



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Adil Mohd Salleh	Project Number S0816
Project Title Home-Built Hydrogen Fuel Cell	
Abstract Objectives/Goals The main purpose of this project was to find out if the amount of hydrogen gas an electrolyser produces, depending on the voltage & amperage of its electricity, would affect electrical output of a fuel cell. Methods/Materials Made a home-built fuel fom graphite foil, a PEM, and small electrical connectors. Made a home-built electrolyser out of plumbing parts. Used NaOH as the electrolyte for electrolyser. Requires DC converter power supply and digital multimeter. Connected hydrogen supply (electrolyser) to the fuel cell. Changed the voltage & amperage of the electricity going to the electrolyser with a DC converter power supply. Measured electrical ouptut of the fuel cell with a digital multimeter. Results When the voltage & amperage of the electricity being fed to the elctrolyser was low, the elctrical output of the fuel cell was low. When I increased the voltage & amperage of the electricity, the electrical ouptput of the fuel cell increased as well (at certain points). Conclusions/Discussion A high voltage & amperage of electricity affects the amount of hydrogen gas produced. When a higher amount of hydrogen is fed into fuel cell, the fuel cell will give a higher the electrical output.	
Summary Statement Testing the electrical output of a home-built fuel cell depending on the electrical input supplied to the electrolyser.	
Help Received Father helped set up experiment and get supplies; mother helped put together display board	