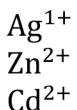


Fixed Charge Cations

Group IA (Alkali metals)	1+
Group IIA (Alkaline earth metals)	2+
Group IIIA	3+



Variable Charge Cations

Use Roman Numeral to indicate the charge.

iron (II) ion	Fe ²⁺
iron (III) ion	Fe ³⁺
cobalt (II) ion	Co ²⁺
cobalt (III) ion	Co ³⁺
nickel (I) ion	Ni ⁺
nickel (II) ion	Ni ²⁺
copper (I) ion	Cu ⁺
copper (II) ion	Cu ²⁺
tin (II) ion	Sn ²⁺
tin (IV) ion	Sn ⁴⁺
lead (II) ion	Pb ²⁺
lead (IV) ion	Pb ⁴⁺

Anions are Always Fixed Charge

Group VA	3-
Group VIA	2-
Group VIIA	1-

Naming Ionic Compounds

Cation + Anion with end changed to "ide"

*** Do not change the name for polyatomic ions

Examples:

lithium sulfide	Li ₂ S
calcium oxide	CaO
iron (II) bromide	FeBr ₂
potassium acetate	KC ₂ H ₃ O ₂
gold (II) nitrite	Au(NO ₂) ₂

Naming Acids

If anion name ends with -ide, change to -ic and use prefix hydro-

If anion name ends with -ite, change to -ous

If anion name ends with -ate, change to -ic

hydrochloric acid	HCl
hydrosulfuric acid	H ₂ S
chlorous acid	HClO ₂
nitrous acid	HNO ₂
sulfurous acid	H ₂ SO ₃
phosphorous acid	H ₃ PO ₃
carbonic acid	H ₂ CO ₃
sulfuric acid	H ₂ SO ₄
phosphoric acid	H ₃ PO ₄

Naming Covalent Compounds

Use Greek prefixes to indicate number of atoms.

*** Do not use charges of the atoms

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

First Element

prefix (except mono) + nonmetal name

Second Element

prefix + nonmetal name with end changed to "ide"

CO₂ = carbon dioxide

PCl₃ = phosphorus trichloride

N₂S₅ = dinitrogen pentasulfide

SF₆ = sulfur hexafluoride

Cl₂O₇ = dichlorine heptaoxide