

Corrige TD N°2.

Exercice N°2

Question N°1



$$\begin{aligned} E(\text{Al}^{3+}/\text{Al}) &= E^0(\text{Al}^{3+}/\text{Al}) + \frac{0,06}{3} \log [\text{Al}^{3+}] \\ &= -1,66 + \frac{0,06}{3} \log(0,1) \\ &= -1,68 \text{ V} \end{aligned}$$

Question N°2



$$\begin{aligned} E(\text{Co}^{2+}/\text{Co}) &= E^0(\text{Co}^{2+}/\text{Co}) + \frac{0,06}{2} \log [\text{Co}^{2+}] \\ &= -0,29 + \frac{0,06}{2} \log(0,01) \\ &= -0,35 \text{ V} \end{aligned}$$

Question N°3



$$\begin{aligned} E(\text{Fe}^{3+}/\text{Fe}^{2+}) &= E^0(\text{Fe}^{3+}/\text{Fe}^{2+}) + \frac{0,06}{1} \log \frac{[\text{Fe}^{3+}]}{[\text{Fe}^{2+}]} \\ &= 0,77 + \frac{0,06}{1} \log \frac{0,1}{0,1} \\ &= 0,77 \text{ V} \end{aligned}$$

Question N°4



$$\begin{aligned} E(\text{Sn}^{4+}/\text{Sn}^{2+}) &= E^0(\text{Sn}^{4+}/\text{Sn}^{2+}) + \frac{0,06}{2} \log \frac{[\text{Sn}^{4+}]}{[\text{Sn}^{2+}]} \\ &= 0,15 + \frac{0,06}{2} \log 2 \\ &= 0,16 \text{ V} \end{aligned}$$