



The fuel cell



Fuel cell

What is a fuel cell?

Fuel cell components



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A fuel cell is a power generator that produces electricity through the chemical reaction of hydrogen and oxygen, without combustion, giving off heat and water as the primary by-products.

A fuel cell consists of two electrodes, an anode and a cathode, separated by an electrolyte. Power is produced electrochemically when ions are formed at one end of the electrodes with the aid of a catalyst, and are then passed through the electrolyte. The current produced can be used for electricity.



Components

The bipolar plate that is made of graphite is one of the most important components for fuel cell. Until now no other material is able to meet the extremely high requirements with respect to chemical stability, conductivity and thermal stability. Graphite will surely play an important role in this technology of the future.

Fuel cell components

These new materials are non-woven papers and felts specifically designed to transport gases into, and water out of fuel cell stacks. They have an open pore structure, good mechanical strength and high electrical conductivity. They are most cost effective for use in moderate temperature Polymer Electrolyte Fuel Cells and in Direct Methanol Fuel Cells.

