**Entropy Change of System**

Entropy is given the symbol S. Entropy change, the symbol ∆S. Each species in a reaction is given a value for entropy. We calculate ∆Ssys using the following equation

 ∆Ssys = Σ Sproducts - Σ Sreactants

E.g. Calculate ∆Ssys for the following reaction using the values in the table

|  |  |
| --- | --- |
| **Substance** | **Sθ J K-1 mol-1** |
| N2(g) | 191.6 |
| H2(g) | 130.6 |
| NH3(g) | 192.3 |

N2(g) + 3H2(g) 🡪 2NH3(g)

Did you expect the entropy to change as it did?

E.g. Calculate ∆Ssys for the following reaction using the values in the table

|  |  |
| --- | --- |
| **Substance** | **Sθ J K-1 mol-1** |
| C2H2(g) | 201.0 |
| H2(g) | 130.6 |
| C2H6(g) | 230.0 |

C2H2(g) + 2H2(g) 🡪 C2H6(g)

