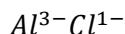


# C11 - 1.3 - Naming Ionic/Covalent/Multivalent/Polyatomic/Acid/Base Notes

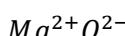
## Ionic Compounds : Metal/Non-metal

Metal 1st

Metal Non-metal-ide



*aluminum chlorine*  
*aluminum chloride*



*magnesium oxygen*  
*magnesium oxide*

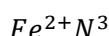
ine → ide  
gen → ide  
on → ide  
xxx → ide

Boron → Boride  
Oxygen → Oxide  
Flourine → Flouride  
Sulfur → Sulfide

Exceptions to the naming\*:  
NaCl: Table Salt  
NH<sub>3</sub>: Ammonia  
O<sub>3</sub>: Ozone etc!

## Multi-valent Compounds:

Multi-valent: More than one ionic charge



Simplify

*Fe<sub>3</sub>N<sub>2</sub>* = iron (II) nitride

*Fe<sub>3</sub>N<sub>2</sub>*

*FeN* = iron (III) nitride

*Fe<sub>3</sub>N<sub>3</sub>*

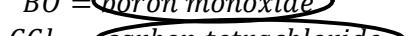
*FeN*

Roman Numerals in brackets to the right of the element representing its charge being used.

<i>I</i> = 1	<i>VI</i> = 6
<i>II</i> = 2	<i>VII</i> = 7
<i>III</i> = 3	<i>VIII</i> = 8
<i>IV</i> = 4	<i>IX</i> = 9
<i>V</i> = 5	<i>X</i> = 10

## Covalent Compounds : Non-metal/Non-metal

Non-metal Non-metal-ide



\* Monocarbon Dioxide

\* more metallic non-metal first.

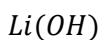
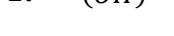
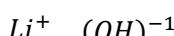
Why is October (Oct) the 10th month? Egyptians were wrong and Julius and Augustus Caesar inserted July and August.

### Prefixes

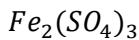
1 mono	6 hexa
2 di	7 hepta
3 tri	8 octa
4 tetra	9 nona
5 penta	10 deca

## Polyatomic Compounds

See Polyatomic Table



*lithium hydroxide*

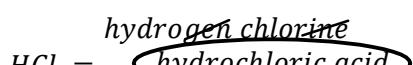


*iron (III) sulphate*

Acids: tend to have an  $H^+$

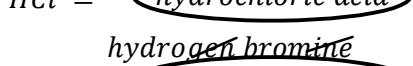
sulphur vs sulfur

### Do not contain Oxygen

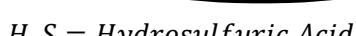


*hydrogen chlorine*  
*hydrochloric acid*

gen  
ine → ic  
Add: acid

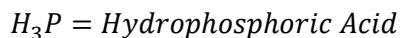


*hydrogen bromine*  
*hydrobromic acid*



*Hydrosulfuric Acid*

ur → uric  
ous → oric



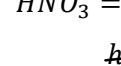
*Hydrophosphoric Acid*

### Contain Oxygen



*hydrogen nitrate*  
*nitric acid*

Hydrogen  
ate → ic  
Add: acid



*hydrogen sulfate*  
*sulfuric acid*

Hydrogen  
ate → uric  
Add: acid



*Hydrogen Nitrite*  
*Nitrous Acid*

Hydrogen  
ite → ous  
Add: acid

### Bases : tend to have an $OH^-$

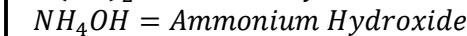
(Name as you would a polyatomic)



*Lithium hydroxide*



*Calcium hydroxide*

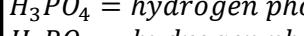


*Ammonium Hydroxide*



*hydrogen phosphate*

*phosphuric*



*hydrogen phosphate*

*phosphorous*

ate → uric  
ite → orous