ENERGY GENERATION

The present invention relates to the generation of energy, and more particularly to the release of energy as a result of both a state-transition in hydrogen and fusion of light atomic nuclei.

Normally, fusion processes are able to be initiated only at extremely high temperatures, as found in the vicinity of a nuclear fusion (uranium or plutonium) detonation. This is the principle of most thermonuclear bombs. Such a release of energy is impractical as a means of providing the power to generate electricity and heat for distribution, as it occurs too rapidly with too high a magnitude for it to be manageable.

In recent years, many attempts have been made to initiate controlled fusion processes at high temperatures by the enclosure of a region of plasma-discharge within a confined space, such as a toroidal chamber, using electromagnetic restraint. Such attempts have met with little commercial success to date as systems which employ such a technique have so far consumed more energy than they have produced and are not continuous processes.

Another approach which has been attempted in order to achieve fusion of light nuclei has been the so-called "cold fusion" technique, in which deuterium atoms have been induced to tunnel into the crystal lattice of a metal such as palladium during electrolysis. It is claimed that the atoms are forced together in the lattice, overcoming the repulsive electrostatic force. However, no clear and unambiguous demonstration of successful cold fusion has yet been presented publicly.

The present invention provides a method of releasing energy comprising the steps of providing an electrolyte having a catalyst therein, the catalyst being suitable for initiating transitions of hydrogen and/or deuterium atoms in the electrolyte to a sub-ground energy state, and generating a plasma discharge