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Edexcel GCSE Chemistry

Topic 5: Separate chemistry 1

Chemical cells and fuel cells

Notes



5.25C Recall that a chemical cell produces a voltage until one of the reactants is used up

- Chemical reactions stop when one of the reactants has been used up

5.26C Recall that in a hydrogen-oxygen fuel cell hydrogen and oxygen are used to produce a voltage and water is the only product

- Supplied by an external source of fuel (eg hydrogen) and oxygen or air
 - o The reaction takes place within the fuel cell to produce a potential difference
 - o Overall reaction in a hydrogen fuel cell involves the oxidation of hydrogen to produce water
 - o $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$

5.27C Evaluate the strengths and weaknesses of fuel cells for given uses

strengths	weaknesses
produce only water as waste	difficult to transport/store hydrogen so aren't suitable for portable devices
keep producing fuel if fuel keeps being supplied	expensive to make

