Nick Ippoliti

Mrs. Loutrel

AP Chemistry 12B

Tue Sep 9 19:52:48 2014

1 Post-Lecture Homework Chapter 03

1.1 Problem 3.2

$$\begin{split} & H_2 + \mathrm{CO} \longrightarrow 4\,\mathrm{CH_3OH} \\ & 8\,\mathrm{H_2} + 4\,\mathrm{CO} \longrightarrow 4\,\mathrm{CH_3OH} \end{split}$$

1.2 Problem 3.14

1.2.1 Part A

$$\begin{split} &\operatorname{Ca_3P_2(s)} + \operatorname{H_2O(l)} \longrightarrow \operatorname{Ca(OH)_2(aq)} + \operatorname{PH_3(g)} \\ &\operatorname{Ca_3P_2(s)} + 6\operatorname{H_2O(l)} \longrightarrow 3\operatorname{Ca(OH)_2(aq)} + 2\operatorname{PH_3(g)} \end{split}$$

1.2.2 Part B

$$\begin{split} & \operatorname{Al}(\operatorname{OH})_3(s) + \operatorname{H}_2\operatorname{SO}_4(\operatorname{aq}) \longrightarrow \operatorname{Al}_2(\operatorname{SO}_4)_3(\operatorname{aq}) + \operatorname{H}_2\operatorname{O}(l) \\ & 2 \operatorname{Al}(\operatorname{OH})_3(s) + 3 \operatorname{H}_2\operatorname{SO}_4(\operatorname{aq}) \longrightarrow \operatorname{Al}_2(\operatorname{SO}_4)_3(\operatorname{aq}) + 6 \operatorname{H}_2\operatorname{O}(l) \end{split}$$

1.2.3 Part C

$$\begin{split} & \operatorname{AgNO_3(aq)} + \operatorname{Na_2CO_3(aq)} \longrightarrow \operatorname{Ag_2CO_3(s)} + \operatorname{NaNO_3(aq)} \\ & 2\operatorname{AgNO_3(aq)} + \operatorname{Na_2CO_3(aq)} \longrightarrow \operatorname{Ag_2CO_3(s)} + 2\operatorname{NaNO_3(aq)} \end{split}$$

1.2.4 Part D

$$\begin{split} &C_2H_5NH_2(g)+O_2(g) \longrightarrow CO_2(g)+H_2O(g)+N_2(g) \\ &4\,C_2H_5NH_2(g)+15\,O_2(g) \longrightarrow 8\,CO_2(g)+14\,H_2O(g)+2\,N_2(g) \end{split}$$