Fuel cell

In the last few years, the most fascinating question for everybody was “Will Hydrogen be ever used as a fuel in vehicles?” The answer to this question is, yes. Fuel Cell is the solution to this problem. In the world where the consumption of common fuel like gasoline and diesel is touching the skies, car manufacturers like Tesla came up strongly setting an example of being an option to enjoy the drive and save the environment at the same time. The Electric Vehicles, or also known as The EVs started to rule the market in Western countries, engineers also started to look for an option for the ‘option’. We have been reading or at least hearing this term called ‘Fuel Cells’ for a while now. Fuel Cells are actually the Galvanic Cells, consisting of an anode, a cathode and an electrolyte using Hydrogen and Oxygen. In chemistry, the very basic reaction everyone learned was 2H2 + O2 = 2H2O. The additional product of this reaction is Energy. So, the reaction becomes 2H2 + O2 = 2H2 O + Energy. This basic reaction is used in Fuel Cell. Now, there are various types of Fuel Cells available and more understudies. The very basic types are:

1) Polymer Electrolyte Membrane Fuel Cell(PEMFC)
2) Solid Oxide Fuel Cell (SOFC)
3) Direct Methanol Fuel Cell (DMFC)
4) Molten Carbonate Fuel Cell (MCFC)
5) Alkaline Fuel Cell (AFC)
6) Phosphoric Acid Fuel Cell (PAFC)

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Fuel Cells use electrolyte to convert hydrogen and oxygen into their respective ions. After reading all this I hope you’ve got an idea about what Fuel Cells are and how they work. Let me tell you about a car running on roads using this very technology. Yes, there is a car running on this technology; the Toyota Mirai. It is in the name, we all know that Toyota is a Japanese motor company, well Mirai in Japanese means The Future. Yes, the future of cars, the revolution in the automobile sector and the enjoyment of the environment for our future generations is possible using the most abundant element on this planet-Hydrogen.