

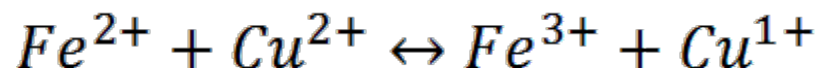
Chemistry 201

Redox reactions

NC State University

Redox Reactions

Redox reactions are electron transfer reactions. This can mean that one atom gives an electron to another atom. For example,



In such a reaction one species is being oxidized (i.e. losing an electron) and the other is reduced (i.e. gaining an electron).

Oxidation is loss of one or more electrons.

Reduction is gain of one or more electrons.

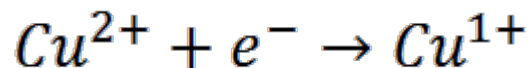
Half reactions

To balance redox reactions one can decompose them into half reactions that show the oxidation and reduction processes separately.

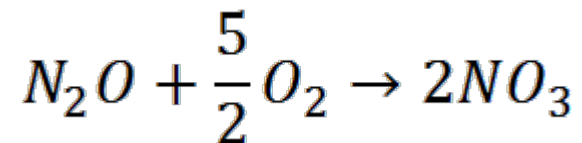
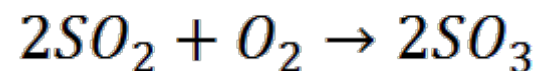
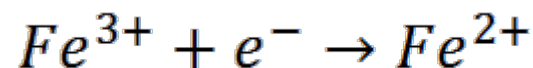
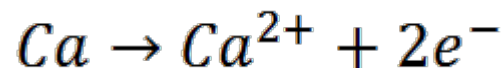
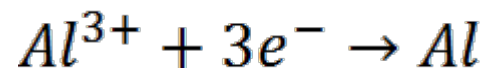
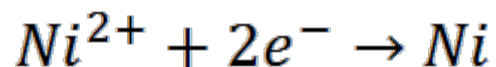
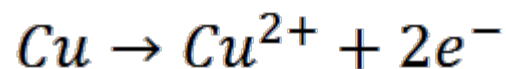
An oxidation half reaction shows a species that is oxidized, i.e. gives away an electron:



A reduction half reaction shows a species that is reduced, i.e. accepts an electron:



Are the following oxidations or reductions?
How many e^- are involved in each?



Are the following oxidations or reductions?
How many e^- are involved in each?

