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Structured and Magnetically Treated Water: Properties, Applications, and Theoretical Insights

Pavel Ošmera

Mechanical Department, Brno University of Technology, Czech Republic

***Corresponding author:** Pavel Ošmera, Mechanical Department, Brno University of Technology, Czech Republic.

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Abstract

Goal is to find the new and better models of electron and positron as fractal torus structures. A new model of atoms and molecules will be presented. We assume that there are two types (type A and type B) of atoms that differ in the direction of rotation of individual rings (type B, all rings rotate opposite to the directions of rotation type A) but both types have the same structure. The rotations of protons and neutrons in atoms behave similarly a "cogwheel" in gear box. For example: both oxygen atoms have the same structure, but the individual protons rotate in opposite directions in both atoms. This is necessary to make magnetic lines of force with opposite orientations. Magnetic lines are then created in the proton axis of both atoms. Only such oxygen atoms can create an oxygen molecule. Magnetic lines of the first oxygen atom and can thus enter the proton of the second oxygen atom. Evera atom of oxygen has 8 protons, 8 electrons and 8 neutrons. This principle applies to all atoms and molecules. This proposed model will affect the foundations of atomic theory, materials science, or cosmology.

Keywords: Fractal Ring Model, Fractal Substructures, Both Direction of Rotation of Proton, Neutron and Electron, Directions of Magnetic Lines, Topological Model of Water, Two Types of Atoms with The Same Structure, A Topological Model of Molecule of Water, Revitalized Water, Diamagnetism of Water, Fractal Electron Structure, Topological Model of Graphene.

Introduction

Young people in schools learn that the nucleus of atoms consists of balls of protons and neutrons and electrons orbit around such a nucleus [1, 2]. This model was inspired by the planetary system, where all planets (including the Earth) orbit the Sun. But this Bohr model cannot explain structures of molecules, for example, the hydrogen molecule, which consists of two hydrogen atoms. Bohr model can explain the hydrogen atom. This model was modified [3, 4]. Electrons, protons are not balls, but rings with a fractal structure, but in the hydrogen atom the electron is attracted by the electric force and repelled by the magnetic force. In the Bohr atom, the repulsive force is created by the centrifugal force. It is interesting that in both models of hydrogen atoms the distances between the proton and the electron are the same in both models.

The point model of electron (or positron) is now the most widely used model of the electron (or positron). The magnetic moments of the electron, proton, and neutron are known. The measured properties can only exist if the elementary particles have a fractal structure with non-zero size. The fractal model of the electron consists of multiple negative substructures, and the fractal model of the positron consists of positive substructures. This explains the overall negative charge of the electrons and positive charge of the positrons. The measured properties of the electron cannot be properly explained by point models used in the theory of relativity and quantum mechanics. It now appears that the fractal model of the electron (or positron) can provide a basic explanation of the properties of the electron (or positron) such as charge, mass, spin, magnetic moment, and stability of the overall structure. Point models cannot well explain the physical principle for the exchange of energy between individual particles. Models of finite- sized objects can change size and shape in response to the presence of other objects.

The "fractal dimension of the electron" was presented in the ar-

ticle [5]. This view contradicts the currently accepted view that the electron has no structure. This article is the first attempt to calculate the size of the fractal dimension of the electron, with the obtained size being 1.446. The vortex-fractal-ring theory could contribute to explaining what charge is, what structure the electron, proton and neutron have, and their electromagnetic fields.

Standard models of elementary particles imagine the electron as a quantum object with a possible wave-particle duality, with properties assigned to it to fit empirical data. Unfortunately, these properties are not related to any physical structure or to the motion of the electron itself. For many physicists, the electron remains a mysterious "black box" for which no one can figure out why the electron has certain line spectra, spin, mass, magnetic moment, wavelength, etc. The classical approach to particle physics is based on three ideas: the idea that elementary particles are physical objects with structure, and the idea that these physical objects are fundamentally electrical in nature. The discovery that the electron has magnetic properties further suggests to classical physicists that the electric charge carried by the electron must be in motion. The first rotating charged ring (SCR) model for the electron was proposed by A. L. Parson in 1915. His model had a charge moving around the circumference of a thin torus ring [6-10]. Previous spherical models (spheres) had only one degree of freedom and radius R, while Parson's rotating ring has three degrees of freedom, radius R, half-thickness r, and rotation rate ω. This model provides more opportunities to fit the characteristics of the ring model to the measured parameters of the electron. However, Parson's electron ring model and other more recent SCR models have one common drawback: the total charge cannot be confined to a surface layer with zero volume, because the compression of each segment of the charge repels all other segments with infinite force in accordance with Coulomb's law. This means that the electron would have to explode. The charge cannot be confined to a point, line, or plane with zero volume, because the compression of each segment of charge repels all other segments in accordance with Coulomb's law. The electron is then elastic, having a finite size and ratio, mass, and energy. Ivan Sellin wrote in 1982 that "A good theory of the structure of the electron is still lacking, and there is still no generally accepted explanation why electrons do not explode under the influence of the enormous Coulomb repulsive forces in an object of small size". A modern and original article on the electron is in [11-14].

Electron Structure

Radius of Electron r_e

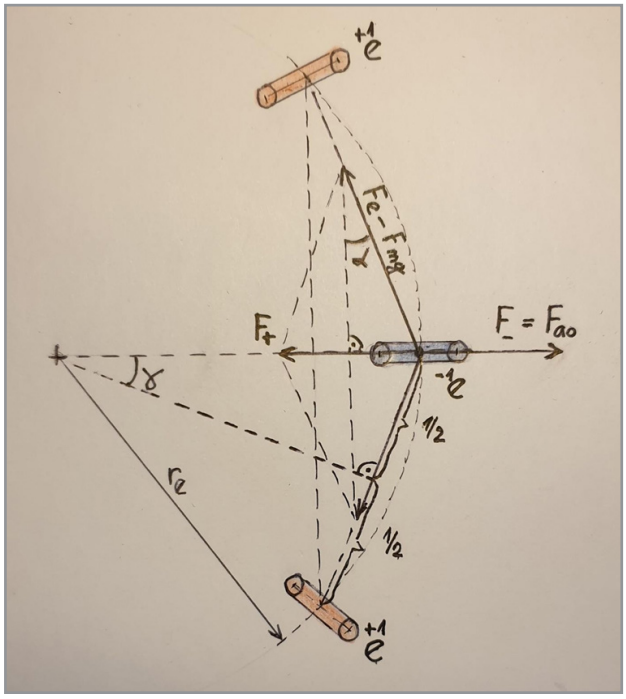


Figure 1: Forces between two sub-electrons -1e and +1e inside electron 0e:

The following relationships result from Figure 1:

$$\sin\alpha = \frac{\frac{F_{a0}}{2}}{F_{C0} - F_{mg}} = \frac{F_{a0}}{2\left(F_{C0} - F_{mg}\right)} \quad (1)$$

where Fa0 = F_ is the acceleration force, F+ = Fel – Fmg, FC0 = Fel = Fe is the attractive Coulomb's force and Fmg is repulsive magnetic force between $^{-1}e + e^{+1}$, where $^{-1}e + e^{+1}$ are the ring substructures of electron and positron.

$$\sin\alpha = \frac{\frac{2\pi r_e}{N}\frac{1}{2}}{r_e} = \frac{\pi}{N}, \quad (2)$$

where re is the radius of electron, N is number of double ring substructures (see Fig.23).

$$\sin\alpha = \frac{F_{a0}}{2\left(F_{C0} - F_{mg}\right)} = \frac{\pi}{N} \quad (3)$$

$$F_{a0} = \frac{2\pi}{N}\left(F_{C0} - F_{mg}\right) \cong \frac{2\pi}{N}F_{C0} \quad (4)$$

$$\frac{m_e}{N^2}\frac{v_e^2}{r_e} = \frac{2\pi}{N}\frac{\left(\frac{e}{S}\right)^2}{4\pi\varepsilon_0\left(\frac{2\pi r_e}{N}\right)^2} = \frac{Ne^2}{8\pi^2\varepsilon_0 r_e^2 S^2} \quad (5)$$

where m_e is mass of electron, 1/S is scaling factor, me/N2 is mass of the first ring substructure e-1 or e+1, v_e is velocity of the sub-electron -1e or e+1. Magnetic forces F_{mg} between e^{-1} and e^{+1} decreases proportionally $1/re^3$. The magnetic forces are significantly less than the centrifugal ones and therefore we can neglect them. This explains why Bohr's model of an atom that did not contain magnetic forces for the model of a hydrogen atom had similar results. It was no longer applicable to the hydrogen molecule. We suppose that there is N2 first substructures inside the electron. Solving (5) for r_e:

$$r_e = \frac{e^2}{8\pi\ \varepsilon_0 m_e}\frac{1}{v_e^{\ 2}}\frac{N^3}{\pi S^2} \tag{6}$$

To receive result that is not in contradiction with general accepted knowledge [2] [3]. We can use:

$$1 = \frac{N^3}{\pi S^2} \qquad S^2 = \frac{N^3}{\pi} \qquad S = \sqrt{\frac{N^3}{\pi}} \tag{7}$$

We then receive the size of electron radius re. This formula is valid only for ve >>0 and c > v_e :

$$r_e = \frac{e^2}{8\pi\varepsilon_0 m_e}\frac{1}{v_e^{\ 2}} \tag{8}$$

Quantum Model of Electron

On a circumference of double loop with re (see Fig.23) is n of wavelength λ (n is quantum number):

$$2\cdot 2\pi r_e = 4\pi\frac{e^2}{8\pi\varepsilon_o m_e}\frac{1}{v_e^2} = n\lambda = n\frac{h}{m_e v_e} \tag{9}$$

$$\frac{e^2}{2\pi\varepsilon_o}\frac{1}{v_e} = nh \tag{10}$$

where v_{en} is velocity of electron if the electron has minimum energy E_{on} on level n:

$$v_{en} = \frac{1}{n}\frac{e^2}{2\varepsilon_o h} = \frac{1}{n}v_{e-\max} \tag{11}$$

For n=1 on the ground state electron has maximal velocity v_{e-max} and has rotational energy Er:

$$v_{e-\max} = \frac{e^2}{2\varepsilon_o h}\frac{c}{c} = \alpha c \approx \frac{c}{137.036} \approx 2180 km/s \tag{12}$$

where α is the couple constant:

$$\alpha = \frac{e^2}{2\varepsilon_o hc} \tag{13}$$

$$\frac{c}{v_{e-\max}} = \frac{2\varepsilon_o hc}{e^2} = \frac{1}{\alpha} \approx 137.036 \tag{14}$$

For spectral lines of atomic hydrogen (Lyman series):

$$\lambda_1 = \frac{h}{\frac{m_e}{N^2}2Nv_e} = \frac{hN}{2m_e v_e} = \frac{T_L}{4} = \frac{91.2324\cdot 10^{-9}}{4} = 22.808\cdot 10^{-9} m \tag{15}$$

$$N = \frac{2\lambda_1 m_e v_{e-\max}}{h} = \frac{2\lambda_1 m_e \alpha c}{h} = \frac{T_L m_e \alpha c}{2h} \approx 136$$

$$N = \frac{T_L m_e v_{e-\max}}{h} = \frac{91.2324\cdot 10^{-9}\cdot 9.11\cdot 10^{-31}\cdot 2.18\cdot 10^{6}}{2\cdot 6.626\cdot 10^{-34}} = 136.72 \cong 136 \quad \ldots \quad \frac{N}{2} = 68$$

where TL is the term of Lyman series (spectral lines of atomic hydrogen). The total number of sub-electrons in the electron is M = 2N*N/2 = N2 = 136*136 = 18496. In [24] page 15 is equation for r_{en}, which equals the equation (8):

$$r_{en} = n^2\frac{T_L\alpha}{4\pi} = n^2\frac{\lambda_1\alpha}{\pi} = n^2\frac{e^2}{8\pi\varepsilon_0 m_{e0}}\frac{1}{v_{e-\max}^{\ 2}} = n^2\cdot 2.65099\cdot 10^{-11} m \tag{16}$$

For quantum level n=1:

$$r_{e1} = \frac{T_L\alpha}{4\pi} = \frac{e^2}{8\pi\varepsilon_0 m_{e0}}\frac{1}{v_{e-\max}^{\ 2}} = 2.65099\cdot 10^{-11} m \tag{17}$$

Energy E_{rn} of rotation of the electron on quantum level n:

$$E_{rn} = \frac{1}{2}\frac{m_e}{N^2}N^2\cdot v_{en}^2 = \frac{1}{n^2}\frac{m_e e^4}{8\varepsilon_o^2 h^2} \approx \frac{1}{n^2}13.6eV \tag{18}$$

For quantum number n=1

$$E_{io} = \frac{m_e e^4}{8\varepsilon_o^2 h^2} \approx 13.6eV \tag{19}$$

$$E_n = -\frac{e^2}{4\pi\varepsilon_o}\frac{1}{d}\left(1-\frac{n^4 d_o^2}{3d^2}\right) = -\frac{e^2}{4\pi\varepsilon_o}\frac{1}{n^2 d_o}\frac{2}{3} = \frac{1}{n^2}18.13eV$$

$$E_{i0} = \frac{3}{4}E_n \approx \frac{3}{4}18.13eV \approx 13.6eV \tag{20}$$

Energy E_n of levitation is in balance with energy E_{rn} of rotation. We can derive distance d_o:

$$E_{rn} = -\frac{1}{n^2}13.6eV = -\frac{1}{n^2}\frac{m_e e^4}{8\varepsilon_o^{\ 2}h^2} = -\frac{e^2}{4\pi\varepsilon_o}\frac{1}{n^2 d_o}\frac{2}{3}\cdot\frac{3}{4} = -\frac{1}{n^2}\frac{m_e e^4}{8\varepsilon_o^{\ 2}h^2} \tag{21}$$

$$d_o = \frac{\varepsilon_o h^2}{\pi m_e e^2} = r_B \tag{22}$$

In our vortex-fractal-ring model [19], [20] we received the same size of the Bohr radius r_B for the distance $d_o \approx 5.29\cdot 10^{-11} m$

The Spin of Electron and Positron

Electron has properties corresponding to its spin S. The spin of electron is defined as angular momentum. For the spin on axis z:

$$S_z = \pm N^2\frac{m_e}{N^2}r_e v_e = \pm m_e r_e v_e \tag{23}$$

where me is the mass of the electron, re is the radius of electron and N is number of substructures inside the structure of electron. For quantum number n=1:

$$r_{e1} = \frac{e^2}{8\pi\varepsilon_0 m_e}\cdot\frac{1}{v_{e-\max}^2} \tag{24}$$

$$v_{e-\max} = \frac{e^2}{2\varepsilon_0 h} \tag{25}$$

$$S_z = \pm m_e\frac{e^2}{8\pi\varepsilon_0 m_e}\cdot\frac{1}{v_{e-\max}^2}v_{e-\max} = \pm m_e\frac{e^2}{8\pi\varepsilon_0 m_e}\cdot\frac{1}{v_{e-\max}} = \pm m_e\cdot\frac{e^2}{8\pi\varepsilon_0 m_e}\cdot\frac{2\varepsilon_0 h}{e^2} = \pm\frac{1}{2}\cdot\frac{h}{2\pi} = \pm\frac{1}{2}\hbar = m_s\hbar \tag{26}$$

$$m_s = \pm\frac{1}{2} \tag{27}$$

The result in (26) is in coincidence with the equation for the spin, where ms is spin quantum number.

Playing cards have spin Sz = 2, that have the same pictures at the top and bottom. We get the same pair of cards if we turn the cards 180 degrees. Spin 1/2 can no longer be explained on a sphere (ball). It is necessary to obtain the same structure by rotating it by 2x360 = 720 degrees. This can only be explained on the toroid (ring). Conclusion: therefore, particles that have spin 1/2 must be rings and not spheres.

Fractal Dimension of Electron

A fractal dimension is a ratio providing a statistical index of complexity comparing how detail in a pattern changes with the scale at which it is measured. Fractional" dimension D is defined in [23]:

$$D = -\frac{\ln N^2}{\ln \varepsilon} = \frac{\ln N^2}{\ln S} = \frac{\log N^2}{\log S} \tag{33}$$

where N is number of substructures (number of new sticks), ε =1/S is scaling factor. For S from (7) and N =136 is fractal dimension D:

$$S = \sqrt{\frac{N^3}{\pi}} = \sqrt{\frac{136^3}{\pi}} \approx 895 \qquad D = \frac{\log N^2}{\log S} = \frac{\log 136^2}{\log 895} \approx 1.446 \tag{34}$$

The fractal dimension D = 1.446 corresponds to a crumpled line (curve) in 3D space. The fractal structure of an electron is very leaky, so an electron can move at almost the speed of light (similar like a photon).

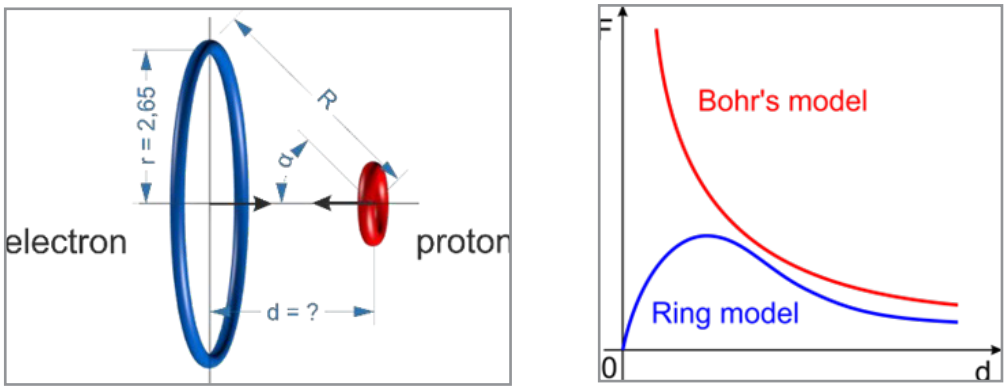


Figure 2: Levitating ring electron in a hydrogen atom (blue ring is the electron, red ring is proton, F is force between an electron and a proton at a distance d).

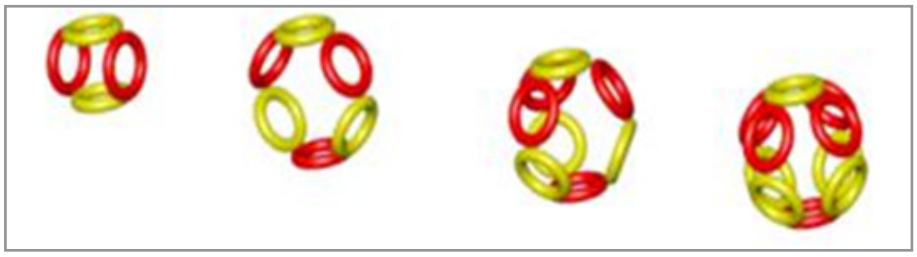


Figure 3: Basic substructures GS of atomic nuclei.

The left substructure in Fig. 3 is a helium nucleus (alpha particle).

The atomic nucleus can be created (built) from basic substructures [19]:

1. Two protons with parallel spin and the same direction can be joined on a common axis. This way we can join basic substructures on Fig.3 by way on Fig.9.
2. Proton and neutron with parallel spins can be joined on a common axis. For example: deuterium (see Fig.5) and tritium.
3. Two protons with different axes can be connected via a neutron by magnetic forces (see Fig.8 and Fig. 9).
4. One or two neutrons can be inserted between the two parallel protons (for example: isotopes on Fig. 10).

It turns out that it is possible to combine these basic rules to create any real nucleus models of individual atoms of the Periodic Table of Elements (see Fig. 7).

Nucleons in the nucleus are not arranged in the shells as in case of electrons but form spherical globule substructures with a maximum of 10 nucleons. Nuclear forces can bind only a small number of neighboring nucleons. Spherical substructures of the nucleus (globule substructures (GS) on Figure 3 are sub-structures of nucleus). They are sequentially occupied by pairs of proton and neutron with 2, 3, 4 and 5 pairs (see Fig. 3).

These GS are connected via two parallel protons into more complex units (see Fig. 9). GS with a maximum and symmetry of occupation of nucleons is an extremely stable part of the nucleus. They create the atom with all completely occupied electron levels (in noble-gases).

The shape of these globule substructures is created by repul-

sive electric forces (green arrows) of positively charged protons (red rings) and magnetic attraction forces (purple arrows) of the magnetic field of the protons and adjacent magnetic fields of the neutrons, (Figure 6). Neutrons have the opposite spin relative to the proton and, therefore, at the point of contact have the same direction of the magnetic field (magnetic moments). This magnetic field attracts and holds the two nucleons together (nuclear forces).

These globule substructures GS are connected through proton-proton bonds (bridges) to more complex entities (see Fig. 9). GS models can not only have the shape of a ball, but also a flattened ellipsoid (carbon), an elongated ellipsoid, or even more complex shapes. Some nuclei of element atoms may exist in more shape modifications (allotropic structures) [15-19].

The neighboring globule substructures with their magnetic fields interact with each other according to the number of their own nuclides and their relative position, which is manifested by the deformation of the shape of the individual globule substructures towards the proton bond in the middle (Fig. 11 and Fig.12).

With these globule substructures, we can assemble the nucleus structure models of individual elements (according to the number of protons and neutrons) of the periodic table of elements.

Charge cannot be confined to a point, line, or plane of zero volume, because compression of each segment of charge repels all other segments in accordance with Coulomb's Law. The electron is elastic, finite in size, and finite in mass-energy. Ivan Sellin wrote in 1982 that "A good theory of electron structure still is lacking. There is still no generally accepted explanation for why electrons do not explode under the tremendous Coulomb repulsion forces in an object of small size".

Spin is a fundamental property of nature like electrical charge or mass. Spin comes in multiples of 1/2 and can be + or -. Protons, electrons, and neutrons possess spin. Individual unpaired electrons, protons, and neutrons each possesses a spin of 1/2.

In the deuterium atom (2H), with one unpaired electron, one unpaired proton, and one unpaired neutron, the total electronic spin = 1/2 and the total nuclear net spin = 1.

In the next figures are shown ring (torus) structures of hydrogen and deuterium atoms with the levitating electron.

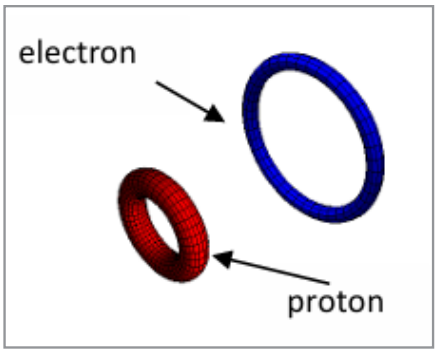


Figure 4: Structure of hydrogen atom

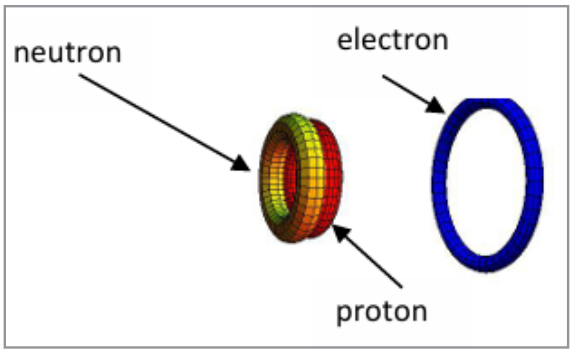


Figure 5: Structure of deuterium atom

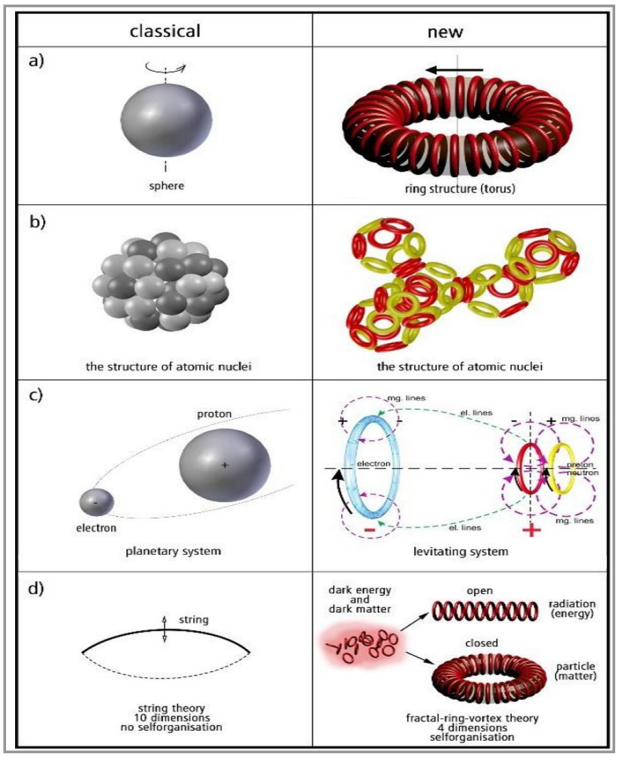


Figure 6: Classical and new ring structure of atoms.

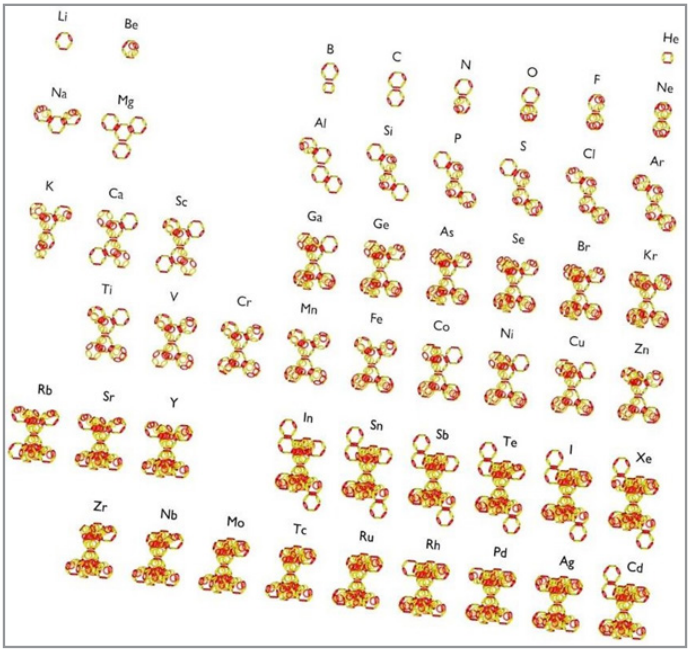


Figure 7: Periodic table of elements from He to Xe

Using these globules GS, we can build more complex core structures of individual elements (according to number of protons and neutrons) of periodic table of elements.

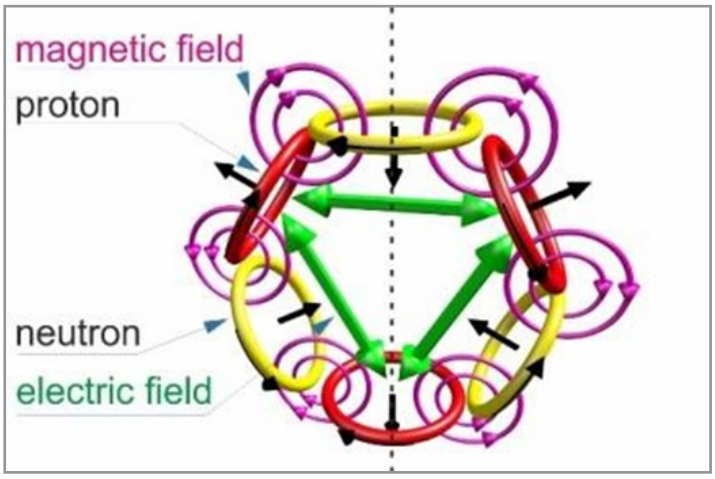


Figure 8: Diagram of electrical repulsive forces (green) and attractive magnetic forces (purple).

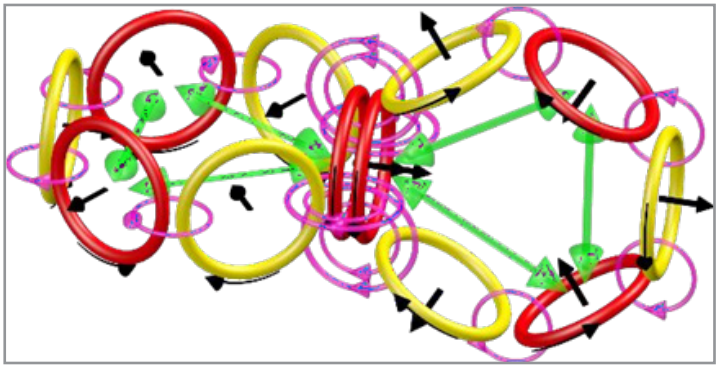


Figure 9: Conjugation of globules through proton-proton bond.

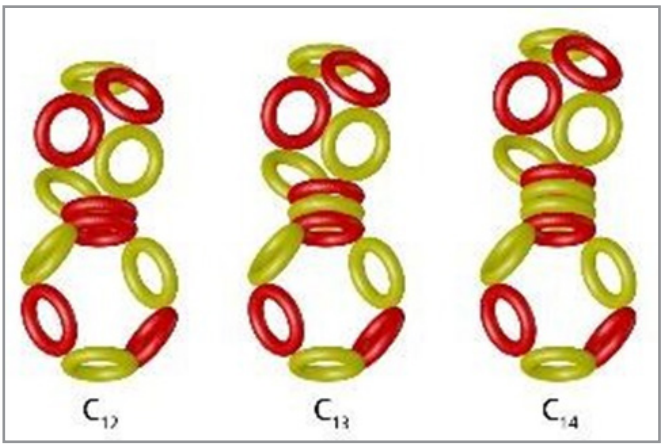


Figure 10: Cores (nuclei) of carbon isotopes.

The globules can bind to each other by magnetic bonding through proton-proton bonds. Between two protons (in the proton-proton bond) can be inserted :0, or 1, or 2 neutrons (see Fig.10). The number of neutrons inserted differs between the individual isotopes of the element. On Fig. 10 are presented ring models of carbon isotopes. With the isotopes of individual elements, the number of neutrons in the nucleus increases and these are usually located between two protons, or they form the surface (skin) of protons of the outermost globules. As a result, the repulsive magnetic force to the electrons increases, and the isotope has a larger radius than the element in the base state [20, 21].

Nuclei composed of globules may not only have the shape of a sphere, but also a flattened ellipsoid (carbon), an elongated ellipsoid (many other cores) or even more complex shapes. Some nuclei of element atoms may exist in more shape modifications (allotropic structures). The neighboring globules with their magnetic fields interact with each other according to the number of their own nuclides and their relative position, which is manifested by the deformation of the shape of the individual globules. As a result, the known bonding angles of the carbon, nitrogen and oxygen elements have an effect in the arrangement of the crystal lattice molecules and shapes.

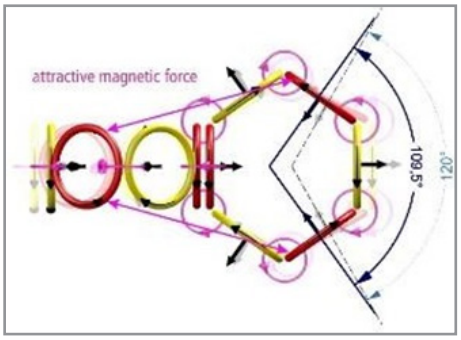


Figure 11: Deformation of the carbon nuclei globules.

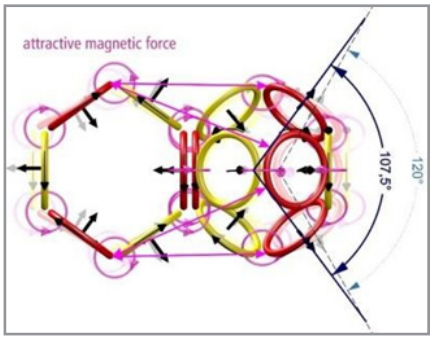


Figure 12: Deformation of oxygen nuclei globules.

The nucleons in the atomic nucleus are not static. First, they have their own magnetic moment, and in each nucleon rotates charge along the axis of its toroid. These rotations are bound to adjacent nucleons and form a sort of "gearbox". Magnetic moments of opposing nucleons then show us whether the energy of binding with the electron enters the globule or comes out of the globule out. This also determines what magnetic moment must have an electron that binds to a pair of proton neutrons

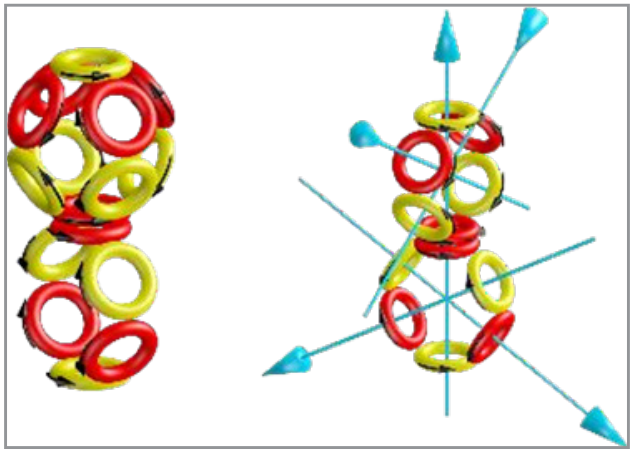


Figure 13: Rotation of oxygen nucleons and direction of magnetic moments at the carbon nucleus.

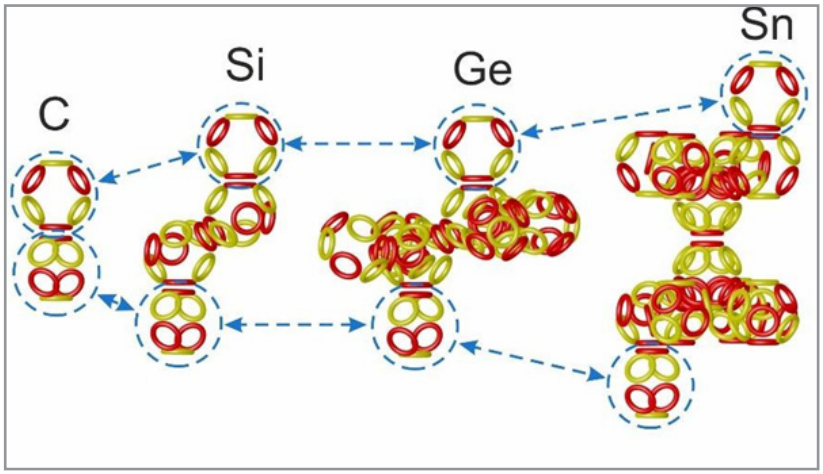


Figure 14: Similar outer structure of C, Si and Ge nuclei (tetravalent atoms).

The proposed model was gradually modified to best match the known properties of nature. Fractal structures allow for significantly simpler subsequent construction and calculations of these ring models.

A Pair of Atoms with the Same Structure

It was revealed that there must be two types (type A and type B) of atoms that differ in the direction of rotation of the individual rings (in type B, all rings rotate in the opposite direction to the direction of rotation for type A). Both types A and B have the same structure (for example: a molecule of oxygen on Fig.15).

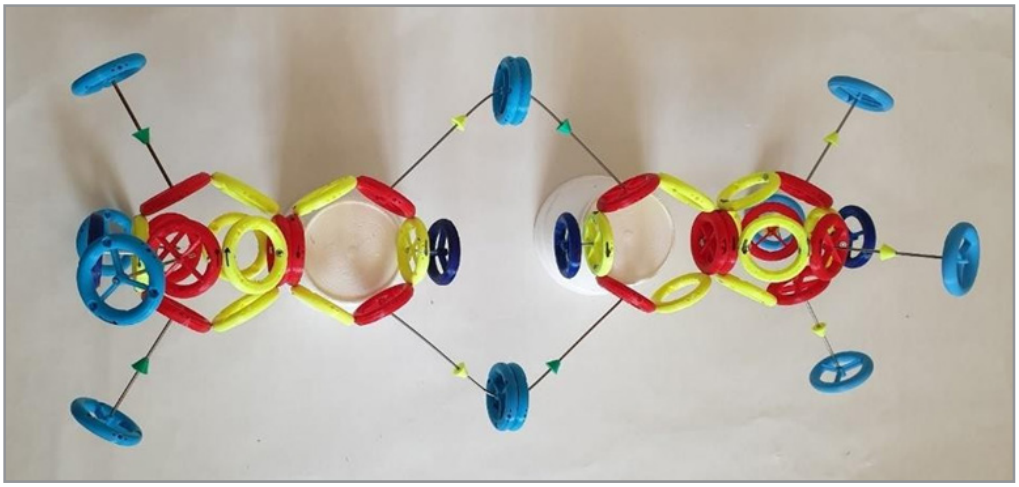


Figure 15: Oxygen molecule (the red rings are protons, yellow rings are neutrons, and the blue rings are electrons)

Topological Model of Water Structure

Figure 16: Topological model molecule of water (rings were printed on 3D printer where the red rings are protons, yellow rings are neutrons, and the blue rings are electrons)

In the topological representation, the distances between the individual rings are not correctly scaled (protons are red, neutrons are yellow, and electrons are blue). In the center of the water molecule is an oxygen atom. With such a size of the oxygen atom, the lower protons of the hydrogens would have to be about 10 m apart. Since we are interested in the bonds between the oxygen atom and the hydrogen atoms (bottom in Fig.16), the topological representation is more convenient. If we had the water molecule shown on Fig.16 in the correct distance scales, then the oxygen atom would be a dot.

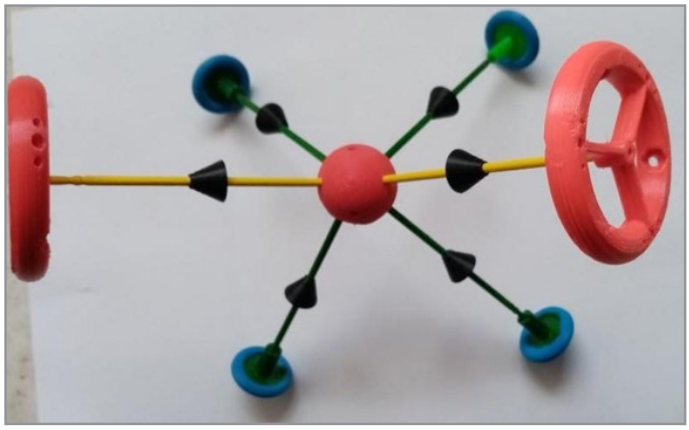


Figure 17: Simplified topological model of water type A (the red sphere is a simplified model of the atom of oxygen, the red rings are hydrogen protons, and the blue rings are oxygen electrons).

Three water molecules, type A water molecules must combine with three type B water molecules so that the magnetic moments (and field lines) are directional. This hexagon formed from type A and type B water molecules allows for the formation of six-pointed snowflakes (see Fig.20).

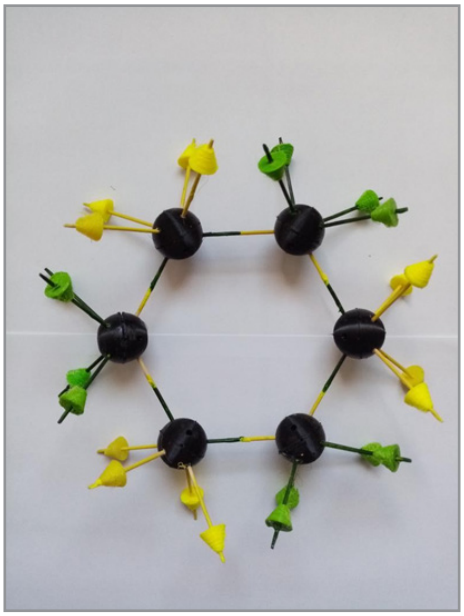


Figure 18: Topological hexagonal model of water (6 water molecules: 3x type A, 3x type B), the black sphere is a simplified model of a water molecule (Fig. 16 and Fig. 17)

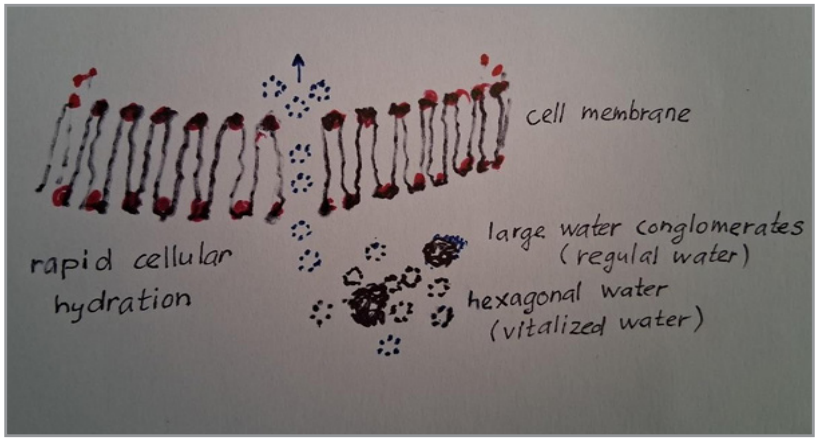


Figure 19: Cell membrane, large clusters of water molecules and smaller hexagonal (hexagonal) water structures (see Fig.18)

Fig.19 shows large clusters of water molecules that cannot pass through the membranes of living cells (plants and animals). These large clusters of molecules can be broken into small hexagonal structures shown in Fig.19 by a magnetic field. We receive so call "living water" or vitalized water. The living water is in too, on page 78.

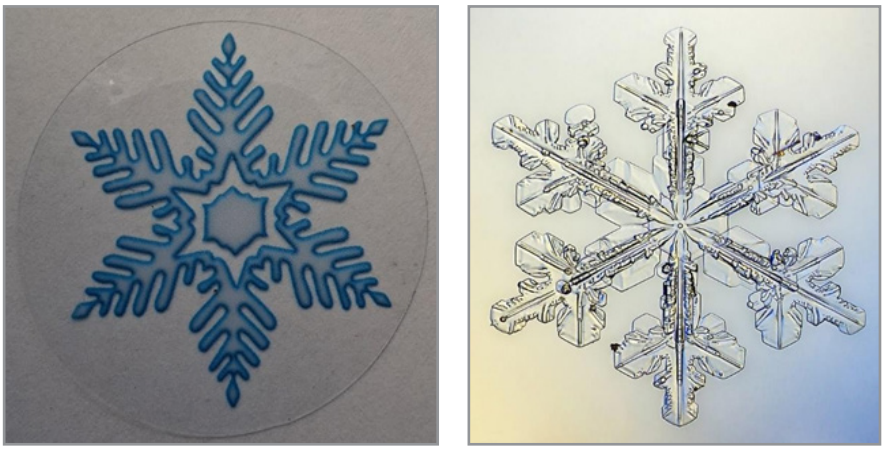


Figure 20: Snowflakes (six-pointed snowflakes with hexagonal center)

The large conglomerates structure of water can be changed by a magnetic field to hexagonal (changing the diamagnetism of water). Rotating (swirling) water creates a magnetic field that can change the structure of water, because each moving charge (electron or proton) creates a magnetic field. For example, in a mountain stream, water flows around stones, which creates a magnetic field. In addition, the water is also oxygenated. Magnetically treated and oxygenated water (this water has the same properties as water in a mountain stream) can be created using several manufactured tap accessories, for example in the kitchen (Fig.21 and Fig.22).

Price comparison with Votex Power Spring (Swiss version) and Czech version:

Figure 21: Votex Power Spring, price: 17 thousand CZK (708 euro) or 620 Swiss francs

Figure 22: Czech version with magnets, price: 1500 CZK (63 euro)

Both designs (Swiss and Czech) have a chamber with rotating water. The moving charges of water molecules create a magnetic field that changes the connection of water molecules (diamagnetism changes - water is then more repelled by magnetic field). At the same time, air is sucked in through the holes, which oxygenates the water [22]. The goal is to get water into the kitchen with the quality of water from a mountain stream. The Czech version adds a magnetic field of magnets to the magnetic field created by the rotation of water, which increases diamagnetism and the water is revitalized more quickly. The Czech version also has a joint. Vitalized (revitalized) water passes more easily through the membranes of the cells of living organisms. For example, cut flowers last twice as long in vitalized water, seeds germinate much faster and their roots grow faster. Vitalized water loses its properties at a temperature of 90 degrees and becomes ordinary water. Therefore, it is not suitable to make tea or coffee from vitalized water. Even the tongue can distinguish vitalized water from ordinary water, provided that both waters are at the same temperature. The tongue is more sensitive to temperature. Vitalized water tastes different. Oxygen is lost from the water relatively quickly (after 15 minutes). Magnetic properties (diamagnetism) gradually decrease over about a week. For example, a watercress that grows in about 4 days has only half the length of its roots, with the same green leafy part [23].

(MVV magnetic vortex vitalizer, – magnetic vortex vitalizer or revitalizer)

Thawed Water

Thawed ice water has the ability retain the crystalline structure of ice (hexagons), which is optimal for our organism. It has the same good properties as magnetically treated water. Applying fresh and thawed ice water is suitable for treating skin diseases (eczema, psoriasis). Melt water rejuvenates and makes the skin elastic. It retains its miraculous properties for a maximum of 8 hours. Fresh thawed ice water is the best quality. We can drink thawed ice water, that is warm maximum 37° C. Thawed ice water from natural snow and ice is not suitable due to contamination with harmful substances. The properties of ice vary significantly depending on temperature, pressure and purity. Ice is water that is frozen into a solid state, typically forming at temperatures of 0°C. Virtually all ice on Earth has a hexagonal crystalline structure. When water freezes, it increases its volume (by about 9% for fresh water). The effect of expansion during freezing can cause frost damage to building foundations and roads. It is also a common cause of flooding in homes when water pipes burst due to the pressure of expanding water as it freezes. Because ice is less dense than liquid water, it floats, which prevents bodies of water from freezing from bottom up.

The diamagnetism of melted ice has been measured (see Fig.28). Its magnitude is the same as that of magnetically treated water. Therefore, water from melting glaciers is very healthy.

Water Treatment by Electrolysis

By connecting current to the electrodes, acidic water ("dead water") begins to accumulate at the anode and alkaline water ("living water") at the cathode. This type of water originated in Uzbekistan in the oil extraction industry (around 1980). Water activated in this way can also be used in construction, as it has shown a 30 percent higher strength in concrete [24, 25]. In one experiment, they watered a cotton bed with "dead water" and then with "living water". To their great surprise, the cotton plant began to grow on this bed, catching up with the cotton plant on the bed watered only with "living water" in growth, and even surpassing it in the number of buds. They accidentally bathed in a pool with alkaline ("living water"). They noticed the healing effects of this water. It is stated in what can be treated with "living" and "dead" water. The device uses rectified current using 4 diodes (Graetz bridge) with an alternating voltage of 230 V. Between stainless steel electrodes, cellophane or parchment is used to separate "live" and "dead" water. I used baking paper and a safe adapter with a direct voltage of 48 V. Recommended treatment in prostate adenoma, angina, joint pain, headache, hemorrhoids, flu, cough, hepatitis, smelly feet, heartburn [26].

Mathematical Description

Electron has radius re and spin S, me is the mass of the electron, ve is the circumferential velocity of the electro n ring, and lambda is the wavelength (de Broglie's equation)

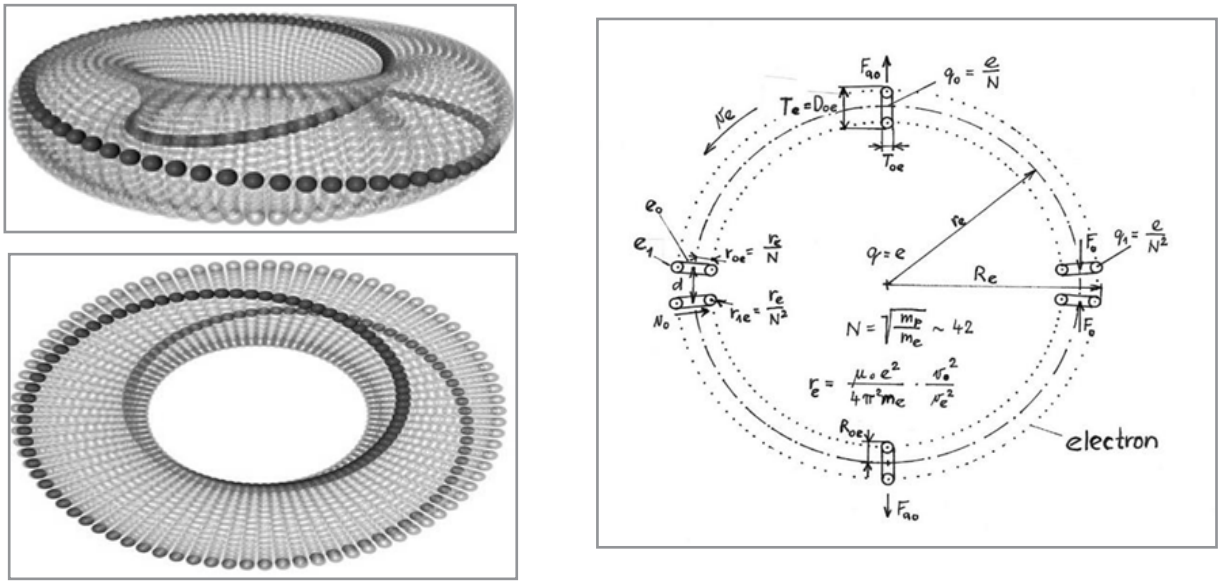


Figure 23: Electron

The black spheres on Fig.23 represent the motion of sub-electron rings moving helically at the surface of the torus. There are N/2 double loops and every double loop has 2N sub-electrons - 1e. Fractal structure of the electron has N/2*2N = N2 sub-electrons.

Next page is from presentation from conference:

$$r_e = \frac{\mu_o e^2}{8\pi^2 m_e} \bullet \frac{1}{v_e^2} \qquad \vec{S} = m_e(\vec{r}_e \times \vec{v}_e)$$

$$|S_z| = N\frac{m_e}{N} r_e v_e = \frac{1}{2}\frac{h}{2\pi}\ 2 \cdot 2\pi r_e = n\lambda \qquad \lambda = \frac{h}{m_e v_e}$$

$$\vec{S} = m_e(\vec{r}_e \times \vec{v}_e)$$

$$S_z = N\frac{m_e}{N} r_e v_e$$

$$r_e = \frac{e^2}{8\pi^2 \varepsilon_0 m_e} \cdot \frac{1}{v_e^2}$$

$$v_e = \frac{e^2}{2\pi\varepsilon_0 h}$$

$$r_e = \frac{e^2}{8\pi^2 \varepsilon_0 m_e} \cdot \frac{1}{v_e^2} = \frac{e^2}{8\pi^2 \varepsilon_0 m_e} \cdot \frac{4\pi^2 \varepsilon_0^2 h^2}{e^4} = \frac{\varepsilon_0 h^2}{2 m_e e^2}$$

$$S_z = \pm m_e v_e r_e = \pm m_e \frac{e^2}{2\pi\varepsilon_0 h} \cdot \frac{\varepsilon_0 h^2}{2 m_e e^2} = \pm\frac{1}{2} \cdot \frac{h}{2\pi} = \pm\frac{1}{2}\hbar = m_s \hbar$$

$$m_s = \pm\frac{1}{2}$$

$$M_z = IS$$

$$T = \frac{2\pi r_e}{\bar{v}_e}$$

$$I = \pm\frac{Q}{T} = \pm\frac{\frac{e}{N}N}{\frac{2\pi r_e}{\bar{v}_e} \cdot \frac{1}{2}} = \pm\frac{e\bar{v}_e}{\pi r_e}$$

$$S = \pi r_e^2$$

$$M_z = IS = \pm\frac{e\bar{v}_e}{\pi r_e} \cdot \pi r_e^2 \cdot \frac{m_e}{m_e} = \pm\frac{e}{m_e} S_z = \pm\frac{e}{m_e} \cdot \frac{1}{2}\hbar = \pm\mu_B$$

The spin Sz of the electron and magnetic momentum Mz

Methods and Experiments Used

A common method in physics is to describe a given phenomenon with equations [27]. For example, the Dirac equation predicted the positron, which is the antiparticle of the electron. Another example is Niels Bohr, who preferred the principle of complementarity. For example, is light a wave or a particle (photon). Bohr was fascinated by cubism, which sometimes allowed for the coexistence of opposing views. Another interesting example is the pictures in the book, written by Thorne. In this book, there is a picture of quantum foam, which has a fractal structure (loops and smaller loops on them). When describing a black hole, they had to go from a sphere to a ring (toroid). In my opinion, the ring of a black hole is the largest ring, which has fractal sub-structures such as proton, neutron and electron rings [28]. These smaller rings are further composed of smaller rings and so on to the structures of dark matter and dark energy. I use the opposite procedure. First, I try to imagine structures that could explain the given phenomenon and then describe them mathematically. It is interesting that contemporary physics does not use fractal description and thus simplified fractal calculations. An example is my explanation of the structure of light. How is it possible that light sometimes behaves like a particle (photon) or sometimes like a wave. In my opinion, it is a change in structure as shown on Fig. 24. Here two vortex structures close into each other and a structure is created, which has enclosed a certain amount of energy (photon), or more of these pairs connect into an energy structure that has a wave envelope and behaves like a wave [29].

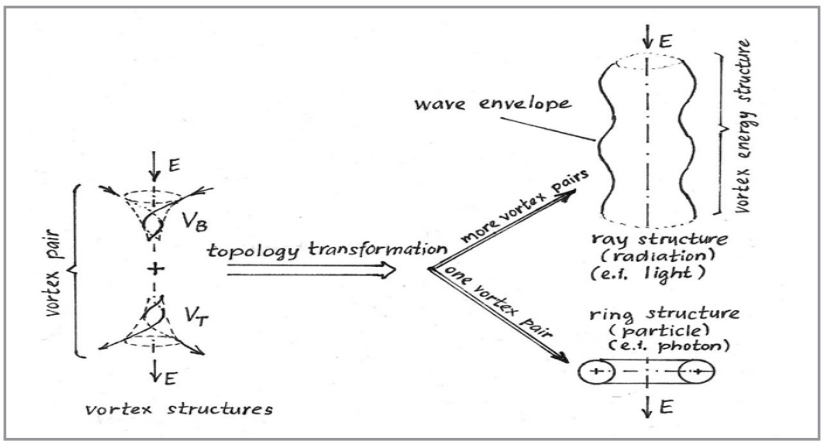
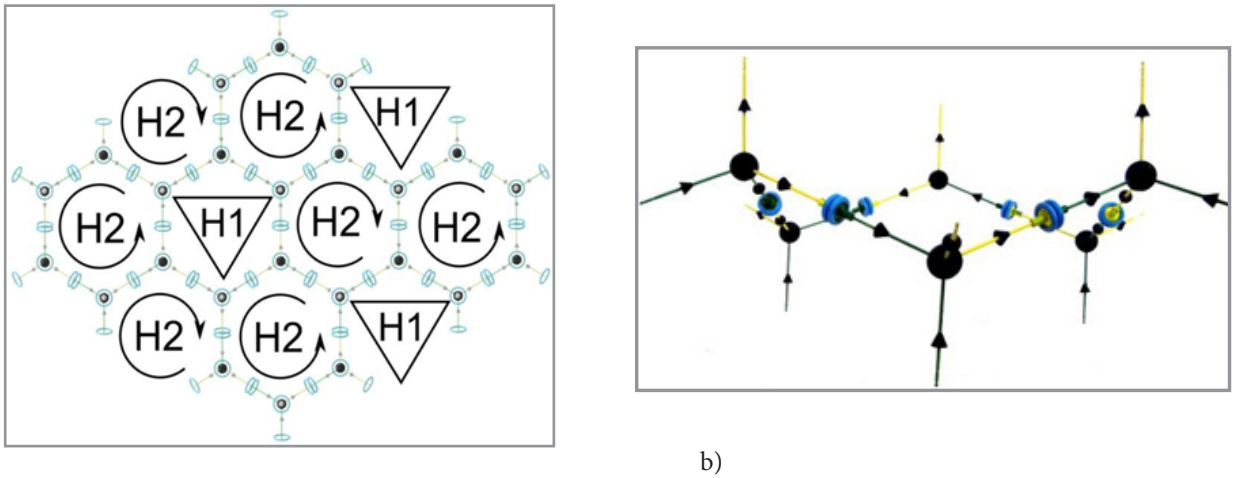


Figure 24: Photon and wave

I originally wanted to be a painter. When I was still studying at university, I painted a picture (see Fig. 25) with rings in two complementary colors (red and green). This picture was supposed to show the connection between good and evil.

Figure 25: Rings with two complementary colors (red and green)



a) b)

Figure 26: a) Rings structure of graphene (six H2 structures creates structure H1)
b) Side view ring model of graphene

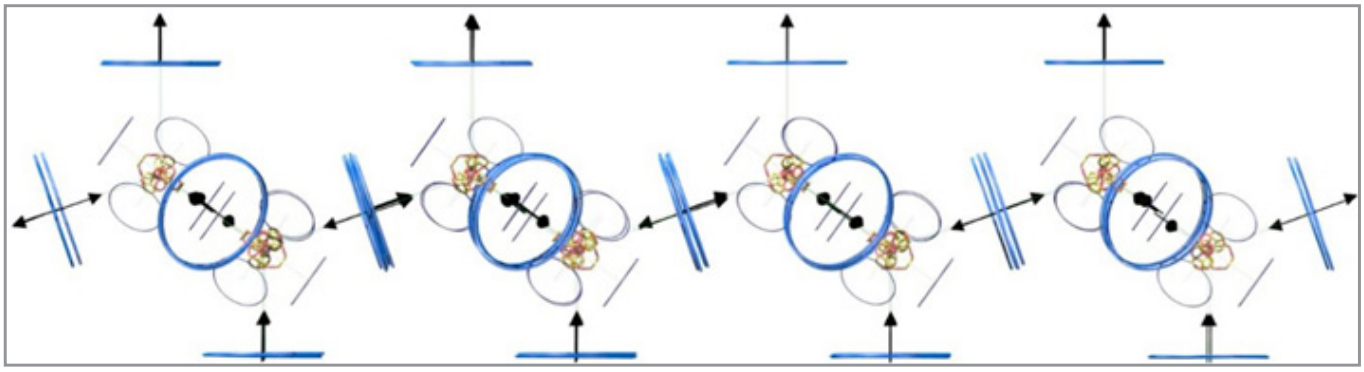


Figure 27: Topological model of graphene (side view, blue rings are electrons, yellow rings are neutrons, red rings are protons)

The structure of graphene in Fig. 26 and Fig. 27 explains why graphene has higher conductivity than gold, silver and copper. The upper blue electrons spin on parallel axes. Therefore, these electrons do not have much gyroscopic problem moving sideways under the influence of a lateral electric field.

To measure the diamagnetism of water, we designed the device shown on Fig. 28.

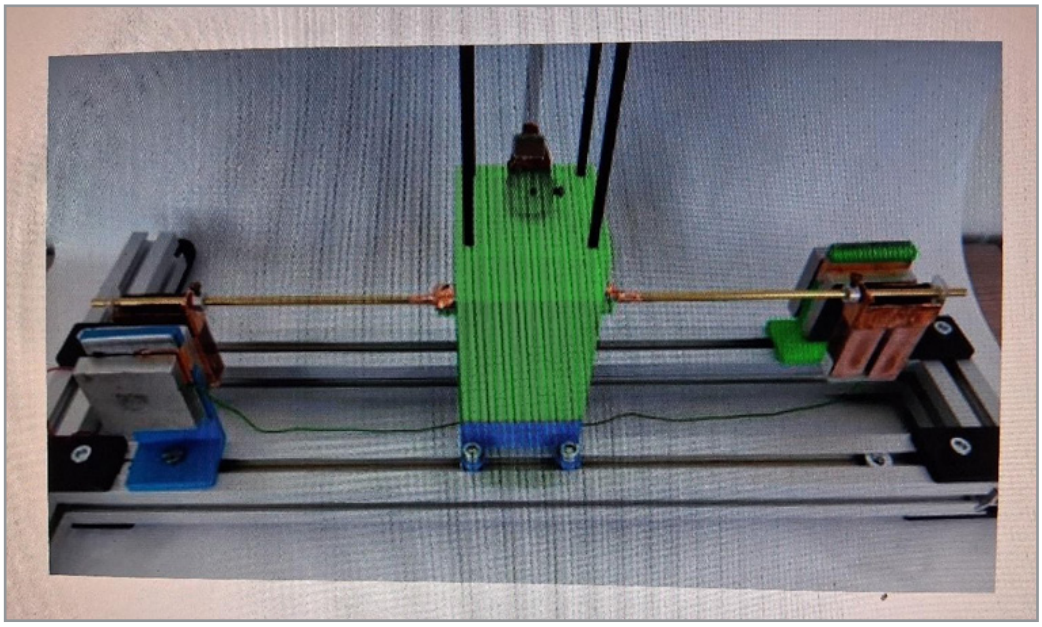


Figure 28: Device for measuring the diamagnetism of water.

Using this very sensitive device (see Fig. 28), the diamagnetism values of individual water samples (untreated water, after magnetic treatment of water, and melted ice) were measured. The diamagnetism value of melted ice and magnetically treated water is twice as large as that of untreated water from the kitchen tap.

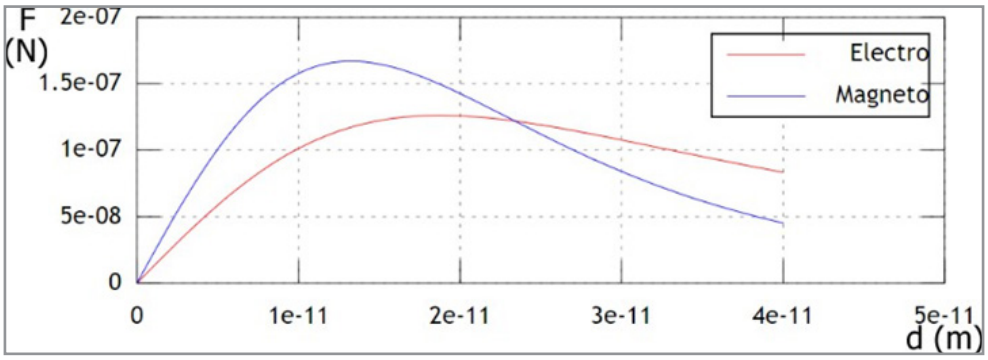


Figure 29: Balance between electric and magnetic force in the ring hydrogen

In the ring hydrogen is balance between attractive electric force F+ and repulsive magnetic force F- [19, 24] (see Fig.29):

$$F = F_{+} - F_{-} = \frac{e^2}{4\pi\varepsilon_o}\frac{d}{\sqrt{(d^2 + r_e^2)^3}} - \frac{1}{4\pi} I_e \mu_p \mu_0 \frac{\sin 2\alpha}{\sqrt{(d^2 + r_e^2)^3}} = 0 \quad (35)$$

where Ie is current inside ring structure of the electron (Fig. 23).

In the Bohr's model of the atom of hydrogen is balance between electric and acceleration forces. For the levitation model, there is a balance between electric and magnetic forces with d = 2.34 x 10-11 m and re = r = 2.65 x 10-11 m.

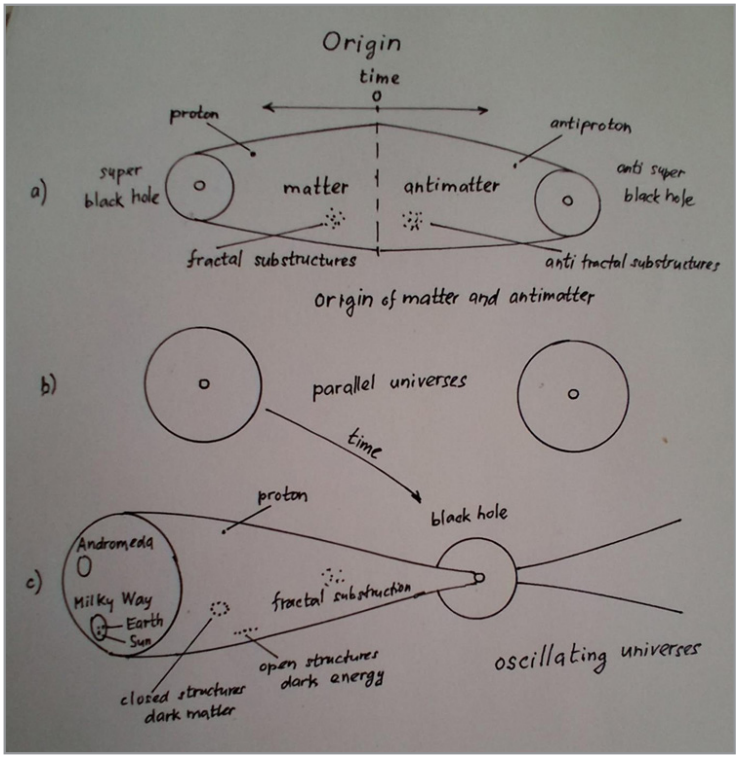
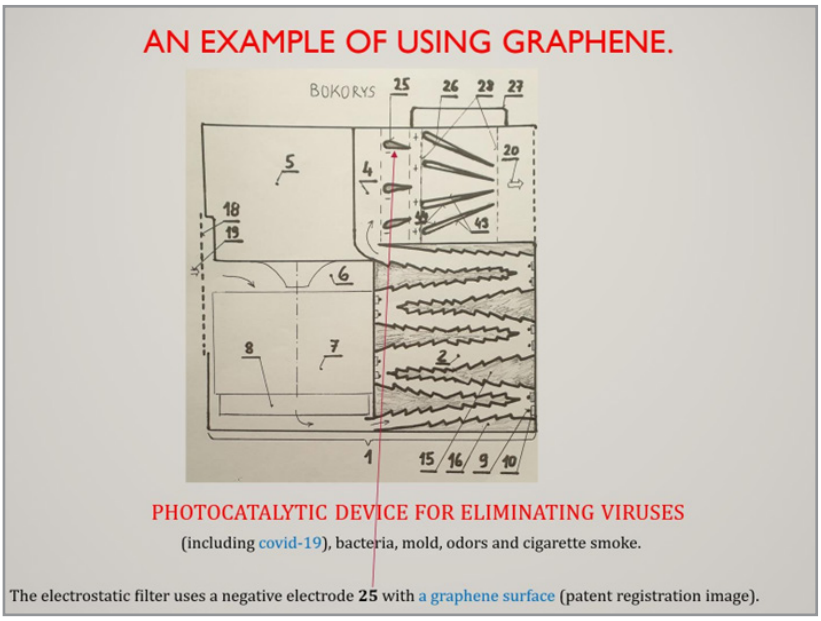


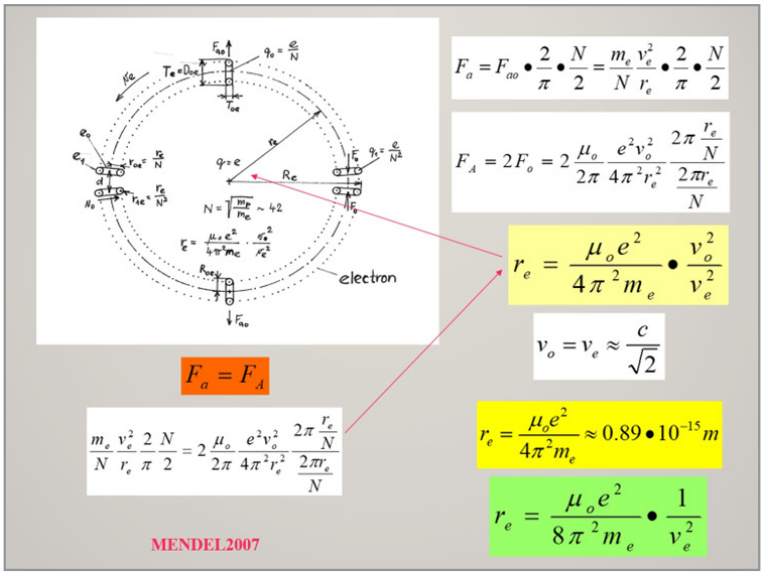
Figure 30: Balance Origin of matter and antimatter

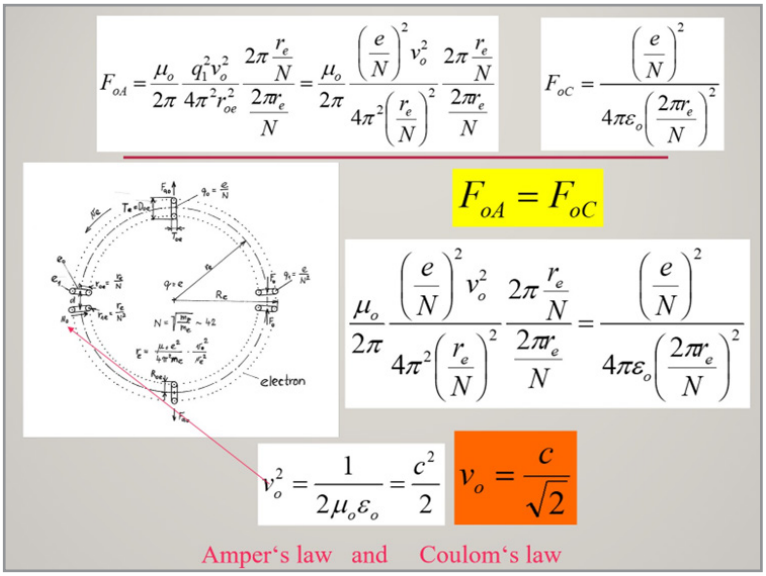
Fig. 30a shows the idea (hypothesis) of the creation of matter and antimatter from nothing, i.e. the beginning of everything (origin) at time zero. A reverse process must also be possible, when everything disappears by combining matter and antimatter and we would reach time zero. In the area of matter, fractal substructures arise, from which over time the elementary particles of matter (proton, neutron and electron) and from them atoms and molecules arise [30]. After a long time, all matter is pulled into a super black hole. A similar process will take place in the realm of antimatter. Fig. 30b shows large black holes that can already emit fractal substructures from their center. Fig. 30c shows the gradual creation of fractal substructures. Over time, the basic particles of atoms (proton, neutron and electron) are formed. The open arrangement of small substructures creates dark energy with repulsive properties. The closed arrangement of small substructures will create closed substructures with attractive effects (gravity). Eventually galaxies such as Andromeda and the Milky Way with the sun and Earth can arise. After a certain long time, the process may reverse the direction of transformation and then the black hole may absorb everything. Then this process may reverse the direction of transformation again and we get oscillating parallel universes [31].

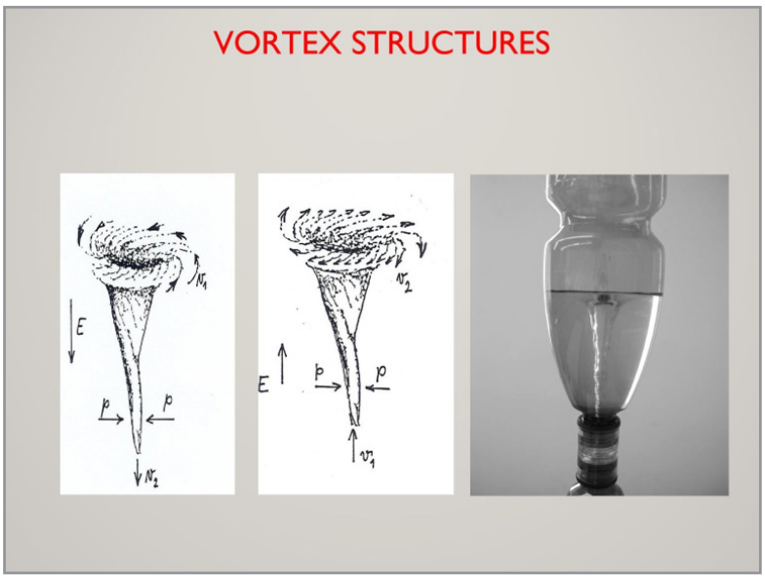
A Selection of my Presentations at Conferences.

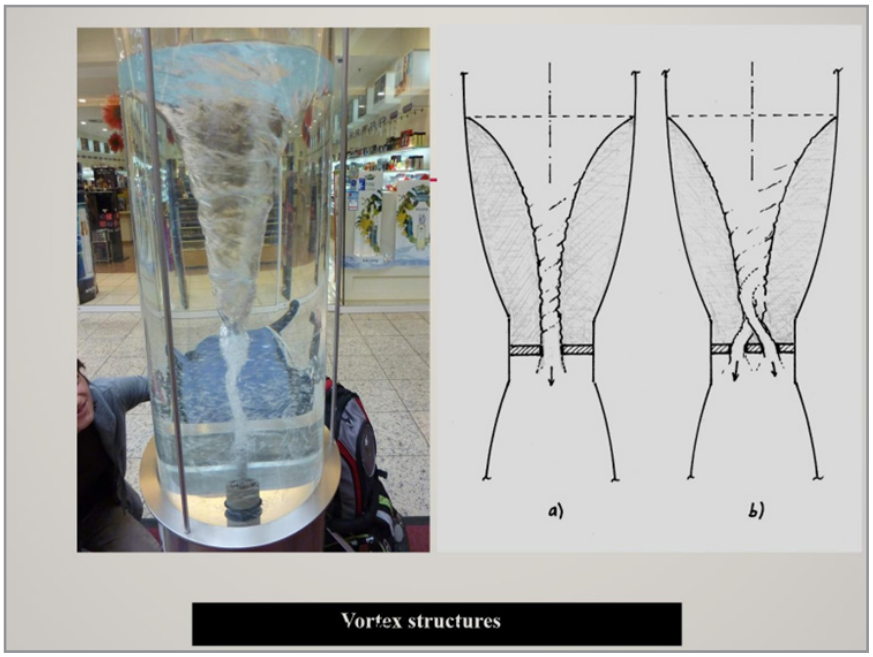
The Following are Images from Presentations I Have Given at Conferences.




electron
MENDEL2007


electron
Amper‘s law and Coulom‘s law


VORTEX STRUCTURES



Vortex structures

Conclusion

The point-electron (positron) is still a dominant feature of the modern model of electron (positron). But electron, proton, and neutron each have measured amounts of spin (angular momentum) and magnetic moment. These features can only exist because the particles have structure and a finite, non-zero size. The electron structure contains more negative sub- structures, and the positron contains more positive substructures. This explains the total negative charge of the electron, and the total positive charge of the positron. Actual properties of electron cannot be explained by point-like models used in theories such as relativity theory, quantum mechanics, and the Dirac theory of the atom. Comparison shows that only a physical fractal model of electron (positron) with finite size can explain the fundamental properties of electron (positron), i.e. charge, mass, spin, magnetic moment, and stability. Just as ordinary objects are composed of a material substance with size and shape, so also by the principle of unity and the philosophy of structuralism an electron must be composed of a material substance with size and specific shape. While points cannot provide a physical mechanism for the exchange of energy between particles, a finite-sized object will change size and shape in response to the presence of another object.

The number of substructures of electron N must be an even number (divisible by two). In the article [20], N was estimated at 42 and N = 34 is derived in this article. The fractal dimension was given D = 1.48 and now D = 1.446 is recalculated. Derivation of the size of electron with torus structure (see Fig.1) can be done with geometry on Fig.23 [20]. Inside of electron are positive positron substructures e+1 and negative substructures of electron e-1. Negative substructures of electron e-1 are N2/2= 9248. Positive positron substructure e+1 has n+ = N2/2

= 9248= n-. The electron has n- + n+ = 9248 + 9248 = 18496 = N2 substructures. The positron and the electron have the same fractal dimension D =1.446.

The electron and positron have substructures of matter and antimatter. This explains where the antimatter is. Antimatter is contained in the substructures of basic particles such as the electron (positron), proton and neutron.

All atoms exist in two types (type A and B). They have the same structure but have opposite magnetic moments. Atoms of type A and type B can then combine to form molecules. This principle allows us to explain the formation of hexagonal structures in water (e.g. a snowflake). All models in this paper have topological structures. The fractal model of the proton, neutron and electron allows us to explain what dark matter and energy could be. Small fractal substructures can be part of dark matter and energy. If they form closed structures (rings) they are matter. If they form open chains, they are energy. Unfortunately, these small fractal substructures cannot be observed with light. Dark matter (see Figure 3d new) manifests itself, for example, in the equal rotation rate of the inner and outer parts of galaxies. Consideration for Fig. 3 d to the right (new). Perhaps dark matter, which is 5 times more than ordinary matter, is related to gravity and inertial mass. Dark matter, which consists of tiny fractal substructures of observable matter that attract each other, could explain gravity. Dark matter, which is also inside ordinary matter, tries to connect ordinary matter into a single whole. Perhaps the movement of ordinary matter by dark matter rotates the inner substructures of the rings, which allows inertial energy to be stored. Dark energy may consist of the tiniest fractal substructures that repel each other, causing the expansion of the universe.

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