# Teaching Inorganic Nomenclature

## A Systematic Approach

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Naming inorganic compounds seems to be unsystematic, unimportant, and subject to pure memorization. This impression is unavoidable when the leading textbooks for general chemistry in the United States are reviewed (*1–12*). From discussions with many colleagues, I also feel that many instructors who teach general chemistry do not know the subject of naming inorganic compounds well enough to teach it adequately and therefore either do a rather poor job or avoid the subject altogether.

Being able to name inorganic compounds is, in my opinion, something every student should master after completing one year of college-level general chemistry. Since I am not an advocate of memorization, I decided to look for the systematics in inorganic nomenclature. I would like to present a semisystematic scheme that I have used successfully for the past four years in our entry-level (college freshmen) general chemistry course.

The scheme is divided into three parts: Cations, Anions, and Compounds (see Figs. 1–3). Cations are further subdivided into monatomic and polyatomic; anions, into monatomic, oxyanions, others and exceptions, and oxyanions containing hydrogen. Compounds are subdivided into ionic compounds, compounds containing hydrogen, and covalent compounds.

I am aware that dividing inorganic compounds into "ionic" and "covalent" compounds and then having as a third category "compounds containing hydrogen" may be a little problematic and artificial, but for the purpose of naming compounds it is not, and the fine tuning can always be done in class when the subject is discussed.

Students have generally reacted positively to the scheme, and the results as measured by the students' performance on the subject in examinations are encouraging.

### Literature Cited

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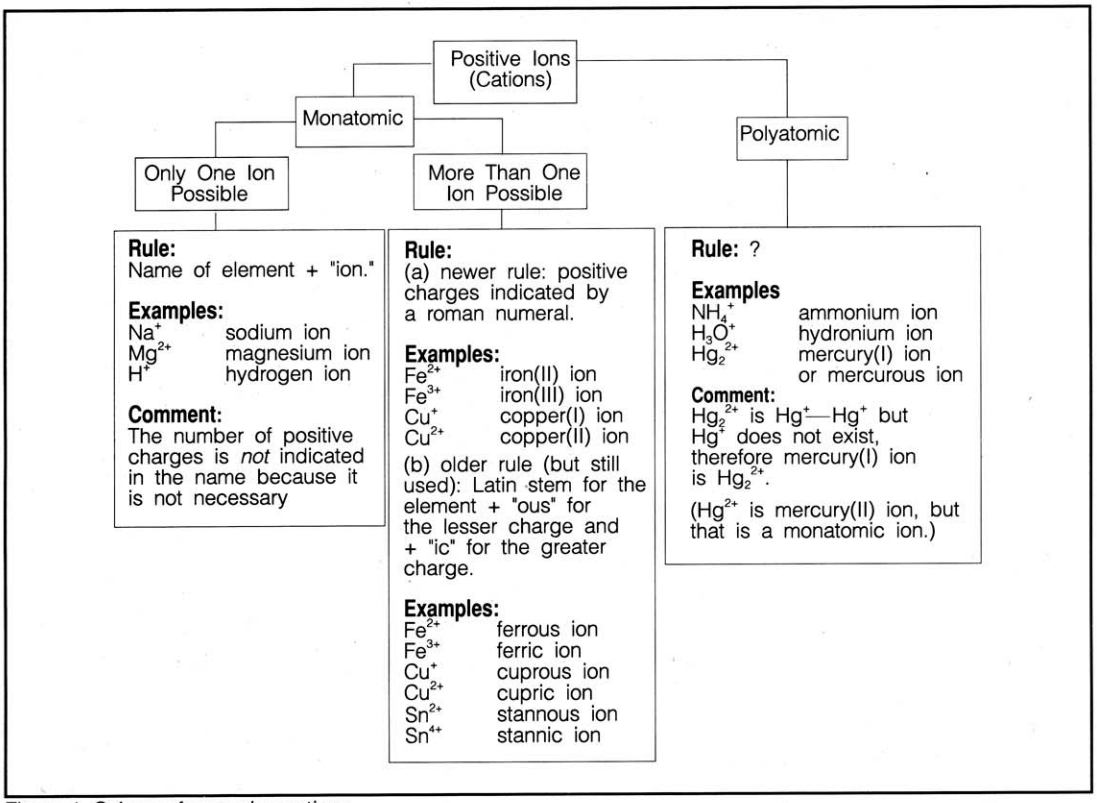

Figure 1. Scheme for naming cations.

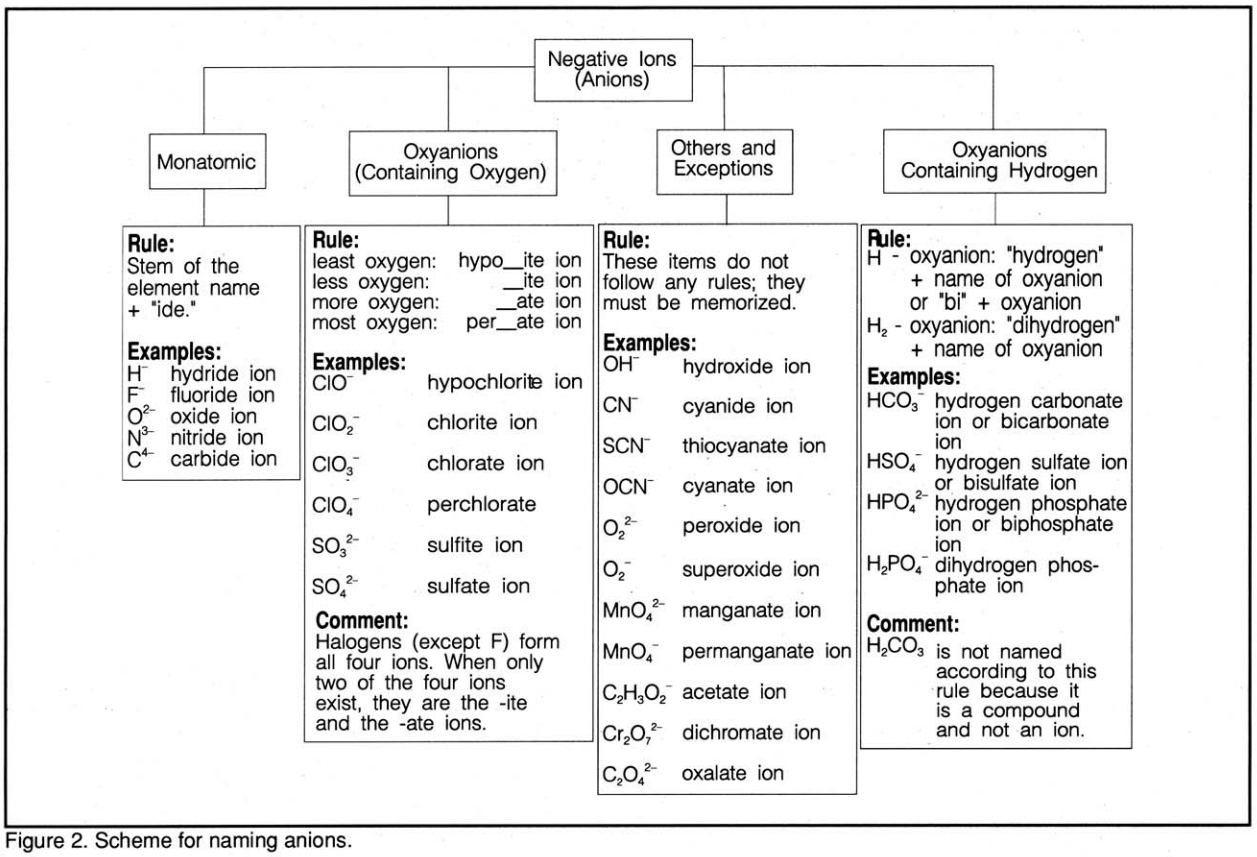


Figure 2. Scheme for naming anions.

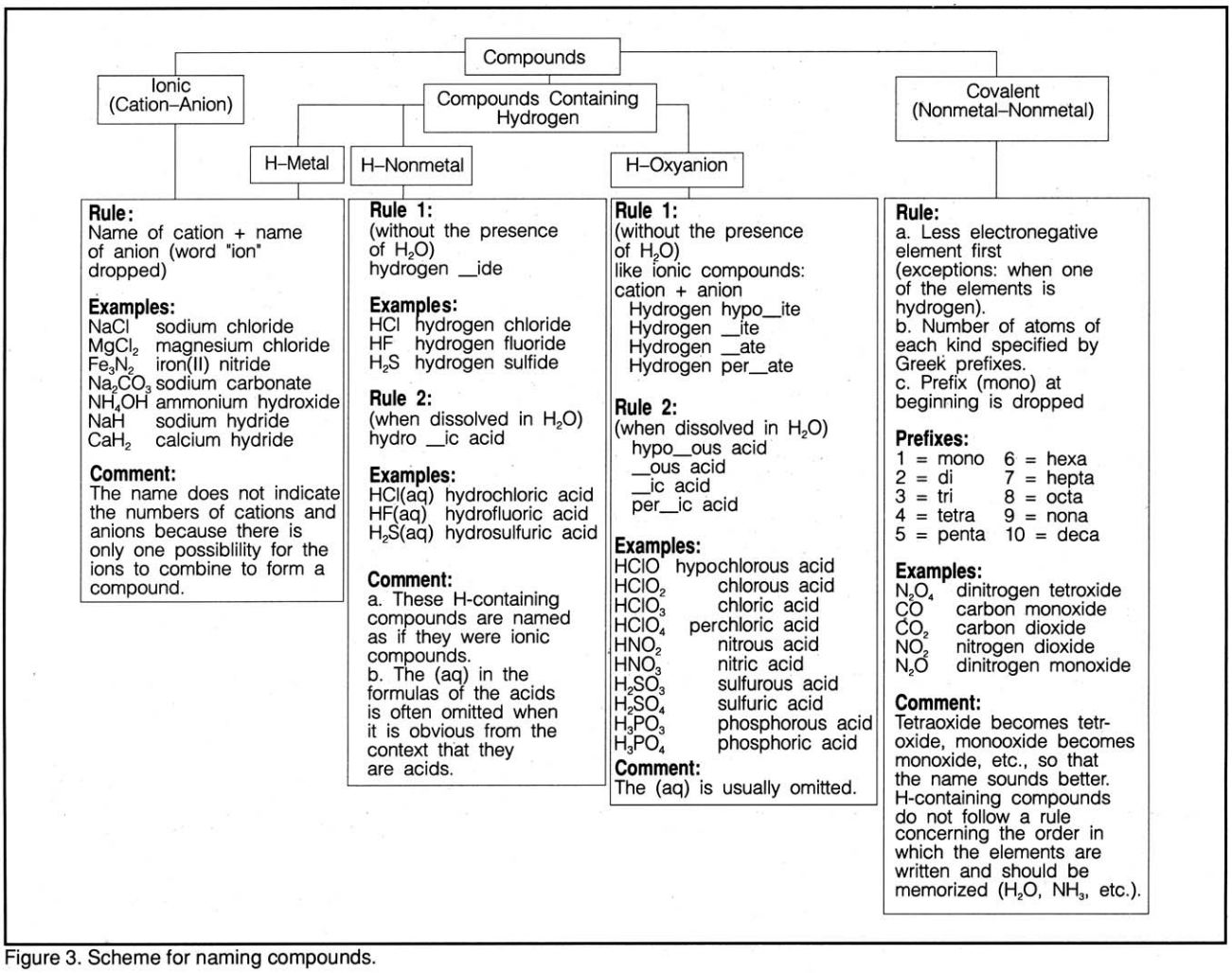


Figure 3. Scheme for naming compounds.