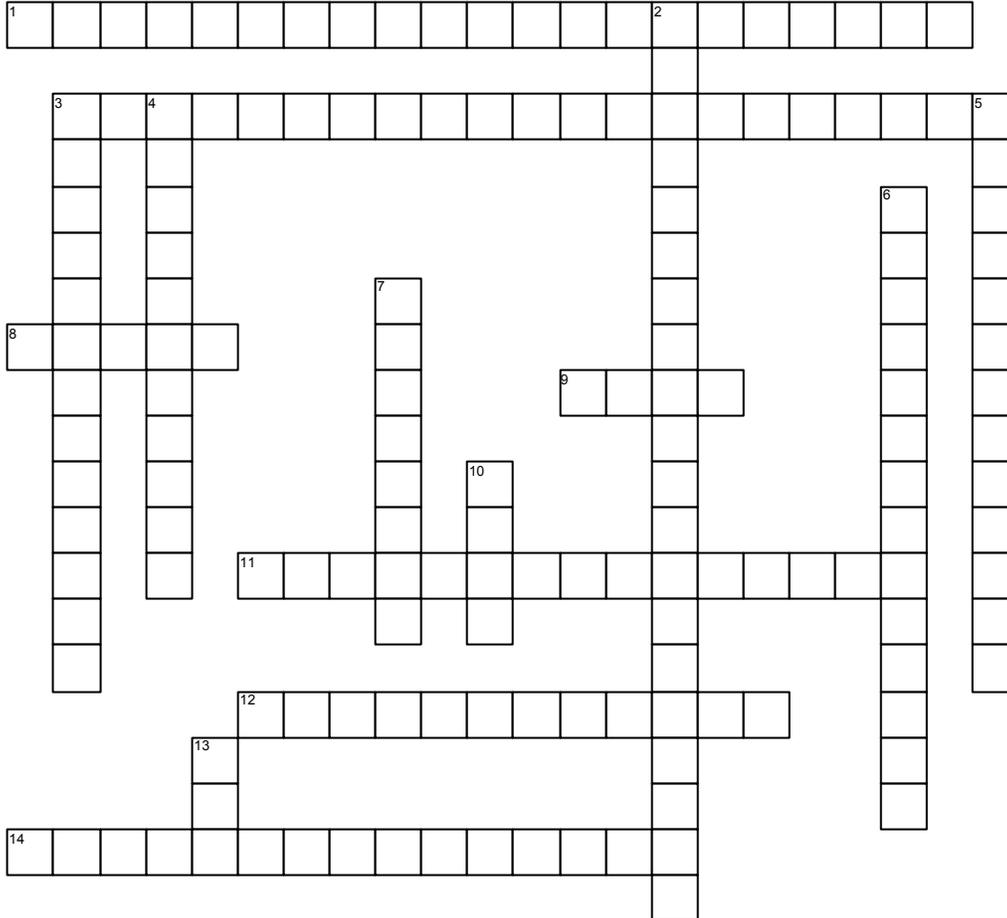


Fuel Cells and Advanced Technologies

Chapter 18



<http://jameshaldeman.com>

ACROSS

- 1 Ultracapacitor cells are based on _____ - _____
_____, in which two activated-carbon electrodes are immersed in an organic electrolyte.
- 3 A _____ - _____ would also have an electrical storage device that can be used to power the vehicle.
- 8 _____ holds drag races for electric-powered vehicles throughout the US.
- 9 _____ is the combustion of a very lean gasoline air-fuel mixture without the use of a spark ignition.
- 11 A _____ - _____ uses the fuel cell as its only source of power.
- 12 The chemical reaction in a fuel cell is the opposite of _____.
- 14 An alternative to storing electrical energy in batteries is to use _____.

DOWN

- 2 _____ converts kinetic energy to hydraulic pressure, and then uses that pressure to help accelerate the vehicle.
- 3 It is more common for hundreds of fuel cells to be built together in a _____ - _____ stack.
- 4 There are a number of different types of fuel cells, and these are differentiated by the type of _____ that is used in their design.
- 5 Hydrogen is only an _____, as energy must be expended to generate the hydrogen and store it so it can be used as a fuel.
- 6 Hydrogen is an excellent fuel because it has a very high _____ when compared to an equivalent amount of fossil fuel.
- 7 A _____ is an electrochemical device in which the chemical energy of hydrogen and oxygen is converted into electrical energy.
- 10 A _____ is a hybrid electric vehicle that is designed to be plugged into an electrical outlet at night to charge the batteries.
- 13 The part of the PEM fuel cell that contains the membrane, catalyst coatings, and electrodes is known as the _____.