

# The Formation of Molecules and New Optics

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## The formation of molecules:

**Abstract:** Ether is the origin of the world. Protons, neutrons, electrons and other elementary particles are all micro ether whirls which we shall call microvortex. Microvortex is absorbing and emitting ether through its self rotation. This results in different microvortex fields. Protons and neutrons all have nuclear field, gravitational field, electric field and magnetic field. Electrons have gravitational field, electric field and magnetic field. Microvortex are combined through different microvortex fields to form nuclei, atom and molecule.

[Guoren Chen. The formation of molecules. Report and Opinion 2010;2(11):96-102]. (ISSN: 1553-9873).

**Keywords:** Ether; origin of world; Protons; neutrons; electron; elementary particle

### 1. The proof of existence of Ether

The world of ether is boundless and timeless. Ether exists everywhere, and is ever-present. Ether-Ether-flow may not only lead to the change in density but also be likely to form large and small ether vortex. Micro-speaking, elementary particles can appear from the "nothingness" and appear in the "nothingness" which is ether. 1. Elementary particles can be converted, such as protons and neutrons, which show that they are formed of the same kinds of substance. This substance is ether. 2. The reason that hundreds of billions of galaxies exist because they are from the ether swirl (black hole) generated by the big bang. 3. Light uses ether as the medium. The entire optics proves the existence of ether.

### 2. The formation of Microvortex

Ether has compatibility. That is, in the same space dimension, the density of Ether varies. When Ether moves, the density changes as well. The flow of ether produce Ether whirl. The high-density ether swirl explosion may form numerous micro-ether vortex. Our world is the result of big bang of Ether whirls. Protons, neutrons, electron, and all other elementary particles, which we shall call microvortex. Ether has the property of field, that is, they can be attracted to each other or repelled from each other. When Ether is converted into microvortex, the ordered flow of ether convert the field of Ether into the field of microvortex. Due to the different ordered flow patterns, the field of ether is converted into different fields of microvortex. The spinning of microvortex produces magnetic field. The absorption

and emission of ether produce the nucleus field, all-posses field, and electric field. The later three are called source field.

### 3. Nuclear Field

Except the single proton or neutron, no nuclear can be formed by a single proton or neutron, but only can be formed by the protons and neutrons together. This shows that the proton or neutron repel each other through some kind of field. At the same time, it illustrates the protons and neutrons attract each other through this field. This field is the nuclear field. The range of the nuclear field is approximately  $10^{-15}$ m.

Protons and neutrons are like water pipe with three ends. They are what we call 3 quark particles with Y shape. The proton has two u quarks that absorb ether and one d quark that spurts ether. The neutron has one u quark that absorb ether and two d quark that spurts ether. Quark is the fundamental building block of protons and neutrons. That is why quark is confined. The nuclear field has positive and negative fields. If u quark has one unit of positive nuclear field, d quark has one unit of negative nuclear field, then after they are combined, the proton still has one unit of positive nuclear field, the neutron has one unit of negative nuclear field.

### 4. Gravitational Field

Positive and negative electric fields are symmetrical fields. Magnetic S pole and N pole are symmetric fields. Positive and negative nuclear

fields are mutual symmetrical fields as well. Does the gravitational field also have a symmetrical field? To draw the right conclusion, let us analyze the following set of experiments.

Experiment 1: For light nucleus to produce fusion reaction, we must exert great pressure. The pressure is usually created by nuclear explosions that forces the occurrence of nuclear fusion. Then what is the power that stops light nucleus to be combined with each other? On the other hand, when the heavy nucleus produce fission reactions, the fragments created by explosions fly apart at high speeds. Then what is the power that generates such speed.

Experiment 2: Radioactive elements generate unstable particles under very high pressure conditions. Once the pressure is gone, radioactive elements will be automatically adjust the structure and generate radiation effects. The  $\alpha$ -rays from the helium nucleus have a speed of about 1/10 of that of light. The  $\beta$ -rays has a speed about 90% of the speed of light. When the helium nucleus are still in the atomic nucleus, it is not possible to move at such speed. In fact, the protons and neutrons are relatively static under the force of nuclear field and positive all-possessed field describe above. What is the power that makes helium nucleus to have such speed?

Experiments have shown that  $\gamma$ -rays can produce electrons. In what follows we shall explain that the vibration of nucleus of the nuclear produces  $\gamma$ -rays. Originally, electrons are not in the nucleus. It is the  $\gamma$  radioactive nuclei that produce electrons. Protons are positively charged. Why the nucleus not only fails to attract electrons, but actually repels them out?

Experiment 3: Using high-speed electrons to hit atomic nuclei, or particles extranuclear electron subject to external high-speed collisions, why they don't fall into a nucleus? What kind of resistance they encountered?

The above experiments showed that there exists a certain field among protons, neutrons, electrons. This field makes them mutually exclusive. In fact this field is symmetrical with the gravitational field. If the gravitational field is called negative all-possessed field, then its symmetrical field will be called positive all-possessed field. Different from the symmetry of the electric field, magnetic field, and the nuclear field, these symmetrical fields share symmetrical strength and effective distance. The positive and negative gravitational fields don't have symmetrical strength and the effective distance. The negative gravitational field has an effective distance of about of about 10-10 m.

Table 1. A variety of symmetric fields' strength and effective distance are compared in the following table:

	Field Magnitude	Effect Distance
Negative all-possessed field	weak	Far
S-N Magnetic field	weaker	Middle-rang
Positive-Negative Electric field	Middle	Less middle-rang
Positive all-possessed field	strong	Short range, app. $10^{-10}$ m
Positive-Negative Nuclear field	strong	Shortest range, app. $10^{-15}$ m

We would like to point out that the scientists have shown that protons and neutrons attract each other at about  $10^{-17} - 10^{-18}$  m. It is balanced at  $10^{-17}$  m. Under  $10^{-17}$  m, they repel each other. This is mainly caused by the different change rate of the strength of the nuclear field and the negative gravitational field, namely, the ratio of field strength and distance for the nuclear field is greater than the ratio of field strength and distance for the negative gravitational field.

## 5. Nuclear Structure

Protons and neutrons attract each other in the nuclear field and keep their distance in the positive gravitational field. Protons and neutrons are combined through the combination of u quark and d quark, which forms u-d keys, also known as the nuclear key. So the nucleus of protons are relatively static. As each atom and molecule in the crystal has its own space, each proton and neutron in the nuclei have their own space.

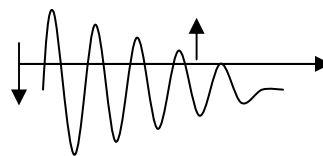
Since the nuclei consists of the protons and neutrons, why the radioactive element doesn't radiate protons or neutrons, but rather the helium. The reason is that after two protons and two neutrons form the helium, there are no more space for u quark or d quark to combine with other nuclear. So once the helium is formed in radioactive nuclei, they will be expelled out of the nucleus by the negative gravitational field.

It can be shown that the source field along the axis of the u quark and d quark is the strongest. They can form microvortex potential wells. The nuclear field between the proton and the neutron, and the positive gravitational field constitute nucleus potential-wells. When the nuclear vibrates in a nuclear potential well, the kinetic energy and potential energy are converted into wave energy, which is how  $\gamma$ -ray is generated. Nuclear fusion, nuclear fission and radioactive nuclear structural adjustment, will lead to nuclear vibrations in the nuclear potential well, while the  $\gamma$ -rays can also produce electrons, which is also the formation of  $\beta$ -radiation of radioactive elements.

## 6. Atomic Structure

Scientists have proved that the u quarks of the atomic nuclei have  $+2/3$  times the elementary charge and d quarks  $-1/3$  times the elementary charge. The proton has one unite of elementary charge and the neutron has no net electric charge. Nuclei and the extranuclear electrons attract each other through positive and negative electric fields, and keep their distance from the positive gravitational field. The positive gravitational field along the u quark axis and the positive electric field form the electron potential well. The bottom of the well constitutes of positive gravitational field along the u quark axis and positive electric field. This is the point of balance for the force on the electrons. The electrons are in this potential well. That is why they are relatively static.

When the electrons vibrate in the electronic potential well, the kinetic and potential energy are converted into wave energy continuously, and eventually the electrons rest on the electronic potential well, this is how the action quantum is formed, which is based on the theory of one of the founders of quantum science Planck (Planck). Electromagnetic waves, infrared, visible light, ultraviolet, X-rays,  $\gamma$ -rays and so on are all transported using ether as the medium. They are collectively referred to as ether waves. When the nuclei vibrate in the nuclear potential, or electrons vibrate in the electric potential well, they will create the following pulse wave:



Different electric potential well has different field strength, so when the electrons vibrate in the electric potential well, the different electric potential wells produce different vibration frequencies, i.e, different electric potential well has a different natural frequency. The presence of strong electronic stronger (deeper) potential well of electronic vibration produces X-rays, visible light by the electrons in the outer layer (shallow) Electronics potential well in the vibration generated. As the number of nuclei in the proton one by one increase in nuclei showing the regularity of cycle, while the cyclical changes in the nucleus, but also shows a cyclical change in the atom, which is the formation of elemental cycles.

## 7. Molecule Structure

The amount of u quarks in the nuclei is far more than the amount of protons. After the electric potential well is filled by the same amount of the electrons as the protons, there are still many electric potential wells vacant. When the two atoms bind together into molecules, they have their own electronic potential well with the other side of the potential well recombined to form electron potential wells - potential well-electron bond, all the chemical bonds are electron potential wells - potential well-electron bond. Small molecules can be combined into large molecules through the structural field. Different large molecules and small molecules have different structural fields.

## Reference:

College Textbooks.

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# Abstract of New Optics

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**Abstract:** All optical experiments prove that light uses ether as the transporting medium. The existence of ether on the surface of object and the effects of refraction, diffraction caused by this it shows that protons, neutrons and electrons are all micro ether whirls.

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## 1. Ether Waves

Our world is the world of Ether. The world of ether is endless, and ether exists everywhere. Electromagnetic wave, infrared ray, visible light, ultraviolet ray, X ray and Gamma ray are all propagating through Ether. We shall call them ether waves.

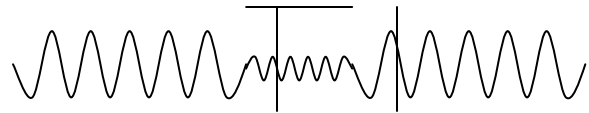
Ether wave is how ether moves. The existence of ether wave shows that ether can move. In fact, ether is constantly flowing, contrary to the traditional view that it is absolutely still.

## 2. The formation of a transparent body

Ether has a compatibility. Ether flow may not only lead to the change in density but also be likely to form large and small ether vortex. The high-density ether swirl explosion may form numerous micro-ether vortex, including protons, neutrons, electron, and all other elementary particles, which we shall call microvortex. The molecules of transparent body are formed by protons, neutrons, and electrons. It is essentially constituted by Ethers, So the spread of light in the glass, water, air and other transparent body is actually spread in the ether. Next we shall describe how optics experiments prove the existence of Ether.

## 3. Transmission of Light

Experiment showed that light is transverse wave. When the light crosses from the sparse medium such as vacuum and air into the dense medium such as glass, not only is the wavelength shorter, amplitude is also smaller, and the frequency stays constant. See the Figure below:



The shorter wavelength and unchanged frequency in turn imply the slowdown of light. When the light passes through the dense medium, and re-enters the sparse medium, the wavelength, amplitude, and the speed of light are to resume. The slowdown of light in transparent object produces the optical path difference.

## 4. The Ether Layer of Object

But precisely why the wave length and amplitude shrink during the transmission? The reason is that the protons, neutrons, electrons and other microvortex continue to absorb and spurt ether while spinning, resulting in the formation of an ether layer with a gradual reduction in the density from the inside out. When the protons, neutrons, and electrons combine to form an object, the ether forms a layer on the surface of the object. Facing any non-transparent object towards moderately intense light, we can see a 0.5 mm dark layer on the edge of the object, that is the hidden layer of Ether. Putting the index finger and thumb close to the contact, we can observe the dark line which the layer of ether.

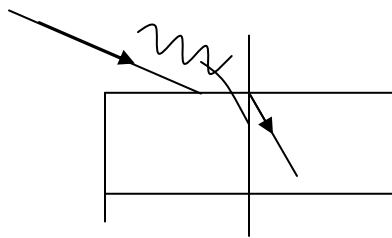
If light is launched vertically into the surface layer of ether, with the density of the ether on the surface gradually increases, the light's wavelength, amplitude, and propagation speed gradually

decreases. After the light enters the object, because of the even distribution of the ether, the wave length and amplitude are to stay the same. After the transmission, by similar argument, the wave length and amplitude are to resume.

**5. Refraction, Dispersion, Diffraction and Inference**

Let the light be injected into ether layer on the glass surface with an angle, see the following diagram:

Incident ray                      Normal to surface  
 Ether layer of glass .....  
 Surface of glass  
 Body of glass                      Transmitted ray



Below dotted line and above the glass surface is the ether layer. Ether density became smaller and smaller when it gets further away from the surface. Light is transverse wave. Let the amplitude surface be parallel to angle of incidence, when the light vibrates downward, with the density of the layer of the Ether increases, the light's wavelength and amplitude will be smaller. Then the distance between two adjacent peaks shortens. When the waves leave the glass in the upward direction, due to decreasing density of the ether, the light's wavelength and amplitude will increase, so outside the lateral distance between two adjacent peaks has increased, so the light will gradually bend to the side of the glass. After the light enters the glass, it will propagate along a straight line, from a macro point of view, light refraction occurred.

The wavelengths of visible lights in the air vary at about 400-760 nm. When the visible light is injected into the ether layer vertically, the thickness of the surface layer of Ether is about 0.5 mm, the surface layer of Ether can accommodate up to a few hundreds or even thousands of waves, the higher the frequency of light, the more the number of waves the

layer of ether can accommodate. When the light is launched into the ether layer with an angle, light can be bended with enough waves. White light is composed of different frequencies of the monochromatic lights. So if white light enters the prism at an angle, because the higher the frequency of monochromatic light, the more waves in the ether layer, so the greater the degree of bending. Otherwise the less the degree of bending, so white light generates dispersion effect.

Whether it is the concave lens or the convex lens, the surfaces of both sides have the Ether layers. The formation of lens focus, the image principle, as well as mapping and the corresponding formulas are all due to the ether layer on the surface.

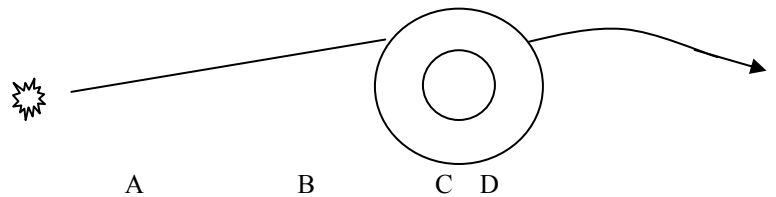
Light is sinusoidal transverse wave. The

$$n = \frac{\sin i}{\sin r}$$

light refractive index is an empirical formula. Only when we understand the ether layer on a transparent surface, we will gain a substantive understanding of this formula.

The effect of diffraction and interference are also caused by the surface layer of the ether.

Stars and planetary atmospheres are formed by the ions, atoms, molecules and other particles. The density of the particles becomes smaller and smaller from inside to outside of the atmosphere, or equivalently the ether density becomes smaller and smaller. So we can treat the planet's atmosphere as a layer of ether. When the light passes through the planet's atmosphere, the light will bended. On May 29, 1919, a total solar eclipse took place. The British Royal Society and the Astronomical Society observed that as the light from distant stars passed by the sun, the light is bended just as Einstein predicted. See the following figure:

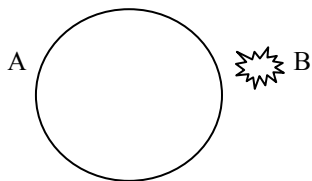


A represents a distant star, B represents the sun and its surface atmosphere, C represents the moon, and D the Earth. But this is not caused by the bending effect due to the gravitational field of sun. The bending effect of the distant star light near the sun and the bending of the light in the surface layer of the Ether are of the same principle.

## 6. The speed of light

Light source, light, light medium, the speed of light, the relationship between the observer and so include the following aspects:

- a. In any conditions, the light in any medium with uniformly distributed ether density has a fixed transmission speed. In the medium with different ether density, it has a different spread. If the same beam spread in different optical medium, the denser the ether, the greater the wavelength, the smaller the amplitude, and the slower the speed. In a transparent solid, transparent liquid, gas, vacuum, the former contains higher density of ether than the latter, so the light speed is smaller than the latter. When light moves from an optical medium into the other, on the interface of the two optical medium, the speed of light will change.
- b. When the light source is still with respect to the medium, the wavelength, amplitude, and propagation speed remain unchanged in all direction. The Earth moves together with the air, ie, the optical medium, and therefore in Michelson Morley experiment, we can not observe the interference effect.  
When the light source moves with respect to the medium, the speed in any uniform medium remains fixed, independent of the fact whether the source and the medium moves or not. In Figure 1, no matter how much the speed of the original beam propagation, and regardless of how fast the glass to which the direction moves, the velocity will remain unchanged relative to the glass. In 1851, Fizeau measured the relative speed of light in moving water and showed that the speed with respect to the medium is a constant.
- c. If the light source moves with a velocity  $v$  with respect to the optical medium, see the figure below:



in the figure above, if the light moves from left to right, or the ether wind (vacuum, air, water, etc.) moves with the speed  $v$  from right to left. For the same spherical wave, the light source has a relative velocity of  $c-v$  with respect to B,

and has a relative velocity of  $c+v$  with respect to A.

- d. If the observer and the light source are within the same vacuum or gas, and the observer stands in front of light source, then purple shift will take place, If we stand behind the light source, the light is red-shifted.

## 7. Optics Proves the existence of ether

The existence of a layer of ether on the surface of any object, as well as its ability to generate the diffraction, interference, refraction and other effects, prove that protons, neutrons, electrons and many other elementary particles are microvortex. In vacuum, gas, liquid and transparent solid, the light uses ether as the transmission medium, which proves that all optical mediums are filled with ether.

The parallel layers formed by the atoms and molecules in many crystals such as calcite ( $\text{CaCO}_3$ ) can produce birefringence effect. When the polarized light through some transparent body, such as quartz crystals, as well as sugar, tartaric acid, etc, the vibration direction of polarized light will rotate a certain angle to form optical rotation.

Both facts have proved that the ordered arrangement of atoms and molecules in transparent crystals makes an ordered distribution of ether, which causes the beam to produce effects such as birefringence, and optical rotation.

The photon theory not only fails to explain the effects of light refraction, diffraction and other effects, but also fails to explain why when the light moves from the denser medium into the sparser medium, the light wavelength and amplitude can be restored. In particular, it can not explain why the speed will increase.

The world is united. Everything in the world is embedded in the long chain of intricate relations. Correspondingly, we have a whole new discipline of science to explain everything in the world. The Ether Vortex Theory that I established is such a discipline. Starting from the element of the world-ether, based on new interpretation of classical and modern experiments, we systematically corrected the current fundamental theory of Cosmology, Physics, Mathematics, Chemistry, Biology, Informatics, etc. Our new theory is self-consistent. The Chinese version of the first half of <<The Ether Vortex Theory>> was published. It has 270 thousand words. The manuscript of the second half is done and is

currently being revised. The whole series contains 700 thousand words.

Denying the existence of Ether is the biggest mistake of modern science. The two papers that I am submitting explain this point. Even though the experiments mentioned in the paper are well known, the truth behind them is enough to modify current scientific theory. Even if the new theory is wrong, it still can inspire people to look at the current theory from a different perspective. The two papers <<The formation of molecule>> and <<Abstract of New Optics>> can be combined into one. Because of the requirement of the journal, we split it into two. The previous paper serves as the assumption of the second paper. The second paper in turn explains the first one. If possible, please kindly publish both of them.

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9/29/2010