$$SO_4^{2-} + Ba^{2+} \longrightarrow BaSO_4 \downarrow$$

$$A \downarrow B \downarrow \longrightarrow B \uparrow B \uparrow$$

$$CH_4 + 2\left(O_2 + \frac{79}{2}N_2\right)$$

$$xNa(NH_4)HPO_4 \xrightarrow{\Delta} (NaPO_3)_x + xNH_3 \uparrow + xH_2O$$

$$CO_2 + C \longrightarrow 2\,CO$$

$$Hg^{2+} \xrightarrow{I-} HgI_2 \xrightarrow{I-} [Hg^{II}I_4]^{2-}$$

$$Zn^{2+} \xrightarrow[+2\,H^+]{+2\,OH^-} Zn(OH)_2 \downarrow \xrightleftharpoons[+2\,H^+]{+2\,OH^-} [Zn(OH)_4]^{2-}$$

$$K = \frac{[Hg^{2+}][Hg]}{[Hg_2^{2+}]}$$

$$K = \frac{[Hg^2+][Hg]}{[Hg2^2+]}$$

2.3 Structural formulae