

# Deetherization (Electrization) and Ionization of Atoms. Electric Field.

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## Abstract.

In this article is opened an physical process of deetherization of nucleuses of atoms - decreasing of ethereal sphere of the nucleuses of atoms under their collisions with elementary particles, under irradiation by photons and under friction of two bodies. In article is also open, that the deetherized nucleuses of atoms are forming an electric field and that the electric charge do not form the electric field. But the process of deetherization and the process of ionization of atoms occurs simultaneously. This article describes the physical process of impact ionization of molecules, photonic ionization of atoms and ionization of atoms by friction of bodies. Given article is written on the basis of existence of an ether in the real physical world.

## 1 Deetherization (Electrization) of Atoms. Electric Field

If a matter (a body or gas) to irradiate by electrons, then these electrons at collision with nucleuses of atoms pass through ethereal sphere of nucleuses, pushing away the most mobile part of sphere in the form of photons. The superficial part of ethereal sphere of elementary particles consists of more mobile mats, as at the ether.

Removal of ethereal sphere from nucleuses of atoms is called *impact deetherization* of nucleuses of atoms. Deetherization of atoms of bodies and gases can occur not only at their irradiation by electrons, but also at their irradiation by nucleons,  $\alpha$ -particles and  $\gamma$ -particles.

Because of reduction of the ethereal sphere of the nucleuses of the etherized atom, the majority of external ethermats at collision with the nucleus

bypass the nucleus through its ethereal sphere, and pass through the nucleus between its neutrons, due to that the velocity of motion of ethermats decreases. As a result of it the strength of momenta of the ether entering into the nucleus, is more than the strength of momenta of the ether leaving the nucleus.

The ethereal field of deetherized atom is called *electric field* of deetherized atom. Apparently, the electric field of the deetherized atom has considerably a big strength and range than a nuclear field of a not deetherized atom, as the fast ethermats pass through the deetherized nucleuses between its neutrons and thus considerably reduce the velocity of the motion, but in case of a nuclear field only the fast ethermats pass through the nucleus, and less fast ethermats bypass the nucleus through its ethereal sphere and thus these ethermats slightly reduce the velocity of the motion. The deetherized atoms attract to themselves electrons and other elementary particles with bigger strength than the not deetherized atoms.

In case of irradiation by electrons the bodies, deetherized only the surface of the body, but in case of irradiation of gas, deetherized all irradiated gas because of small density of gas. Bodies, which have deetherized atoms, are called *electrized bodies* as they attract elementary particles and other easy bodies. Process of deetherization of atoms is called *electrization*. The direction of the electric field of electrized bodies is to the body surface, where are deetherized atoms.

## 2 Impact Ionisation of Atoms of Molecules.

If a matter (a body or molecular gas) to irradiate by electrons, having velocity close to limiting, these electrons have a central collisions with nucleuses of atoms, because electrons at approach to any nucleus of atom are attract to its centre. At the central collision the fast electron with a nucleus of atom, the electron sharply displaces the nucleus of atom in a direction of the motion, due to that there is a pushing of these nucleuses of atoms in the direction of motion of electron. Together with the nucleus, the orbits of electrons are displaced also. The electrons before collision had tangents of collision with nucleuses of the next atoms of the molecule. Because of change of internuclear distance in the molecule, the tangents of collision of valency electrons with nucleuses of the next atoms are broken. As a result of these collisions, the electrons will have more central collisions, or will not have collisions with nucleuses of the next atoms, due to that these orbital

electrons will be released and the electrons of previous orbit will have collisions with the nucleus, i.e. become valency. If a impact ionisation occurs in all volume of a body, the body decreases in volume. Leaving of orbital electrons of atoms of molecules because of collisions of fast electrons with nucleuses of atoms of molecules is called *impact ionisation*. At the impact ionisation of atoms simultaneously occurs the deetherization of these atoms.

Impact ionization of atoms of molecules occurs not only at an irradiation of molecules of matter by fast electrons, but also at an irradiation by protons, neutrons, and also  $\alpha$ -particles.

Impact ionization occurs only in molecules, but in separate atoms does not occur. So, at an irradiation of inert gases by fast electrons, there is no ionization of atoms of gas. It confirms that ionisation of atoms occurs at the central collisions of orbital electrons with the nucleuses of the next atoms.

### 3 Electric Current Ionisation and Deetherization of Atoms of Molecules

Impact ionisation occurs also at electric current passage through conductors. In this case the current electrons collide with the nucleuses of atoms of the conductor and push them, due to that the distance between atoms increases or decreases, and at decreasing of the distance occur a emitting of orbital electrons. Such impact ionisation is called *electric current ionization*. Electric current ionisation of atoms of a body is actually a impact ionisation and consequently at electric current ionisation also there is the deetherization of nucleuses of atoms of the body and accordingly an electric field formation.

If a conducting body to connect to a hole (positive) pole of a source of a direct current with a high voltage, from this body will leave the free electrons in a source of current. Also the free electrons, being on the surface of the body will be to leave. Usually the concentration of electrons on the surface of a body is more than inside of body. Because of absence of superficial electrons will occur collisions of atoms of air with nucleuses of atoms of the surface of the body. At collision of atoms of air with atoms of the body will occur deetherization of these nucleuses, why above the surface of the body the electric field is formed.

If a conducting body to connect to an electronic (negative) pole of a source of a direct current with a high voltage, the electrons of the charge will be not only inside of this body, but also will be forming an electronic plasma above the body. This plasma cannot leave from the body because of

collisions with surrounding atoms of air. At collision of electrons of plasma with atoms of the body will occur deetherization of nucleuses of atoms of surface of the body, due to that above the surface of the body the electric field is formed. Apparently, the electric field is formed not because of the charge in the body, but because of deetherization of nucleuses of atoms of the body. So, the stream electrons in vacuum represents a charge, but an electric field has no.

#### 4 Photonic Ionization of Atoms. (Photo-electric Effect)

If on a body or a gas to radiate a x-ray, ultra-violet or light radiation of photons, then these photons can collide with orbital electrons of atoms of the body and change the direction of their motion, due to that these electrons can leave from an orbit and to become free electrons. The releasing of orbital electrons of atoms because of action on these electrons of atoms by photons is called *photonic ionization* or *photo-electric effect*. If irradiation occurs by photons of light, then for that an orbital electron was released it is required that this electron has collided not with one, but with two or more photons.

Photonic ionization occurs not only under action of photonic radiation on molecules, but also under action of photonic radiation on single atoms. This is the evidence of the fact that photonic ionization occurs in an atom and not in a molecule as a whole.

If photonic radiation is directed on gas, this radiation can ionize significant volume of gas due to their underpressure, as the photon radiation passes through significant volume of gas, where photons can collide with any nucleus. If photon radiation is directed on a body or liquid, then the ionization of atoms of this body occurs only on insignificant depth because of the big density of bodies.

#### 5 Ionization and Deetheration of Atoms by Friction of Bodies

Ionization of atoms occurs also at friction of two bodies. In a place of friction of these bodies, the atoms of one body collide with atoms of other body. Collision of two atoms represents a collision of orbital electrons of one atom with nucleus of other atom. Because of collision of orbital electrons with

nucleuses of atoms occurs a deetherization of nucleuses of atoms. Orbital electrons, collided with nucleuses of atoms, considerably reduce the velocity of the motion and become free electrons. The releasing of orbital electrons of atoms upon friction of two different bodies is called *ionization by friction*. Thus at friction of two different firm bodies there is an ionization of atoms of one body and deetherization of atoms of other body.

## Conclusions

1. The deetherization of atoms represents the deetherization of nucleus of atom, at which the ethereal sphere of the nucleus of atom is decreasing and this sphere does not cover the neutrons outside of the nucleus of the atom. In this case the ethereal sphere between neutrons of the nucleus of atom becomes more rarefied and then the less fast mats of the ether, moving on the direction to the nucleus, do not pushed from the nucleus by the ethereal sphere, and pass through the nucleus between its neutrons.

2. The electric field of electrized atom is formed due to that that the mats of the ether at passage through the deetherized nucleus of the atom reduce the velocity of motion and therefore the intensity of momenta of ether in the direction to the nucleus of atom is more than in a direction from the nucleus, that represents an electric field, which does not depend from lack or presence superfluous orbital electrons in atom.

3. Impact ionisation occurs at collision of the fast electrons or nucleons with molecules of gas, a liquid or firm bodies. The electrons collide with nucleuses of atoms of a molecule, due to that the internuclear distance of the molecule is changed and therefore there can be a realising of orbital electrons.

4. Photonic ionization of atoms occurs at an irradiation of atoms by photons. Under colliding of photons with orbital electrons of atoms, the electrons can move from the orbit and to become free electrons.

5. At ionization by friction of bodies, the orbital electrons of of atom of one body collide with nucleuses of atoms of other body, due to that the orbital electrons are released and the nucleuses of atoms are deetherized and form an electric field.

6. The electric field around of a conductor with electric current is formed because of deetherization of nucleuses of atoms of a conductor at collision with electrons of electric current.

7. The electric field around of a conducting body, attached to a positive

pole of a source of a current, is formed. It occurs due to that that in this case are absent free electrons on the surface of the body, why there is a collision of atoms of air with atoms of the body and thus occurs deetherization of atoms of the body and formation of an electric field.