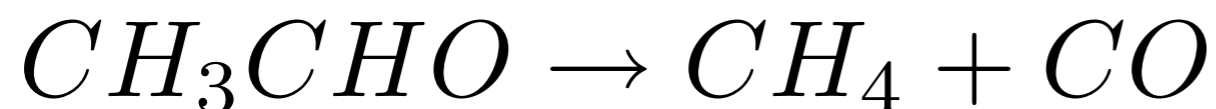
$$rate = k[H_2][I_2]$$



$$rate = k[NO_2]^2[O_2]$$



$$rate = k[N_2O_5]$$



$$rate = k[CH_3CHO]^{\frac{3}{2}}$$



$$rate = k[SO_2][SO_3]^{\frac{1}{2}}$$

