

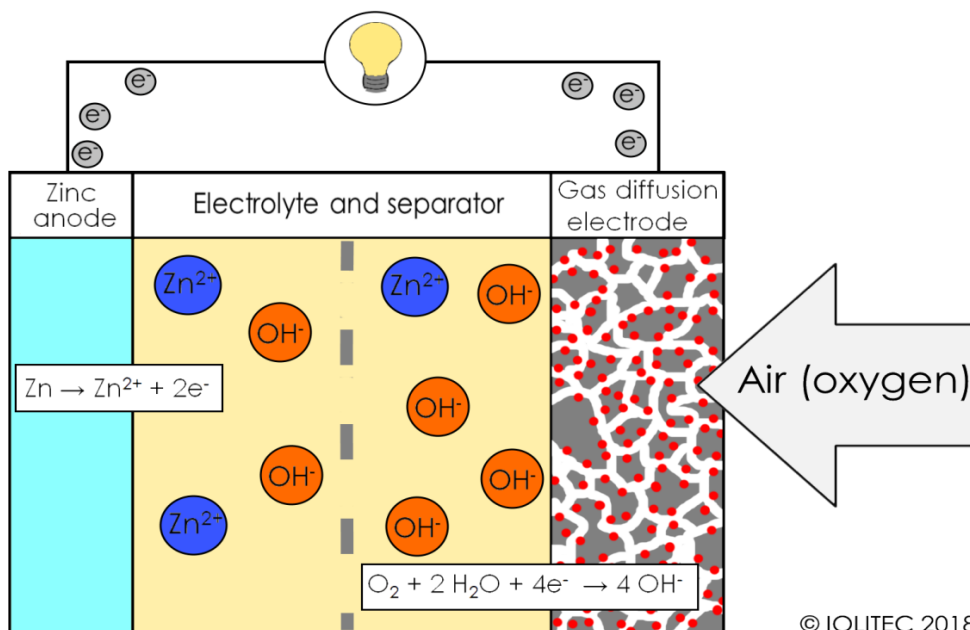


Zinc-Air Battery

- Zinc – air batteries are more popular. Zinc air batteries are the batteries which breathe air, that is , they use oxygen directly from the air to bring about the electrochemical reaction.

Construction

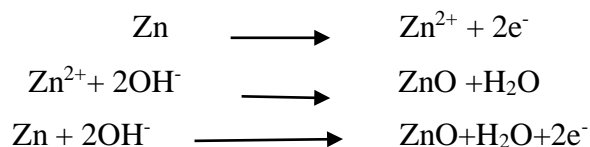
- Anode is composed of granulated zinc powder
- Cathode is made up of porous carbon plates for the entry of air or O₂ into the cell and Electrolyte contains 30% KOH.
- Cathode is provided with thin layers of Teflon to prevent the entry of moisture from the air.
- The container is made of glass and has a separator made of nylon.





The reactions involved in the cell are:

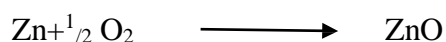
At the anode:



At the cathode:



The over all cell reaction :



The battery offers an EMF of 1.25-1.35V.

Advantages

- These are light and have high energy density.
- These are relatively eco-friendly and have unlimited capacity.

Disadvantage

- These suffer from low shelf life still, they are known for low energy cost.