NEW MODEL of DISSOCIATION

In this part of paper we demonstrate the alternate model of dissociation of hydrogen. This model guesses, that the atoms of hydrogen are constructed from two types of vibrant energy rings of the same diameter. The energy rings of the first type vibrate in radial direction and represent multi-frequency emitters of energy or radial polytrons. The energy rings of the second type vibrate in axial direction and represent multi-frequency stores of energy or axial polytrons.
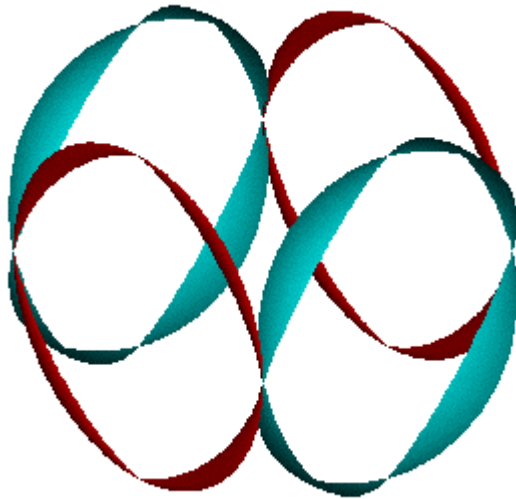
Fig.1
Model of hydrogen atom at *m*=4

In Fig.1 all four polytrons of hydrogen atom are shown. The atom of hydrogen contains two radial (red color) and two axial (blue color) polytrons. The number of vibrant segments in one polytron is named as the frequency order of polytron and is designated by the character *m*. All four polytrons in Fig.1 are shown at the frequency order *m*=4.

The polytrons are joined one with another in nodes. For each two joined polytrons three obvious conditions should be observed:
1) the Speed of energy in rings should have identical direction.
2) the Frequencies of own resonance oscillations in rings should be equal.
3) the Directions of transversal oscillations (polarization) also should coincide.
The exchange of resonance energy between polytrons happens in nodes.
Polytrons possess seven types of energy. One type of energy is defined by the value of speed of light in vacuum and is general for radial and axial polytrons.

Each type of polytrons possesses also three types of resonance energy.

Resonance energies of radial polytron:
1) Energy of tangential oscillations

$$W_t(Z,m,n_r) = 1.08612 \cdot 4 \cdot \pi \cdot M_e \cdot c^2 \cdot \left[\frac{n_r^4}{\left(\frac{m}{Z}\right)^2 + \left(\frac{n_r}{K}\right)^2} \right] \quad |J| \qquad (7\text{-}1)$$

2) Energy of radial oscillations

$$W_r(m,n_r) = 6 \cdot \pi \cdot M_e \cdot c^2 \cdot \left[\frac{0.1875 \cdot m^4 \cdot n_r^4}{m^4 + 0.1875 \cdot n_r^4} \right] \quad |J| \qquad (7\text{-}2)$$

3) Energy of pulsations of radial dynamic layer

$$W_d(m,n_r) = 3 \cdot \pi \cdot M_e \cdot c^2 \cdot \left[\frac{m^2 \cdot n_r^2}{64 \cdot (m^2 + 4) + n_r^2} \right]^2 \quad |J| \qquad (7\text{-}3)$$

Resonance energy of axial polytron:
1) Axial component of energy

$$U_z(m,n_a) = 24 \cdot \pi \cdot M_e \cdot c^2 \cdot \left[\frac{m^2 \cdot n_a^2}{m^2 - 0.1875 \cdot n_a^2} \right] \quad |J| \qquad (7\text{-}4)$$

2) Radial component of energy

$$U_r(m,n_a) = 36 \cdot \pi \cdot M_e \cdot c^2 \cdot \left[\frac{n_a^4}{m^2 \cdot (m^2 - 0.96 \cdot n_a^2)} \right] \quad |J| \qquad (7\text{-}5)$$

3) Energy of pulsations of axial dynamic layer

$$U_d(m,n_a) = 48 \cdot \pi \cdot M_e \cdot c^2 \cdot \left[\frac{m^2 \cdot n_a^2}{6 \cdot m^2 + n_a^2} \right]^2 \quad |J| \qquad (7\text{-}6)$$

From the vibration theory we know, that energy of resonance oscillations is proportional to quadrate of amplitude. In particular, we have found, that tangential energy of radial polytron is proportional to the total square of segments.
The formula for calculation of this square looks like

$$Q_r(m,n_r) = \frac{\pi \cdot D_s^2}{4} \cdot \left(\frac{n_r}{m} \right)^2 \cdot \left[\frac{64 \cdot (m^2 + 4)}{64 \cdot (m^2 + 4) + n_r^2} \right]^2 \quad |m^2| \qquad (7\text{-}7)$$

In Fig.2 are shown the sequence of joining of two hydrogen atoms in the molecule, i.e. the process of associating of two hydrogen atoms is shown. In the left drawing both atoms occupy the energy level, which corresponds to the frequency order m =6. In these conditions the atoms cannot be associated in the molecule, as opposite of places of connection the antinodes of polytrons are placed. In order the atoms were capable to associate it is necessary, that opposite of places of connection the nodes of polytrons were located. The nearest frequency order, at which this condition will be fulfilled is m =12. Therefore, all eight polytrons should pass from the level m =6 to the level m =12 (see middle drawing).
At transition from m =6 to m =12 each hydrogen radial polytron radiates energy 1.113 eV, that makes 7% from its full tangential energy. At the same time the full resonance energy of axial polytrons remains practically invariable (decrease makes ~0.001 %).

Thus, the total energy of emission from four radial polytrons will make

E1+E2=4x1.113=4.452 eV

The molecule of hydrogen as a parallelepiped is unstable; therefore it become transformed to an octahedron (see right drawing) and radiates energy E3.

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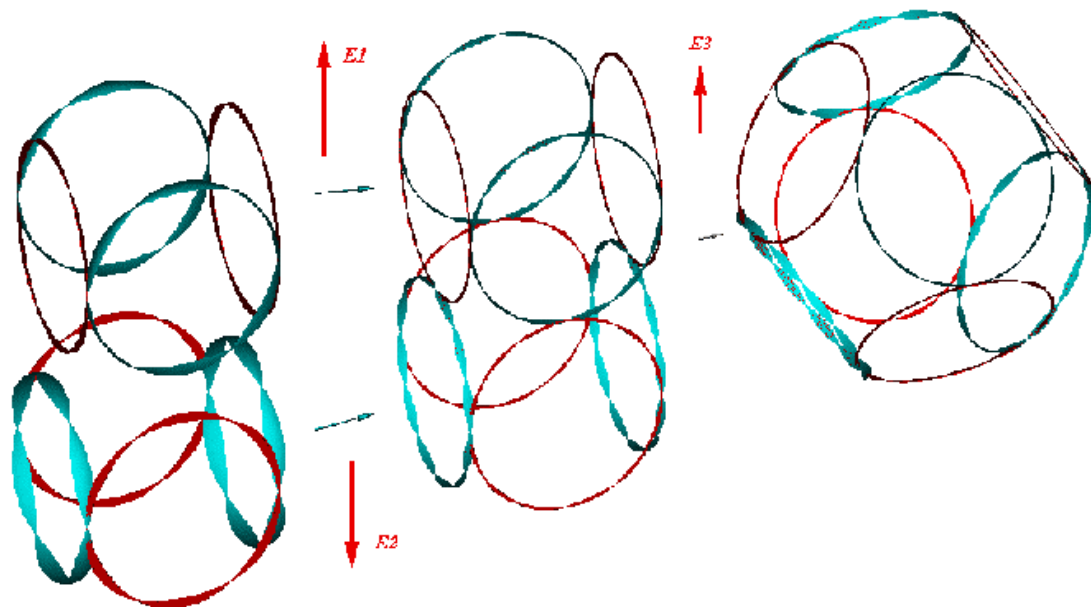
Fig.2
The process of associating of two hydrogen atoms in molecule

According to experimental facts, energy of dissociation of hydrogen molecule is 432.07 kJ/mol, that forms 4.478 eV/molecule.
Energy of geometrical transformation makes

E3=4.478-4.452=0.026 eV

There are designations used in formulas:

$K = 3.3515$ – parameter of geometrical form of emitter of electromagnetic
energy in atom

$M_e = 9.10938188 \times 10^{-31}$ *kg* – electron rest mass

$c = 299792458$ *m/s* – speed of light in vacuum

Z – serial number of element in The Mendeleyev's Table

m – frequency order of polytron (main quantum numbers)

n_r – amplitude order of radial polytron

n_a – amplitude order of axial polytron

D_s – static diameter of polytron (for hydrogen $D_s = 197.714 \times 10^{-12}$ m
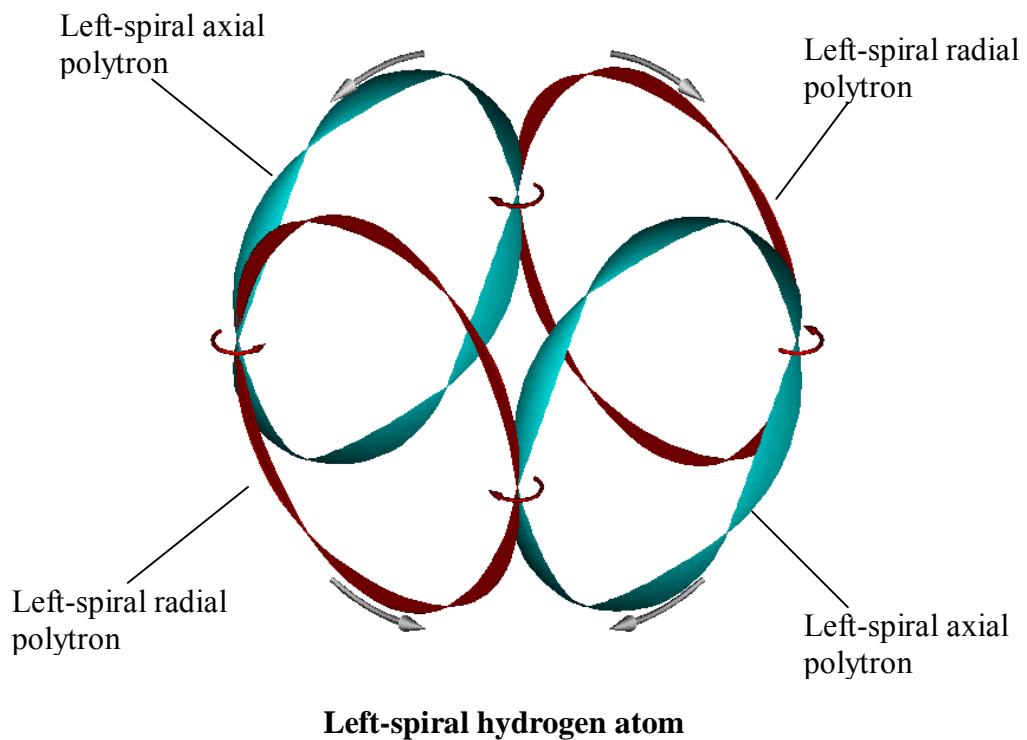
This theme can be developed in several directions: dissociation, structure of atoms, structure of gamma-quantums, etc.

But, at first, we would like to devote a little of time to the problem of oncological illnesses.
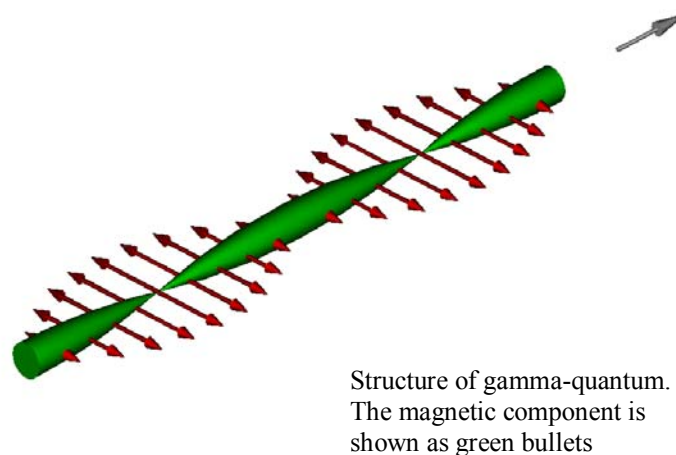
We well know, that oncological illness arise by reasons of destruction of DNA molecules (desoxyribonucleic acid). In particular, at irradiation by hard gamma rays, probability of origin and heavy outcome of illness is almost 100 %.

The DNA molecules contain very many hydrogen atoms. Namely these atoms provide information link inside our organism. It is a very thin and hypersensitive way of link by means of exchange of signals with composite structure.

Look at figures 3, 4 and 5.

Left-spiral axial polytron

Left-spiral radial polytron

Left-spiral radial polytron

Left-spiral axial polytron

Left-spiral hydrogen atom

Fig.3. Left-spiral hydrogen atom

Structure of gamma-quantum.
The magnetic component is
shown as green bullets

Fig.4 Structure of gamma-quanta

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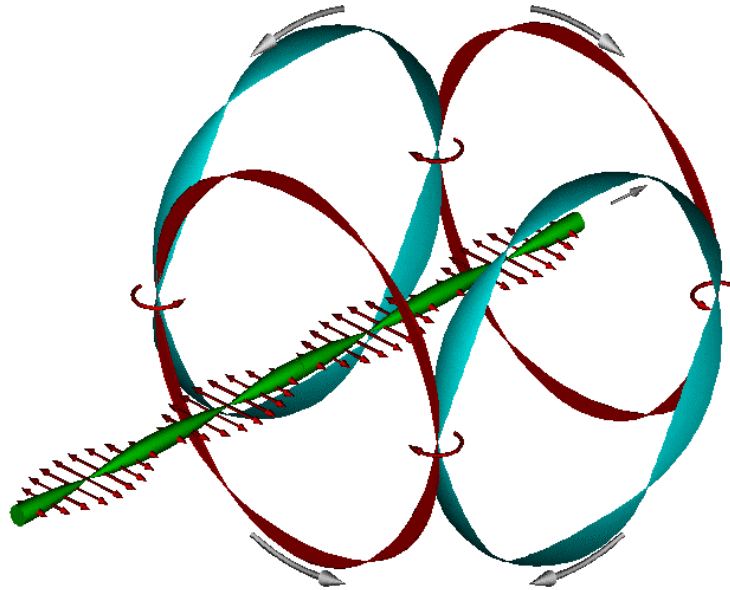
The motion of gamma-quantums helps the helicity of the nearest radial polytron, but counteracts the helicity of the remote radial polytron

Fig.5 Violation of the helicity of hydrogen atom under impact of gamma-quantum

As distinct from visible light and ultraviolet, which cause a burn, gamma rays are capable to penetrate into substance much depth and to tear intermolecular links. The existing theory gives the rather foggy explanation to concept "intermolecular link". Idea of exchange with imponderable virtual particles here is utilized. Therefore, according to this idea, gamma-quantums are capable to hit in virtual particles and to kill them. It is similar to complete bosh, whether the truth.
We consider, that the penetrability of photons and gamma-quantums depends on their transversal size.
In Fig.5 the process of flying of gamma-quantum through atom of hydrogen is shown.
The gamma-quantum varies the helicity of atom. The false helicity is transmitted on a chain to other hydrogen atoms in the DNA-molecule and, as a result, the whole molecule passes into abnormal state.
Our idea consists in the following.
Whether it is impossible to find a gamma-quantums with such energy, which would restore atoms into normal state.

Now we shall pass to an explanation of the aforecited formulas.
You well see, that the first six formulas have the homogeneous factors before brackets. This is product of the electron mass and quadrate of speed of light.
It is energy.
Therefore, all other terms in the formulas are dimensionless.
On the first sight it seems, that here there are no problems.
However problem is, and this problem is the main hindrance to understanding of the structure of microcosmos and nanoworld.

Two phenomena, which underlay modern physical theories, are constructed on two fictions by scientists XIX and XX of centuries.

The first phenomenon is the dualism of wave and particle.

The second phenomenon is the transmutation of mass and energy.

The first fiction is the fundamental particle.

The second fiction is the formalism "mass".

If we shall eliminate both fictions from phenomena, then remains with reality:

Wave = Energy

Thus, the electron mass in our formulas is a superfluous term.

Instead of the mass there should be some a wave property of microcosmos, and, maybe, of Universe.

This problem is not solved till now.

From debate by vlamir in Science Forums:
The reason of our obstinate misunderstanding of the reality is, that training of man to any theories represents the targeted process of cultivating of stereotypes in consciousness and subconsciousness of the man.
It is the Pavlov's theory, which, it is necessary to tell, still never has yielded of failure.
I consciously speak, that it is zombeing of students. For students a lot of theoretical material give, and then require good knowledge its material. Complexity, multiformity and problemness of the experimental facts they should find out already after training-zombeing.

Radius of the Earth was known ancient Hindus in V century B.C. (6239 km).
Ancient Chaldeans had almost the same value of radius of the Earth in VII century B.C..
But that fact is more surprising all, that the ancient Egyptians knew and had utilized this value at building before five thousand years B.C..
Our civilization has calculated radius of the Earth only in XIX century.
Maybe, my question will seem for you unexpected, but I want to know:
In what the mankind was guilty before the Creator?
Why he deleted all knowledge from memory of the subsequent generations?

If I am not mistaken, the following words belong to Bismarck:
" The Theory of revolution is written by the geniuses, the revolution is realized by the fanatics, and fruits of revolution are used by impostors ".
These words can confidently be referred as to Politics, as well as and to Science.

Maybe, we go by the same way?
Then, after five thousand years our CDs will be utilized by semi-barbarian boys as toys.

Now we want to look at the problem of formalism of the concept of "mass" on the other side.

We consider, that the solution of the problem of mass it is necessary to search by comparison of mass with different sorts of energy. In this case, mass can be expressed, as speed of change of an amount of energy in the system and as speed of conversion of one sorts of energy into others.

All of us know, that there are two sorts of a mechanical energy - kinetic and potential. But physics for some reason have yielded to these different sorts of energy the identical unit of measurements - joule. One joule is an operation of force equal to one newton on length equal to one meter $|J| = |N| \cdot |m|$.

We have fulfilled researches of resonance processes in classical (macroscopic) objects of the ring form and have found the equations, which can be applied to the description of processes of exchange of EM energy between atoms and conversion energy in atoms.

From these equations follows, that the dimensionality of electric charge |C| is equal to the square root of force multiplied on time $|C \sim (N^{1/2}) \cdot s|$ or $|N \sim (C/s)^2|$.

Agree with us, that physical nature of such dimensionality of electric charge we understand cannot. But dimensionality of energy expressed as $|N \cdot s|$ is possible to understand as operation of force in time, i.e. as operation without moving.

Let's designate operation (energy) with moving $|E_l| \sim |N \cdot m|$, and operation (energy) without moving $|E_t| \sim |N \cdot s|$.

Then the ratio $|E_l/E_t| \sim \upsilon$ will have dimensionality of speed.

One of sorts of exchange of energy between atoms is the exchange by photons $E = h*[nu]$. Dimensionality Planck`s constant is $|J \cdot s| = |N \cdot m \cdot s| = |E_t \cdot m|$, i.e. the Planck`s constant represents operation of photon on length commensurable with sizes of atom.

On the other hand, the identity $|N \sim (C/s)^2|$ can be considered as quadrate of a variable charge, i.e. quadrate of the electrical component of wave.

From standard definition of kinetic energy

$E_k = (M/2) \cdot \upsilon^2 \sim (M/2) \cdot (E_l/E_t)^2$

also follows, that the mass is formal concept. The mass can go into as into E_l, as well as, into E_t. The change of kinetic energy happens at change of the ratio E_l/E_t.

Maybe, someone will consider, that we offer to forget concept of "mass". It is not so. The concept of "mass" has helped us at creation of new mathematics very much. I offer to upgrade concept of "mass" and to express it by means of wave properties of the Universe.

One of methods of measurement of dissociation energy is the calorimetric method.

If you remember, the calorimetric method was applied for definition of equivalence of energy of mechanical motion and heat.

Since then it is accepted to consider, that the heat is the manifestation of chaotic moving of particles and collisions them with each other.

It is the aged-, aged-, aged-stereotype of understanding of nature of heat.

The heat is not chaotic moving of particles.

The chaotic moving of particles is the method of transmission of heat from one object to another.

Directly heat represents itself resonance oscillations of polytrons.

Look in Fig.5 once again.

Gamma-quantums have the electrical (polarized) component. Numerous red arrows show this component.

At flying of gamma-quantum through any polytron, it gives up a share of its electrical component to polytron. Depending on energy of the quantum and depending on which part of atom the quantum will hit, it is probably much variety of interactions.

You can switch on own imagination and write own script.

For us, the most important script is at which, as a result of absorption of portion of energy the polytrons pass to more low frequency of own resonance oscillations.

This script should be written by the mathematical language with the help of mathematical model, which we have offered to attention of a scientific public two years ago.

This mathematical model contains more than hundred equations.