

Principle of Construction of Multielectronic Atoms

Anatoli Bedritsky

Abstract.

In the article the principle of a structure of atoms is opened. According to that the nucleus of an atom consists basically of neutrons. The protons move around of the nucleus on orbits. Above each orbital proton there is in an attraction one orbital electron. In the article also the principle of the structure of molecules from atoms is opened.

Given article is a part of my project "Real theoretical physics on the basis of existence of the ether ". The real theoretical physics is strictly materialistic, but the modern theoretical physics in many cases is idealistic, because of absence of knowledge about mats (initial particles of matter), of which the ether and all elementary particles consists.

1 Structure of Atoms of Helium

The nucleus of atom of an easy isotope of helium consists of two protons and one neutron, due to that this atom has two orbital electrons which are attracted to protons. The atom with such nucleus is not stable because such position of nucleuses is not stabile. Fig. 1 shows the structure of atom of isotope of helium.

Nucleus of atom helium consists of four nucleons (two neutrons and two protons), attracted to each other, as shown on Fig. 2.

Nucleons of the nucleus are attracted to each other with overlapping their rarefied (ethereal) spheres, but to merge to be one elementary particle they cannot, because the nucleon is a greatest elementary particle which can be formed. The nucleons of the nucleus, which beside each other, have opposite direction of rotation, but their of superficial mats in the place of overlapping of spheres of these nucleons have identical direction of motion, due to that there is no a counteraction to rotation of these nucleons.

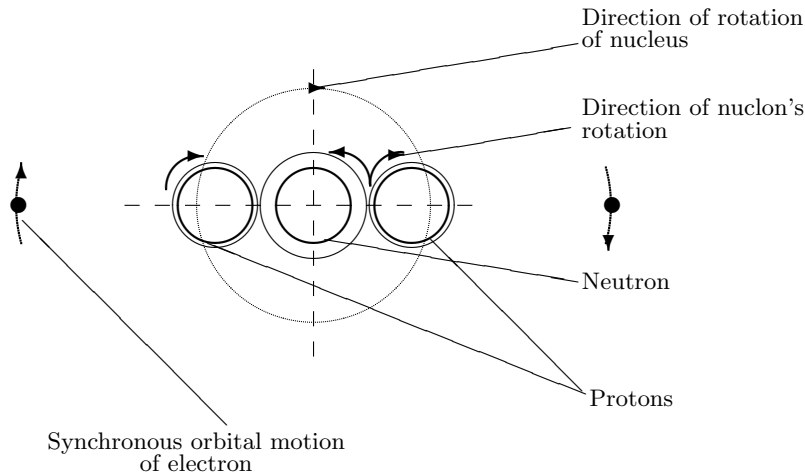


Figure 1: Atom of isotope helium

The nucleus of atom of helium represents α -particle. Direction of motion α -particles in parallel to axes of rotation of nucleons of this particle. α -particles of radioactive disintegration have the left rotation as protons.

At fast motion and rotation of the α -particles, the counter ether acts in a greater measure on protons than on neutrons, due to that from the protons a part of the rarefied sphere are blown off and consequently the protons have a little bit smaller mass than the neutrons.

Fig. 3 shows the structure of atom of helium.

2 Construction of Atoms with Orbital Protons and Electrons

Lithium and the subsequent chemical elements having 3 and more orbital electrons, have more complex structure of a nucleus of atoms than helium.

The nucleus of atom of lithium consists of 6 nucleons, of which 4 are neutrons, and 2 (in the center) are protons. These 2 protons have periodic collisions with orbital electrons of the other atoms of a molecule, due to that from the protons a part of the most mobile mats of the rarefied sphere are pushed away out in the form of photons and consequently due to that the protons have a little bit smaller mass than neutrons.

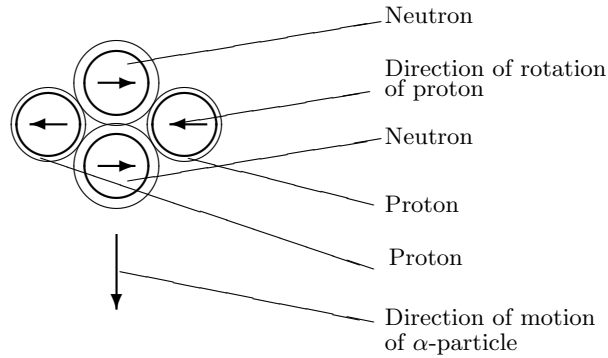


Figure 2: Construction of alpha-particle

Fig. 4 shows the structure of atom of lithium.

As a nuclear field of a nucleus pushes from a surrounding ether less mobile mats to the nucleus, then the density of the ether round the nucleus is increasing at decreasing the distance up to the nucleus. Accordingly the ethereal deceleration of orbital motion of elementary particles increases at reduction of radius of orbital motion. The elementary particle can have constant orbital motion in an orbit with such radius, where free acceleration equal ethereal deceleration. Therefore, heavier atoms can have several electronic orbits, where the electrons have different velocity of orbital motion depending on density of the surrounding ether.

As the mats of electrons have greater sphericity (mobility) than the mats of protons, then on them in a smaller measure acts the ethermats of the nuclear field and consequently the electrons have smaller field acceleration than protons and therefore the electrons have smaller minimal radius of orbital motion than protons. Therefore on the first orbit around of a nucleus there are two orbital electrons, in the second orbit one orbital proton, and in the third orbit the third orbital electron, which is constantly above the orbital proton because of an attraction to him.

Fig. 5 shows the structure of atom of beryllium.

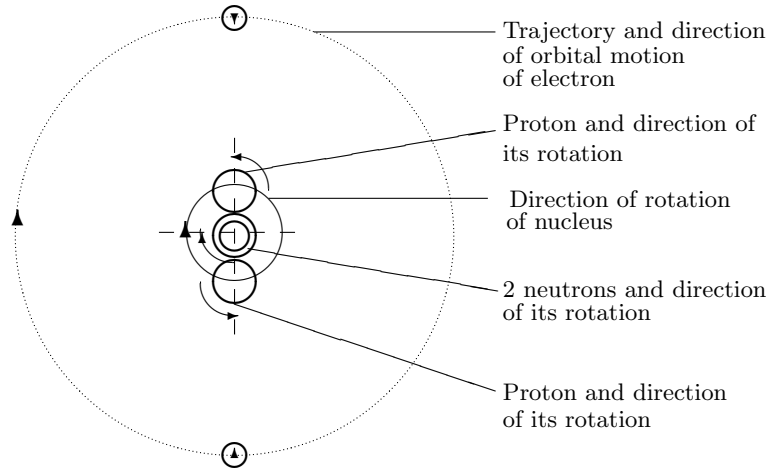


Figure 3: Atom of helium

Because the axis of rotation of an orbital proton and the axis of rotation of the orbital electron, which above the proton, are parallel to each other, then due to the circumferential ethereal wind created by a proton, the electron has an opposite direction of rotation in relation to a proton. Therefore the electron has the right rotation, and the proton has the left rotation.

The nucleus and the orbital protons and electrons of atom have an identical direction of circumferential motion, because the ethereal wind of circumferential motion of a nucleus untwists orbital protons and electrons, and the ethereal wind of orbital motion of protons untwists the nucleus. The speed of inertial rotation of the nucleus and the velocity of orbital motion of protons and electrons increases up to their limit, which is limited by the braking of the counter ether.

Fig. 6 shows the structure of atom of boron.

The nucleons of the nucleus are attracted to each other with overlapping

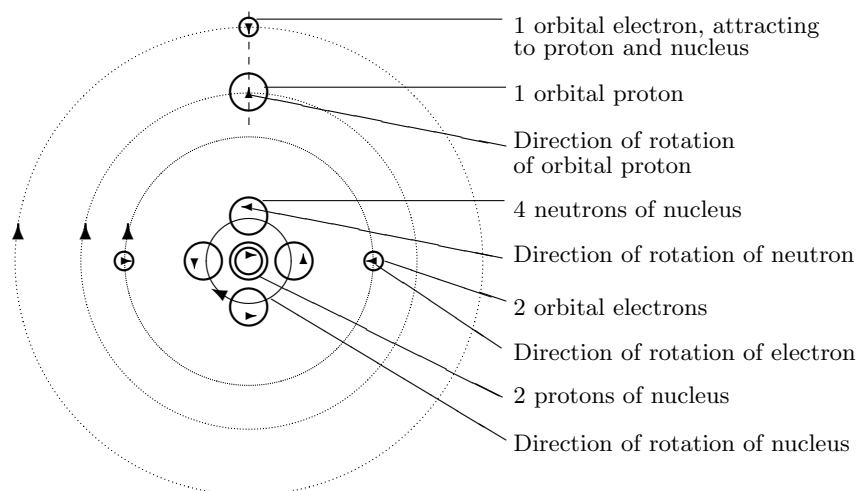


Figure 4: Structure of atom of lithium

their rarefied spheres. Herewith the nucleons of the nucleus have such direction of rotation, at which the direction of the circumferential motion of these nucleons in the place of their contact coincides, because of what there is no counteraction to their rotation. The attraction of nucleons to each other is limited by the increasing of density of the ether at approach of the nucleons to each other.

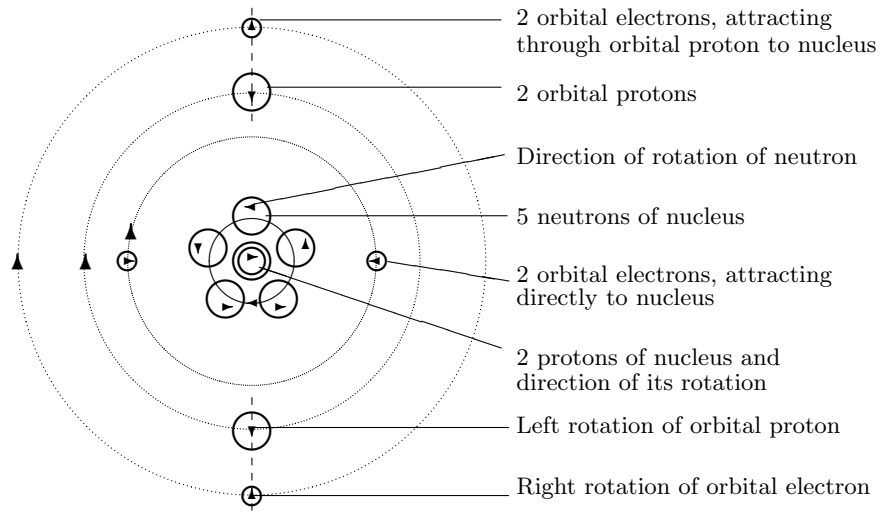


Figure 5: Structure of atom of beryllium

Fig. 7 shows the structure of atom of carbon.

The nucleus of atom of carbon consists of 8 nucleons, of which 6 nucleons are neutrons, and 2 nucleons are protons. The 2 protons located on edges of an axis of rotation of the nucleus, because of that they have collisions with orbital electrons of other atoms of general molecule. Around of the nucleus of the atom in the first orbit move 2 orbital electrons, and in the second orbit move 4 orbital protons above which move 4 orbital electrons, attracted to the orbital protons.

Fig. 8 shows the structure of atom of oxygen.

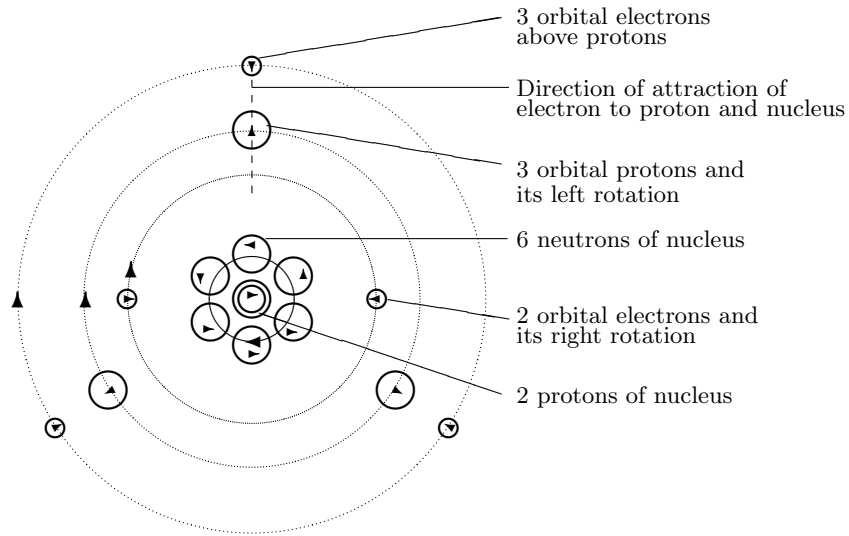


Figure 6: Structure of atom of boron

Fig. 9 shows the structure of atom of neon.

The nucleons of the nucleus, located one beside other, are attracted to each other up to overlapping their spheres, which push away the nucleons from each other. These nucleons have such direction of rotation, that the direction of the circumferential motion of the nucleons in a place of overlapping of their spheres, coincides.

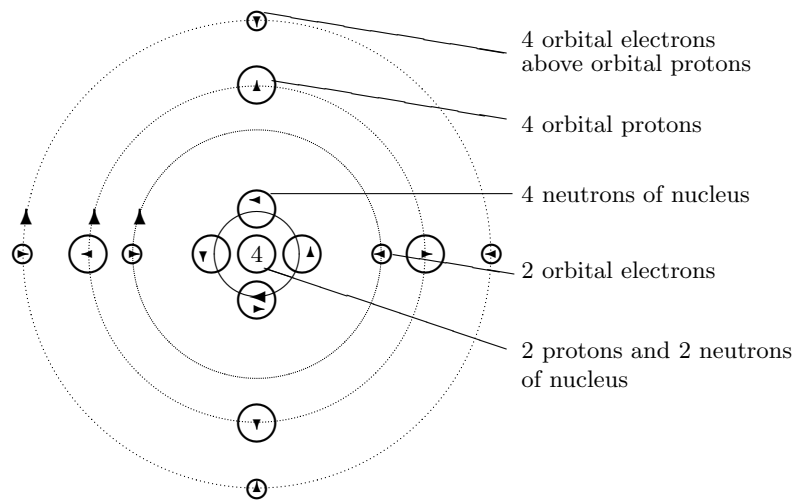


Figure 7: Structure of atom of carbon

Fig. 10 shows the structure of atom of magnesium.

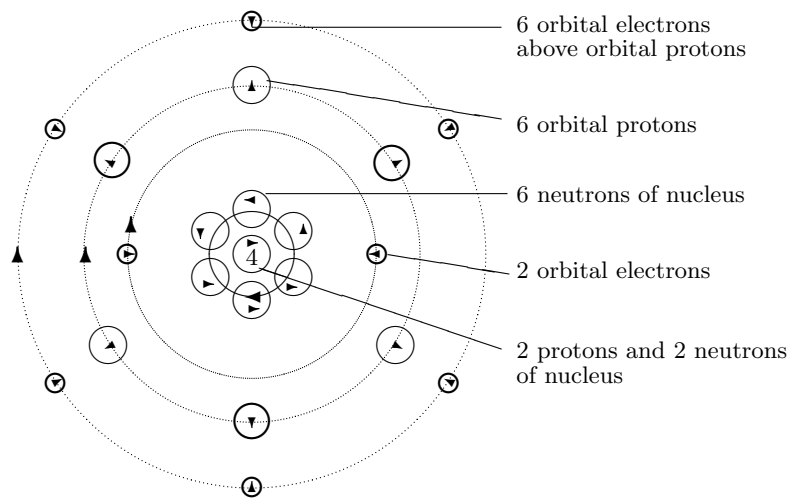


Figure 8: Structure of atom of oxygen

Fig. 11 shows the structure of atom of copper.

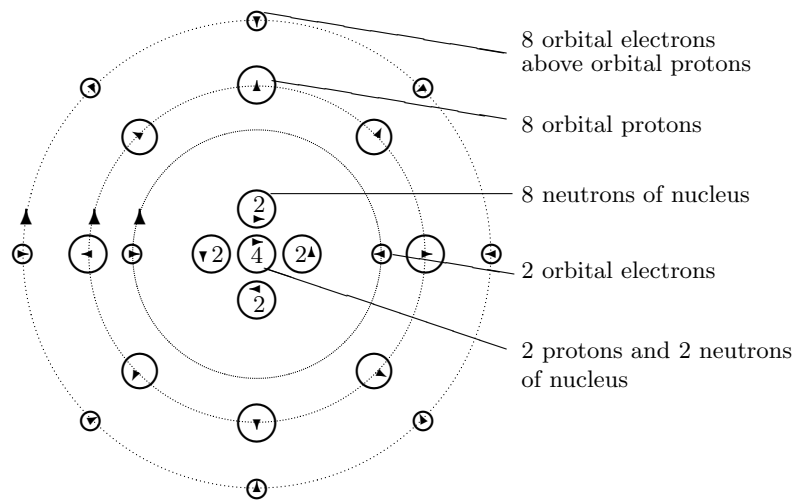


Figure 9: Structure of atom of neon

The nucleus of atom of copper consists of 36 nucleons, of which 34 are neutrons and 2 protons. These protons have tangential collisions with orbital electrons of other atom of general molecule. Around of the nucleus 27 orbital nucleons and 29 electrons are moving. As the orbital nucleons have greater velocity of motion they are protons, but not are neutrons. The first proton orbit of atom of copper consists of 8 protons, the second proton orbit consists of 18 protons, and the third proton orbit consists of 1 proton.

In the first electronic orbit are located 2 electrons, which directly to the nucleus are attracted. Since on the second and the subsequent electronic orbits the orbital electrons are attracted to the nucleus through the orbital protons, then on the second electronic orbit there 8 electrons are moving, and herewith they are attracted to 8 orbital protons .

Since in multielectronic atoms two electrons of the first orbit are connected with the nucleus, and since quantity of electrons of the second and the subsequent orbits is equal to quantity of orbital protons, then in any multielectronic atom the quantity of orbital electrons is equal to quantity of orbital protons plus 2.

The nucleus of atom of copper is dense. Dense nucleus has a limited quantity of nucleons. In such nucleus an installation of additional nucleons is impossible, because they can have an opposite direction of circumferential motion in places of a contact with the nucleons, which are on the circumference of this nucleus.

Nucleuses of heavy atoms have overage of mass in relation to the sum of

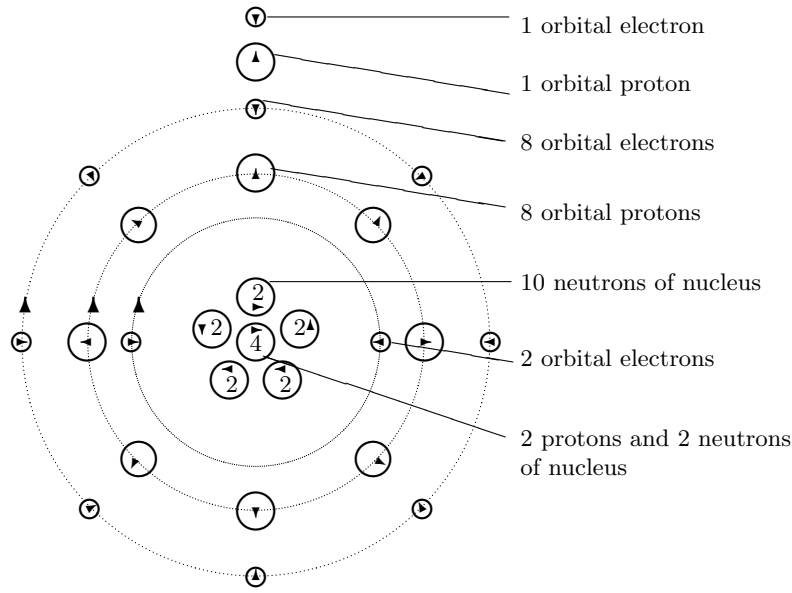


Figure 10: Structure of atom of magnesium

mass of nucleons. It occurs due to that, what at increasing of mass and of density of a nucleus, the density of the ether between nucleons of the nucleus and around of the nucleus is increasing.

Around of a separate neutron there can not be an orbital motion of electrons, as the ethereal (nuclear) field of neutron has small range. But the nucleus consisting of neutrons has a big range of a nuclear field and can act on the orbital electrons and protons. It occurs due to that that the ethermats of nuclear field of a nucleus cannot passes through a neutron, but can passes through the dense ether between neutrons of the nucleus. (See article "Principle of formation of nuclear field").

If experimentally to make a photo of separate atom, then the image is actually the image of a nucleus and of orbital protons

3 Orbital Motion of Protons and Electrons in Atoms

If a separate atom has a nucleus consisting more than four nucleons, and this atom is in a steady condition, then the density of the ether (etherization) around of this atom $\Pi = 1$, and the proton orbits of this atom are stationary. The radius of orbital motion of a proton of any stationary orbit, is defined as well as at atom of hydrogen:

$$R = \frac{M \cdot s}{V^2}$$

where M is the mass of the nucleus, s is the mobility of orbital protons, V is the orbital velocity of protons in the given orbit.

As electrons have greater mobility than protons, then the given electronic orbit are above given proton orbit, considering the attraction of given electron to given proton.

If the atom has received an irradiation photons, then has occurred an etherization of the ether around of the nucleus of atom (the density of an ether increases) and in this case its proton orbits are not stationary. The radius of orbital motion of the proton of any orbit of the atom, which nucleus consists more than of four nucleons, is defined as well as at the atom of hydrogen:

$$R = \frac{V^2 \cdot \Pi}{M \cdot s}$$

whwre Π is the etherization of given proton orbit.

The velocity V of orbital motion of proton in the given proton orbit of the etherized atom is defined:

$$V = -\frac{s \cdot M}{\Pi}$$

The last proton orbit of any etherized atom is in not condensed ether, where etherization environments $\Pi = 1$. The insignificant deviation of the etherization of the the environment, depends only from the strength of the gravitational field in the location of atom.

Apparently, the more the radius of a proton orbit of the given atom, the is less etherization of ether in this orbit, and therefore the more orbital motion of the protons. Therefore the angular speed of orbital motion of protons in all orbits of the given kind of atoms is identical, but at different atoms can be different. Angular speed of orbital motion of protons is defined

$$\omega = \frac{V}{R} = Const$$

As the mass of a proton is much more than the mass of an electron, then each orbital electron is attracted to the nucleus through a one orbital proton, due to that the orbital electron is moving above the orbital proton. Thus, the electron have such radius of the orbit, at which the electron and the proton make a synchronous orbital motion with identical angular speed.

At change of density of the ether around of a nucleus, the velocity and the radius of orbital motion of electrons and protons is changing. It is possible at absorption by the nucleus of photons. At increasing of the radius of last orbit, the orbital electrons leave this orbit, that presents itself a photoeffect.

4 Connection of Atoms in Multielectronic Molecules

Fig. 12 shows two atoms of hydrogen and one atom of oxygen, which form a molecule of water.

Orbital motion of protons and electrons in separate atoms is circular, but in structure of molecules the orbits is lengthened because of an attraction of the orbital protons and electrons to nucleus of another nearest atom of molecule.

All proton orbits and all electronic orbits of separate atoms are in one plane. But if atoms are in structure of molecules, then the orbital protons and electrons have an attraction not only to the nucleus of their atom, but also to nuclei of another close atoms, due to that the orbits of protons and electrons can turn in a direction to nuclei of another close atoms of the molecule. Since the last orbit of protons and electrons is most close to another nuclei, then the orbital protons and electrons of this orbit can even change the orbit.

So for example atoms of carbon in the first orbit have 2 orbital electrons, in the second orbit have 4 orbital protons, and in the third orbit have 4 orbital electrons, attracted to 4 orbital protons. These atoms form graphite when all orbital protons and electrons of the given atom are in one plane, but these atoms are forming a diamond if a proton orbit divided on two orbits which are on two planes, perpendicularly to each other. Herewith the orbital electrons, attracted to orbital protons, is also divided on two orbits, 2 electron on each orbit.

Fig. 13 shows construction of molecule by chamois of the acid H_2SO_4

Apparently, as the nucleus of atom of hydrogen consist of one proton, then the orbital electrons of heavier atoms cannot be attract to a nucleus of atom of hydrogen to tangential collisions with him. Therefore, the atoms of hydrogen cannot be a center for formation of a molecule. Atoms of hydrogen can join heavier atoms.

Conclusion

1. The nucleus of multielectronic atoms consists of all neutrons and only of two protons. Other protons have a orbital motion as orbital electrons.
2. Two orbital electrons, which are in the first orbit, are attracted directly to the nucleus of atom, but other orbital electrons are attracted to the nucleus through the orbital protons, i.e. above each orbital proton moves

one orbital electron. Therefore the number of orbital protons in atom is equal to the number of protons of atom.

3. As the density of the ether around of the nucleus there increases at affinity to the nucleus, then the electrons and the protons can have several orbits.

4. The ethereal wind, formed due to rotation of orbital protons, acts on the electrons, moving above protons, and because of it the orbital protons and electrons have opposite directions of rotation (the left and right rotation).

5. The neutrons located one beside other in a nucleus of atom have such direction of rotation, that between these neutrons their ethereal wind coincides in the direction and consequently rotation of one neutron does not counteract rotation of other neutron.

6. Molecules are formed due to the attracting of nucleuses of atoms to each other and herewith the orbital electron of the greatest orbit of one atom push away from itself the nucleus of other atom up to the certain distance equal to the radius of the orbit of this electron.

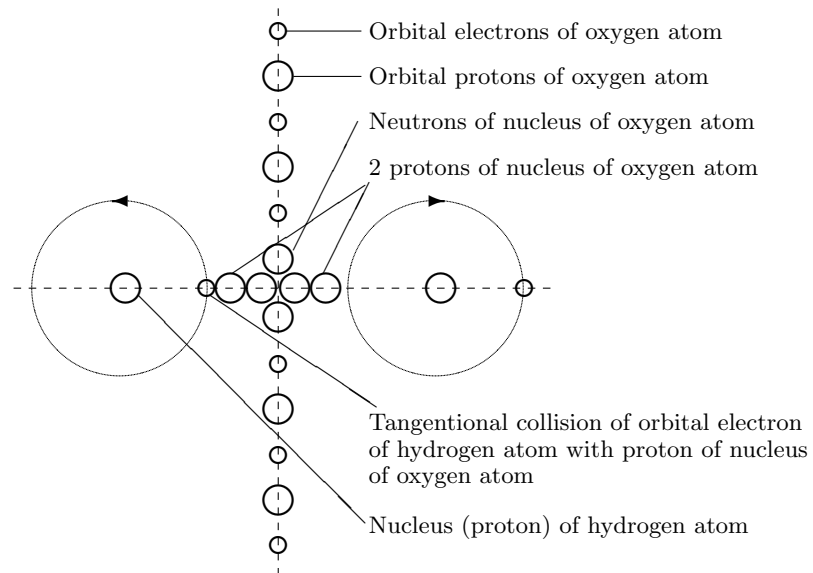


Figure 12: Structure of water molecule

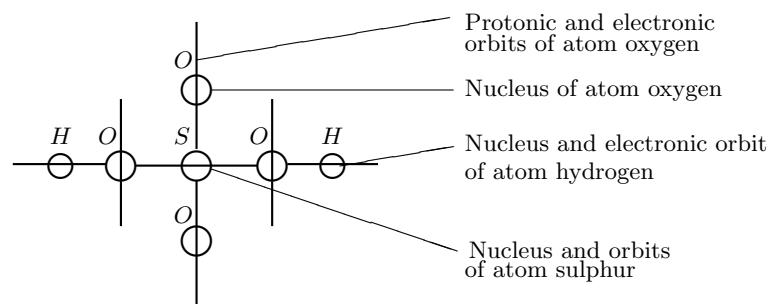


Figure 13: Construction of molecule H_2SO_4