

# Chem 107

Fall 2014

Review Session 2

Practice Problems-with answers

9/17/14

# Solubility Rules, Dissociation in Aqueous Solutions and Net Ionic Equations

- When a **covalently bonded** material is dissolved in water, it remains intact, it **does not dissociate**
- When an **ionic** solid dissolves in water it **does dissociate**
- **Strong** acids and **strong** bases dissociate and are strong electrolytes
- **Weak** acids and **weak** bases remain intact and are weak electrolytes
- **Insoluble** compounds remain as solids and are **not electrolytes**

Covalent:



Ionic:



# Solubility Rules, Dissociation in Aqueous Solutions and Net Ionic Equations

- When a **covalently bonded** material is dissolved in water, it remains intact, it **does not dissociate**
- When an **ionic** solid dissolves in water it **does dissociate**
- **Strong** acids and **strong** bases dissociate and are **strong electrolytes**.
- Molecular equation contains all species present as associated molecules
- Total ionic equation contains all species and shows ions after dissociation
- Net ionic equation retains those species that are active in the reaction

*Textbook example, page 77*

**Molecular equation:**



**Total ionic equation:**



**Net ionic equation:**



- 1) Write out molecular equation and make sure it is balanced
- 2) Write total ionic equation, dissociate the species that will dissociate
- 3) Cross out any species that appears as both a reactant and a product