

Marks
6

- A galvanic cell is made of a Ni^{2+}/Ni half cell with $[\text{Ni}^{2+}] = 1.00 \times 10^{-3} \text{ M}$ and a Ag^+/Ag half cell with $[\text{Ag}^+] = 5.00 \times 10^{-2} \text{ M}$. Calculate the electromotive force of the cell at 25°C .

Answer:

Calculate the equilibrium constant of the reaction at 25°C .

Answer:

Calculate the standard free energy change of the reaction at 25°C .

Answer:

Indicate whether the reaction is spontaneous or not. Give reasons for your answer.

Express the overall reaction in the shorthand voltaic cell notation.