Wednesday 11th May 2022

Electrolysis Revision

Electrolysis

Electrolysis is using an electrical current to cause a reaction. See notes:

[C1.6 - Electrolysis](file:///S:\My%20Work\Science\Chemistry\C1.6\Electrolysis.docx)

Extracting Metals from Ores

If a metal is too reactive to be reduced using carbon, then we can use electrolysis to extract it. This is an expensive method, as lost of energy is needed to melt the ore and produce the current.

1. Aluminium Oxide is extracted from the ore **bauxite**.
2. It has a very high melting point, so is mixed with **cryolite** to lower the melting point.
3. The melted mixture has free electrons – it will conduct electricity.
4. The positive Al3+ ions are attracted to the negative electrode, where they pick up 3 electrons, making them neutral aluminium atoms.
5. The negative O2- ions are attracted to the positive electrode, where they lose two electrons, and combine to form O2 molecules.

