

CHEM 142

1-FEB. 6 2019

Masteringchem: CH142SP2019

↳ due wed. 8am.

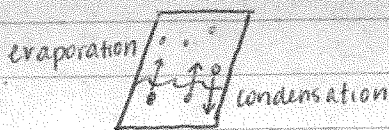
FEB.

CHEM MEET & GREET - 2nd Floor Keyes 3-4 pm. Friday 8, 2019

THIS SEMESTER:

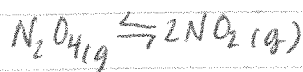
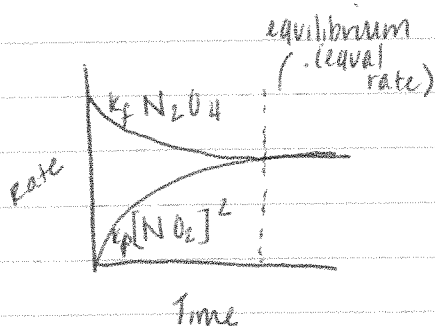
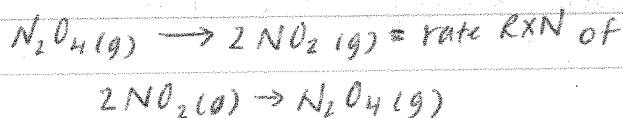
- What determines whether compounds react?
- What determines how fast things react?
- Why do some RXNs go 'to completion' and others don't?
- Can we predict (or control) how much product we get from RXN, or how long it will take?
- Why would we want to?
- ↳ How can we maximize production efficiency in industrial processes?

Recalling Vapor pressure



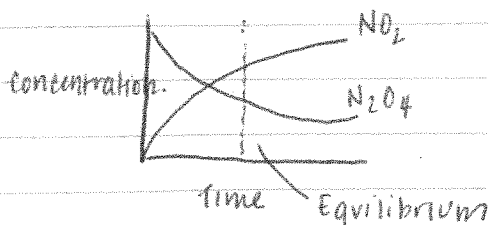
EQUILIBRIUM
DYNAMIC EQUILIBRIUM

EX 1 RXN of $N_2O_4(g)$ to form NO_2
 $N_2O_4(g)$ dissociates to become brown $NO_2(g)$



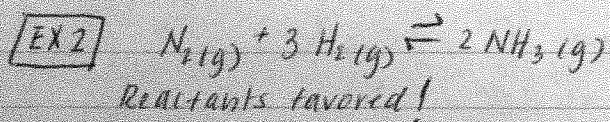
'CLOSED SYSTEM
ONLY.

- After several days, tube will hold mixture of reactants and products
- Concentration of N_2O_4 ↓ initially
- -||- of NO_2 ↑ at first
- concentrations reach constant value, after time



- At equilibrium concentrations, products and reactant amounts do not have to be equal.

∴ concentrations don't change over time.



$H_2(g) + O_2(g) \rightarrow H_2O(g) + \text{energy}$
products favored
goes 'to completion' spontaneously

