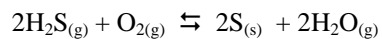


CH1012

Tutorial 1

Name:

1. Fuel desulfurization is often used in natural gas power plants to reduce one of the major pollutants resulting from fossil fuel combustion SO_2 . The compound removed from the fuel is hydrogen sulfide (H_2S).



Write down the equilibrium expression K_c for this reaction.

What happens to the equilibrium concentration of H_2S if O_2 is added?

What happens to the equilibrium concentration of S if H_2S is removed?

2. Write down the equilibrium constant (K_p) for the decomposition of liquid water for form gaseous hydrogen and oxygen.

- What is the difference between a Lyophobic and a Lyophilic colloid – provide examples to illustrate your answer? Include a clear definition of each colloid.
- The relative mobility of the hydrated Group 1A ions increases as we go down the group and yet the ionic size increases. Explain this apparent anomaly.
- Define the term **organometallic compound** and give an example of a Group 2A organometallic compound.

