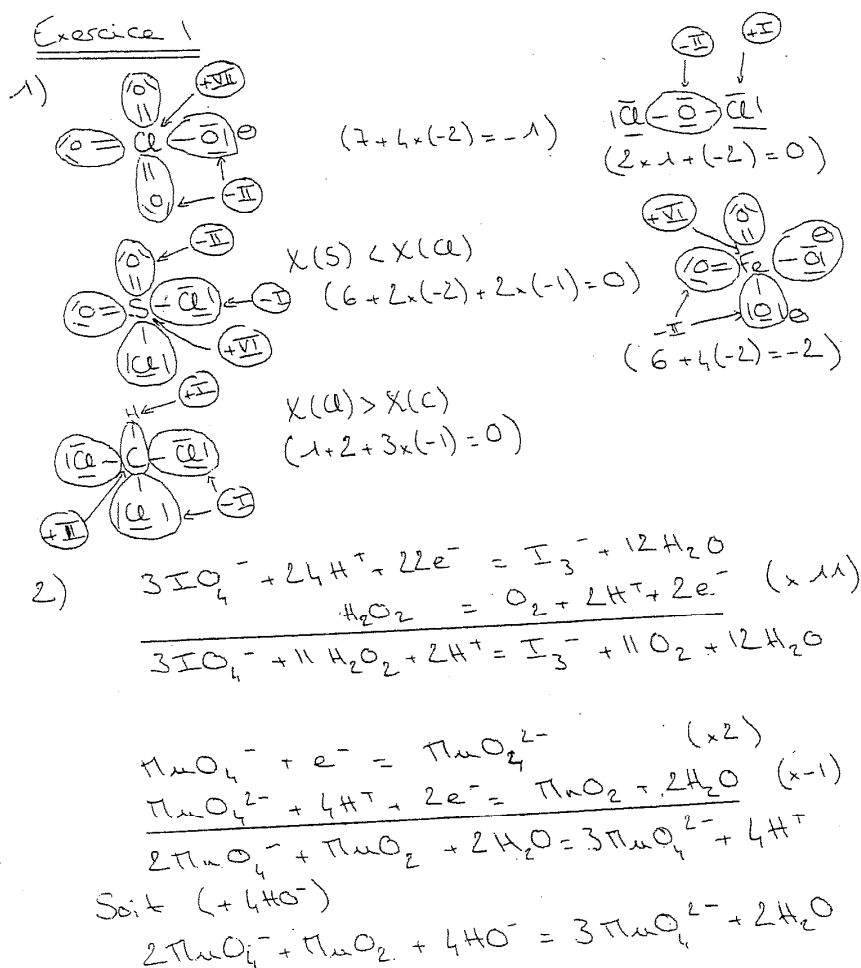
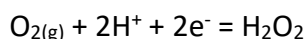


ELEMENTS de CORRECTION du TD Oxydoréduction

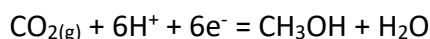
Exercice 1 no et 1/2 -équations



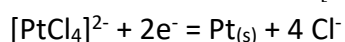
Exercice 2 Relation de Nernst



$$E_{O_2/H_2O_2} = E^\circ_{O_2/H_2O_2} + \frac{RT}{2F} \ln \frac{P_{O_2}[H^+]^2}{[H_2O_2]} = E^\circ_{O_2/H_2O_2} + \frac{0,06}{2} \log \frac{P_{O_2}[H^+]^2}{[H_2O_2]}$$



$$E_{CO_2/CH_3OH} = E^\circ_{CO_2/CH_3OH} + \frac{RT}{6F} \ln \frac{P_{CO_2}[H^+]^6}{[CH_3OH]} = E^\circ_{CO_2/CH_3OH} + \frac{0,06}{6} \log \frac{P_{CO_2}[H^+]^6}{[CH_3OH]}$$



$$E_{[PtCl_4]^{2-}/Pt} = E^\circ_{[PtCl_4]^{2-}/Pt} + \frac{RT}{2F} \ln \frac{[PtCl_4]^{2-}}{[Cl^-]^4} = E^\circ_{[PtCl_4]^{2-}/Pt} + \frac{0,06}{2} \log \frac{[PtCl_4]^{2-}}{[Cl^-]^4}$$

Exercice 3 : Constantes d'équilibre

Pour la démonstration, voir le cours

$$1) \log(K) = (0,34 - 0,8) \times 2 / 0,06 \quad K = 10^{-15,3}$$

$$2) \log(K) = (0 + 0,14) \times 2 / 0,06 \quad K = 10^{4,7}$$

$$3) \log(K) = (1,51 - 1,23) \times 10 / 0,06 \quad K = 10^{46,7}$$