Check Homework - Worksheet

FORMATION

Al^{3+} O^{2-}

e) $4Al_{(s)} + 3O_{2(g)} \rightarrow 2Al_2O_{3(s)}$

aluminum + oxygen → aluminum oxide

DECOMP.

f) $2NaOH_{(l)} \rightarrow 2Na_{(s)} + O_{2(g)} + H_{2(g)}$

Sodium hydroxide → sodium + oxygen + hydrogen

Chemical Reactions

III. Combustion Reaction

A complete combustion reaction is the burning of a substance with oxygen to produce the most common oxides of the elements in the substance being burned.

Most Common Oxides:

- Carbon : $CO_{2(g)}$
- Hydrogen: $H_2O_{(g)}$
- Sulfur: $SO_{2(g)}$
- Nitrogen: $NO_{2(g)}$
- A metal: Oxide of metal with most common ion charge

Ex $2C_4H_{10(g)} + 13O_{2(g)} \longrightarrow 8CO_{2(g)} + 10H_2O_{(g)}$

element/compound + O_2 → most common oxides

Fe^{3+} O^{2-}

$$4Fe_{(s)} + 3O_{2(g)} \longrightarrow 2Fe_2O_{3(g)}$$

$$2CH_3NH_{3(s)} + 7O_{2(g)} \longrightarrow 2CO_{2(g)} + 6H_2O_{(g)} + 2NO_{2(g)}$$

CH_3NH_3
CH_3NH_3

Combustion Reactions

Write a balanced chemical equation for the following combustion reactions:

$2Mg_{(s)} + O_{2(g)} \longrightarrow 2MgO_{(g)}$

$C_{21}H_{24}N_2O_{4(s)} + 27O_{2(g)} \longrightarrow 21CO_{2(g)} + 12H_2O_{(g)} + 2NO_{2(g)}$

Homework

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p. 332 #15, 16
p. 337 #20, 21