

Thermochemistry

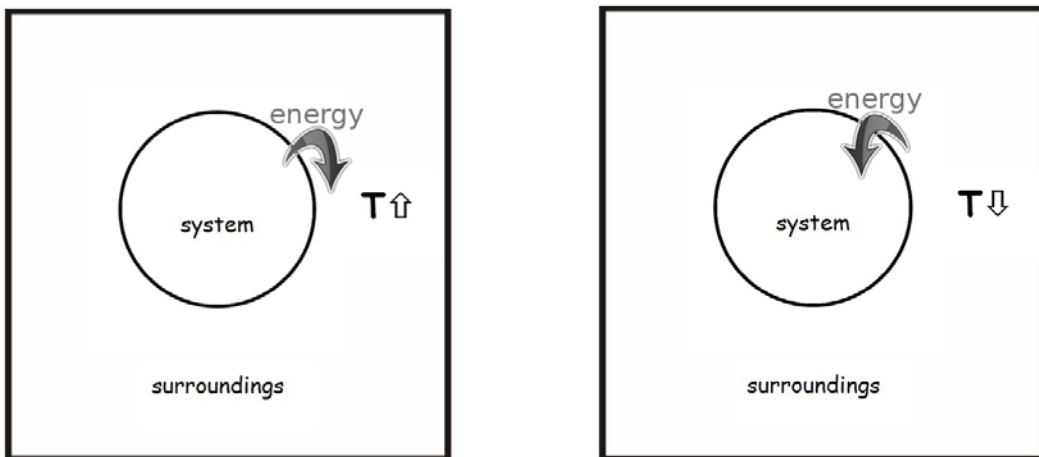
-chemistry that deals with heat changes accompanying chemical reactions

Heat-a type of energy which can be transferred resulting in a temperature change

Temperature-a measure of the average kinetic energy of a system

System-what you are studying, can be a substance or a mixture of substances

Surroundings-everything else



The Law of Conservation of Energy-energy cannot be created or destroyed; however it can be changed from one form to another and transferred from one substance to another.

∴ energy gained by the system equals energy lost by the surrounds and energy lost by the system equals energy gained by the surroundings

Heat of reaction-the energy change which accompanies a chemical

Reaction

-the symbol is Q

Exothermic reaction-system loses energy so surroundings gain energy

as a result the temperature in the surroundings

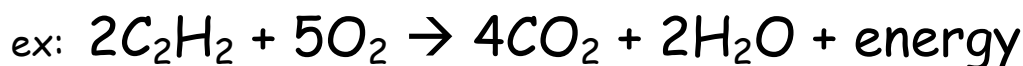
increases ($T \uparrow$, surroundings)

Endothermic reaction-system gains energy, surroundings lose energy so

the temperature in the surroundings decreases

($T \downarrow$, surroundings)

Thermochemical equation-energy is written as part of the equation



ethyne

-exothermic reaction (energy is a product)

ex:



-endothermic reaction (energy is a reactant)