

The Generation of Positrons from Mega-STN and Function as an Alternative Energy Source

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Abstract

Paul Dirac (1902-1984) theoretically predicted the existence of positrons for the first time in 1928, and Carl Anderson (1905-1991) found the positrons through cosmic ray observation experiments in 1932. Positrons are the antiparticle of electron, and their spin and mass are equal to electrons and they have the same electric charge but are different in sign. That is, their spin is $\frac{1}{2}$ Fermion, their electric charge is base charge $+e$, and their mass is approximately 9.11×10^{-31} kg. Because positrons are the lightest particle with a positive charge, they have an infinite lifespan without collapsing into other particles. But if positron meets with another electron surrounding them, double extinction of positron and electron occurs, and positrons disappear with electrons, and then photons are generated. Because the earth has many electrons, double extinction occurs immediately in most cases even if positrons are created.

There is gravity, electromagnetic force, weak interaction in the interaction of positrons, and the isotopes emitting positrons include carbon-11, nitrogen-13, oxygen-15, fluorine-18. For example, carbon-11 turns into boron-11. These isotopes are used on positron emission tomography device. Electron capture is another way of decay that can occur competitively with positron emission, but the larger the difference of energy is, the higher the probability of decaying due to positron emission is.

Researchers say that positrons are generated if there is collision between high energies by the interaction of positrons, but we think that this should be supplemented more. There is a hypothesis that positrons are generated when the unstable radioactive isotopes created during a supernova explosion collapse. It is inevitable that it will cost a lot of time and money when generating radioactive isotopes according to this hypothesis. This makes us try new methods about positrons emission breaking away from conventional fusion methods.

Our new methods for generating positrons are to make artificially the fusion with micro/nanoparticles and isotopes emitting positrons and the interchangeability between them, and to create a great deal of heat energy by making micro/nanoparticles collide into each other with using thermal energy and waves between micro/nanoparticles. We think that our new methods are the best way to generate high heat with a small energy source. To put our ideas into practice, we made a stainless steel rectangular plate using the combined materials of MEGA-STN, that is the new types fused with each of micro/nanoparticles and isotopes emitting positrons, and added MEGA-STN to materials of the existing stainless steel heater stick. We measured temperature changes depending on whether or not the materials are present and depending on the content of the materials, and checked even positrons emission in our study. We also measured the air quality and the amount of oxygen as well as humidity.

Consequently, we found out obtaining high-temperature heat energy by investing less energy. The surface temperature of the existing stainless-steel heater stick did not exceed 320°C when 3Kw electricity was supplied, but one of stainless-steel heater stick which is mixed with the materials of MEGA-STN was 1000°C . Based on these results, we think that our MEGA-STN can be replaced as a heat energy source which is necessary for all industries using fossil fuel, nuclear power, sunlight generation, wind power and so on, and this can bring good synergy to climate and environment. We expect that our emitted positrons cause the changes of the amount of oxygen and air quality, affect plants and animals including ecological growth, and so make a big difference in human life.

Keywords: Positron, Wave Energy, Thermal Energy, Mega-STN

Introduction

This study is aimed at practical embodiment of our MEGA-STN by using positron wave thermal energy. Here, MEGA-STN is referred to a fusion conjugate of each of micro/nanoparticles. A change in chemical properties of each of micro/nanoparticles generates a fusion reaction of thermal energy and the interchangeability of each of micro/nanoparticles makes high-temperature thermal energy. The thermal energy which is made at this time collides into each other, this collision is made into multiple collisions and the thermal energy by this multiple collision creates greater heat energy. And a large amount of positrons is emitted due to the momentary gap which is created when thermal energy collides.

Our study about MEGA-STN was followed by P. Dirac's positron prediction and C. Anderson's positron discovery, and was conducted on the basis of a great interest in positrons. We learned that positrons emitted through our experiments not only have a tremendous impact on the field of science but also are able to make a great contribution to the everyday life. We also learned that positrons we found in creating and using thermal energy are qualitatively different from ones of the radioactive isotopes, have a good influence on not only our human body but also animals and plants, and change the state of nature. It is hard for a man to live without thermal energy. Our study about new methods of production and emission of positrons could be good news for us to live like a human being. It is considered that this great discovery about production and emission of positrons not only makes our lives richer but also leads to a high-level life.

To demonstrate this, we first measured the temperature of the existing stainless-steel heater stick and changes in surface temperature of the existing stainless-steel heater stick added 15% of our materials. Secondly, we increased the electrical capacity of the existing stainless-steel heater stick and measured changes in surface temperature of the existing stainless-steel heater stick added 50% of our materials. Thirdly, we made stainless steel rectangular plate (300 mMX200 mMX20 mM), that is a heat-conducting plate filling with our materials and welding as a whole and measured the surface temperature of it to show emission of positrons C. Anderson found in a different way. We also examined the stainless-steel heater stick fused by high-temperature.

The figure below is the structure formulated by combining micro/nanomaterials with isotopic materials emitting positrons to make our MEGA-STN.

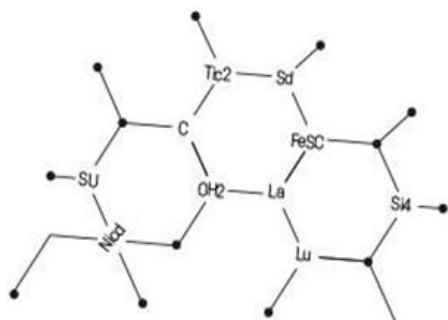


Figure 1: Part of Structural Formula of our MEGA-STN

Our materials of MEGA-STN with this structural formula basically range in 500~1800°C when supplied with thermal energy and waves energy. Here, if the minimal thermal energy is supplied from the outside or their own heat is created from the inside, the supplied heat is amplified. The thermal particles that is generated when micro/nanoparticles and thermal energy collide with each other make multiple waves and transfer resonating within micro/nanoparticles. They collide into each other within this resonant orbit and spin like a tornado, and then thermal energy is increased and a fast-rotational force is created. At this time, large amounts of positrons are emitted.

We checked the change of temperature, air, and water property depending on large amounts of positrons emitted from our MEGA-STN. For example, when we put water in front of our MEGA-STN supplied with thermal energy, it resulted in a higher pH level of water and nanonization of water. When we also checked the activity of bees in winter, we made a machine with our materials of MEGA-STN and changed the quality of air cleanly and moistly. As a result, bees showed much more activity. Furthermore, when we checked the change in air temperature and the degree of plant growth by setting a machine that is made of our materials of MEGA-STN to a pepper farm of approximately 2,079m², the temperature inside the farm kept constant 17°C~21°C under conditions of -4°C~5°C outside and there was also a marked difference in the growth of peppers. Additionally, when we put the machine that is made of our MEGA-STN in places where the air is dirty such as poultry farms and incinerators, the results showed that the air was clean. Here, we set up an equipment made with MEGA-STN in the room of 138m² and measured the air quality in it. The measurement of the air was that CO is 3ppm and CO₂ is 1,968ppm before setting up, but CO is 0ppm and CO₂ is 402ppm 5 minutes after setting up. To find the mechanism of our MEGA-STN, the experiment of this study was conducted in the following manner.

Methods

We prepared an existing stainless-steel heater stick, an existing stainless-steel heater stick adding 15% of materials of our MEGA-STN, an existing stainless-steel heater stick adding 50% of materials of our MEGA-STN and a stainless steel rectangular plate (300 mMX200 mMX20 mM), and measured the surface temperature of things prepared like above. The materials of our MEGA-STN are the refined output of various minerals.

First, we measured the temperature of the existing stainless-steel heater stick and the changes in surface our materials. Secondly, we increased the electrical capacity of the existing stainless-steel heater stick and measured changes in surface temperature of the existing stainless-steel heater stick added 50% of our materials. Thirdly, we made stainless steel rectangular plate (300 mMX200 mMX20 mM), that is a heat-conducting plate filling with our materials and welding as a whole and measured the surface temperature of it to show the emission of positrons C. Anderson found in a different way. Interestingly, through the third experiment we will check positrons emitting from our MEGA-STN and see that the method of positron generation and emission is different from the past. Fourthly, we made stainless steel rect-

angular plate and the exterior case of it to find out the changes of the temperature and in the properties of air and water, and then measured them in 2,079m² and 3,300m² of pepper vinyl greenhouse and 138m² of a room. Consequently, we learned that positrons which are checked through the third experiment causes remarkable changes in real life.

Results

We present the following methods with the existing stainless-steel heater stick to prove the effectiveness of materials of our MEGA-STN. We experimented with the temperature change and durability with the existing 1.5 kW stainless steel heater stick. (Figure 2) below is a 1.5 kW stainless steel heater stick, and its surface temperature change was expressed in figures of 120°C~180°C when supplied with electricity. Through several experiments, Figure 2 shows that the maximum surface temperature does not exceed 180°C. At this time, the temperature of the internal coil was 1020°C, and the temperature inside the stainless-steel heater stick did not increase any further at 600°C. After a certain period of time, our materials inside the stainless-steel heater stick started to burn, and its surface temperature increased to 180°C and began to drop gradually to 120°C. Additionally, we supplied 1.5 kW of electricity continuously to the stainless-steel heater stick, but there was no longer a surface temperature change. After a certain time, the stainless-steel heater stick stopped working with no further change in heat. At this time, the internal coil was cut off from the inside, and our materials inside were burned and blackened.



Figure 2: AC 1.5 kW (50/60 Hz)

Figure 3 shows that we tested again with a capacity greater than the capacity tested above. We again experimented with the temperature change and durability with the existing 3.2 kW stain-

less steel heater stick. (Figure 3) shows a 3.2 kW stainless steel heater stick, and its surface temperature change was expressed in 150°C~320°C when supplied with electricity. Through several experiments, Figure 3 shows that the maximum surface temperature does not exceed 320°C. At this time, the temperature of the internal coil was 1120°C, and the temperature inside the stainless-steel heater stick did not increase any further at 800°C. After a certain period of time, our materials inside the stainless-steel heater stick started to burn, and its surface temperature increased to 320°C and began to drop gradually to 150°C. Additionally, we supplied 3.2 kW of electricity continuously to the stainless-steel heater stick, but there was no longer a surface temperature change. After a certain time, the stainless-steel heater stick stopped working with no further change in heat. At this time, the internal coil was cut off from the inside, and our materials inside were burned and blackened.



Figure 3: AC 3.2 kW (50/60 Hz)

Figures 2 and 3 show the results that is experimented through the existing stainless-steel heater stick. Figure 4 shows that we tested the materials of our MEGA-STN again based on these results. We used the existing 1.5 kW stainless steel heater stick, as shown in (Figure 4), and added 15% of the materials of our MEGA-STN to the internal materials commonly used. The figure of the surface temperature change was 550°C~700°C when supplying electricity in (Figure 4). Through several experiments, its surface temperature change showed no difference. At this time, the temperature of the internal coil was 1020°C, and the temperature inside stainless-steel heater stick was approximately 800°C. There was no further change in temperature, and even after a certain period of time, the existing stainless-steel heater stick with 15% of the materials of our MEGA-STN worked stably and was not out of order.



Figure2: AC 1.5 kW (50/60 Hz)

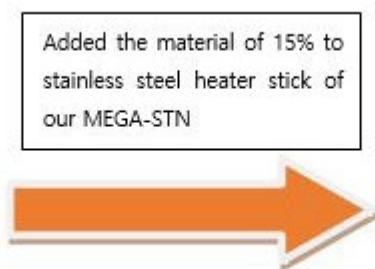


Figure 4: AC 1.5 kW (50/60 Hz)

We increased the electricity capacity to 2.5 kW and added 50% of the materials of our MEGA-STN. We supplied electricity shown in Figure 5, and the surface temperature was 700°C~800°C. Through several experiments, its surface temperature change showed no difference. At this time, the temperature of the internal coil was 1120°C, and the temperature inside stainless-steel heater stick was approximately 1100°C. There was no further change in temperature, and even after a certain period of time, the existing stainless-steel heater stick with 50% of the materials of our MEGA-STN worked stably and was not out of order.



Figure 5: AC 2.5 kW (50/60 Hz)

As above, we were able to check the change in ther-

mal temperature when changing the electricity capacity from 1.5 kW to 2.5 kW. As the electricity capacity increased, the thermal temperature increased. That is, it is found that our materials have a direct effect on heat. Based on these facts, we fixed the stainless-steel heater stick of Figure 5 in the stainless-steel rectangular plate (300 mMX200 mMX20 mM) and filled its remaining space with our materials. As shown in Figure 6, we applied electricity to the stainless-steel rectangular plate (300 mMX200 mMX20 mM) filled with our materials, and its temperature was increased, as shown in Figure 7. At this time, the surface temperature of the stainless-steel rectangular plate (300 mMX200 mMX20 mM) in Figure 7 increased to 850°C, the temperature of the internal coil was 1120°C, the temperature inside stainless-steel heater stick was 750°C, and the surface temperature of the stainless steel heater stick was 700°C, and the temperature of the materials in the stainless steel rectangular plate (300 mMX200 mMX20 mM) increased to 950°C.



Figure 6: Stainless steel rectangular plate (300mm x 200mm x 20mm) filled with our materials



Figure 7: Stainless steel rectangular (300mm x200mm x 20mm) filled with our materials

After a certain period of time has elapsed, the surface temperature in Figure 8 reached 1100°C, the temperature of the internal coil was 1120°C, the temperature inside the stainless-steel heater stick surrounding the coil was 750°C, the surface temperature of

the stainless steel heater stick was 700°C, and the temperature of the materials in the stainless steel rectangular plate increased to 1500°C. After this, the stainless-steel heater stick is no longer electrified, and it stops working.



Figure 8: Stainless steel rectangular plate (300 mmx200 mmx20 mm) filled with our materials

The results of the above tests are that as the thermal energy was supplied between the positrons, it collided into each other, thermal dilatation occurred, thermal dilatation in the enclosed room collided with each other such as a heat storm, waves travel from one to the other, and the heat is amplified. At this time, we found that the positrons were emitted in large quantities as shown in Figure 7 and 8. We got the same result as the positrons were emitted in large quantities when doing experiment supplying heat energy repeatably to Figure 6. There has been no change when we experimented the same process with the general ceramic materials, not the materials of our MEGA-STN.

We made three 4Kw stainless steel heater sticks added 50% of materials of MEGA-STN as shown in Figure 9. The surface temperature of it went up to a maximum 700°C. We made a stainless-steel rectangular plate (500 mMx400 mMx30 mM) with the air holes as shown in Figure 10. Figure 10 is the one with a stainless-steel heater stick (AC 4Kw, 50/60 Hz) of Figure 9 fixed in the stainless-steel rectangular plate and materials of MEGA-STN in the remaining space of it. The surface temperature of it went up to a maximum 950°C. We made an equipment as shown in Figure 11. We put three stainless steel rectangular plates of Figure 10 in the equipment of Figure 11 and two fans. As shown in Figure 11, a fan located on top of the equipment pushes the wind in and a fan in front of it pulls the wind out. This is the way to emit positrons by passing the wind through three stainless steel rectangular plates of Figure 10 in the equipment of Figure 11.



Figure 9: stainless steel heater stick (AC 4Kw, 50/60 Hz)



Figure 10: Stainless steel rectangular plate (500 mMx400 mMx30 mM) filled with our materials of MEGA-STN, which is with the stainless-steel heater stick (AC 4Kw, 50/60 Hz)

We installed two equipment's of Figure 11 in 2,079m² of cheongyang pepper vinyl greenhouse as shown in Figure 12 to see the real process of plant growth. Here, our installation was that as shown in Figure 12, we connected a four-meter duct to an equipment in cheongyang pepper vinyl greenhouse 80 meters long and 26 meters wide, and then made four holes one meter apart from each other and connected 80 meters long and 300π whole vinyl to each hole as shown in Figure 13. After this connection, we operated the equipment's. We installed five equipment of Figure 11 in 3,300m² of cheongyang pepper vinyl greenhouse as shown in Figure 14. Figure 14 is a cheongyang pepper vinyl greenhouse 100 meters long and 34 meters wide, in which we set up in the same way as 2,079m² of cheongyang pepper vinyl greenhouse. We connected 100 meters long and 500π whole vinyl to each hole and operated five equipment's in 3,300m² of cheongyang pepper vinyl greenhouse as shown in Figure 14. As above, we made a hot air fan equipment using our MEGA-STN and tried it in 2,079m² and 3,300 m² of cheongyang pepper vinyl greenhouse.



Figure 11: Equipment with our MEGA-STN



Figure 12: vinyl greenhouse (2,079m²) with test equipment using our MEGA-STN



Figure 13: 80 meters long and 300π whole vinyl



Figure 14: 100 meters long and 500π whole vinyl



Figure 15: Cheongyang peppers in vinyl greenhouse (2,079m²)



Figure 16: Cheongyang peppers in vinyl greenhouse (3,300m²)

We decided to check the changes of state by entering only electricity in Figure 10. Therefore, we got some very interesting results as shown in Figure 17 and 18. When electricity was supplied, the surface temperature of Figure 10 was 1300°C such as Figure 17. After that, the inner stainless steel heater stick was

melted, and it did not work anymore as shown in Figure 18. This means that the inner temperature of Figure 17 is quite high given that the melting point of the stainless steel is generally 1375°C~1530°C.



Figure 17: Stainless steel rectangular plate (500 mMx400 mMx30 mM) filled with our materials of MEGA-STN , which is with the stainless steel heater stick (AC 4Kw, 50/60 Hz).



Figure 18: Stainless steel rectangular plate (500 mmx400 mmx30 mm) filled with our materials of mega-stn, which is with the stainless-steel heater stick (ac 4kw, 50/60 hz).

Discussion

How can we be up the heat higher? We minimized internal heat loss by coating a ceramic coating film with the outer surface of the combined structural assembly of insulating materials, exothermic materials, conductive materials, and materials storing heat. At this time, the heat has an expanding nature, and the expanding heat exits the space, yet the internal clash between heat and heat occurs by the external coated film. The higher the heat is, the greater the amount of heat impact, and thus invisible minute waves are formed. The waves collide repeatedly, and the strength of the waves is stronger, and by this strength, the temperature of heat increases. Hereat, it goes up to only the specified temperature, because the range of the vibration depends on the quantity of our materials.

Conclusion

The materials of our MEGA-STN will be the ones that are able to be used as the energy sources emitting a large amount of positrons. This seems to be an achievement comparable to the energy sources of the 19th century industrial revolution. They can be an alternative that would solve the modern environmental problems such as global warming and the problem of carbon emissions from fossil fuels, and are expected to change the quality of life

by being utilized in a variety of industries, that is healthcare, construction, transportation, and energy. We are going to provide help and opportunities to apply our materials for researchers in many fields by showing the studies related to our MEGA-STN in the future [1-10].

Additionally, our MEGA-STN adjusts the temperature and humidity suitable for animals and plants to live in by having a positive effect on the ecological environment. Through it, the earth's ecosystem would be harmonized by having environmental conditions suitable for growth and development like as air is clear and water is clean. Our MEGA-STN makes our life improve further due to the complementarity of science and everyday life, and we will be able to draw a hopeful society in the future.

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