

Electrolysis—Chemical Cells & Fuel Cells

5.25—Chemical cells

Chemical cells generate a **voltage** via a chemical reaction (chemical energy is converted to **electrical** energy).

They will continue to generate a **voltage** until one or all of the chemicals in the cell are **used** up.

Examples of chemical cells include **batteries**.

5.25—Hydrogen-oxygen fuel cells

Hydrogen-oxygen fuel cells work in a similar way to chemical cells. However, as long as the **gases** are available, the fuel cell can produce a constant **voltage**.

Another advantage of fuel cells is that the only product is **water**.

5.25—Evaluating the use of hydrogen-oxygen fuel cells

There are many potential uses for fuel cells: it is important to consider the positive and negative aspects of the use of fuel cells.

For example, the benefits of using fuel cells in cars is that make **little** noise. They also have very few **moving** parts (so require less maintenance than a regular car) and the only waste product is **water**, which has no **environmental** impact.

However, storing the **hydrogen** gas can be dangerous, as it is explosive.

There are also very **few** filling stations that sell **hydrogen**, meaning it can be difficult to obtain. Finally, there are **energy** costs associated with the production of the hydrogen gas.

Diagram of a chemical fuel cell

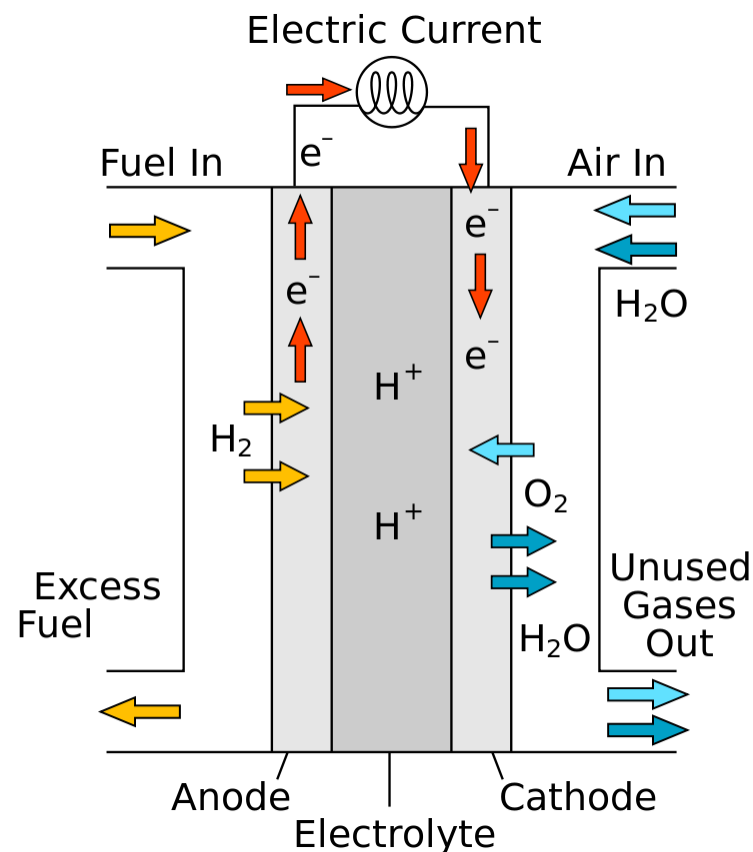


Image source: https://en.wikipedia.org/wiki/Fuel_cell#/media/File:Solid_oxide_fuel_cell_protonic.svg