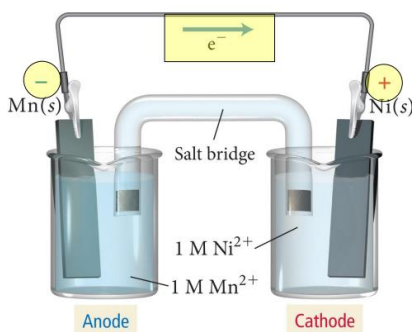
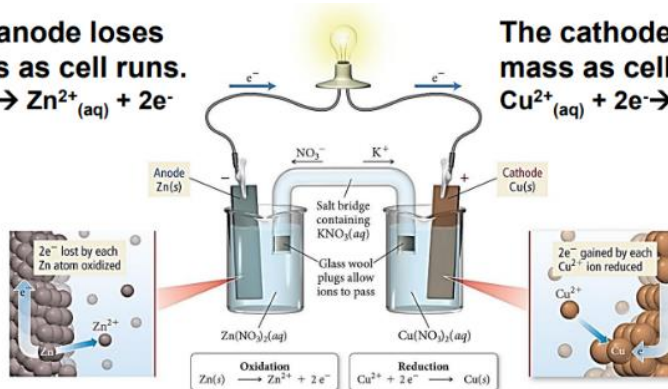


N44



The anode loses mass as cell runs.
 $Zn(s) \rightarrow Zn^{2+}(aq) + 2e^{-}$

The cathode gains mass as cell runs.
 $Cu^{2+}(aq) + 2e^{-} \rightarrow Cu(s)$



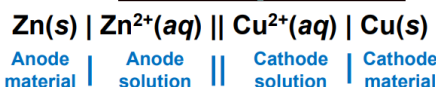
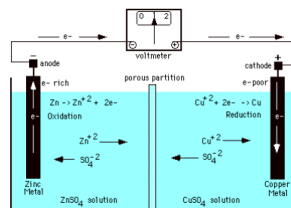
Galvanic

- Converts chemical energy into electrical energy.
- Positive cell potential, $E^{\circ}_{cell} = +$
- Spontaneous, negative free energy difference, $\Delta G = -$
- Anode = - and Cathode = +
- Electrons supplied by the chemical being oxidized.
- Electrons flow from anode to cathode.

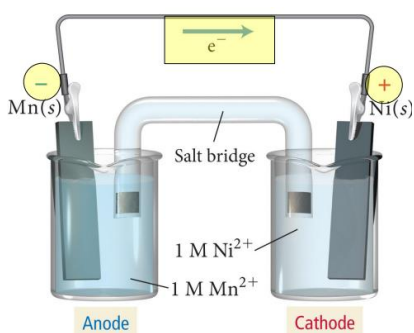
Electrolytic

- Converts electrical energy into chemical energy
- Negative cell potential, $E^{\circ}_{cell} = -$
- NOT spontaneous, positive free energy difference, $\Delta G = +$
- Anode = + and Cathode = -
- Electrons supplied by an external source
- Electrons enter from the cathode and come out at the anode.

Line Notation

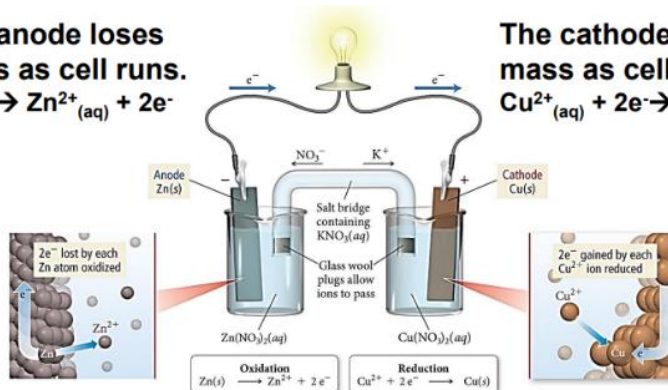


N44



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Electrolytic

- Converts electrical energy into chemical energy
- Negative cell potential, $E^{\circ}_{cell} = -$
- NOT spontaneous, positive free energy difference, $\Delta G = +$
- Anode = + and Cathode = -
- Electrons supplied by an external source
- Electrons enter from the cathode and come out at the anode.

Line Notation

