Answer on question #69848

The decomposition of crystalline N2O5 [N2O5(s)-->2NO2(g) + 1/2O2(g)] is an example of a reaction that is thermodynamically favored even though it absorbs heat. At 25C we have the following values for the standard state enthalpy and free energy changes of the reaction: dH=+109.6kJ/mol , dG= -30.5kJ/mol.

Solution:

$$^{1}/_{2}$$

$$\frac{^{J}/_{mol} \qquad\qquad ^{J}/_{mol}}{} \quad \mathbf{470}\left(\boldsymbol{^{J}/_{mol\ \ K}}\right);$$

$$\sum n(produ$$

$$4\left(^{kJ}/_{mol}\right).$$

Answer: $\mathbf{470}\left(\mathbf{^{J}/_{mol\ \ K}}\right)$ $\left(\mathbf{^{kJ}/_{mol}}\right)$.