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TÍTULO: Interacción entre los ornamentos y la estructura gráfica de las moléculas.

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RESUMEN: Azerbaiyán es una de las antiguas partes históricas ricas del mundo. La esfera artística de influencia de las obras maestras creadas por hábiles arquitectos y pintores de Azerbaiyán había sido muy amplia y fuerte. Muchas de estas decoraciones tenían un significado místico y una esencia simbólica. Los motivos elaborados en los monumentos de arte, en primer lugar, son medios de expresión del arte y están dirigidos a aumentar la calidad estética de las cosas que decoraron. El artículo aborda estos aspectos.

PALABRAS CLAVES: Geometría, Decoración, Arquitectura, Adornos.

TITLE: Interaction between the ornaments and graphic structure of molecules.

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ABSTRACT: Azerbaijan is one of the ancient rich historical parts of the world. The artistic sphere of influence of the masterpieces created by skilled architects and painters of Azerbaijan had been very broad and strong. Many of these decorations had a mystical meaning and a symbolic essence. The motifs elaborated in the monuments of art, in the first place, are means of expression of art and are

aimed at increasing the aesthetic quality of the things they decorated. The article addresses these aspects.

KEY WORDS: Geometric, Decoration, Architecture, Ornaments.

INTRODUCTION.

We should note, that according to the principle of establishing ornaments have a special structure. Creating of ornaments begins with formation of ornamental cage and resulted alignment geometrically symmetric systems.

Geometric ornaments with molecule-based in establishing harmony, symmetry, geometric similarity, symmetry principles play a key role in the creating of geometric ornaments. Even structure of such ornaments motivated their structural development, increasing of human sensor ability and strengthening of geometric thinking, calls on purpose.

When we study (research) the molecular ornaments combined with the scientific approach, it is possible to show artistic perfection, content richness and forming of a unity form, the depth of ideas. By visually given tetrahedral models and projections schedule, hydrocarbon compounds, molecules are endless, their infinite structures are endless, too. Of course, this is a new art way; art is fully adopted, these are valuable materials for actors, designers and artists.

The main aim of the article is to give a scientific explanation of chemical compounds' formula and opportunity to create a rich geometric molecular. At the same time, it was shown a creation of tetrahedral form in scientific point of view.

DEVELOPMENT.

The main aim is to show this principle implementing in the ornament science. Both the architecture and decorative art in all areas as well as the spatial structure, spatial volume different functional forms, the structure and composition of purpose, a logical approach to the analysis of artistic and decorative design is one of the most pressing issues.

Method of approach in terms of logical thinking of mathematic and geometric analysis were shown in the treatises of well-known scholars such as Ibn Sina, Al-Kashi, al-Farabi; even Aristotel, Platon, Pifaqor.

The scientists stressed that these geometric figures are used as model, pattern and ornaments. A well-known researcher of Azerbaijan Khudu Mammadov had made (prepared) the theoretical basis of geometric figures' crystallographic essence; to give scientific names and their investigation based on the theory of the importance of relationship between the sciences.

During thousands years, the best patterns of architectural, description and decoration art works created in Azerbaijan was included in the gold fund of worldwide art. It played an important role in the development of art creation of eastern people. Many of Azerbaijani well-known architects, painters and other masters had showed a wide creative activity in the East countries, especially from Turkey to the far India. They took an active part in creating and decorating rare art works which were far-famed in the feudal palaces.

The scientific in Azerbaijan ornament field shows that some geometrical ornamental forms had developed from ancient time and took traditional picture. These ornaments didn’t lose its main essence till nowadays and it uses in the art works more than once until recently. The ornaments had been unsupported part of Azerbaijan from the beginning of ancient period and at the same time it gifted a highly artistic qualities to the constructive significant of monuments.

The creation of decorations is the portentous part of the period and surroundings and complicated separate stages of development of customs, life conditions, religious ceremony and artistic taste in itself [Nazim Kazimov. 2013].

The investigations show, that from the ancient time, the art decoration on monuments had never worked out freely and in disorder case, but it always carried out according to the custom rules. These rules characterized the definite description style of culture and performed brightly expression role on

artistic aesthetic views of the period. Besides, the main ideological forms of the period as religious, mythology, folklore, poetry, were also influenced to description style.

By the geometric patterns found in all areas of creativity, scientific investigation of molecular structures and their scientific names, genius Einstein has such a phrase: "The nature's most beautiful gift to know and understand happiness"; indeed, the nature of the world around us, whether visible or invisible is rich in beauty, which can be understandable. A man watches, comprehends this beauty and he is surprised to grasp the secrets of nature, because it reflects the admiration of people who are part of nature's perfect.

DEVELOPMENT.

Decorations.

The information of travelers about religious ceremony, art brand and etc. dealing with mastership which take place in Shamakha (Azerbaijan), Tabriz, Ardabil (Iran) are very interesting too. We meet different views about the ornament motives of the art samples, its artistic peculiarities and contents in many works of East painters and art critics. There were given a wide explanation about ornament art, its structure and contents in Iskandar Munshine's "Tarikhi-alam-araye-Abbasi" work, Gazi Ahmad's "About painting and calligraphy" booklet, in the Sadig bey Afshar's "Ganun us - savar". [R. Efendi.2002]. The investigations show that, though the decoration meet by change on the art monuments are different and we may divide them into six large groups.

1. Geometrical ornaments.
2. Botanical ornaments.
3. Zoomorphic and legendary- mythic images.
4. Topical and narrative description.
5. Decorations made up from different from of calligraphy.
6. Emblems and symbolic essence decoration.

We must note that all these decorations on the art monuments are not met simultaneously. Some of them are decorated by geometrical ornaments and some by botanical ornaments but the others are decorated by mixed ornaments and pictures. It must be noted that, the most of these ornaments recently having decorated character had a special meaning in the far past and they reflected real, lifeless images which are met in the life and daily round.

Designer artists – the architects are perceived the world with their imagination and revive it according to their thinking and privatize. Craftsmen who use a simple spatial geometric figures first of all, Platon"s materials - tetraedri, heksaedri, oktaedri, ikosaedri and dodekaedri switch on the plane simple spayial figures and exploring ways of how to use them.

Geometrical ornaments.

Some geometrical ornaments had been the first writing and explanation from among the primitive human in the far past, too. From the ancient time, geometrical ornaments which were used in schematic and conditional style rose to high development stage in Azerbaijan in the middle age. The high development of geometrical ornaments in the middle ages first of all deals with general development of geometry and algebra, mathematics and other exact sciences. In this period, the scientific notions as symmetry, proportionality, harmony, scale passes to the front plan in all fields of artistic culture.

We met by chance an original compound sample of geometrical ornaments on the architectural monuments in the Middle Ages. “Mermina Khatun” and Kuzeyir’s son Jusif tombs which were built by Abubakr’s son Ajamy may be a nice example for it and they were keepsake of XII century [K.M. Mammadzade.1973].

The geometrical ornaments come cross more than once on the art samples are comparatively callous, static and although in most cases they were in connection with other decoration types. According to their original and artistic image, they have been inseparable part of our culture and decorative art.

According to their appearance, the geometrical ornaments are divided into two groups: simple and compound. We can include straight, fragmentary, wavy lines, the pictures of reflecting the description of sun, moon and stars into simple geometrical ornaments. Among ornament motives, the primary and simple one are the fragmentary lines. We happen upon these on the earthen wares plates found in Khanlar, Gazakh, Nakhchevan territories (Azerbaijan) created in 4-5 thousand years before. The investigations show that, on the base of simple ornaments as straight, fragmentary, wavy lines gradually created the new, relatively compound.

Decorative Motives.

This decoration motive happens upon the earthen wares plates created in the far past, afterwards they began to use on the art monuments made from stone, metal and wood. The carried out scientific investigations show that, this decoration motive represented water in the past. As an example, to this, we can display the red clayey jug founded (in XIII-XVII centuries B.C.) in Shamakha village of Nakhchivan Autonomous Republic (Azerbaijan). The description of duck given between the straight lines on the frame of jug is the point to their swimming on the water. It is interesting that, even such type of decoration motives given today by the people's masters named water on the border of the carpet and on fine-needle works. Among the simple geometrical ornaments, there were "paxlava" like ornaments, too. Afterward, this decoration kind gradually became compound and it was called "katiba" and it overturned to unsupported part of the decorative applied art type: carpet, fabric fancy work stone engraves and etc.

The compound geometrical ornaments are met mainly on the artistic arrangement of architectural monuments. According to the history, most of them belong to the middle age. We see the beautiful and compound samples of these ornaments which are used for decoration main parts of architectural monuments crated in XII-XIV centuries. A lot of these geometrical ornaments were contracted on the base of nets and is formed from the repetition of definite figures and lines on stone, wood, brick and

glasses. We met the most beautiful samples of such kind of compound geometrical ornaments like net in “Gulustan”, tomb near Julfa (Nakhchivan, Azerbaijan) and in architectural monuments in Baku (Azerbaijan) and in its suburbs. The ornaments come across on “Sinning Gala geometrical” [V.M. Papanov.1976].

Others examples include the broken fortress and minaret (1078 year) and on “Seyid Yahya Bakuvi” tomb and in court-house in Shirvanshah’s complex in Azerbaijan (XV century). We must note, that in forming such kind net, the like geometrical ornaments which are known in geometry and in other field such as rectangle, rhombic, triangle, parallelogram and hexagon ornaments are used continually. The compound geometrical net like ornaments covered and decorated not only plain surface but in many cases circle surface of Azerbaijan architectural monuments. We can show as an example the cupolas mosques religious school of musclemen. In this case, net like ornament called “Bandy rummy” are carried out by spreading it from the centre to the sides. There used pair and sometimes single axes for this purpose.

In the middle ages in Azerbaijan, the masters creating geometrical ornaments were applied complicating ornaments by color method. In the nature, as well as in the society, there are met straight, curved and mixed surfaces. Pictures imprinted on these surfaces always aroused interest. Therefore, these ornaments studied in the course of enjoyment if they are reproduced on the basis of exact mathematical calculation and perspective construction [Dickson M.B.1981].

Figure 1. Geometric decors of the mausoleum of “Momina Khatun”, 1186, Nakhchivan,Azerbaijan.

Figure 2. Metal bars with geometric decor, XIX century, Shusha, Azerbaijan.

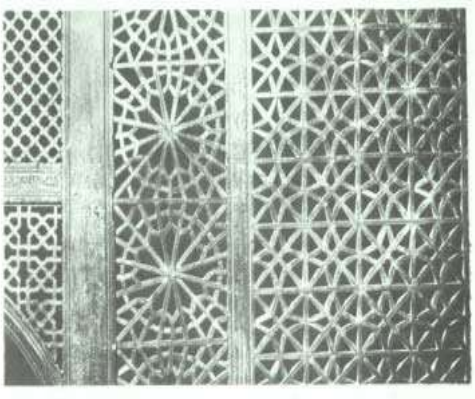
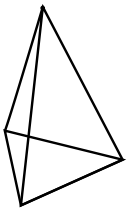


Figure 3. Shebeke of geometric motif in Juma mosque, XVII century, Ganja, Azerbaijan.



For the Eastrn artists of muslims period, ornaments were very important as an expression method. Masters express their ideas and opininons by sylized ornaments. That's why art ornament developed and expanded in Muslim counties. As a result of its systematically development it has been a number of known and unknown quantitative formula with full of deep meanings.

Ornaments are very colorful accourding its content, and shape, they are very deep and polysemantic essence point of view. Architect Ajami's activity is based on design system with deep thinking. Ajami's all ornaments based on simple and straight geometrical figures such as point, circle and triangle.

Obtained figurers such as pentagonal, hexagonal, eightpointed, tenpointed stars are based on geometric and mathematical rules are worked out as a result of the artist's wide range of thinking.

These combined elements are arranged with gold division (F = 1.618). We think, each elements are harmonized with verses of the Gurani-Kerim and the figure is loaded with meaning. All areas of art, architecture, buildings, or the application of such articles are changed into unique beauty. We should stress that all complexities strat from the dot the simplest element. So, the dot is a beginning. It means of being of beginning. Science proved that creation of the universe started from the one dot by the theory of great explosion.

At the same time, the dot expresses the end of the world. In this case it is confirmed the scientific character of straight and reflection departure from spatial geometrical point of view. Point as a free design and beginning of all ornaments they play an important role in the formation of ornaments.

There will be a straight line of dots (points) are merged mathematical consistency. Straight line is the shortest way to connect two points (dots). This straight line consists of only one number.

Dimentioal geometrical figures are made from the connection of the lines according of some rules. One of them is pyramid.

Pyramid is a triangle of sustainability over time a geometrical figure that seat is a triangular of sustainability over time. This is a symbol of shelter. Pyramid means flame that located in the middle ("pir"– means flame, fire from the Greeck, "mid" – means middle). The words flame, fire means the same. Flame means a family, a family is gathered around the hearth. That's why sacred places are called a flame or a fire.

Sacred place is a grave monument of the human who lived before, then died. Those people have been faithful and preyed. That's why their grave monument called sacred place.

Thanks to the wisdom God has given them, people can solve their problems and find a way out of problems. Some ignorant people asked and hoped for help, even after death. Thus, unfortunately, they sinned, and compose shirk with Allah. Shirk is the unforgivable sin in our religion. People, who understand that this life is temporary, they always believe in God who lives forever. These people find shelter in preaying only for God.

The main oportunity of the formation principles of the ornaments their complying with serious regularities. Otherwise, it would not be anything to say about order. Beauty of the ornaments with their inner essence accoiated with their external apperance. İt is impossible to obtain beauty without obeying the regularities in external essence. These regularities are consistency, proportionality, symmetry, recurrence, commitment to the center and others. These regularities are the same in all creative fields as well as in music. As these principles symbolize human life, it is impossible to live without seeing, feeling and hearing of the beauty without obeying the low in all fields. Thus, human live in the society.

If any society exists without central management system, society tyranny, chaotic actions will turn into life style and society will fail. Such kind of freedom, self-abuse, selfishness is disease (illness) of society. God must be central according to the human opinion. The human think that God should be a central. Piety (Tegwa) means to differ fault (gilt), truth, unfair. Two powers - to love and to be afraid of losing the love of God keep the man in the Tegva. One should pay attention during the communication with all of them. It is important to be in distance during the communication with people. To differ fault (gilt), truth, unfair keep the one in the right way. These two principles should be taken into account during the commutation to every person, because human consist of 3 beings: the soil, body and desire that belongs to God. Man should communicate with God such as shelter. One of the methods of expression of wishes, dreams is ornaments. The ornaments is one of the good methods to impress the wishes and dreams of the human.

While ornaments are arranged consistently, it is followed the rule of continuity. All ornaments based on motives are associated one-another. This is one of the importnat isses of the social life. The relations between the atomic nucleus and the electrons in microlife concern such type of ties. İf this distance changes, it will be occur nuclear weapons, and this is a great danger for people.

Macroworld is also a distance between the planets. To be closer to the Sun can be caused burning of us (we can catch a fire), or to be far from the Sun can be caused frozen of us. As we see molecular structured ornaments have a great scientific essence. Crossing multi-angles in the ornamnets are the symbols of expressions of relations between fortunes, tribes, friends and society.

Inversion in the drawings made from the replacing of elements in the unit around the central object. Inversion of the design solves the monotonously by arranging of the same motif pattern in opposite directions. Double ones are beings: male and female, negative and positive, day and night, being dead and alive. This is a world and hereafter, this is a light and a shadow, this is a justice and a tyranny. Its geometrical symbolism is an inversion. There are absolute and relative symmetry methods in ornamental icons (designs). The absolute symmetry can be obtained, not putting with the same details as well as by correcting of mass balance. Proportionality means sharing. Islam is the way of God. Sharing of the provisions on the way of God named Infak in Islam. İt has not only meaning of sharing of provision as well as meaning of blessing share. This proportionality means sharing. Such a great reward awaits those who is good deed in life hereafter.

Completeness of the world that surrounds us associated with multidimensional spatial and ask for the dynamic formation and the development of human consciousness and requires at least a three-dimensional thinking. In this case, unit adopting of the science and education is combined relevant interdisciplinary attachment. The principle of spatial molecular structural similarity provides complicity of graphical images, perspective constructions, and manifestation model forms. By this way, molecular ornamentalistics, molecular architecture, their design, shaping, perspective formations and approaches as a formation of a three-dimensional perspective are the most actual issue of the day.

It is also important to use hormony principle called "Golden hormony" during the formation of molecular ornaments in all fields of appllied sciencies. Scientific structure as a spatial geometry - spatial chemistryas - molecular structure is taken into account as a closer relationship. Such sructures

have an important place and role in the formation of the main harmony principle in the proportional system. Artists, scientists and painters take into their account to arrange molecular ornaments correctly in of the line types during the investigation of the ornaments.

Perspective has its own rules of the establishment. If you follow these rules as a whole, as well as the figures appear to the human eye (one can see them as they seen). The ornaments are based on perspective rules, symmetry and geometrical proportional principles. At the same time, the establishment of geometric ornaments begin with the establishment of ornamental cage which formed by the geometrically symmetric systems.

The formation of graphic illustrations that express spatial structure of moleculas and named due to the scientific nomenclatures, setting of model and patterns based on scientific principles. Hormony, simmetric proportionality, geometrical similarity principles play an important role in formation of geometrical ornaments based on molecular. Even the structuras of such ornaments caused increasing of thinking and sencor (feeling, sensor) ability of the human, strengthen of geometrical type and purposely searches.

Molecular ornaments have as a special feature as other ornaments in scentific, theorical and technical researches. These fuatures and beauties reflect in the sereach of thinking and dreams, in solution of scientific problems, in correctly analysing of facts. One of the main factors causing beauty in art is richness, perfection, depth of ideas, form combination of improvement can be concerned to molecular ornaments.

Such ornaments are conducted (carried out) on the base of complete filling of the surface, symmetry in the ornaments, setting of ornament principles and lows.

We can stress that simple geometric figures can be shown by mathematical and geometric approach as well as philosophical, religious, psychological. It is also possible to show the pedagogical meaning, the chemical structure of similar figures, physical features and descriptive geometry and prospects.

Ornaments.

The main idea of the presented article is dedicated to the study of working out of ornaments in the field of architecture, carving on stone, carpet-weaving on the basis of molecular construction and revealing of their perspective on different surfaces. The similar modular organization of space found in crystal cells of natural minerals (Zeolite etc.) and polyhedral molecules (diamond, fullerene) witnesses the unity of principles of designing the stable systems, the ergonomically and economically advantageous the stability in a cosmology.

The visual structure of molecules having conceptual value finds its sufficiently bright expression in the spatial DNA (published by Dzh. Witson and F. Krik predicting comprehension of a human heredity and nature of genetic diseases), establishment of correlative dependence between a fine structure and physical-chemical, biological properties, finding of topological indexes for ecologically dangerous dioxins, for the stereo chemical theory of an olfaction, for an octane number of oil hydrocarbon, etc. At this stage, the most important role falls on the computer generation of molecule designs and development of topological stereochemistry which predict the dependence of molecular properties upon their conformation and configuration structure. In this method, they enlarged the measure of the spans (inch).

Aforesaid process is fulfilled as mentioned below. At first they take relatively a little span, but the color is repeated passing some spans [El-Said E.İ.1976; Parman A.1976]. We must appendix that, while creating geometrical ornaments, the masters did not used complex tools such as ruler, plummet. The strengthening knowledge, measure feeling, the handicraft of masters gives them opportunity to create especially simple ornaments approximately (by eye). The examples of traces which are on stone engraves shows it clearly. Thin lines drowned in the preparation stage had stayed between the rest monuments geometrical engrave of Baku (Azerbaijan) and its suburbs. It shows that the masters didn’t draw the nets on the paper, but they draw then strictly on the stone with thin pointed metal pen and them they formed an ornament from this.

The expression of substances and their conversion by means of model conceptions on the level of micro-sphere is the peculiarity of chemical thinking. One obvious methods of such expression is a demonstration of a series of properties of a molecule in the form of its graphic image. These graphics are forms which create plane and volumetric conceptions reminding geometrical figures. Such forms promote the representation of architectural models and designs having a molecular structure with scientific elucidations.

All perfect architectural edifices as all living forms of the nature have their own law of creation of the form and their structural form. Stone annals of all architectural forms reflecting nowadays the whole scientific portrayal of the epoch since the antiquity are obvious examples of that the professions of an engineer and an architect were created on the basis of the scientific of all scientific spheres and are the places of blending of scientific accomplishments as well.

Architectural creations.

As the human being is a part of the nature, the fruit of his mind should reflect the universe, material reality. In this case the result of intellectual work of the man finds its material manifestation of creative thinking is the repetition of the nature. But creative thinking also reveals new peculiarities, qualities and all of it is natural.

According to inner laws; from this point of view, the notion of chemical structure should unite in itself the principle of resemblance in various spheres and geometrical structure. In this case geometrical structure creates the opportunity of searching the unity in the sphere of architectural creation and stereochemical structure [Y. Shill.1973].

We come across term “stereochemistry” in the special section of chemistry, the term “stereometre” in a special section of geometry. The word “stereo” in the structure of both words shows their likeness and indicates the volumetric object in the space. From this point of view, the notion of chemical structure should unite in itself the principle of resemblance in various spheres and geometrical

structure. In this case, geometrical structure creates the opportunity of searching the unity in the sphere of architectural creation and stereochemical structure.

Modern stereo chemical synthesis is developing in a very complicated and original way. Of course, the investigation of spatial structure of organic substances, the creation of new structures as well as the study and the synthesis of rotaxan and nodulous molecules which don't have chemical ties and exist both in animate and in animate world are main problems in modern chemistry. Some of them are connected with investigations of natural models (oil, living organism etc.) and others with the creation of new models. The latter demands the synthesis of astrochemical structures according to the known "project", that's to say "gathering" of new molecules with any spatial structure; for example, as in building at first calculation is carried out, then to draw up a draft and at last to bring them together. From this point view, the synthesis polyhedrons reminding geometrical figures are of great interest.

Long ago, the German scientist Albert Zadenburg (1869) affirmed that molecules of Benzene have a structure of prism. But then six-term monocyclic structure with the length of sides in 1,42 A was accepted for Benzene. Later, in 1964, Belgian scientists pointed out the possibility of the synthesis of organic combination preserving the structure of a prism and called it prisman according to Ladenburg's statements. The American chemists Ayton and Cory synthesized the new substance, having the structure of a cube (Figure 4).

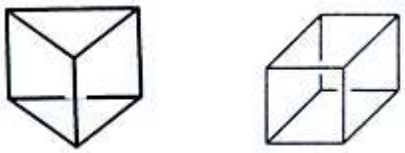


Figure 4. Prism and cubic structures

It should be noted, that at present, the chemists continue synthesizing more original models and molecules from the point of view of stereochemical architecture. Adamantine, twisting, congressing, cubing, prism, aster, furler and other polyhendrons are the result of the last achievements in the sphere

stereochemical synthesis. They are hydro-carbonal compounds which have the volumetric polyhedric structure reminding geometrical figures [Goodwin Godfrey.1992].

Plato Polyhedrons have geometric figures, have spatial nuclear molecule structure in chemistry. Chemists analyze this spatial objects and synthesis them of the relevant chemical rues or carry out (realize) them in the form of crystals. Meantime Polyhedrons are revived in front of your eyes as an objectiv being. Their seizes and proportionality parameters are aware and changed into "artistic creativity", " aesthetic value" and "synthesis".

Architecture is extremely closer to molecular architecture - astrochemical synthesis. Interdisciplinary approach as matter analyzes-synthesis is the main concept of logic subject and spatial geometry. In fact, logic is a philosophy science. Ligical thinking and spatial thinking is the main assistant of all Scientifics in all researches. It is possible to get a more accurate result by comprehensive approach to nature and society incidents [Demiriz Yıldız.1993].

By the graphic depictions in monumental applied art fields, in the art forms of the ornament according to the order of nuclear arrangement can be good expression.

The structure of the molecule formula is used to express a variety of graphic images in the chemistry. Images that make up the atoms and relationship between them, corresponding to the degree of valence bonds are shown through lines.

The same molecule can be expressed in Several graphical depiction, all of these can show the structure of the molecule. Among them, graphics attracts spatial structure of the molecule more realistic in stereochemistry.

However, in many cases, sterochemical stucture was replaced by more simple flatness formulas. We know that character of chemical thinking is to express by the model and creative ideas in the microlife level. The easiest way is to express some characteristics of the molecule by the imagin of graphical description. These graphs are geometrical figures,that demonstrate plane and capacious ideas; for example, triangular, square, pentagonal, and other polygonal reflects the structure of the organic

atoms and imagines some ideas about the structure of atom groups which combined with each other through bonds.

Then, while these figures are created using geometric ornaments chemical molecules, rather the structure of the molecules in the polymer chain can be regarded as reflecting the graphic illustrations. The important thing is that when we keep the principles of four valence atoms, we will obtain the graphic illustration with hypothetical molecule structure. We cancel the simple forms and we can see them in the chemical books. To give the graphical illustrations according to these imagines are a simple rule for chemists.

Ornamnets on the base of molecular structure are a new idea or consption for artists especially resaerchers who study ornaments; for example, if two cyclopropane molecules combines by the different valence rule, you will get the following illustrations: Preserving of valance principle does not limit the artist's activity, on the contrary, it asked for more strength their intellect power, high-qualified artistic ability and semantic approaching style to the new created ornaments.

As great France architec Le- Karbuze says, everything in art is taken out of the life, everything should depend on its lows. The architect stresses that after analyses and exploring for 100 years a modern art and idea tries to across coincidence, then a geometry bring them to the mathematical order and harmony [Hankin E.H.1925].

The main characteristic of the geometric ornaments having symmetry ornament, because after prserving of this simmetry rule, we can cover the surface infinitivly. It is possible to see all 17 simmetric gruops in old ornaments due to the well-known matematician of XX centure German Valey. At the picture of simmetric plane is such an imaginary line that when we qatlanda the illustrsation all elements of one side fall on the another side.

One of the intersting examples is the Alhamran palace in Movritaniya which built in the XIII- XIV centures. 15 simmetric planes are reflected in all rich-decarated halls of Alhamran. Last ornament geoups were created in China. This ornament is called a China ornament. We should note that this

ornament made from the joining of triangular called tsiklopropane. We can show that there are trans configurated ornaments in the chemistry. One can research these trans-confugirated ornaments at the same time.

One of the intersting side of China ornament is a possibility of its including to the chemical oranments [Riegl A.1923]. Thus, the fragments that attracted spatial structure of tsiklopropane molecular has originally strunged and completly and reapetedly filled with directed connections.

So, we can create a new series of ornaments on the basis of graphical description of tsiclopropane malecular by prividng of the carring surface. some of these molecules üere used by the artists and one ones may be completly presented as a new ornament.

Thus, a graphical imagination of bitsiklopropil molecule has been used in design of Sahib Ata Mosque in Turkey. The description of the parts can be seen as a projection plane of the crystal lattice created silica oxygen that confirmed by the chemists. As a chemical combination this part is a graphical description of polymer that consists of cyclopropane molecule. Of course, it is also geometric-chemical ornament. By the other way one can see fragments like stars as the result of the joining with connections of 6 cyclopropane molecule to these ornaments. This process can be received as a complete polypro merger.

İt is clear, that we can obtain new chemical ornaments by the using and holding the order of valence of the graphical ilustrations of organic ingredients and petroleum hydrocarbon. At the next picture, we can confirm the chemical names of ornaments, which used in architechcher monuments of Azerbaijan and Turkey.

So, cyclopropane, cyclohexane tsiklobutan can be received as a chemical ornament based on the one of the proportion of graphical strycture of silica oxide. New geometrical-chemical series of ornaments can be obtained by combining with each other in various forms, or we can give the names all to these ornaments with researching by this principle. This concept is proposed to be considered as a basis of a learning process, facts and events, founded on spatial perception of three-dimensional systems and

dynamic approach, as a result of which a person trended to more high level of world perception, becomes the owner of the method of more deep understanding of events, differs by more impartial attitude to social, economical problems.

The conception recommends to organize the educational system based on the world practice taking into consideration the nature of the historical and modern national and territorial factors, saving genetic connection between stages, events and keeping proportionality, differentiation and integration of different scientific trends.

Such system approach to the global problems provides recurrence and creates favorable conditions for the integrative application of scientific achievements. The paper tells about the role of stereochemical investigations and the value of principle of modular organization of space for formation and development. where the particular -scientific - practical problems in this field are studied.

Carpet ornaments based on graphical image "bath" of conformation of polycyclohexane.

Visualization of micro- and macro world by means of creation and demonstration of molecular models of StuarK Brigleb, Dreading, sphere-bar and tetrahedral models help to develop spatial perception of unity of the Universe. The application of these models by the students, masters, postgraduate students provide formation of actual spatial thinking about molecules, invisible by an eye.

The realization of tetrahedral angle equal to 109°28' in molecules of oil paraffin hydrocarbons, application of this angle in eternally steady Egyptian pyramids, and also by bees when building their beehives from mild wax for rather short time, providing greatest capacity and stability is founded on the global common law of nature.

CONCLUSİONS.

We tried to give some visual examples about the establishment and usage actuality of molecule models. We tried to analyze that the basis of these ornaments are hexagon and triangles by giving a geometrical stuctue of ornaments, and also tried to anlyze interaction of ornaments hexagonal structure of benzene in organic chemistry.

The scientific study of geometrical molecular ornaments have been researched in the science firstly by me. We can note that as every carbon atoms are combined under 109°28' angle (corner) with other ones, these nuclears are located not on the 1 parallel flatness, as wel as on the 2 parallel flatness. In this case angle between the connections have not been g'rilmir.

As the result of this, prosses a unite of similar to the podium carbons and it is conditionally called (named) the "chair" conformation of tsikloheksan. At the same time, we tried to show the meaning of spatial ideas by analyzes spatial geometric, spatial chemistry, phylosofy-psycology point of view in this research.

This propasal was combined by completly mathematical-chemical rules. We tried to stress that this is the great way in science by the examples for the artists. Even the usage with endless motivations of such ornaments and designs with logical, mathematical and hormony were given by the helping of spatial ideas.

All fragments of instructions in the direction of the sides of hexagon are equal. The diameter of the same thickness is with unique type and frame.

One of the best features of art culture works of Azerbaijan masters is their artistic merit and worth-wile. It is really so, because there may be found few monuments without ornaments which were created by Azerbaijan architects and masters.

For centuries, at the result of gained experiences and knowledge, Azerbaijan masters could create descriptive ornamental methods, classical compositions, and deep meaning images which have highly artistic peculiarities.

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