Reaction enthalpy. P 56 (chap 2)

$0 = \nu_i B_i$, where ν_i are the stoichiometric numbers

Amount of reaction n_i uses extent of reaction ξ, where $n_i = n_{i0} + \nu_i \ \xi$.

n_i : The amount of stuff that we have because of the reaction, or the stuff we started with.

Let it be at constant pressure. We want to look at heat. We use enthalpy H.

$dH = \overline{H_i} dn_i$

We can write this as

$dH = \nu_i \overline{H_i} d\xi$. (T, P constant)

or

$$\left(\frac{\partial H}{\partial \xi} \right)_{T,P} = \nu_i \overline{H_i}$$

$\equiv \Delta_r H$

If we have a reaction, such as $C+O_2 = CO_2$, suppose we get one mole of CO_2.

Then $\Delta\xi$ is 1 mole.

We measure the heat (i.e., the enthalpy), and then tabulate the values.

Enthalpy of formation $\Delta_f H$ is for the reaction at the standard state.

To find enthalpy at another T, use a sequence of paths (p. 61).

This is because H is a state function (path indep).

We look at a sequence of paths as we did for entropy.

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