

Ryan Pickett
Electrolysis

The purpose of my experiment was to see which metal (steel, copper, aluminum, or graphite) would most efficiently split water into hydrogen and oxygen. My intention for this experiment was to see if it was possible to ever design a car to run on hydrogen. The first step in my experiment was to set up my anodes and cathodes (negative and positive charged metal). The second step was to fill the aquarium with nine gallons of water and mix in between 1 to 2 cups of salt. After that I clamped my first set of metals into a clamp-like device I made. When I was ready to start, I plugged in the transformer and started the stop watch. When the test tube of hydrogen filled up, I stopped the stop watch. The results were very different from what I thought they would be. I thought that graphite would have the fastest time because it carries electricity through batteries. The metal with the fastest time was actually steel, with an average time of 24 minutes 54 seconds. I did not expect steel to have the fastest time. I was also surprised of the time of the second test of all the metals, it took forever and the last test of all the metals took under twenty minutes.