

MASS OF A BODY – WHAT IS IT?

Material from Wikipedia – the Free Encyclopedia:

<https://ru.wikipedia.org/wiki/%D0%9C%D0%B0%D1%81%D1%81%D0%B0> (article in russian)

*“**Mass** (from Ancient Greek μάζα, kneaded dough) is a scalar non-negative Lorentz covariant physical quantity that is one of the most important variables in physics. In the non-relativistic approximation, when the velocities of the bodies are much less than the speed of light, mass defines their inertial and gravitational properties.*

Initially (in the XVII-XIX centuries) it characterized the “amount of a substance” in the physical object, which, according to the ideas of that time, determined the object’s ability to resist the applied force (inertia), and the gravitational properties (in particular, weight).

Availability of the mass in elementary particles is explained by their interaction with the Higgs field. The stronger this interaction, the greater the mass of an elementary particle.

In modern physics the notion of ‘amount of a substance’ has another meaning, the mass is closely related to the notions of ‘energy’ and ‘momentum’ (according to present-day ideas, mass is equivalent to the rest energy). Mass manifests itself in several ways.

- ***Passive gravitational mass** shows the force with which the body interacts with the external gravitational fields – in fact, this mass is the basis for mass measurement by weighing in modern metrology.*
- ***Active gravitational mass** shows the gravitational field which is generated by this body – gravitational masses occur in Newton’s law of universal gravitation.*
- ***Inertial mass** characterizes inertia of bodies and it occurs one of the wordings of Newton’s second law. If arbitrary force in the inertial frame of reference equally accelerates different initially motionless bodies, these bodies are considered to have equal inertial mass.*

Gravitational and inertial masses are equal to each other (experimentally with high accuracy – the order of 10^{-13} and exactly in most physical theories, including all those confirmed experimentally), therefore when it does not refer to ‘new physics’, they just talk about mass, without specifying which of them is implied.

In classical mechanics, mass of the system of bodies is equal to the sum of the masses of its constituent bodies. In relativistic mechanics, mass is not an additive physical quantity, i.e. mass of the composite system is generally not equal to the sum of the masses of components, and includes the binding energy and depends on the nature of the particle motion relative to each other.

Direct generalization of the notion of mass include such characteristics as the tensor characteristics as the moment of inertia, and such properties of the ‘body- plus-environment’ system as the mass displacement, added mass and effective mass used in hydrostatics, hydrodynamics and quantum theory. The quantum theory considers also fields with non-standard kinetic terms (for example, the Higgs field) which can be regarded as the fields with the mass of quant depending on their energy”.

Let us try to assume by ourselves what is the origin of the term ‘mass’. We shall run an experiment in the mind’s eye with several black cubes of the same size, but made of different materials. Weight force, i.e. the force with which the blocks are pressed against the surface of the table, is different, which is established by weighing. What do the blocks having the same size and color differ in? Probably they differ in the kind of material that fills them, but if the cubes are not open, then they are to be endowed with some similar property, such as mass. Consequently, the cubes have different mass, i.e. depersonalized kind of all materials. What in this depersonalized case should the masses of cubes differ in to get different weight forces?

Force of weight is what one can catch hold of. In Neutron Sciences (NS) there is a gravitational flow consisting of gravitons and pieces of magnetic field lines (MFL) (see

hereinafter **fig.9** and **Table 1**) obtained from the Earth's MFL, as a result of their constant partial destruction, and directed towards its center.

Gravitons are magnetic energy carriers, and for their action on the mass of any depersonalized materials the latter should also consist of molecular magnets, which will result in their interaction – for one thing.

For the other, for different forces of weight of cubes masses should have different powers of molecular magnets. Similar molecular magnets have power in proportion to the dimensions of their bodies.

Assuming that the bodies consist of yet unknown chemical elements, we have obtained a definite task to create them. Knowing that the bodies have crystalline lattices, for example, with cubic cells, we can get chemical elements in the form of hexagram 'hedgehogs', whose needles are permanent magnets (see hereinafter **fig. 2-6**). Differing in length needles of different chemical elements will have different magnetic powers. Then rows of chemical elements appear. The development of this subject has led to the creation of Neutron Sciences (NS) (see <http://neutronscience.com.ua/books/>).

Down the ages the most common idea about the mass of the body is certain knowledge about it as a quantity of substance in the form of the sum of various chemical elements. On the Earth, the Moon and other places in the Universe mass of the same body is considered to be constant.

Is it so in fact?

Let us approach this issue from an unusual side, as if forgetting about physics. Weigh in on the Earth's market 1 kg of rice and get its definite volume with a certain amount of a certain number of rice grains, i.e., a certain quantity of substance. Imagine yourself this package of rice having the Earth mass of 1 kg is transferred to the Moon provided we do not know physics at all. Holding the package in the hand on the Moon, we will feel that it is six times easier than on the Earth, and we do not know anything about gravitational attraction of masses, being a kind of Ignoramuses with a rice package on the Moon.

The question naturally arises at once why the package has become easier.

We all understand perfectly well that the mass of the Moon does not change every second, but not many folks know that gravity is different everywhere on its surface. Measurements of Lunar Orbiter satellites speed allowed creating the gravitational map of the Moon (see **fig.1**). As you can see, the picture of gravitational field is inhomogeneous and represents a plurality of various areas-'spots'. Thus, the rice package will press on the hand differently in the different gravitational 'spots', and at the same time the mass of the Moon itself is invariable, what is more, the differences are significant. Agree it is some nonsense!

The first thing that comes to mind, it is the unequal distribution of mass inside the Moon, in the absence of a single center of gravity. This leads to the idea that it does not have a heavy core, and it can be absolutely empty and represents a soccer ball (hollow sphere), which sounds like a bell long after hitting a hard object, which has been repeatedly recorded by American astronauts and observers from the Earth with special equipment.

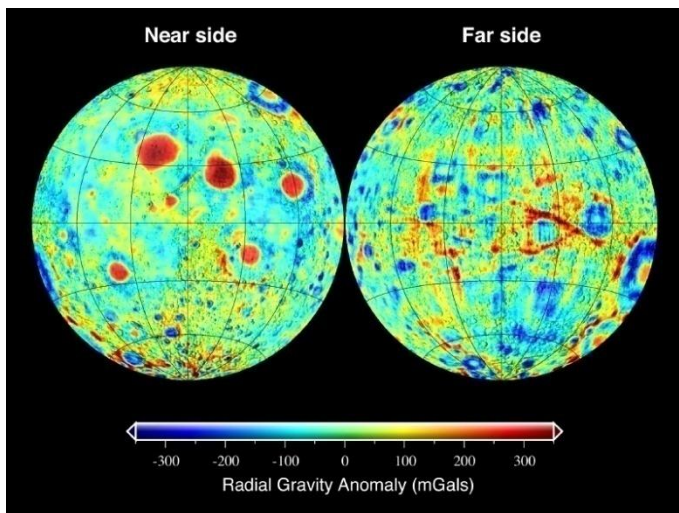


Fig.1. Radial gravity anomaly on the Moon surface

of the scientists on the Earth when Saturn V crashed into the lunar surface: “The Moon rang like a bell”.

Back in November 1969, the Apollo 12 astronauts had sent their Lunar Module (LM) crashing into the Moon following their return to the command craft after the lunar landing mission. That Lunar Module struck with a force of one ton of TNT. The shock waves built up to a peak in eight minutes and continued for nearly an hour. As for the Apollo 13, the seismic signals produced by the impact of S-IVB were 20 to 30 times greater and four times longer than those resulting from the LM crash. Peak intensity occurred in 7 minutes, and the reverberation continued for 3 hours and 20 minutes and spread to a depth of 25 miles. This shows that the Moon has an unusually light core or has nothing of the kind at all.

In Houston, CAPCOM (Capsule Communicator) made this remark to the Apollo 13 astronauts after impact: “By the way, we see the results now from 12’s seismometer. Looks like your booster just hit the Moon, and it’s rocking a little bit.”

The NASA report says that information obtained as a result of the two artificial “moonquakes” led to reconsideration of theories proposed about the lunar interior. Among puzzling features were the rapid build-up to the peak and the prolonged reverberations. Nothing comparable happens when objects strike the Earth.

...during the hit after the fall of the Apollo 13 launch stage the scientists not only talked that “the Moon rang like a bell”, but also mentioned regular vibrations of the entire lunar surface, “as if there was a huge hydraulic spring system underneath.”

This phenomenon made many people come back to the old hypothesis of the hollow Moon. As far back as in 1962, Dr. Gordon MacDonald, the lead scientist for the NASA, published a report in “Astronautics” journal, where he claimed that an analysis of the Moon motion indicated at its hollow structure...”

“Moon’s Amazing Secrets”

Despite the fact that, virtually, the Moon is just a dead piece of rock with very low geological activity, crust movements happen there as well. They are called moonquakes (by analogy with earthquakes).

There are four types of moonquakes: the first three are deep moonquakes, vibrations from meteorite impacts and thermal moonquakes caused by solar activity, they are relatively safe. But moonquakes of the fourth type can be quite unpleasant. Usually they are up to 5.5 on the Richter scale – that is enough to make small objects trembling. Such quakes last for about ten minutes. According to NASA, such moonquakes make our moon “ring like a bell.”

The most frightening in these moonquakes is that we have not a faintest idea about what exactly causes them. Earthquakes are usually caused by the movement of tectonic plates, but there are no tectonic plates on the Moon at all. Some researchers think that they may have some connection with the tidal activity of the Earth, which, as if ‘pulls’ the Moon on itself. However, this theory is not supported by anything – tidal forces are associated with the full moon, and moonquakes are usually observed at other time...”

Let us cite some excerpts:

«PROBLEMS DURING DEVELOPMENT OF THE MOON

<http://qaxa.ru/zemla-luna/424-2010-02-03-16-44-10.html> (article in russian)

...At 20.09, Eastern Standard Time on April 14, Apollo 13 was headed homeward, and the 15-ton spent third stage of the Saturn V launch vehicle flew to the Moon. It was supposed to crash into the Moon surface with a strike force, equivalent to 11.5 tons of TNT. The epicenter of the shock was 85 miles west-northwest of the place, where the astronauts of Apollo 12 had set up their seismometer.

The NASA report says about the reaction

of the scientists on the Earth when Saturn V crashed into the lunar surface: “The Moon rang like a bell”.

A huge amount of issues concerning mass and gravitation on the Moon have accumulated so far. America was a rich country, and NASA experts decided to gain insight on the gravity once and for all, make sure that mass attracts mass and close this question forever. To do this, they chose asteroid Eros and sent the NEAR (Near Earth Asteroid Rendezvous) space probe over there, with an estimated weight, according to which it should be attracted to the large body of the asteroid. Nothing happened. Mass did not want to attract the mass.

The second richest country, Japan, decided that the Americans had prepared the wrong experiment, and they got down to prove on their own the correctness of the notions of the modern science about gravity. They chose asteroid Itokawa and at this time sent the HAYABUSA (“Falcon”) controlled space probe towards it. Again, there was a failure, even after its mini-lander MINEVRA was forcibly struck on an asteroid, it escaped Itokawa's gravitational pull and tumbled into space (see the article “Jackstraws and Tiny Tots Played by Universal Gravitation” http://www.logoslovo.ru/forum/all/topic_3331/, [article in russian](#)).

There was a series of shameful failures, how is this possible? Does it turn out that scientists are not on top of issues, despite the colliders and space experiments?

Scientists around the world stupidly pay no attention to one fact which stands out like a sore thumb and begs to be taken into account. Different gravity in the ‘spots’ on the Moon is greater in those places where magnetic fields are stronger, which implies a clear conclusion about the direct connection between gravity and magnetic fields of planets. Asteroids without strong magnetic fields cannot attract anything, because they lack the mechanism of attraction. Newton called such asteroids (bodies) to be passive bodies (masses).

Asteroids with magnetic fields are active masses and will attract other passive bodies.

It can be concluded firmly from the above that an active mass with magnetic field has some force mechanism for action on any bodies, after which they are pressed thereto.

While looking at an atom with its nucleons and electrons, we understand that it is absolutely indifferent to the magnetic field, for example, of the Earth.

All the fundamental problems of physics came together at one point, and in a paradoxical situation occurred where it can already be seen clearly that a mass does not attract another mass and atom excludes any other approach because of a lack of its interaction with the magnetic field of the Earth, although everything indicates that the response is precisely in the direction of magnetic gravitational interactions.

Apparently, the idea of the atom as a nucleus with electrons is an aberration!!!

The explosion of indignation may follow: what about nuclear power engineering and all the development of chemistry and technologies?!

All the modern development of technologies is based on human intuition and the ‘hit-and-miss’ method of millions of scientists and engineers for centuries. I will pluck up the courage and make a further statement: even nowadays humanity does not understand what electricity is, especially the static one. Note that the theoretical science always lags behind the experience, i.e., the ‘hit-and-miss’ method, and then tries to catch up trying to explain it.

Let us consider the above as exemplified by electricity generation. It is no news that first the electric generator was invented, and then they began to fit science under it. For our purpose it is most convenient to discuss electricity generation by means of large generators having capacity of 800 - 1000 MW.

According to the science, electric current is a stream of free electrons, not linked with atoms, flowing from the copper bars of the generator windings under the influence of magnetic field poles when the rotor rotates. We know that electrons are scattered in space in the television CRTs, and it follows from this example that the electric network constantly loses free electrons in large quantities. Next, it follows that with a decrease of free electrons in the generator windings its power should be reduced naturally. In practice, there is no such a reduction of the generator power. The question is – where are free electrons replenished from in the generator windings? If that would be on part of the environment, then at such capacities lightnings (flows of electrons), being same size as a generator in diameter, should constantly enter the electric generators. This phenomenon is not observed.

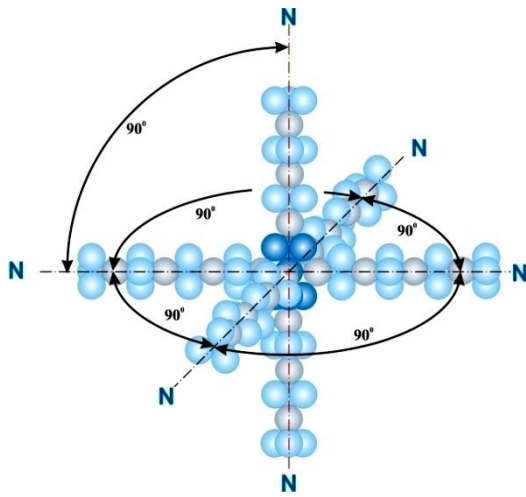
As you can see, clarity and big science disappeared bashfully.

This situation is observed across the board in all the fundamental sciences, therefore, it is not surprising that there are a large number of questions for which modern science has no answers.

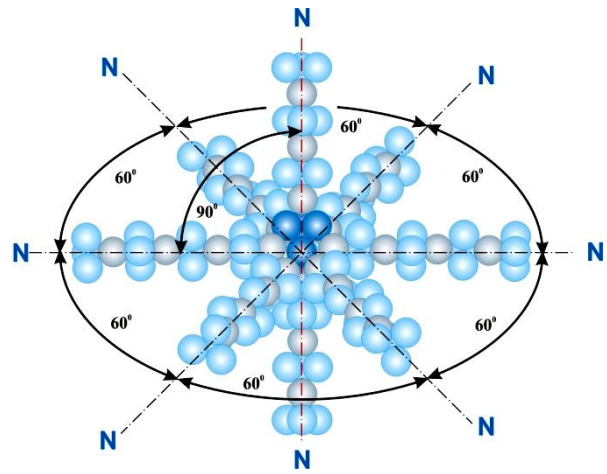
Let us draw up interim results:

- According to Neutron Sciences (NS) (see <http://neutronscience.com.ua/books/>), gravity is not the attraction of body masses to each other, but certain force-related properties of magnetic fields of planets (of active masses) and magnetic properties of chemical elements (according to NS) constituting the substances, and these properties are manifested during their interaction with each other;
- It is obvious that the above interaction needs the flows of ‘gravitons’ (according to NS) (see hereinafter **fig.4, 5, 6, 9**), passing through the lattices of bodies, interacting with them in the magnetic way and pushing the bodies towards their motion;
- Atom in the form of a nucleus with electrons, according to the ideas of modern physics (MP) is far from being used to explain such magnetic interactions, and another model of chemical elements is required (according to NS) (see **fig.2**);

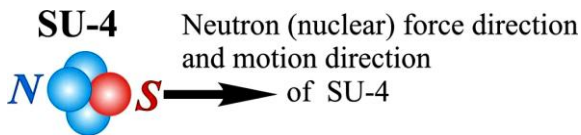
In Neutron Sciences (NS) everything is based on the chemical elements in the form of ‘hedgehogs’ with six (a simple chemical element) or eight needles (a radioactive element), consisting of structural units (SU) (see **fig. 2**) in the form of quads (SU-4) and pentads (SU-5) of neutrons. Each needle of any chemical element has its personal molecular magnet which provides its stability and rigidity.



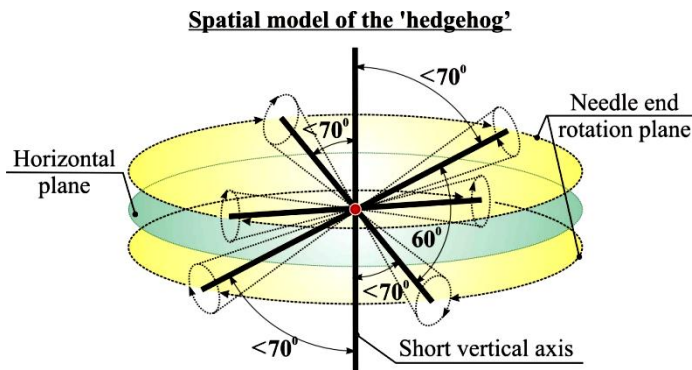
a). Quad-based six-pointed 'hedgehog' – simple sodium (Na)



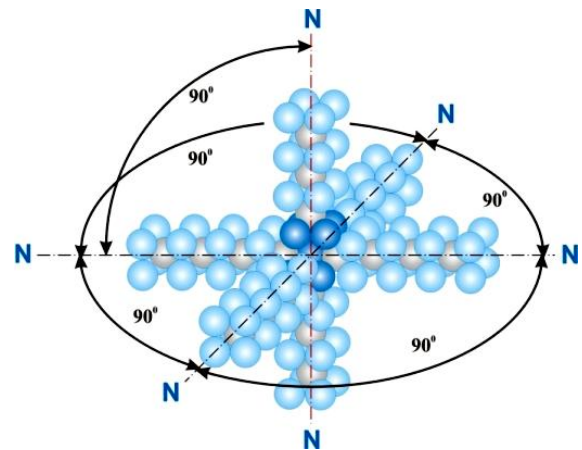
b). Quad-based eight-pointed 'hedgehog' – radioactive sodium (Na)



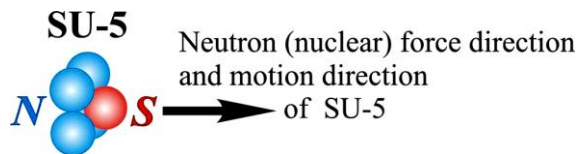
c) Quad structural unit (SU-4)



d) pentad-based eight-pointed 'hedgehog'



e) pentad-based six-pointed 'hedgehog'



f) Pentad structural unit (SU-5) (noble chemical elements – aurum, platinum, etc. are built on the basis of 'pentads')

Fig.2. Chemical elements – 'hedgehogs' and structural units SU-4 and SU-5

Both six-pointed (**fig.2.a and 2e**), and eight-pointed (**fig.2b and 2d**) 'hedgehogs' are formed with needles on the basis of SU, they are summarized in the tables of conversions 1, 2 and 3, 4 (see <http://neutronscience.com.ua/books/> "Tables №1, №2, №3, №4 of successive conversion of chemical elements into each other"). Let us consider a cell from **Table 2** of chemical elements conversions with chemical element **Lithium** as an example (see **fig.3** and **Fragment of Table of Conversions 2**).

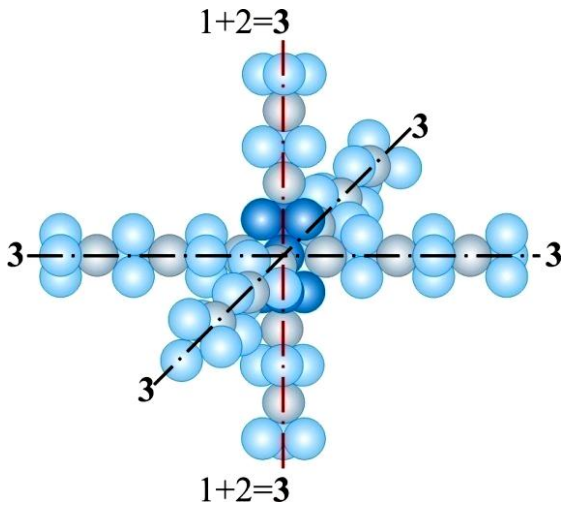


Fig.3. Six-pointed 'hedgehog' with quad-based needles. Lithium – 'solid state'

Solid state (physical state of the element)	
3 (atomic number)	
Li_{ss}^2 (symbol) <i>Lithium</i> (name)	71 (actual quantity of neutrons in the element) -1 (neutron deficit in protogas)
534 (roentgen density in solid state, kg/m ³)	72 (theoretical number of neutrons)
542 (gravitational density in solid state, kg/m ³)	3 (number of layers of structural units (SU) in the hedgehog's needles)
7.1 (relative neutron mass M)	18 (number of SU-quads without neutron deficit)

Fragment of Table of Conversions 2 (6x4). LITHIUM.

gas-1		liquid-1		gas-2		liquid-2		gas-3		solid state	
3											
Li^2_{gas1}	51	Li^2_{liq1}	55	Li^2_{gas2}	59	Li^2_{liq2}	63	Li^2_{gas3}	67	Li^2_{ss} <i>Lithium</i>	71
	-1		-1		-1		-1		-1		-1
	52		56		60		64		68	534	72
389	2 ¹ / ₆	420	2 ² / ₆	450	2 ³ / ₆	481	2 ⁴ / ₆	511	2 ⁵ / ₆	542	3
5.1	13	5.5	14	5.9	15	6.3	16	6.7	17	7.1	18

Needles of a 'hedgehog' connect with the needles of neighboring 'hedgehogs' with the help of **crystalline lattice** (see **fig.4**). Neutron Sciences distinguish such kinds of interactions (chemical bonds) of hedgehogs' needles – metallic, covalent (polar and non-polar), ionic and sedimental (metallic, covalent, ionic) chemical bonds.

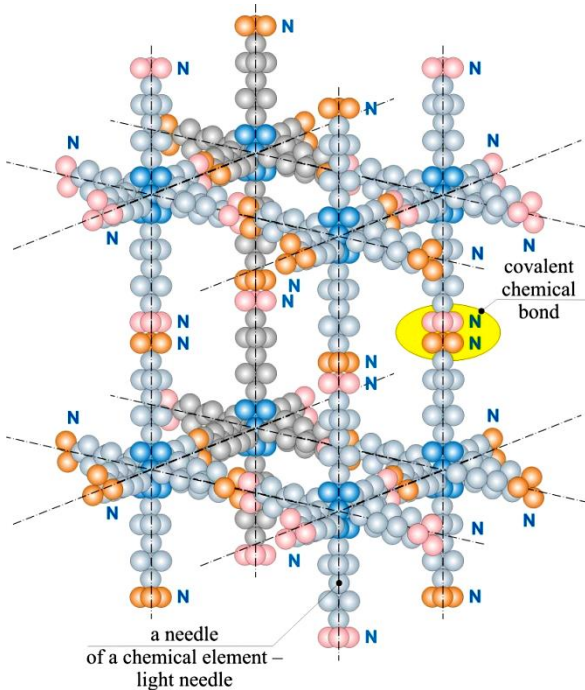


Fig.4. An example of the crystalline lattice made of chemical elements – 6x4 'hedgehogs'

Metallic chemical bond

According to MP, "...A kind of the chemical bond – attraction between ions and sharing electrons – is called a metallic bond and here the nature of bond is electric..."

In NS **metallic chemical bond** (see **fig.5**) is realized by overlapping the needles of one 'hedgehog' on the needle of another 'hedgehog', when they come into neutron interaction, and each 'hedgehog' tries to attract the neighboring 'hedgehog' via its needle as nearly as possible to itself. A pair of needles overlapped on each other – 'skipping rope' resembling a rotating kids'

jumping rope – has a random twisting in addition which is formed by the action of free neutrons.

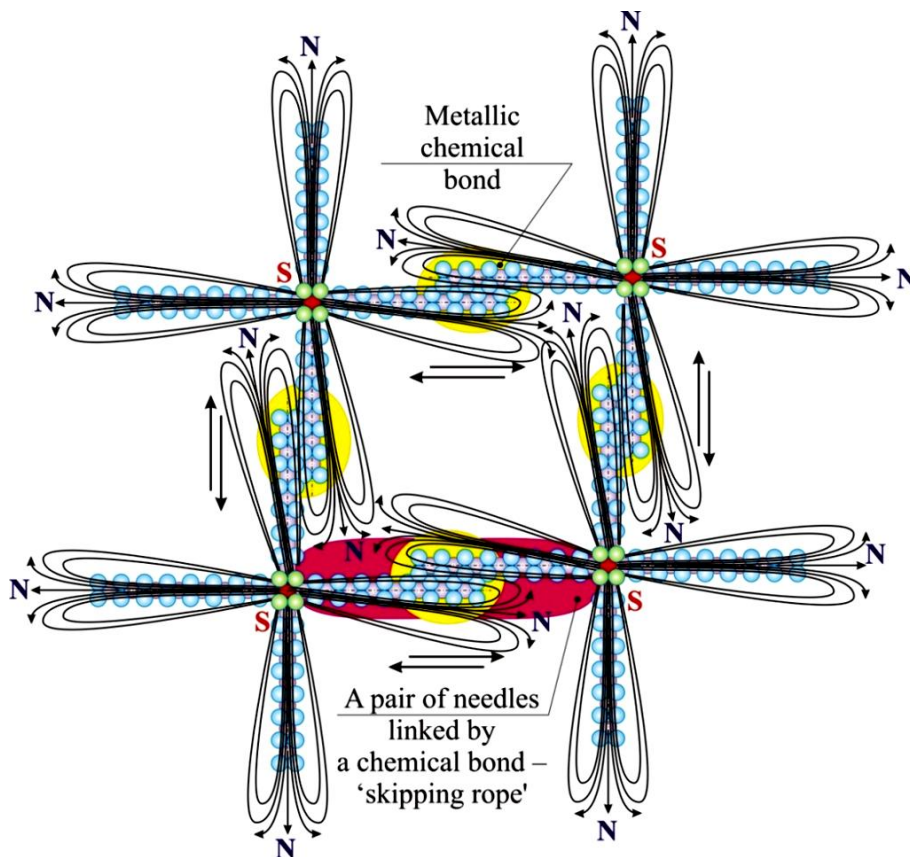


Fig.5. Metallic chemical bond

If the needles are fully tightened, then one-sided shifts of conditional magnetic field lines will take place and twist of the skipping ropes will be terminated, i.e. the conditions for superconductivity will be created. Conductivity may be increased partially in the process of metal forging.

The distance between the neighboring ‘hedgehogs’ may increase or decrease, as the action of neutrons or mechanical force may intensify or weaken interaction of the ‘hedgehogs’. Remember the springs in the models of crystal lattices between atoms. These springs are artificially introduced to give an explanation, but we have a natural process.

Covalent chemical bond

According to MP, “...Chemical bond realized by the electron pairs is called atomic or covalent. This bond is formed when one electron atomic clouds with opposite backs are overlapped. Compounds with covalent bond are called homopolar or atomic. Two varieties of covalent bond are distinguished: non-polar and polar.

In case of non-polar covalent bond the electron cloud, formed by a common pair of electrons, or electron bond cloud, is distributed in the space symmetrically relative to the nuclei of both atoms. This can be exemplified by diatomic molecules consisting of the same element atoms: H_2 , Cl_2 , O_2 , N_2 , F_2 , etc. Their electron pair equally belongs to both atoms. These substances have low melting and boiling temperatures and do not ionize in water.

In case of polar covalent bond the electron bond cloud is shifted towards more electronegative atom, i.e. towards the atom with greater relative electronegativity. This

For the metallic bond to occur, it is necessary to have conditions under which needles slide along each other and can connect by overlapping each other with neutron interaction, i.e. needles of chemical elements – ‘hedgehogs’ should be rather long. That is precisely why such chemical bond is impossible for chemical elements at the beginning of the table of chemical conversions.

In the points of needle overlapping conventional magnetic field lines reconstruct and twisting of the coupled sites decreases sharply (**fig.5**).

can be exemplified by molecules of volatile inorganic compounds: HCl , H_2O , H_2S , NH_3 , etc.”

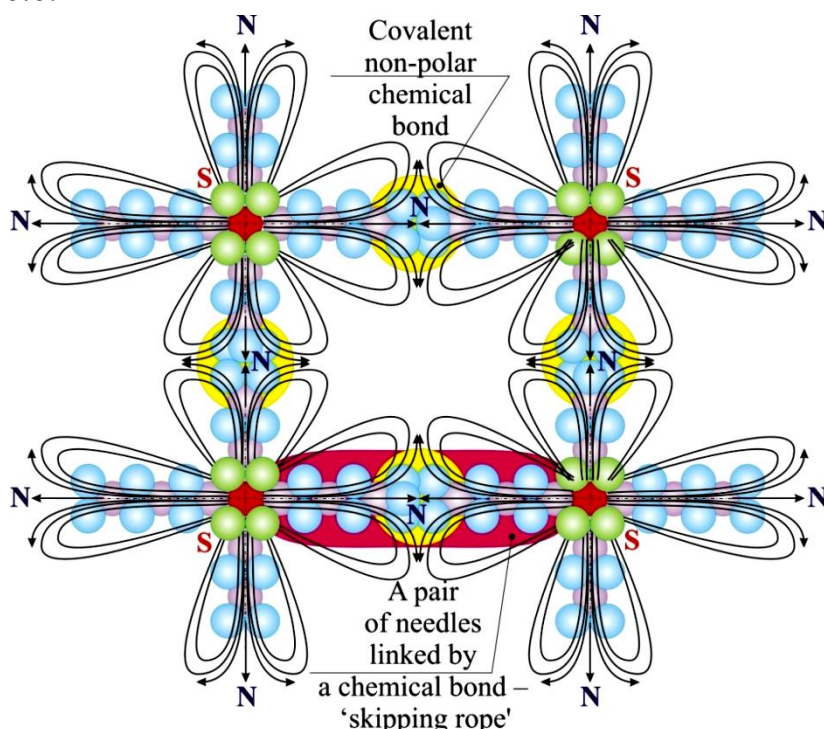


Fig.6. Covalent bond

In NS, a **covalent bond** (see **fig.6**) is an interaction, during which needles of ‘hedgehogs’ are joined by ends rather than by overlapping each other. Such natural interaction occurs between the chemical elements, having starting numbers, since they either have no needles (hydrogen), or these needles are very short, and interaction by overlapping is practically unreal – it will be instable.

Non-polar covalent bond according to NS is a coupling of two needles by ends vertically overcoming magnetic repulsive forces of two *similar* ‘hedgehogs’ (**fig.6**).

Because of the presence of magnetic repulsive forces, and above all due to poor flexibility of short needles under the force impact of thermal carriers, these substances have low melting and boiling temperatures. Two stacked ‘quads’ or ‘pentads’ cease to rotate, as there is no ‘unity’ at the coupling. Without artificial heating covalent bond has the largest mechanical tensile and compressive strength of all types of bonds.

Polar covalent bond according to Neutron Physics (NP) is an end coupling of two needles of *different* ‘hedgehogs’ of elements with overcoming magnetic repulsive forces. The longer the hedgehog’s needles, the stronger molecular magnets, since a greater number of neutrino particles are involved into the process of their creation.

In the polar covalent bond the forces of magnetic repulsion of hedgehogs’ needles increase, and respectively, uncoupling of chemical elements becomes easier, and melting and boiling temperatures decrease much more than in the non-polar covalent bond.

Metallic and covalent chemical bonds are **neutron chemical bonds**, since they are carried out by means of interaction of neutrons of the neighboring hedgehogs’ needles.

Ionic (magnetic) chemical bond

According to MP: “... Chemical bond between ions realized by electrostatic attraction is called *electrovalent or ionic bond*.”

There are rather few ionic compounds. They have high melting and boiling temperatures; they are electroconductive in the melt state and easily ionize in water. Ionic compounds consist of separate molecules only in the vapor state. In this case, for example, one ion of Na^+ is connected with one ion of Cl^- . In the solid (crystalline) state ionic compounds consist of regularly located positive and negative ions. Thus, for example, in sodium chloride, as detected by X-ray study (structural analysis), each Na^+ -ion is surrounded

with six Cl^- -ions, and each Cl^- -ion is surrounded with six sodium ions. Ions interact between each other, attracting each other. A crystal as a whole is a giant molecule consisting of such ions...”

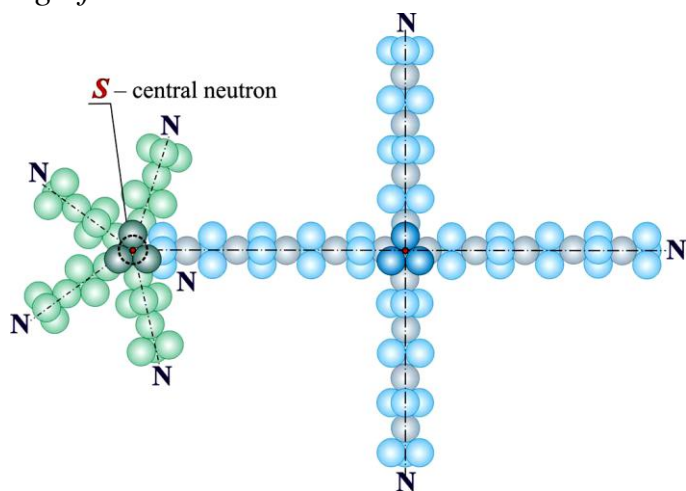


Fig.7. Ionic bond. Top view

‘hedgehog’ freely penetrates between the needles of the smaller ‘hedgehog’ when coupled and moves apart its needles (**fig.7**). Hybridization of the magnetic fields of the longer needle of the largest ‘hedgehog’ and four needles of the smaller one takes place, which results in the rise of melting and boiling temperatures.

Sedimental chemical bond

Neutron Sciences introduce another three bonds – sedimental covalent, sedimental ionic, and sedimental metallic ones.

Sedimental bonds according to NP are layered couplings of horizontal planes of groups of elements and molecules, poorly or absolutely not matching between themselves, with overcoming magnetic repulsion of the lower immovable layer by means of force of weight of the upper movable layer.

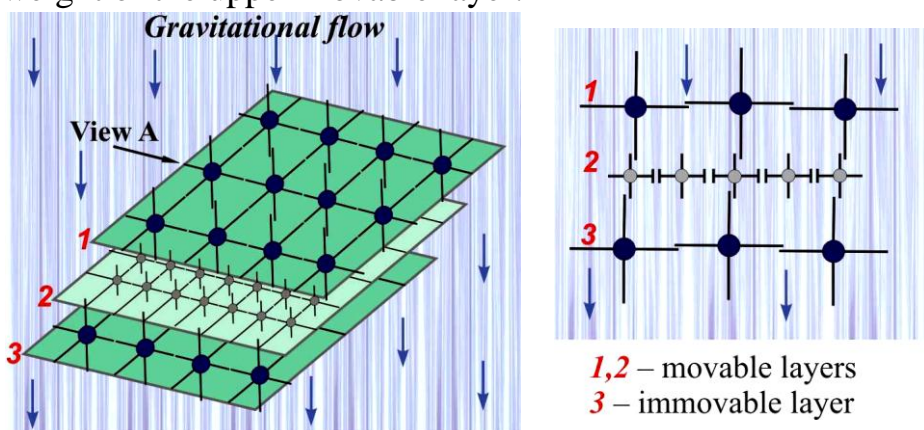


Fig.8. Sedimental bonds

volleyball net with square, rectangular or rhombic meshes.

Now let us take the second plane – the volleyball net and put it twisting on the first one, then the third plane and so on, which will result in the horizontal bonds of needles, blocked on many directions, being much stronger than the original ones (**fig.8**).

Let us consider the principle of the ionic bond according to NP (see **fig.7**).

Ionic bond is possible only between the ‘hedgehogs’ that differ considerably in their needle size. In this case a needle of the larger ‘hedgehog’, with the northern pole being at its end, may reach the central neutron (the southern pole) of smaller ‘hedgehog’ and bump against it (magnetic bonding forces).

Such bond is most stable if a smaller ‘hedgehog’ has six quad-based needles: in this case a needle of the larger

In this case hedgehogs’ needles of planes of elements or molecule shaving overcome magnetic repulsive forces (bonding) come into neutron interaction by overlapping.

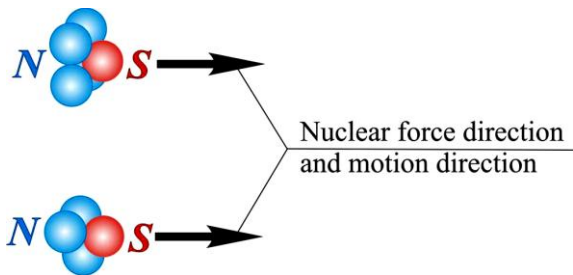
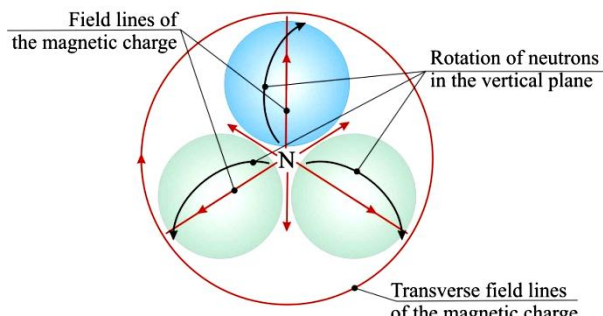
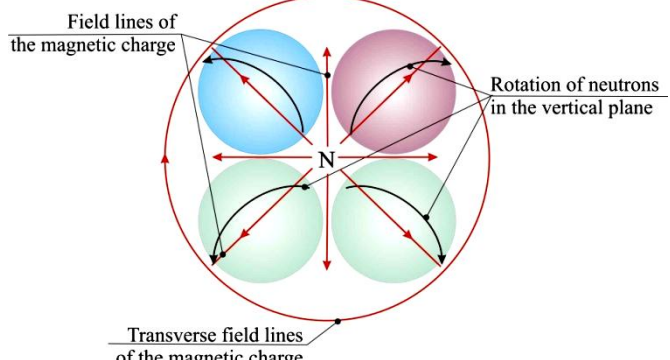
Looking from top downward at the plane, the groups of elements or molecules will resemble

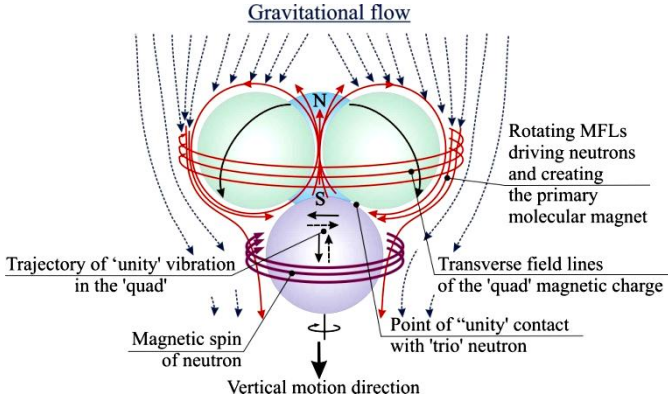
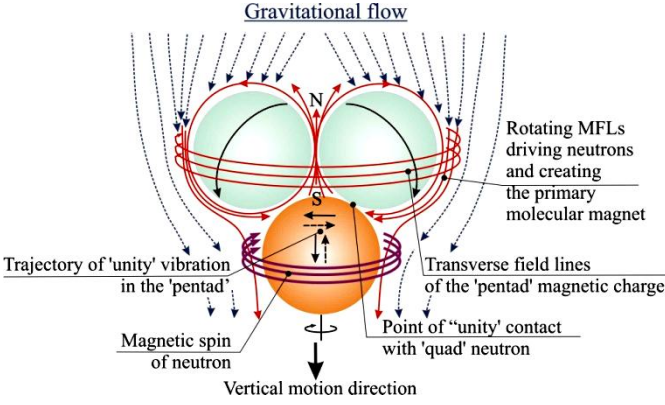
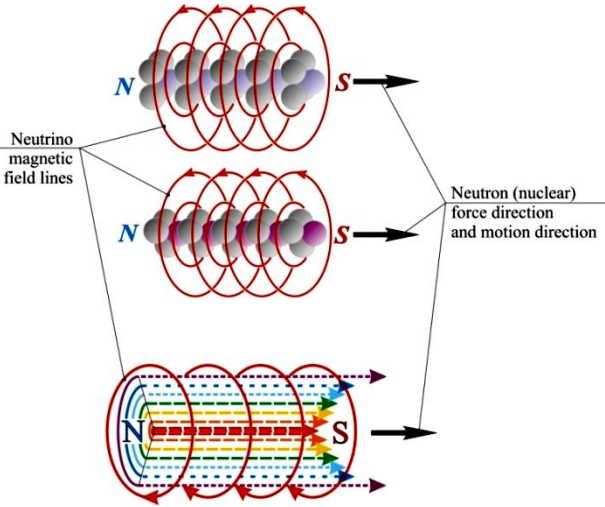
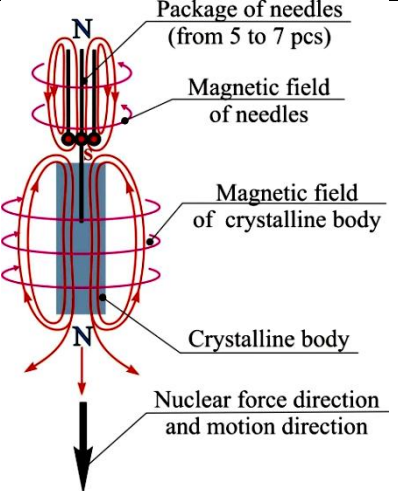
Vertical needles of the ‘hedgehogs’ may not be engaged with their neighbors at all. For these reasons, natural crystals are easily split along these layers – planes.

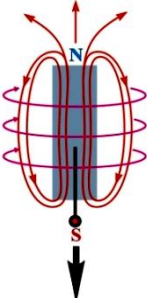
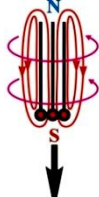
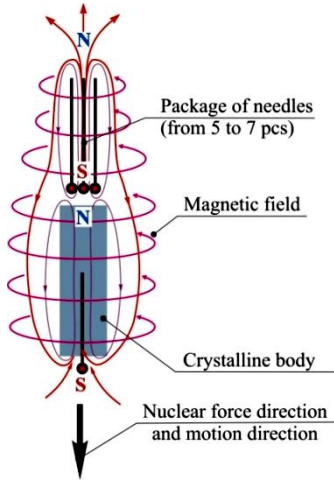
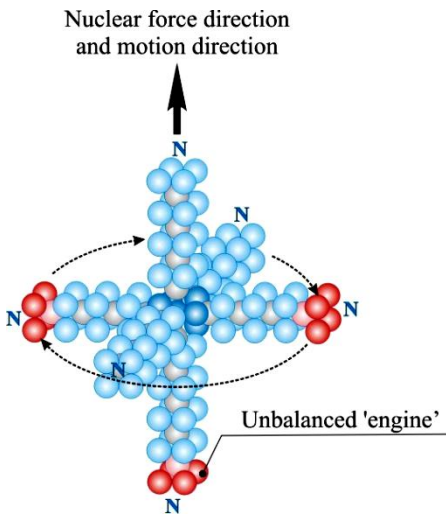
When the upper plane overlaps the lower one, horizontal needles may cross, like swords, at any angles, entering neutron interaction.

- Since the flows of gravitons constantly pass through the lattices of all bodies, they appear to be electron providers (according to NS) in the electric generators, which means that the electron is an antipode of the graviton, and they can transform into each other, and electric charges are magnetic poles (see *Table 1*).
- The graviton has the northern pole in front, as all chemical elements, while the electron has the southern pole, which results in destruction of chemical elements when they crush with freely moving electrons and cutaneous lesion, for example, during electric shock (let us recall that the speed of electricity is near to the speed of light “C”)

Table 1

BASIC ENERGY CARRIERS of the I and II PARALLEL WORLDS on the basis of neutron or neutrino		
PRIMARY – structural unit (SU) SU-4 and SU-5 have a stable structure due to the rotation of neutrons, ensured by the rotating MFL of molecular magnets (‘drive belts’), having neutrino engines, and available magnetic charges, and speeds nearing the speed of light “c”.	‘pentad’	
	‘quad’	
Neutrons consist of neutrinos and contact with each other in SU-4 and SU-5 through covalent neutrino chemical bond like sticky lubricants		
<p>“TRIO” TOP VIEW</p>  <p>Magnetic charge of ‘trio’</p>	<p>“QUAD” TOP VIEW</p>  <p>Magnetic charge of ‘quad’</p>	

			
Magnetic field lines of 'quad'		Magnetic field lines of 'pentad'	
LIGHT	A needle from 'pentads'		
	A needle from 'quads'		
	Cord		
MAGNETIC – graviton or β^+ - particle	Anode carrier – transformer mainly on the basis of the chemical element Ferrum with the needle 43 SU-4 long		

<p>DURING GRAVITON FRACTURE</p>	<p>α^- – particle (a needle with crystalline body)</p>	 <p>Nuclear force direction and motion direction</p>
	<p>γ - particle (a package of 5-7 needles or package of light)</p>	 <p>Nuclear force direction and motion direction</p>
<p>ELECTRIC – “electron”, e^--particle (when fractured – α^--particle and γ-particle)</p>	<p>Cathode carrier – transformer</p>	 <p>Package of needles (from 5 to 7 pcs)</p> <p>Magnetic field</p> <p>Crystalline body</p> <p>Nuclear force direction and motion direction</p>
<p>CHEMICAL ELEMENT – “GAS”</p>	<p>There is one unbalanced 'engine' (SU)</p>	 <p>Nuclear force direction and motion direction</p> <p>Unbalanced 'engine'</p>

Under certain conditions, all of the above energy carriers and their temporal combinations are broken into smaller structures (needles and cords of light, the SU), as well as into neutrons and neutrinos (for the II parallel world – the ‘dark matter’), which become heat carriers.

Let us pay attention to the fact that from the point of view of NS the Universe has a **plurality of parallel worlds** built on the same principle, but using different initial carriers: the I world uses the neutron, the II the world – the neutrino (dark matter), the III world – the superneutrino, etc.

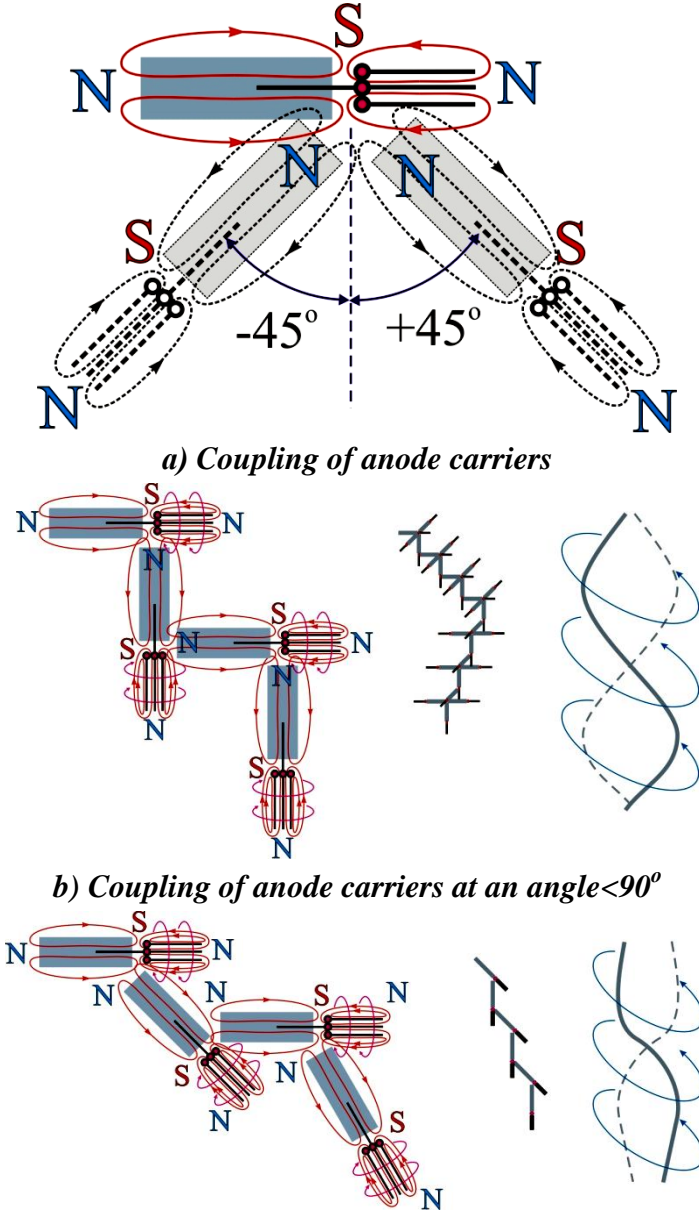


Fig.9. Formation of magnetic field lines (MFL)

0.1÷0.3“C”) which appears not only in the radioactive decay, but always and everywhere, including in the generation of electricity in the machine generators, solar panels, etc.;

– Gravitons are elementary components of magnetic field lines (MFL) (see **fig.9**), which exposed to constant compression of the Earth’s magnetic field are constantly squeezed towards the magnetic axis, formed by the electric current of planets, like all electric coils, forming chaotic flows (at the telegraph, they are called “cheerful atmospherics”) – these are extra-long radio waves after connecting flows of pieces of MFL and electrostatic charges, for example, storm clouds;

– It is well known that to obtain a constant magnet a definite chemical ferromagnetic body is required, for example, made of iron, and only in its presence MFL may be formed via it under certain conditions;

– Electrons and gravitons as transformers (see **Table 1**) apparently must have bodies consisting at least of dozens of tiny chemical elements, whereon MFL may be formed, for example, on the basis of neutrino chemical elements (this is the II parallel world or just the ‘dark matter’);

– We have come to a wild conclusion that the electron contains dozens of chemical elements, and the molecular magnet on their basis is an α^- -particle (or a slow electron having speed of

- As we can see, in generators electricity is formed not from the free electrons (elementary particles under MP), but from the structured bodies of energy carriers (see **Table 1**);
- Graviton and electron (according to NS) can be functionally presented as a rocket putting a satellite with its engine for additional control into the orbit;
- When gravitons or chains of them (MFL) hit the crystalline lattice of the generator copper winding, ‘satellite separation’ occurs – α^- -particle separates from the main body of the ‘rocket’ – γ^- -package which also has the southern pole in front, and under the action of the magnetic field of the poles they move in one direction in compliance with the known rules (left-hand rule), only the speed of α^- -particles equals to $0.1 \div 0.3 “C”$, and that of γ^- -package – to “C”, and it catches up the α^- -particles and docks at the rear side to its northern pole, resulting in the full-fledged electron having speed “C” (the graviton has transformed into the electron, which points at the possibility of the reverse process);
- It is obvious that to generate electricity by any way it is necessary to break gravitons;
- Where do gravitons and electrons come from?

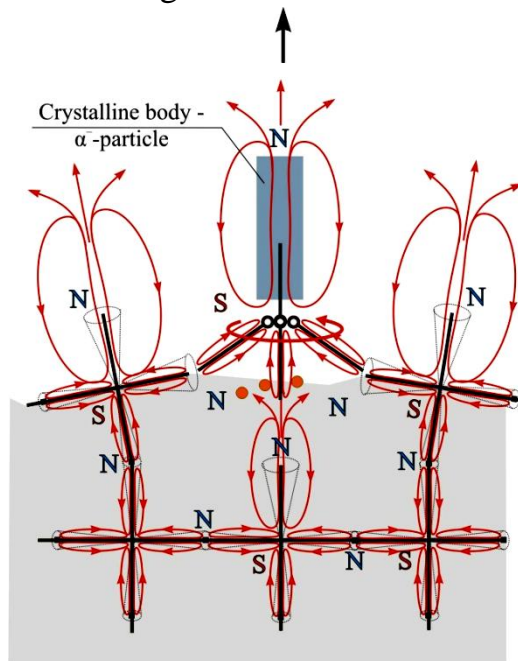


Fig.10. Graviton formation

– Gravitons are generated after formation of α^- -particles on the free needles of surface chemical elements of the bodies after they are torn out by oscillating heavy α^- -particles from their lattices with the break-down of chemical bonds (see **fig.10**), thus, many bodies made of different chemical elements may produce gravitons;

– Slow (α^-) and fast (e^-) electrons are obtained from gravitons, and electricity can be ‘ferrous’, ‘golden’, ‘silver’, ‘uranium’, etc., depending on which chemical elements the graviton was formed on;

– Radioactive chemical element with 8 needles as opposed to simple chemical element with 6 needles may form separate

α^- -particles, i.e. slow electricity due to the loss of two unstable needles without tearing a chemical element from the body in the form of β^+ -particle (graviton);

- It is obvious that α^- , β^+ -particles and γ^- -packages in Neutron Sciences are energy carriers with their bodies of chemical elements, and in fact they are not particles, similar to particles in MP, the names were left only for the readers’ convenience;
- α^- -particle of slow electricity links very quickly (both in the human body, and any other) with chemical bonds of lattices of liquids and gases, converting the latter into powerful thermal ions as compared to thermal ions based on the nee-

- dles of chemical elements, or simply to light, i.e. light ions, which ultimately leads to damage of the surface tissues and organs in the human body;
- at large intensity β^+ -particle (graviton) presses and shifts everything in the human body with any consequences similar to falling of a man from the height onto the asphalt, for example;
 - γ^- -package (and γ^- -radiation, respectively) is most dangerous for human health, as it can decompose into separate needles of light and penetrate anywhere into the human body, increasing the quantity of thermal foci by 5÷7 times by means of thermal ionization with annihilation of living cells and whole organs;
 - When electric current is generated in the generators, at the first stage gravitons and MFL chains are captured as magnetic fields, and then while the latter are impressed into the lattices of copper of the windings, they are transformed into electrons (NP) creating a flow, i.e. electric current;
 - It should be noted that gravitational flow changes its density in the same way as light according to the dependence $\rho_{gr} \sim \frac{1}{R^2}$;
 - Hence, electric capacity of the generator will decrease considerably due to decreased density of the gravitational flow when it is moved away from the Earth's surface by 2000÷3000 km.

The above stated has demonstrated a somewhat different viewpoint on the fundamentals with a perspective to get answers to most questions.

Let us return in our imagination back to the Moon to our package of rice with the Earth's mass of 1 kg. At this point we admit an assumption that mass does not attract mass, but there is some other mechanism operating for interaction between the rice grains in the package and gravitational flow of the Moon.

What is this assumption based on?

Material from Wikipedia – the Free Encyclopedia:

“Gravity (attraction, universal gravitation) (from Latin *gravitas* – ‘heaviness’) is a universal fundamental interaction between all the material bodies.

...Within classical mechanics gravitational attraction is described by Newton's law of universal gravitation which states that a particle attracts every other particle in the universe using a force that is directly proportional to the product of their masses and inversely proportional to the square of the distance between them, that is:

$$F = G \frac{m_1 \cdot m_2}{r^2}$$

here – gravitational constant, equals approximately to $6.67 \times 10^{-11} \text{ m}^3/(\text{kg} \cdot \text{s}^2)$.

...Under the law of universal gravitation, the value of the gravitational acceleration on the surface of the Earth or of other planet is connected with the planet mass M by the following ratio:

$$g = G \frac{M}{r^2}$$

where G – gravitational constant ($6.67408(31) \cdot 10^{-11} \text{ m}^3 \cdot \text{s}^{-2} \cdot \text{kg}^{-1}$), and r – radius of the planet”.

Thus, according to MP, for gravitational acceleration on the Moon surface the following formula will be true:

$$g_{Moon} = G \frac{M_{Moon}}{r_{Moon}^2}$$

Thus, we have the following constant quantities: $M_{Moon} = const$, $r_{Moon} = const$, $G = const \rightarrow g_{Moon} = const$, and F_{Moon} is a variable in all gravitational spots. At the same time asymmetric distribution of mass along the volume of the Moon is not proved. Hence follows that without additional studies of the Moon it either is not subject to the law of universal gravitation, or mass of the rice package is a variable quantity.

Gravity formula $F = m \cdot g_{Moon}$ is empirical, and it does not care what meaning we put into it. Mass in this formula is unexplainable notion so far, despite the fact whether mass attracts mass or not. Recall the term ‘*amount of substance*’ and assume that this is an amount of chemical elements in this volume of the body. Thus, in the bodies of similar volume, for example, of copper and aluminum, larger quantity of substance will be contained in aluminum, as its chemical elements are less than chemical elements of copper, but the mass will be larger than that of the body of copper!

What caused this turn of events?

Needles of all chemical elements have their constant molecular magnets with neutrino-based MFL (recall, these MFL have the same structure as neutron-based MFL). Power of molecular magnets is determined by the length of needles. What fold *Cu* needles (49 SU-4) are longer *Al* needles (11 SU-4), that fold the power of *Cu* molecular magnet is higher than that of *Al* molecular magnet. Power and induction of similar molecular magnets are approximately proportional to their dimensions.

The windows of the crystal lattices of the same volume of *Cu* and *Al* will vary in size about by 20 times, and this is the main point of gravitational power interactions of lattices with the gravitational flow, because the total power of molecular magnets of gravitons in the *Cu* lattice window will also be roughly by 20 times larger than in the *Al* lattice window. Thus, magnetic power action of the gravitational flow on the *Cu* crystalline lattice will be much greater than on the *Al* lattice of the same volume due to the fact that the metallic chemical bonds of *Cu* are much more compressed than those of *Al*, and *Cu* body will be more deformed, because it has significantly fewer chemical bonds. Large deformation of the body is the factor that determines the greater power action of gravity, being also a force of weight.

At the beginning of this article, we have put the meaning into the term ‘mass’ that it determines the properties of all the depersonalized materials of our objects to interact blocks at the first step with the gravitational flow, which led us to the gravitational mass.

Keywords: mass determines the properties of all the depersonalized materials of our objects-cubes to interact ... (with external forces).

Mass is depersonalization of materials of objects with similar volumes, having its own force of resistance.

Let us divide into the groups of words:

Mass is chemical elements (chemical elements depersonalize the type of materials);

Mass is a physical object;

Mass is own force of resistance.

Definition:

Mass of the body is a physical object consisting of structured chemical elements in the form of 'hedgehogs' with needles-molecular magnets connected with each other by chemical bonds – power 'muscles' of the structure, representing the force of the object resistance to any external power impact with the mandatory creation of the internal inertia force after termination of the latter's action.

Gravitational mass of the body is a mass, exposed to the constant force impact of a gravitational flow through the magnetic interaction between gravitons or short MFL chains and molecular magnets of chemical elements of the body.

Inertial mass of the body is a result of instantaneous external mechanical force impact thereon with internal force of inertia appearing after it, which is created by chemical bonds, restoring the structure of the body.

Gravitational and inertial mass of the body is absolutely one and the same mass of the body with the same chemical bonds and absolutely similar response to the external effects, only in the first case the body experiences a constant force and in the second case, an instantaneous force acts on it.

Radioactive substances

Simple chemical elements have six needles-molecular magnets (they are also needles of light, thermal energy carriers), while radioactive chemical elements have eight needles. Two needles of eight can rather easily split off the chemical element and become light, a thermal energy carrier. However in order to turn the substance made of radioactive chemical elements, emitting only light used by bacteria and lighting bugs, into a common radioactive element constantly radiating α -, β - and γ -particles, it should have a special crystalline lattice (see **fig.11**).

Crystalline lattice of eight-pointed hedgehogs with completely bonded needles emits no α , β and γ -particles

Crystalline lattice of eight-pointed hedgehogs with partially bonded needles is a radioactive substance with α -, β - and γ - rays.

Top view

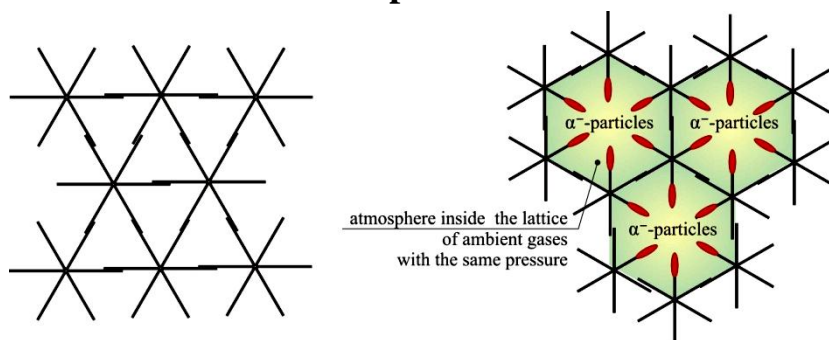


Fig.11

Fig.11 shows that the substance lattice in the form of honeycombs has 50% of free needles of chemical elements that capture chemical elements-gases of the intracellular atmosphere by means of the ion (magnetic) chemical bond and build the bodies of α -particles. It is obvious that the substance can produce the largest quantity of α -particles, as compared to the other particles, since in this case the entire lattice volume operates.

And β^+ -particles are ranked second in terms of quantity of particles consisting of the same substance, as they are formed only on its surface from the superficial chemical elements.

The third place in terms of particle number is taken by γ^- -particles, as they appear after the fracture of β^+ -particles into α^- -particles and γ^- -packages.

SUMMARY TABLE OF CONVERSIONS OF CHEMICAL ELEMENTS No.5.

Conversion of chemical elements occurs by connecting to the needles 'hedgehogs' of the appropriate structural units SU-4 or SU-5.

SU layers	Table 1(8x4)		Table2(6x4)		Table 3(8x5)		Table 4(6x5)		ρ_{theor}	Sym bol	Name
	n^0	ρ_{gr}	n^0	ρ_{gr}	n^0	ρ_{gr}	n^0	ρ_{gr}			
1	2	3	4	5	6	7	8	9	10	11	12
1/2	11	84	11	84	14	107	14	107	90	H	Hydrogen ▲
1 1/8(6)	27	206	27	206	34	259	34	259	206	He	Helium ▲
3	95	725	71	542	119	908	89	679	534	Li	Lithium
4	127	969	95	725	159	1213	119	908	971	Na	Sodium
4 3/6(8)	139	1061	107	816	174	1328	134	1022	1026	N	Nitrogen ▲
5	159	1213	119	908	199	1518	149	1137	862	K	Potassium
6	191	1457	143	1091					1550	Ca	Calcium
6					239	1823	179	1366	1830	P _{white}	White Phosphorus ▲
6 1/6(8)					244	1862	184	1404	1444	Ne	Neon ▲
6 1/8(6)	195	1488	147	1122					1469	O	Oxygen ▲
7	223	1738	167	1274					1738	Mg	Magnesium
7					279	2129	209	1595	1532	Rb	Rubidium
71/6			171	1305			214	1633	1656	Ar	Argon ▲
8	255	1946	191	1457					1959	Cs	Cesium
8					319	2434	239	1823	1848	Be	Beryllium
8 3/8(6)	267	2037	195	1488	334	2548	254	1938	2040	Cl	Chlorine ▲
8 7/8(6)	283	2159	211	1610	354	2701	264	2014	2120	F	Fluorine ▲
9	287	2190	215	1640					2265	C _{gr}	Carbon (graphite) ▲
9					359	2739	269	2052	2702	P _{bl}	Black Phosphorus ▲
10	319	2434	239	1823					2314	B	Boron ▲
10					399	3044	299	2281	2223	P _{red}	Red Phosphorus ▲
11	351	2678	263	2007	439	3349	329	2510	2698	Al	Aluminum
12	383	2922	287	2190					2085	S ₁	Sulfur -1 ▲
12					479	3655	359	2739	3513	C _{diam}	Carbon (diamond) ▲
13	415	3166	239	2373					2332	Si ₁	Silicon-1 ▲
13					519	3960	389	2968	2988	Sc	Scandium
13 1/6			315	2403			394	3006	3004	Kr	Krypton ▲
15	479	3655	359	2739	599	4570	449	3426	2630	Sr	Strontium
15 3/6			371	2831			464	3540	3571	Xe	Xenon ▲
16	511	3899	383	2922	639	4875	479	3655	3594	Ba	Barium
17	543	4143	407	3105	679	5181	509	3883	4073	Br _l	Bromine (liq) ▲
18 1/8(6)	579	4418	435	3319	724	5524	544	4151	4400	Rn _r	Radon (gas) ??
20	639	4875	479	3655	799	6096	599	4570	4504	Ti	Titanium
21	671	5119	503	3838					5000	Ra ₁	Radium-1
21					839	6401	629	4799	4808	Se ₁	Selenium ▲
22	703	5364	527	4021	879	6706	659	5028	6694	Sb	Stibium
23	735	5608	551	4204	919	7012	689	5257	6977	Yb	Ytterbium
23 1/6(8)	739	5638	555	4234	924	7050	694	5295*	5245	Eu	Europium
24	767	5852	575	4387	959	7317	719	5486	7194	Cr	Chromium
25	799	6096	599	4570					6000	Ra ₂	Radium -2
25	799	6096	599	4570					4472	Y	Yttrium
25	799	6096	599	4570	999	7622	749	5715	5780	As ₁	Arsenic-1 ▲
26	831	6340	623	4753	1039	7927	779	5943	5907	Ga	Gallium

27	863	6584	647	4936					4934	I	Iodine ▲
27					1079	8232	809	6172	6162	La ₁	Lanthanum-1
28	895	6829	671	5119	1119	8538	839	6401	6769	Pr ₁	Praseodymium-1
29	927	7073	695	5303					7007	Nd	Neodymium-1
29	927	7073	695	5303					5323	Ge ₁	Germanium-1
29					1159	8843	869	6630	8790	Co	Cobalt
30	959	7317	719	5486	1199	9148	899	6859	7260	Pm	Promethium
31	991	7561	743	5669	1239	9453	929	7088	7286	In	Indium
32	1023	7805	767	5852	1279	9758	959	7317	5769	Sn ₁	Stannum-1
33	1055	8049	791	6035	1319	10063	989	7546	6110	V	Vanadium
34	1087	8293	815	6218	1359	10369	1019	7775	6272	Te	Tellurium ▲
36	1151	8782	863	6584					6531	Zr	Zirconium
36					1439	10979	1079	8232	8230	Se ₁	Selenium-1
37	1183	9026	887	6767	1479	11284	1109	8461	8630	Nb	Niobium
38	1215	9270	911	6951					9314	Po ₁	Polonium-1
38					1519	11589	1139	8690	8642	Cd	Cadmium
39	1247	9514	935	7134					9523	Po ₂	Polonium-2
39	1247	9514	935	7134					7144	Zn	Zinc
39					1559	11895	1169	8919	8902	Ni	Nickel
41	1311	10002	983	7500	1639	12505	1229	9377	10062	Ac	Actinium
41 1/8(6)	1315	10033	987	7530	1644	12543	1234	9415	7536	Sm ₁	Samarium
42	1343	10247	1007	7683	1679	12810	1259	9606	7469	Mn	Manganese
43	1375	10491	1031	7866					7872	Fe	Ferrum
43					1719	13115	1289	9835*	9800	Bi	Bismuth
44	1407	10735	1055	8049	1759	13421	1319	10063	7895	Gd	Gadolinium
45	1439	10979	1079	8232	1799	13726	1349	10292	8272	Tb ₁	Terbium -1
46					1839	14031	1379	10521	10500	Ag	Argentum
47	1503	11467	1127	8599	1879	14336	1409	10750	11563	Tc	Technetium
47	1503	11467	1127	8599					8559	Dy	Dysprosium
48	1535	11711	1151	8782	1919	14641	1439	10979	11724	Th	Thorium
48 1/6(8)	1539	11742	1155	8812	1924	14679	1444	11017	8799	Ho	Holmium
49	1567	11956	1175	8965	1959	14946	1469	11208	8933	Cu	Cuprum
50	1183	12200	1199	9148	1999	15252	1499	11437	9062	Er	Erbium
51	1631	12444	1223	9331	2039	15557	1529	11666	9318	Tm	Thullium
53	1695	12932	1271	9697	2119	16167	1589	12123	12038	Pd	Palladium
54	1727	13176	1295	9880					9849	Lu	Lutetium
54					2159	16472	1619	12352	12437	Ru	Rhutenium
55	1759	13421	1319	10063	2199	16778	1649	12581	16623	Ta	Tantalum
56	1791	13665	1343	10247	2239	17083	1679	12810	13680	Cm	Curium
56	1791	13665	1343	10247					10220	Mo	Molybdenum
57	1823	13909	1367	10430	2279	17388	1709	13039	13780	Am	Americium
58	1855	14153	1391	10613	2319	17693	1739	13268	13248	Hf	Hafnium
59	1887	14397	1415	10796	2359	17998	1769	13497	14193	Hg	Mercury
62	1983	15130	1487	11345	2479	18914	1859	14183	11340	Pb	Lead
63	2015	15374	1511	11528					15370	Pa	Protactinium
63					2519	19219	1889	14412	19263	W	Wolfram
64	2047	15618	1535	11711	2559	19524	1919	14641	19320	Au	Aurum
65	2079	15862	1559	11895	2599	19829	1949	14870	11870	Tl	Thallium
68	2175	16594	1631	12444	2719	20745	2039	15557	12423	Rh	Rhodium
69	2207	16839	1655	12627	2759	21050	2069	15786	21020	Re	Rhenium
71	2271	17327	1703	12993	2839	21661	2129	16243	21450	Pt	Platinum
73	2335	17815	1751	13359	2919	22271	2189	16701	22400	Ir	Iridium
74	2367	18059	1775	13543	2959	22576	2219	16930	22590	Os	Osmium

78	2495	19036	1871	14275	3119	23797	2339	17845	18950	U	Uranium
81	2591	19768	1943	14824			2429	18532	19816	Pu	Plutonium
83	2655	20257	1991	15191			2489	18990	20250	Np	Neptunium

Legend:

Curium	Radioactive element according to MP (Modern Physics)
Actinium	Actinoid according to MP (Modern Physics)
Lanthanum	Lanthanide according to MC (Modern Chemistry)
▲	Nonmetals

Gravitational density of substances in the solid state is calculated by formula:

$$\frac{\rho(He)}{N(He)} = \frac{\rho_{grav}(element)}{N_{true}(element)}, \text{ hence } \rho_{grav}(element) = N_{true}(element) \cdot \frac{\rho(He)}{N(He)},$$

where

$\rho_{grav}(element)$ – calculated gravitational density of the given element in the table of conversions (solid state)

$N_{true}(element)$ – true quantity of neutrons in the ‘hedgehog’ of the given element in the solid state

$\rho(He)$ – Helium density in the solid state, being equal $\rho=206 \text{ kg/m}^3$

$N(He)$ – quantity of neutrons in helium ‘hedgehog’ in the solid state, being equal to $N=27$

In addition to the variety of chemical elements from the table of conversions, which is determined by their physical state, number of SU-4 or SU-5 in the hedgehog’s needle, chemical and physical properties of all substances depend on stable special structure of a chemical element.

Read it yourself → give your friends sight of it and find out their opinion.