

# Participation Assignment

## CHEM 1100-General Chemistry II

Name:

#3

Section: 31, TR

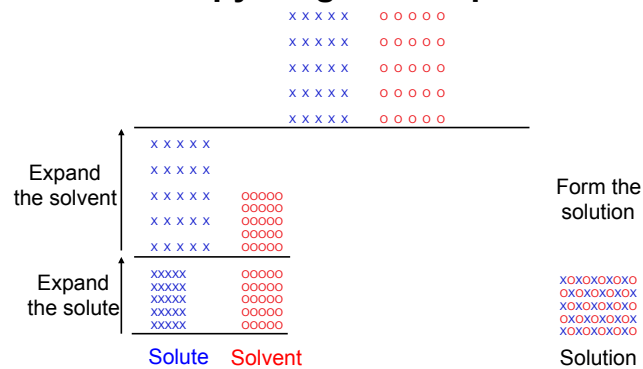
Due Date: Tuesday 1/15/2019

**Enthalpy**- Energy change at constant pressure (typically atmospheric pressure).

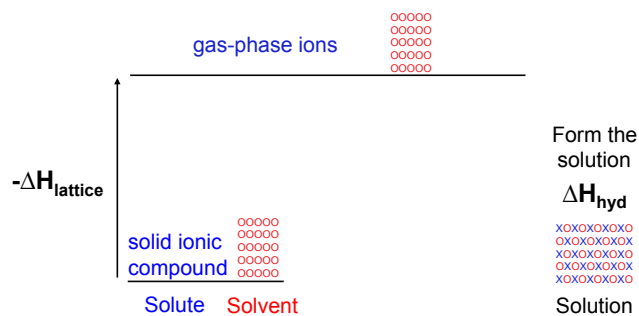
**Lattice Energy**- Amount of energy released when gas-phase ions form a solid ionic compound (this is the thermodynamic definition).

**Hydration Energy**- Amount of energy released upon solvation of gas-phased ions in water.

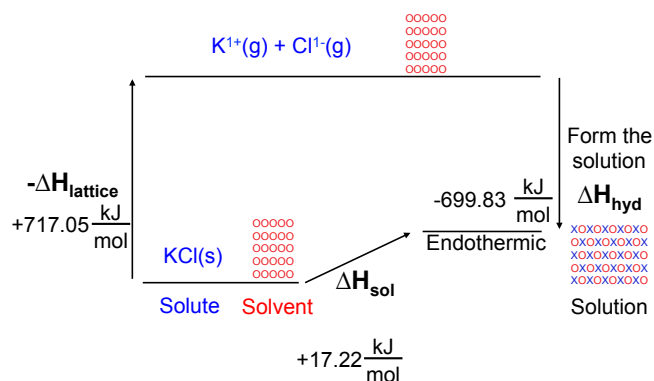
### Solution Formation Enthalpy Diagrams-Liquids



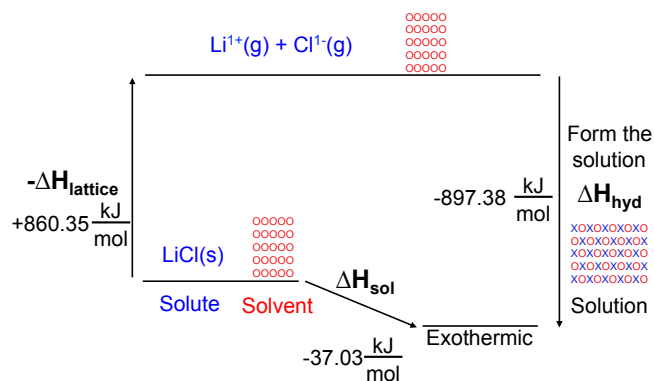
### Solution Formation Enthalpy Diagrams-Solids



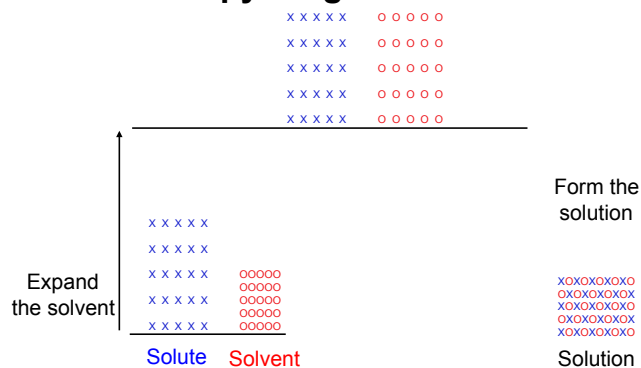
## Solution Formation Example-KCl(s) in Water



## Solution Formation Example-LiCl(s) in Water



## Solution Formation Enthalpy Diagrams-Gases



1. Define each of the following:

a. chemical kinetics

b. reaction rate

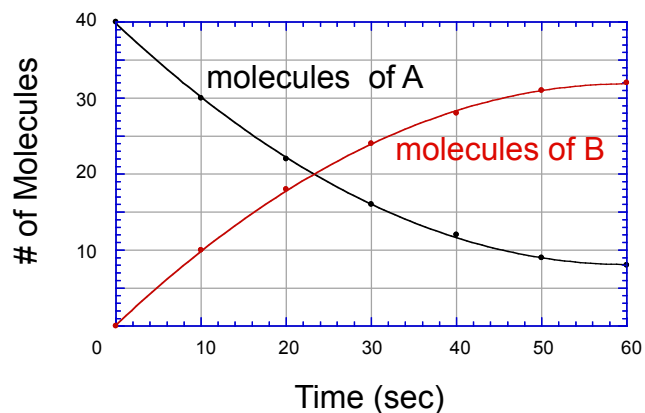
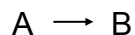
c. initial rate

d. rate law

e. reaction order

# Chemical Kinetics

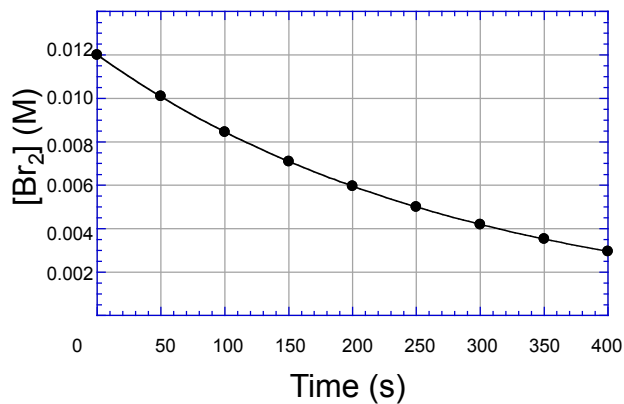
## Rate of Reaction



Data: Chang, R., *Chemistry*, 7<sup>th</sup> ed., The McGraw-Hill Companies, 2002, p511.

# Chemical Kinetics

## Rate of Reaction



Data: Chang, R., *Chemistry*, 7<sup>th</sup> ed., The McGraw-Hill Companies, 2002, p513.

Time (s)	[Br <sub>2</sub> ] (M)
0.0	0.0120
50.0	0.0101
100.0	0.00846
150.0	0.00710
200.0	0.00596
250.0	0.00500
300.0	0.00420
350.0	0.00353
400.0	0.00296