The unity of Matter and Antimatter

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The nature around us is in perpetual motion and development. Lenin gave a formula of dialectical development: development is the "struggle of opposites."

Laws of nature and general organization of nature always occupied people's minds. Natural history of XIX century had significant progress. New energy conservation law and law of conservation of mass were opened.

D.I. Mendeleev discovered the periodic system of elements. It was a big step in the knowledge of the outside world. At the beginning of the XX century the Danish scientist Niels Bohr created the theory of the atom, which is based on its postulates. An atom is a positively charged nucleus around which negatively charged electrons move. Lenin had said at that time: "Electron is inexhaustible as the atom."

Bohr's postulates formed the basis of modern quantum mechanics.

Study of electron properties showed that it exhibits the properties of particles and electromagnetic waves. Wave properties of electrons are described by the Schrodinger's wave equation. For over one hundred years dualism has not received an explanation in the properties of the electron.

In the works [1,2] a hypothesis was suggested about the structure of electron and the attempt to explain the dualism in the properties of electron. This explanation is correct from philosophical point of view. Coexistence of matter and antimatter in the electron is the unity of opposites, and the struggle of opposites under certain conditions leads to the disappearance of the particle due to the annihilation of particles and the transition to a state of an electromagnetic wave with other opposites. It is not correct to say: "Electron exhibits the properties of particles and waves." It is correct to say: "Electron is either particle or wave." Of course, the Schrodinger equation correctly describes the properties of the electron, but it is when the electron is in a state of the wave.

The positron is the anti-electron. It has the same properties as the electron. They have the same mass, and hence the same energy

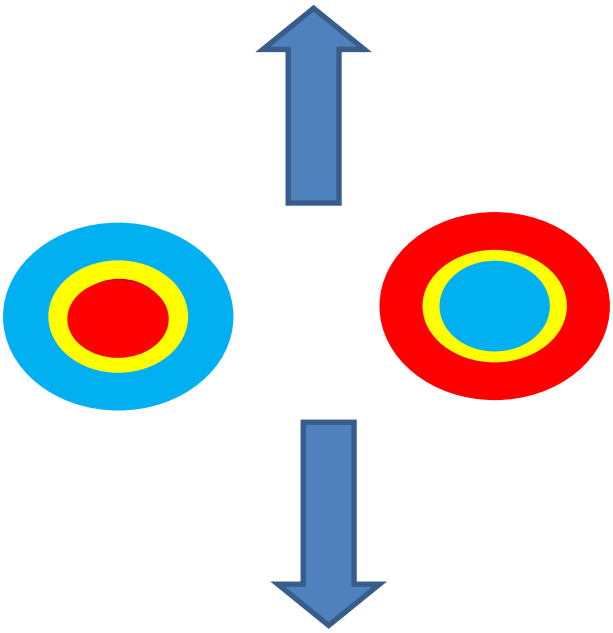
$$E=m.c2$$

They differ in the following. If to conditionally accept the outer layer of the electron as a matter, then in the electron the matter envelops the antimatter with a layer between them and ether. In case of positrons it is the opposite - antimatter envelops matter. Figure 1 shows an electron and a positron. Blue depicts matter, red depicts antimatter and yellow - ether.

Electron and positron, going into wave (photon), have the same energy. Under certain conditions back transition into the particle is possible. However, for the photon it does not matter from which particles it was formed and at the reverse transition it can be obtained from any particle (electron or positron). Therefore, a positron can be obtained from an electron and vice versa.

If transitions particle-wave-particle flow in an environment where there are many electrons, then in the case of formation of positronium it again annihilates with an electron.

Incidentally, the result of annihilation are two gamma-rays (Figure 1). This result supports the hypothesis that the electron and positron consist of two halves. Otherwise, only a gamma ray would be b



Drawing 1. The annihilation of electron and positron.

Fusion of electron and positron is well known as positronium, which has existed a short time. The existence of positronium is due to the presence of ether. Since the electron and positron are attracted, the ether spreads and annihilation happens. Ether, to some extent constrains annihilation.

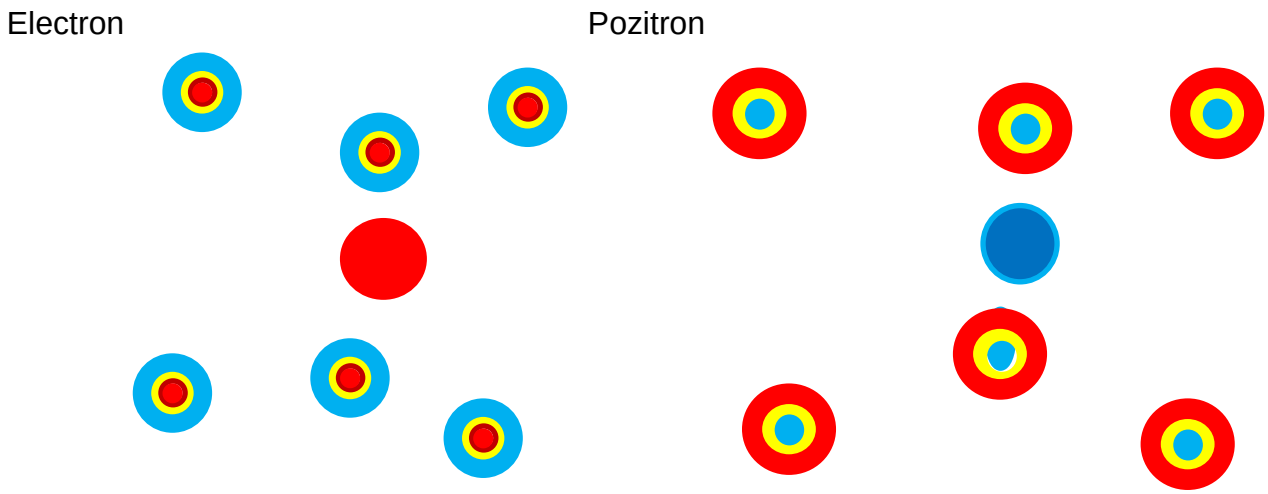
We are now on the charge saying that the electron is negatively charged, and positron - positively. There is, in our opinion, a fair question: What are the uncharged electron and positron? Such particles are not known. Furthermore, in the description above, the processes of transferring the particle-wave-particle showed the possibility of electron transfer in the positron and vice versa. Electricity as such does not occur anywhere. All the above confirms the conclusion that electricity as such does not exist. There is an interaction of matter and antimatter. Heterogeneous matter attracted and homogeneous-repelled.

According to many scientists all space objects, including Earth, formed after the Big Bang. Following the philosophical law "Unity and struggle of opposites," it can be argued that as a result of the explosion formed a mixture of particles and antiparticles. Certainly, there are quanta of electromagnetic waves, since the probability of collision of particles and antiparticles, followed by the annihilation is very great.

Thus, among the particles and antiparticles there are processes of annihilation and creation of particles and antiparticles. As we mentioned above, the probabilities of formation of particles and antiparticles are equal.

Protons are, as used to say, positively charged. It's safe to say that it contains in its structure a positron, which is anti-electron. Therefore, an appropriate amount of particles and antiparticles can form larger particles or antiparticles. Next comes the process of formation of atoms of matter or antimatter atoms.

[1] shows the structure of matter and antimatter atoms excluding the presence of ether. The presence of the ether mentioned in [2]. With this in mind, Figure 2 shows the structure of carbon atoms and anti carbon. Obviously, the superposition of the interaction of forces of two homogeneous carbon atoms and superposition of the interaction of forces of two different carbon atoms differ. The degree of difference is the subject of another work.



Drawing 2. An atom of carbon and anti – carbon.

A mixture of an equal number of atoms of matter and antimatter is unstable due to annihilation processes. At the same time, in some places there may be groups of atoms of substances that are attracted to form centers of forming material, and in other places may form centers of formation of antimatter. If these centers fall into alien atoms, then they will be destroyed by annihilation. Merger of centers is possible. The growth of these centers is accompanied by a decrease in temperature.

A black hole is an accumulation of large amounts of antimatter [1]. Earth is made of antimatter and matter in the center of the outer layer. In the intermediate layer, where matter and antimatter come into contact, there is annihilation of electrons and positrons, neutrons erupting mass contains some antimatter, they will react with the material and eventually turn into matter. Thus, a portion of antimatter reacted with the outer layer material and turned into a material. The presence of antimatter in the center of the Earth was confirmed by the US researchers. Let's quote information from the Internet: "American physicists involved in research within the project "Cryogenic Search for Dark Matter" reported that they were able to find traces of dark matter deep underground. This discovery was made in a special laboratory located in Minnesota. According to scientists, during the research was recorded a significant release of energy, which occurred without the involvement of dark matter particles. Researchers almost 100% sure that the burst of energy was the result of the interaction of atoms of normal "terrestrial" matter with particles of dark matter."

Thus, matter and antimatter coexist in the micro and macro scale.

Literature

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