Human Photosynthesis or the Astonishing Capacity Previously Unknown Of Human Body to Dissociate and Re-form the Water Molecule

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ABSTRACT

Photosynthesis means make things with light. The best known example is in plants, where Chlorophyll, in presence of purple and red light and water, dissociate irreversible the water molecule giving oxygen and hydrogen diatomic. The principal product of this reaction, considered the most important of the world because is the beginning of the food chain, is the Hydrogen due to be the energy carrier by excellence in the entire Universe. The reaction can be schematized as follows: $2H_2O \rightarrow 2H_2 + O_2$
This energy is indispensable for plants to impel the consequent reactions allowing the fusion among CO2 and H2O forming C6H12O6 (glucose).
So far this type of process was considered virtually non-existent in human beings; however, in 1990s, we found the first clues of it in human retina during a study about the three main causes of blindness, because are the same diseases in all the world since 60 years or more, therefore available treatments are not working at all. Finally, in February 2002; we could be able to identify the complete reaction (Solis-Herrera Cycle) that can be schematized as follows: $2H_2O \leftrightarrow 2H_2 + O_2 + 4e^-$
Astonishingly, our body has the extraordinary capacity to dissociate and re-form the water molecule, being a conceptual revolution of biblical proportion. Briefly, the human photosynthetic system is composed by: Light visible and invisible/ Melanin/ Water arranged in order of abundance in the Universe. Our finding, by analogy with plants, was termed Human Photosynthesis.

1. Introduction

The energy, which is defined as anything that produces a change, whatever it may be, is essential to both life and economic development of the countries. Currently, the world is in a period of energy crisis, and that within a few years, global production of conventional oil will decrease, having now reached the limit of production, while global demand continues to grow.

The resulting crash of the oil famine along with the decrease of production is unavoidable, because of the importance of our economies dependence cheap oil. As alternatives are being considered many options, from alternative or renewable energy to nuclear energy, but none of them has a full feasibility.

The major energy alternatives with which we have today are the following:

☐ Natural gas is the most rapidly increasing use, constituting 24% of energy consumption, and has many advantages, but its operation also contributes to the greenhouse effect and, like oil is also nearing its decline.

☐ Fuel Coal is a very heavy, very efficient, with little versatility and great cost of extraction and transportation. It is very polluting (both its mining and combustion) and is the cause of acid rain and contributes to the greenhouse effect.

☐ Nuclear fusion, which are produced inside the Sun and gives us the energy that comes from the star, is the source of energy that is said to solve all energy problems in the future, but the technological complexities overcome are of such magnitude that since initially raised already warned that he would not be available at least before last about 50 years, and so continues today, although it has been more than 30 since.

☐ Nuclear fission has many difficult to establish large-scale and short-term: the huge cost (economic and energy) of the construction and dismantling of each nuclear power plant, the absence of solutions to the treatment and storage of hazardous waste, which emit radioactivity for thousands of years, the risk of nuclear accidents and terrorist attacks, conflicts between countries fear the possible use of nuclear energy for military purposes, the great environmental impact generated by uranium mining.

☐ Renewable energies (solar, wind, tidal, geothermal ...) represent only 0.5% of the world total, and its early development has been made possible by the availability of oil, which is used both as a raw material power for the manufacture of costly materials required, and the construction of infrastructures rigged. The energy supplied is difficult to transport and store and its amount varies according to external agents, in addition to not very high yields. If successfully exploited any wind power, higher performance, the Earth in the 100 meters closer to the ground, something not feasible, the amount of energy would be only 75% of primary energy that humans currently consume. If we did this equivalence with solar PV, we would need to get it all over a surface like Spain.

This global energy framework just described necessitates research into new forms of energy that do not contribute to environmental problems that currently exist and can be implemented on a large scale worldwide.

The search for a source of clean, safe and able to supply the world's energy consumption may have come to an end with the discovery of human Photosynthesis, whose study has taken place in just the last 23 years. The chemical reaction we found during a study of the three leading causes of blindness in Mexico can be outlined as follows:

$$2H_2O \leftrightarrow 2H_2 + O_2 + 4e^-$$

In other words the human retina has the amazing ability to use water as an electron source, something never seen, as the only living things that knew they could do it are those that contain chlorophyll. And in them, the reaction is the same but limited, and can be expressed as follows:

$$2H_2O \rightarrow 2H_2 + O_2$$

When comparing the two processes can be seen that our photosynthesis is much more efficient, as in plants, water dissociation is irreversible, since oxygen ejected into the atmosphere, but our system is thousands of times more efficient, as not only capable to dissociate the water molecule, but also re-form it[1]. Something unique in nature. Also, the plant chlorophyll is capable of using only the ends of the visible spectrum, namely red and purple light as the energy source for dissociating the water molecule, whereas we can absorb the visible and invisible spectrum. This means that melanin serves as the ideal fuel cell thus generates its own water and recycles hydrogen that is produced as a final product.

This process represents a revolution over current known energy sources, as the substance responsible for the generation of energy (melanin) is not dangerous or poses a risk to health or the environment. Also, during power generation, there are no waste contaminants and their production is continuing.

The current problem in getting this technology presents performance electrical production that permits direct application to real processes, such as lighting a large scale. Achieving the desired energy efficiency systems and apply short term may be marketed is the immediate goal of this project forward.

Background:

The economy from fossil fuel burning is in crisis due to the depletion of the same and CO2 emissions by greenhouse gas effect contribute significantly to climate change.

The various options used trying to correct the path that has led to the energy crisis have shown significant deficiencies and secondly that its dangers are huge enough to mention Chernobyl, which will require 900,000 years to decontaminate.

The search for new sources of renewable energy, capable of sustaining economic needs seems to have come to an end with the discovery of human photosynthesis.

Knowledge is acquired by reading, but the wisdom is obtained by observing nature. It is necessary to look closely to nature so that we can understand how they get the energy the many forms of life we know. The dogma that the energy source of the eukaryotic cell comes from the oxidation of glucose is broken into pieces.

There are many inconsistencies in the raised metabolic pathways in order to sustain glucose as the energy source par excellence of living things. A food is considered raw fuel to glucose that is obtained from them is considered as the average fuel refining and fuel ATP as refined[2]. But the amount of ATP that is theoretically generated from glucose does not meet the metabolic needs of the organism.

Only putting aside the laws of thermodynamics can accept that from the amount of food we eat daily, ranging at around 600 grams, can generate 180 kilograms per day of ATP. On the other hand this hypothesis holds that the body stores the energy in the high energy bonds of ATP. When we know that energy cannot be preserved, for or used or lost. Furthermore, the amount of protons required for the Krebs cycle is 24 and glucose only has twelve. And this regardless of the so named in oxidative phosphorylation an electron goes missing. Finally, if the energy source was glucose, diabetic patients should be able to fly.

And nothing makes sense in biology except in the light of evolution, let's begin with a question: What was the very first spark of life? which, according to Darwin, had to have been in a completely sterile, i.e., without any other form of life present, it otherwise would have been absorbed or swallowed instantly.

Looking at nature we know that all life on earth originated and depends entirely on the energy emanating from the sun or space, but light or photonic energy is not susceptible of being used by the eukaryotic cell, therefore must be transformed, inevitably, in free chemical energy.

The battery bank that was used in the tests described below is similar to the one shown in the picture.

2. Experimental Section:

The manipulability of new knowledge is an important criterion of validity [3].

The first stage consisted of analyzing needs, to define the methodology to follow. To verify the behavior of the electric voltage of the batteries uses cookies to support one data acquisition card NI USB-6009 model from National Instruments (NI). It connected to DAQ to monitor the electrical tension that occurred when the batteries had charging.

Through LabVIEW program in which data were obtained both voltage and electric current, like the time, saving them for later analysis.

3. Results and discussion***

Test 1)

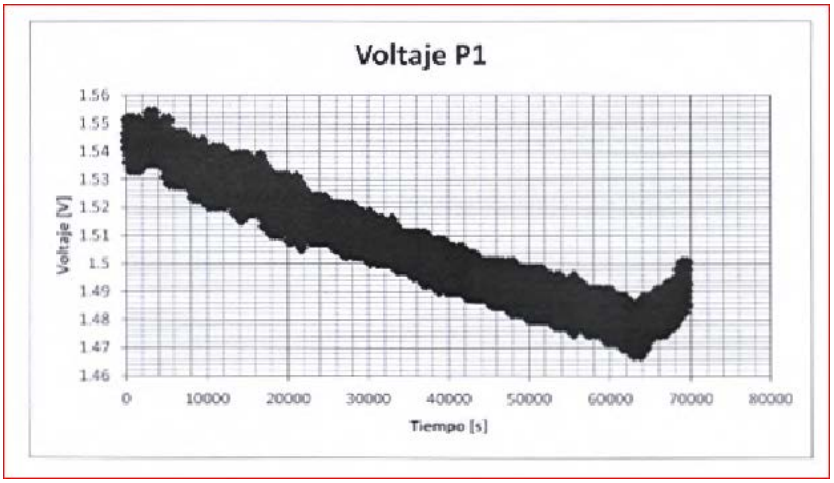
The first test consisted of monitoring the voltage and current with respect to time on a single charge which consisted of a single LED, obtaining data every 20 seconds for a period less than 24 hours.

Load conditions:

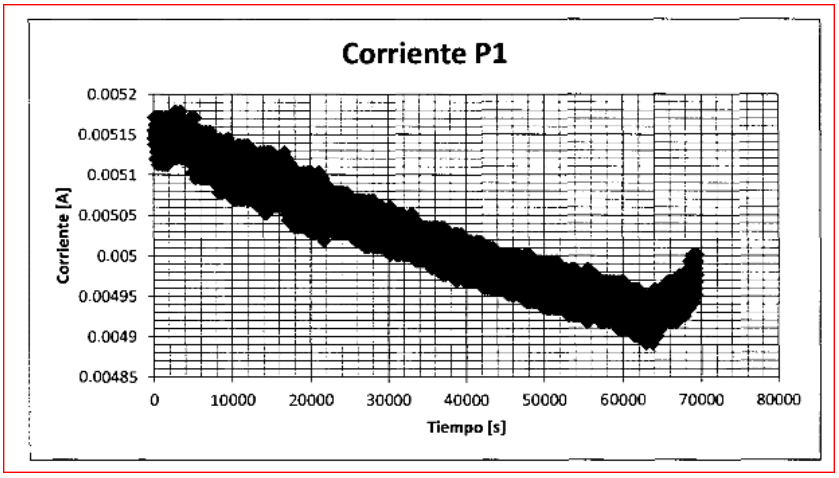
Light Emitting Diode (LED) 1.7 [V], 10 [mA]

Resistance 330 [Ω]

Elapsed time: 19.20 hours.



Graphic No. 1, test 1: simple load, tension versus time,.



Graphic No. 2, test 1: simple load current vs. time

Test 2)

The second test consisted of performing the monitoring of voltage, current and time but with a load Maori, obtaining a better visualization of the behavior of the battery bank, the data collection interval was 60 seconds for a period of three days.

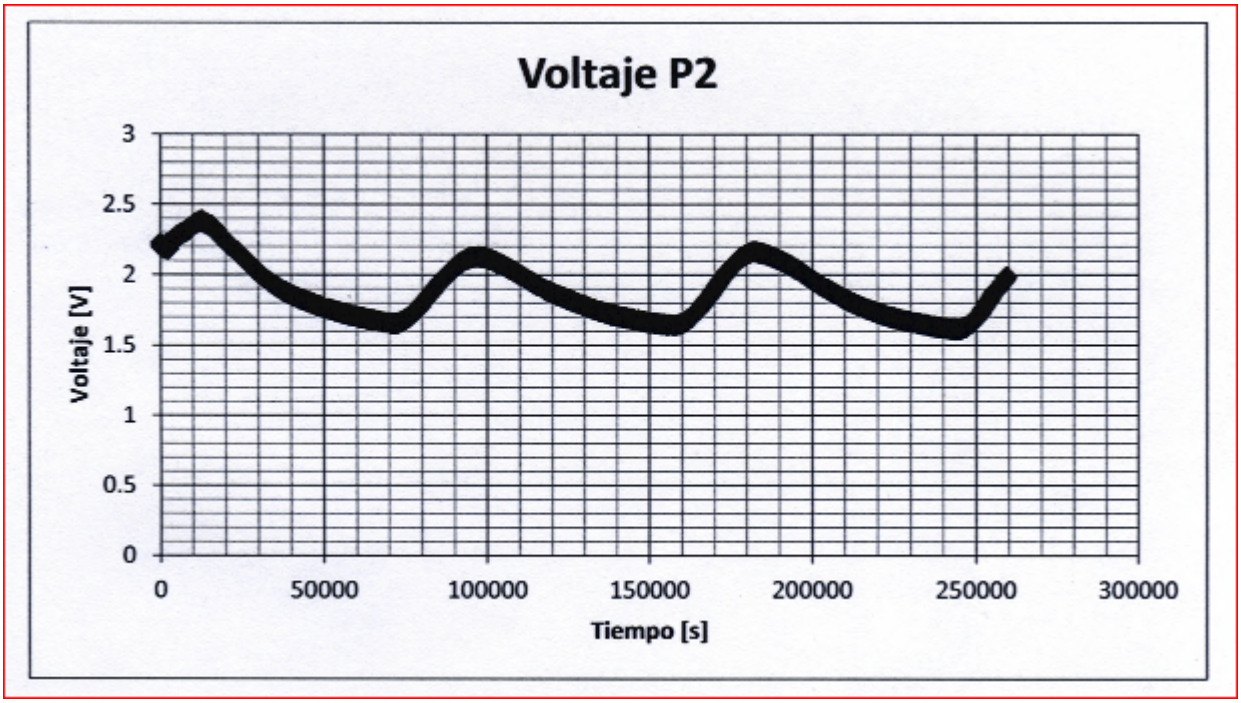
Loading conditions: double burden.

2 LED´s 1.7 [V], 10 [mA], connection in series.

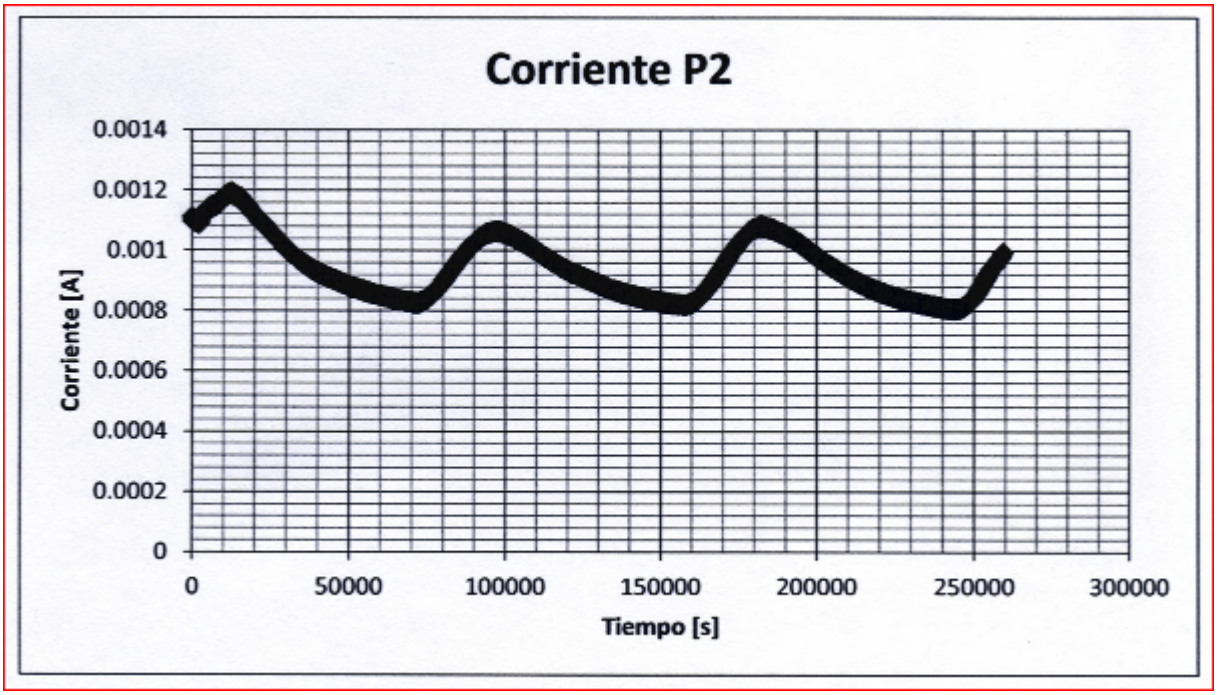
Resistance 2[Ω], ½ [W]

Time: 3 days, 0 hours with 5 minutes.

Loading conditions: double burden.



Graphic No. 3:, Test 2; Double burden, Tension vs time.



Graphic 4, test 2: Double burden, Current vs Time.

Test 3.-

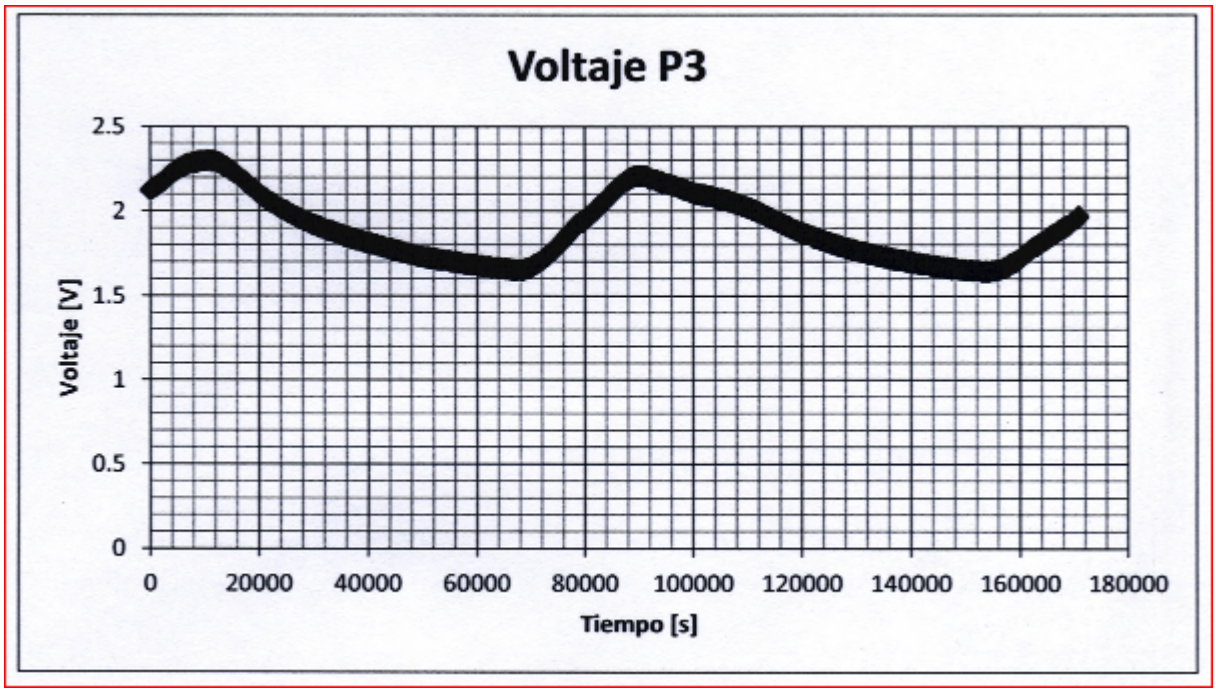
The last test was conducted so similar to the second with the difference that resistance was implemented to check if the ambient light intensity relationship had on the behavior of battery. To work with the photoresist is defined voltage 5V passage through the same; depending on the resistance value that gave the photoresist is related to the intensity of light incident thereon, this caused variations in our defined voltage of 5 V.

Loading conditions: double intensity, ambient light intensity

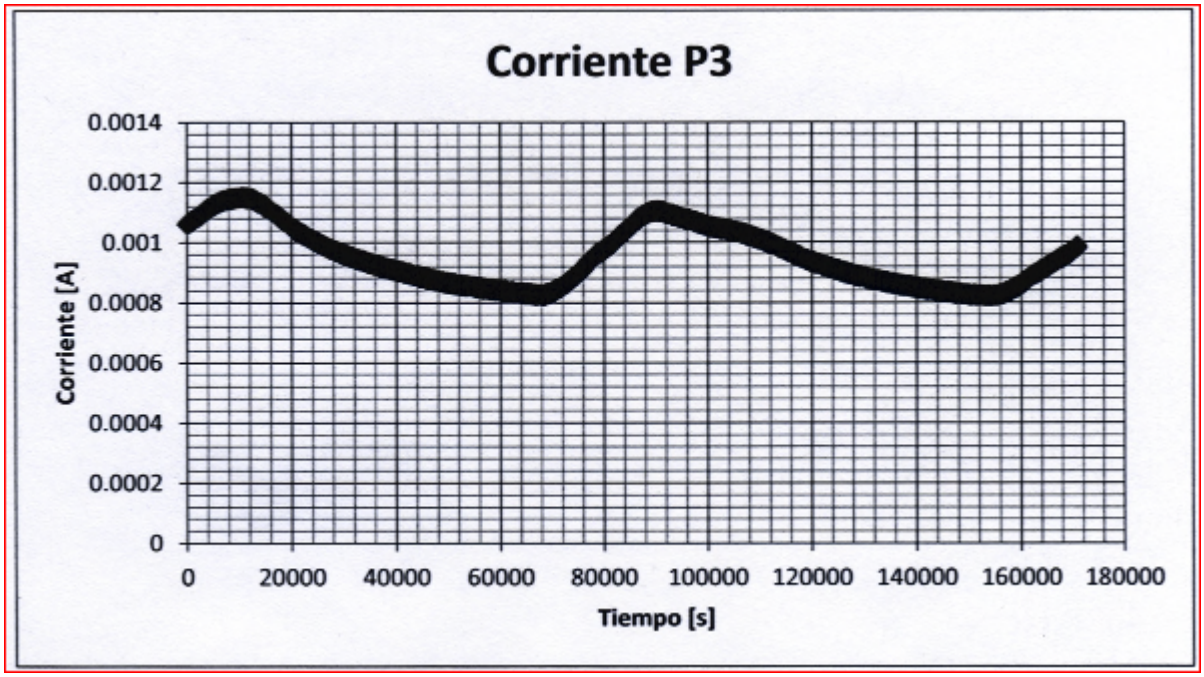
2 LED´s 1.7 [V], 10 [mA]. Series connection.

Resistance 2 [kΩ], ½ [W]

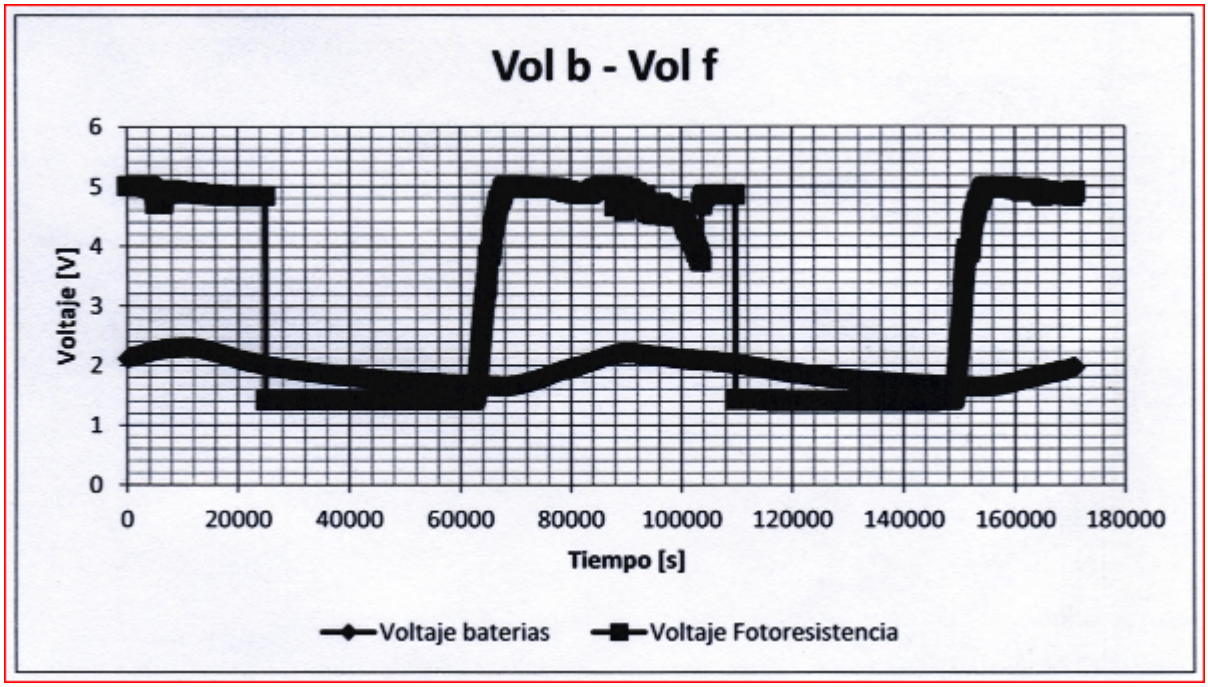
Time: One day, 23 hours 30 minutes.



Graphic 5, Test 3: Tension vs. time



Graphic No. 6, Test 3: Current vs. time



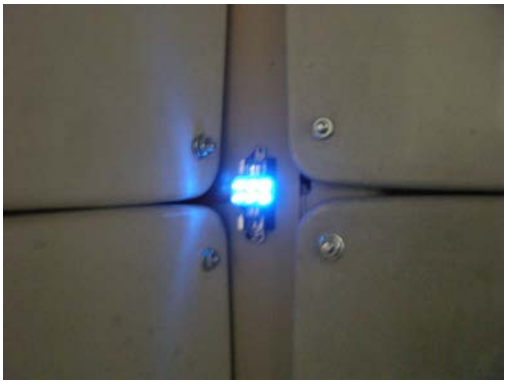
Graphic No. 7 Test 3: Battery Voltage and Voltage Photo-resistance vs. time.

To analyze the data obtained during the tests verify that the behavior of the voltage and electric current varies with time as it is not constant. The battery bank that was studied is recharged by the sun which is proven because the voltage increases again in the morning and decreases as the day progresses.

In the graphs shows that, during the discharge stage, it has a slope much lower than shown as it passes through the stage of recharge. This indicates that it takes more time to reach the minimum value of voltages compared with that used to reach the maximum value of voltage.

It was thought that the performance of the batteries was also influenced by ambient light intensity, but I cannot check since existed many shocks on ambient light as shadows, the light striking a focus when turns on and off.

The battery voltage while maintaining the load is applied is in an average of 1.8 [V] with a variation of + / - 0.5 [V] although this remains for a long time, voltage and current are small values.



Light emitting diodes (LEDs) energized with melanin batteries.

4. Conclusions:

The battery bank to apply a load, shows a stable behavior since the voltage variations found in a range of + / - 0.5 [V], although it is important to mention that the values we get are small voltage which is not suitable for applications where a high voltage is required, such as LED's. But if required for applying higher voltage applications such as starting an engine of 12 [V], 1 [A]; would require a larger set of batteries and still could not ensure that the battery bank provides tension and current necessary to start the engine, maybe just to keep going.

The intrinsic property of melanin to dissociate and re-form the water molecule undoubtedly marks a watershed in the search for renewable energy. The scientific principle already given now follows the development of the technology so that it can answer the question: What is the best geometry so as to increase the efficiency of the design?

5. Acknowledgements

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6. Referencias

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