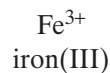
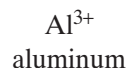


## The Stock System of Nomenclature

Some elements, such as iron, form two or more cations with different charges. To distinguish the ions formed by such elements, scientists use the Stock system of nomenclature. This system uses a Roman numeral to indicate an ion's charge. The numeral is enclosed in parentheses and placed *immediately* after the metal name.

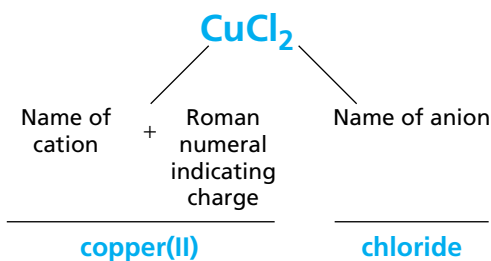


Names of metals that commonly form only one cation do *not* include a Roman numeral.



There is no element that commonly forms more than one monatomic anion.

Naming a binary ionic compound according to the Stock system is illustrated below.



**FIGURE 1** Different cations of the same metal form different compounds even when they combine with the same anion. Compare (a) lead(IV) oxide,  $\text{PbO}_2$ , with (b) lead(II) oxide,  $\text{PbO}$ .