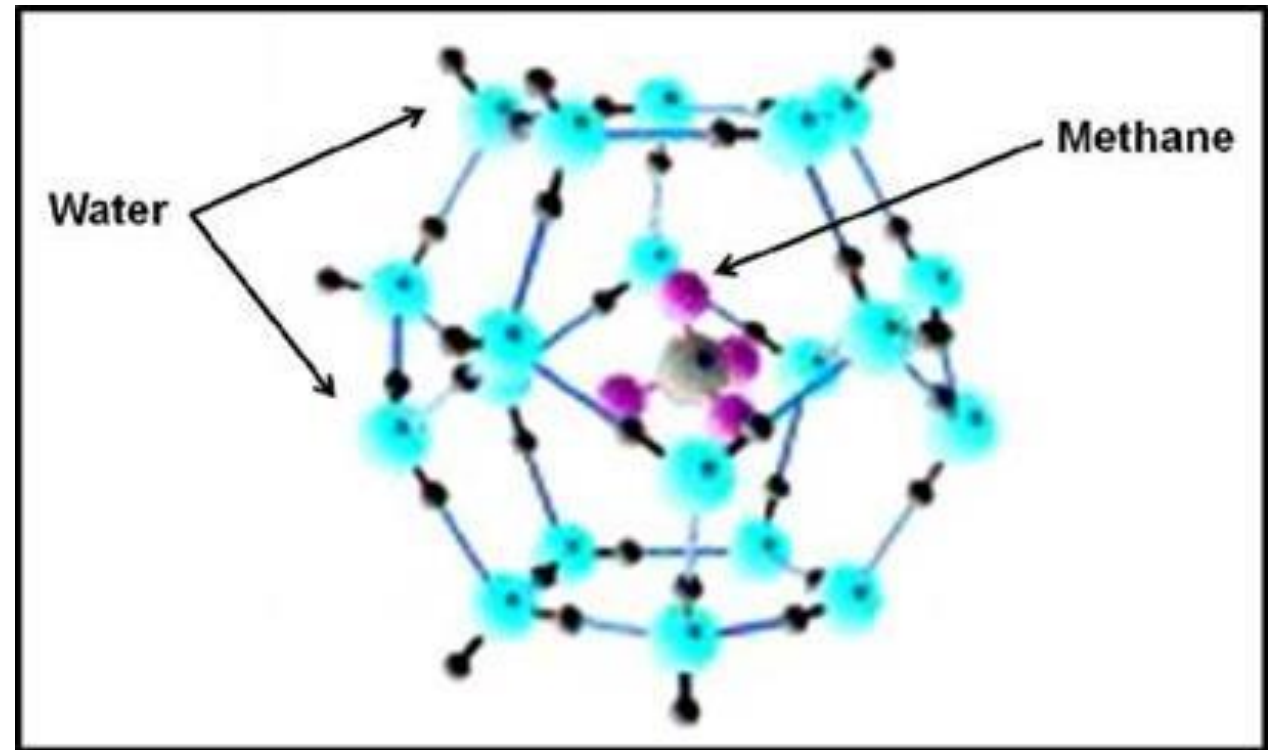
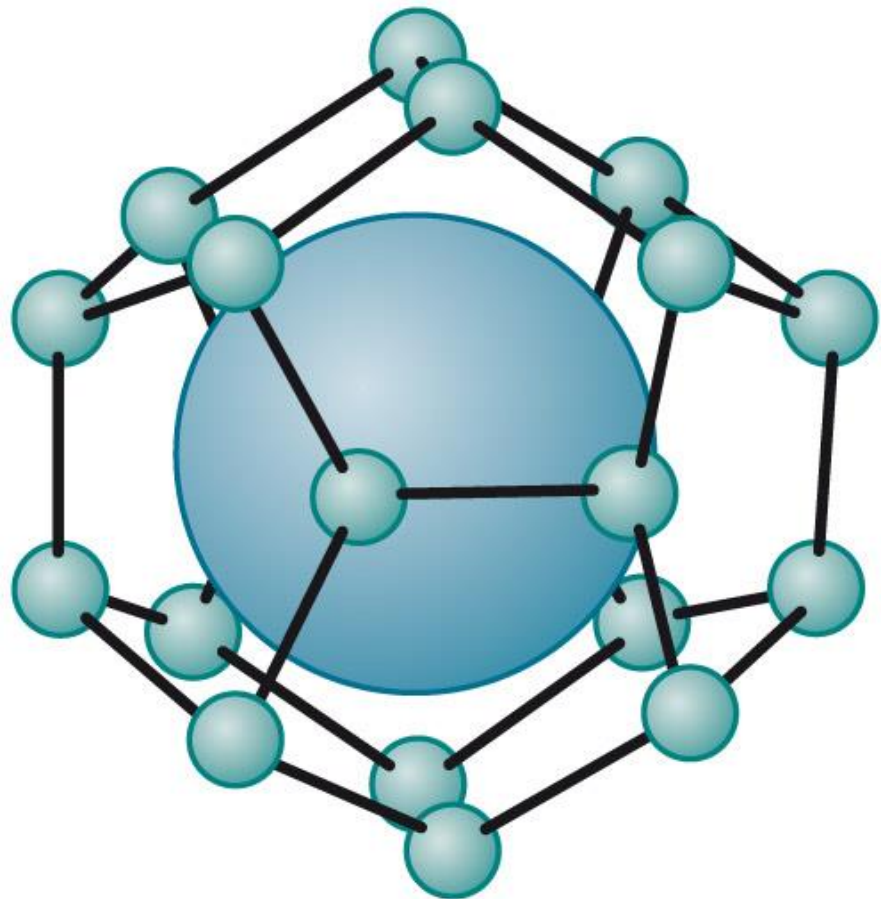


[1.3] - Naming Hydrates



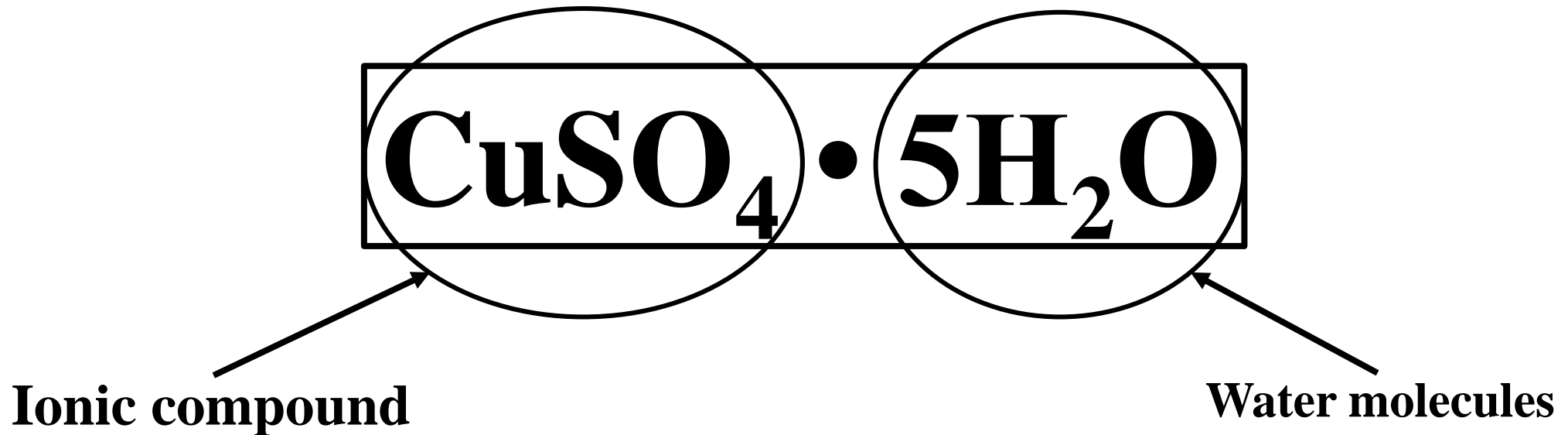
Hydrates

- **Hydrates** are **solid compounds** that contain **water** molecules (H_2O)
- When solid ionic compounds crystallize from liquid, they often include water molecules surrounding them



Identifying Hydrates

- **Hydrates** are like regular ionic compounds, however contain water molecules at the end
- If there are water molecules at the end of an ionic compound separated by a “•”, it is a **hydrate**



Naming Hydrates

- Naming hydrates involves two steps:
 1. Name the ionic compound at the beginning by following regular ionic naming steps
 2. Name the water molecules by using the **prefixes** below (Recall from covalent compound naming) + “**hydrate**”

Ionic compound name + prefix-hydrate

Naming Hydrates

- The prefixes will go before the word “hydrate”

Number of H ₂ O	Prefix	Combination
1	Mono	Monohydrate
2	Di	Dihydrate
3	Tri	Trihydrate
4	Tetra	Tetrahydrate
5	Penta	Pentahydrate
6	Hexa	Hexahydrate
7	Hepta	Heptahydrate
8	Octa	Octahydrate
9	Nona	Nonahydrate
10	Deca	Decahydrate

Naming Hydrates

Examples:



Practice Problem #1

Name the following hydrates:

1. $\text{Zn}(\text{CH}_3\text{COO})_2 \cdot 6\text{H}_2\text{O}$: _____

2. $\text{CrBr}_3 \cdot 7\text{H}_2\text{O}$: _____

3. $\text{NiN} \cdot 10\text{H}_2\text{O}$: _____

4. $\text{MgS} \cdot 4\text{H}_2\text{O}$: _____

Practice Problem #2

Write the chemical formulas of the following hydrates:

1. Calcium phosphide dihydrate: _____

2. Sodium carbonate monohydrate: _____

3. Chromium (III) nitrate tetrahydrate: _____

4. Barium iodide hexahydrate: _____