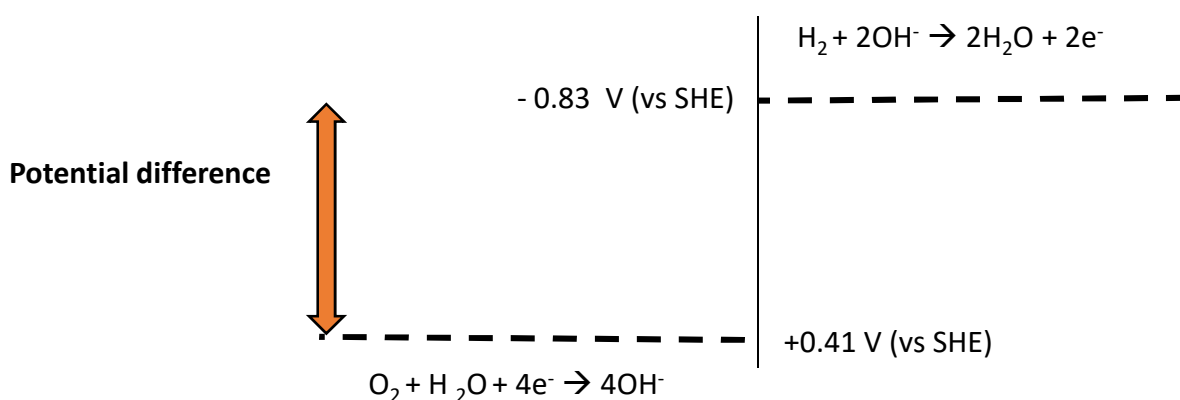


# Fuel Cells

- A fuel cell is a type of electrochemical cell where the reactants for two reactions are provided and the reactions result in an electric current.



- In the hydrogen fuel cell, hydrogen is oxidised and oxygen is reduced.
- Here, oxygen is reduced with electrons to form hydroxide and at another electrode, the hydroxide ions react with hydrogen to give water and electrons.
- In an alkaline cell, there are lots of hydroxide ions around to provide something to oxidise.
- By continuously providing the gases needed for these reactions, they can keep going at the electrode, so there is a difference in potential between them. Electrons flow from high potential to low potential through an external circuit, where they do useful work.
- The potential is established by the reaction, so the cell needs a constant supply of hydrogen fuel. But it doesn't need recharging like a battery.
- What advantages are there for fuel cells over hydrocarbon fuel or batteries?