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*Dye Sensitized Solar Cell*

This study was to allow the observance of the solar energy in order to comprehend the Dye Sensitized Solar Cell. It was hypothesized that a decrease in resistance in semiconductors and a change in surface area will result in an increase in electrical flow. In the first two trials of the cell two variables were changed, the coating of the glass and the surface area. The study was kept constant of which the electrode, counter electrode, and electrolyte solution were made from. The difference in surface area was  $625\text{mm}^2$  and a difference of  $80\text{ ohms per }25\text{mm}^2$ . Each cell was measured at the same time of day within 5 minutes of the cell before. The increase in voltage varied from test to test, however it averaged to a difference of approximately .3 volts from the first cell made to the second cell. The surface area to me was a factor in why more electricity was produced, the resistance was a factor in the ability to transfer the energy to a usable form. The implications of changing type of glass and a bigger surface area would increase the amount of electrical flow, however not every variable will result in such action. From the data collected manipulating other variables such as a different electrode or counter electrode and a different electrolyte solution, or possibly a different dye is in the best of interests.