LECTURE 20

1. In water at 25 ˚C, lead (II) sulfate ($PbSO_4$) has a solubility of 4.25×10^{-3} g/100 mL solution. What is the K_{sp} of $PbSO_4$?

2. Carbon dioxide (CO_2) is a greenhouse gas and many research groups are trying to figure out how to sequester it from the environment and how to store it. In one experiment, carbon dioxide gas is dissolved in a sample of water in a partly filled, sealed container. Once equilibrium is reached between the CO_2 in the air space above the solution and the CO_2 in the solution, explain what happens to the solubility of the CO_2 if (a) the partial pressure of the CO_2 gas is doubled by the addition of more CO_2; (b) the total pressure of the gas above the liquid is doubled by the addition of nitrogen.

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