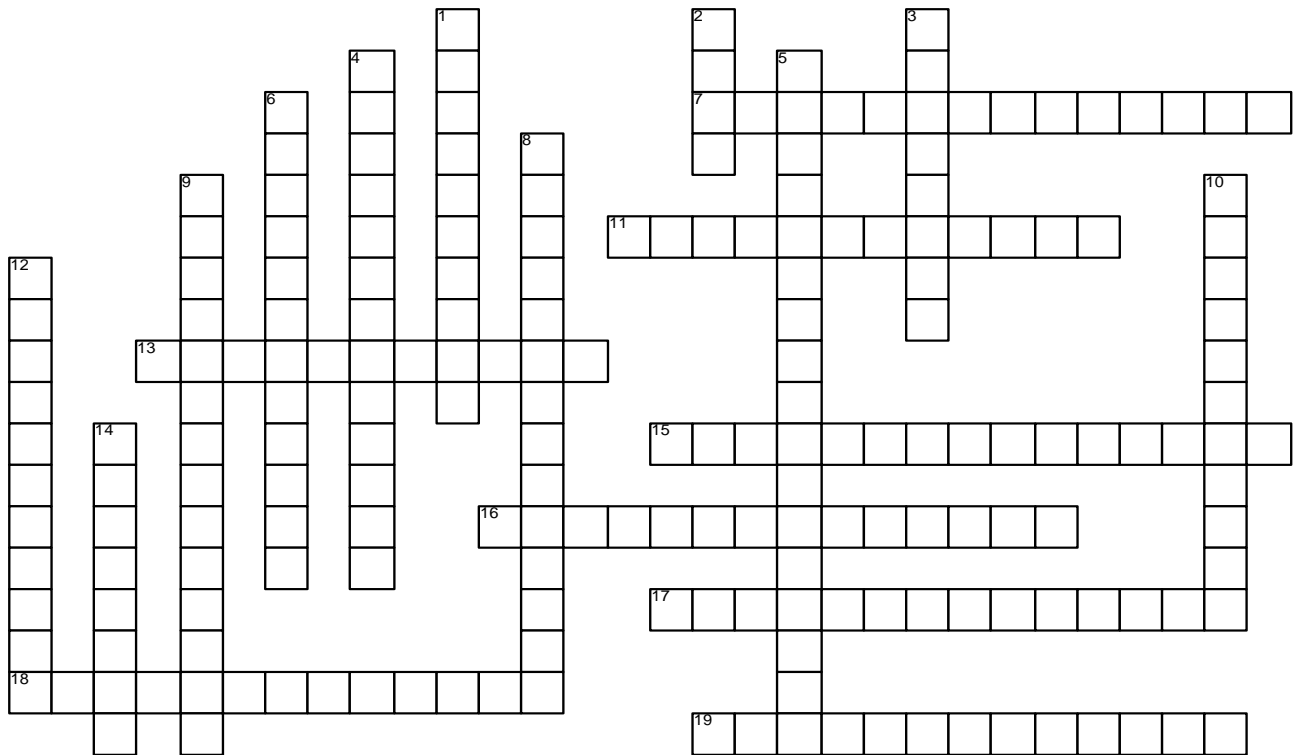


Fuel Cells And Advanced Technologies

Chapter 95



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ACROSS

- 7 A _____ vehicle would also have an electrical storage device that can be used to power the vehicle.
- 11 One of the major challenges for engineers in this regard is the fact that the heat generated by the fuel cell is classified as _____.
- 13 _____ Charge Compression Ignition (HCCI) is the combustion of very lean gasoline air-fuel mixture without the use of a spark ignition.
- 15 A _____ uses the fuel cell as its only source of power.
- 16 Hydrogen is an excellent fuel because it has a very high _____ when compared to an equivalent amount of fossil fuel.
- 17 Hybridization tends to increase efficiency in vehicles with conventional drive trains, as energy that was once lost during braking and otherwise normal operation is instead stored for later use in a high-voltage battery or _____.

- 18 Hydrogen is only an _____, as energy must be expanded to generate the hydrogen and store it so it can be used as a fuel.
- 19 It is more common for hundreds of fuel cells to be built together in a _____.

DOWN

- 1 Hydrogen is a _____ gas that is stored aboveground at the station.
- 2 The Proton Exchange Membrane fuel cell is also known as a _____.
- 3 A _____ is an electrochemical device in which the chemical energy of hydrogen and oxygen is converted into electrical energy.
- 4 Methanol has a higher _____ than gaseous hydrogen because it exists in a liquid state at normal temperatures, and is easier to handle since no compressors or other high-pressure equipment is needed.
- 5 The part of the PEM fuel cell that

contains the membrane, catalyst coatings, and electrodes is known as the _____ assembly.

- 6 The chemical reaction in a fuel cell is the opposite of _____.
- 8 The _____ Assist (HPA) system converts kinetic energy to hydraulic pressure, and then uses that pressure to help accelerate the vehicle.
- 9 The fuel-cell design that is best suited for automotive applications is the _____ membrane.
- 10 Ultracapacitor cells are based on _____ technology, in which two activated-carbon electrodes are immersed in an organic electrolyte.
- 12 There are a number of different types of fuel cells, and these are differentiated by the type of _____ that is used in their design.
- 14 _____ is a low-carbon, non-toxic fuel that is domestically produced from local resources.