

## The Consideration of Physics and Chemistry Sciences in Holy Quran

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### ABSTRACT

Undoubtedly the consideration of physics and chemistry sciences in Holy Quran is of most scientific subjects of Quran sciences. As it is one of the most important discussions especially in identifying the interpretations of Quran verses and the understanding of its concepts.

Holy Quran, the most vigorous and valid religious documents, belonging to human being has been provided to us without any distortion. It has sent to all the people around the world especially Muslims in all ages.

This thesis on the consideration of physics and chemistry sciences in Holy Quran has the aim of explaining cases and basic concepts identification of science in Holy Quran and deep effects of Islam in creating developed civilizations and getting away from everything returning back to ignorance and misleading by using Quran, historic and scientific documents and librarian method.

Also it reveals the Quran role in signifying real character of human being and the importance of this divine religion to the interested people of Quran sciences by discovering the identification of basic concepts in Holy Quran and its influence on creating new and useful sciences.

**KEYWORDS:** Quran- Islam- science- physics- chemistry

### INTRODUCTION

One of the discussed and great issues among the investigators and authors is the matter of science in Holy Quran and its miracle adjustment with new discoveries. So always there are discussions about these matters and every scientist has answered to these questions with his own point of view and has his own different result. Some scholars have doubt about the validity of scientific issues in Holy Quran. I myself believe that by having an investigation without any bias and by scientific investigation and consideration can result scientific and valid aim.

This thesis on the consideration of physics and chemistry sciences in Holy Quran has the aim of explaining cases and basic concepts identification of scientific, literal concepts by Quran facing with different sciences in Holy Quran by using different sources concluding Holy Quran, Quran, historic and scientific interpretations by librarian method. Also it is considered the kind of new reaction in facing with scientific verses of Holy Quran.

#### The consideration of lexical meaning of the word "science"

Science has different meanings. It's opposite of ignorance (Farahidy, 1985 lunar year, 1274), means knowledge and awareness. Also Allameh Tabatabaei has said in his book "Almizan": "the truth of science is discovering the issues outside mind by the help of mental form, resulting from sense, wisdom and experience and reliable sciences such as the reputation of chairman for a person are opposite it (Alameh Tabatabaei, 1995 solar year, 50/1)

Albert Einstein said: "the basic aim of science is covering a great deal of experimental realities by reasonable comparison a great number of hypotheses and principles". (Zibakalam, 1999 solar year, 55)

From other divisions of science is its division of science into 2 groups: theoretical and practical ones. Theoretical science is a kind of knowledge resulting perfection such as the science of creatures. Practical science is a kind of knowledge resulting perfection by acting according to it(s principles) like science to prayers (Ragheb Isfahani, 1953, 58). In addition to these sciences being acquired, some of the sciences are resulting from discovering and without any mediator by divine illumination for some people, being referred to it as theological science (fakhr-e-Razi, without referring to the history of the quote, 187/2)

#### Different kinds of science

A) Science concludes disciplined studying systems and is identified according to scientific method (observation and experience), showing the realities of the world as they are, and its aim is to help human being to understand the nature of phenomena and discovering and expressing the roles being able to explain or predict these phenomena (Bozorgmehr, 1968, 186).

B) Also the way of obtaining science and understanding it, is not limited to physical sense and experiment, but also beyond and non-sensory conceptions are understandable to human-being (Tabatabaei, 1995, 75/1).

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C) There is third meaning for the word "science" in sciences such as logic and philosophy. When we are using the word "science" in this knowledge, we are not referring to a special knowledge or certainty, but we refer to understanding and awareness. i.e. Something is called science to a philosopher or a logician that obtains any kind of understanding or information from the time of his/her birth (Haghighi,2004,72/76). Also we can define the word "science" in this way that "the collection of real events being provable" in sense experience way and this is the same term being used by positivists and on its base non-experimental sciences and education are not called sciences. Nowadays this term has progressed in all over the world and according to its science is located in opposite of philosophy (Rezaei,1381 solar year,no.1,34) and we want to investigate this kind of science ,being referred here, in this thesis.

\*1)Here the aim of word knowledge and awareness is "knowledge"

\*\*2)Sheikh Mohammad abd-alazim, was born in Alja'fariye quarter, in western province of Egypt. He started his education in Ma'hadAlahmadi in 1191 and then graduated from religion principles college in 1925. In that year he received super document. He was transferred to Ma'had Tanta and then started teaching in Cairo Ma' had. He passed away in 1367 (lunar year)

### **Different kinds of sciences being relevant to Holy Quran**

The prominent professor of Quran sciences "Sheikh Mohammad Abd-Alazim Al-Zarghani" has said about Quran sciences:

"Science concludes every kind of science being at the service of Holy Quran or being documented to it. Therefore Quran sciences conclude the science of reciting, Quran orthography, miracle, Quran sending down, e'rab system in indication, foreknowledge, religion, lexicon sciences and etc" (Al-Zarghani,1417,27/1)

Jall-Aldin has developed the conceptions of Quran sciences so much that even sciences such as astronomy, geometry, medicine and like these ones are considered as the Quran sciences and he believed that the Holy book concludes these sciences (Alsayoti,1365,33/4)

### **General consideration of experimental sciences in Holy Quran**

Some scholars have divided the scientific verses of Holy Quran in terms of different sciences, Yusef Marveh believes that there are 675 scientific verses in Holy Quran (Yusef Marveh, 1995,76-77) and Mohammad Jamil Alhabal and Meghdad Aljavari believed that the number of scientific verses are 1322 (hamil Alhabal, 1979,35), this number conclude 20% of Holy Quran verses. Also they believed that there are 61 verses in the field of medicine, 63 verses in physics, 100 verses in astronomy, 20 verses in geology, 21 verses in farming, 12 verses in biology (animals), 36 verses in creation and life, 73 verses in geography, 20 verses in meteorology, 9 verses in chemistry in Holy Quran (Yusef Marveh, 1995,76-77). But Mohammad Jamil Alhabal and Meghdad Marvie have reported these numbers differently. For example, they believed that there are 138 verses in the field of physics, 11 verses in chemistry and 69 verses in geology (Hamil Alhabal, 1979,35)

One of the biggest reasons in paying attention to experimental sciences in Islam is having reference by Quran to more than 700 verses relevant to science and thought. Also in many verses of Holy Quran has been signified directly or indirectly to experimental sciences. So by paying attention to this subject (the referring of many Quran verses to natural sciences) and many probers' and author's confirmation to this matter,that more than 1000 verses of Holy Quran and experimental sciences have inseparable relation with each other, for solving challenges related to Quran and science, we need collected investigation about the existed relation between Quran verses and experimental sciences. Maybe we can reveal the secrets of Holy Quran and their relation with experimental sciences and answer this question with a special and unbiased look toward religion.

### **Quran's reference to the existence of ice and thunder and rainfall in space**

Have you not observed that how Allah causes the clouds move along? Then he brings them together; then piles them up and presses them; and you as a beholder see that rain is falling; and from the sky which is above mountainous regions he sends down hails; afflicting whom Allah wills and repels it away from whom he wills the flash of the lightening quite possibly may cause blindness.

*An-Nur, no. 43 verse*

The word "move along" refers to the slow movement with rejection. The word passes them upmeans density. The words the flash of the lightening refer to the brightness of light. (Gheraati,2004,195/8) if somebody flies the clouds will see that the cloud masses are like mountains and this is the magic of Holy Quran when said in 14 centuries ago "we send down hails from cloud mountain" (the same verse)

The writer of the book "Ameli's interpretation" writes according to Tabari's interpretation that the sentence "we send down hails from cloud mountains" has been interpreted in 2 ways:

God sends down hails from Ice Mountains being in the sky.

God sends down ice being in the sky as much as a mountain on the Earth (Ameli, 1981,347/6)

In continuation of his words, he writes according to Balkhi's words: maybe the aim can be: ices become masses as much as a mountain in cloud and then fall down. Or maybe the purpose of the word "sky" can be

cloud, because as it be higher and be classified, it's called sky (the same source). Also it has been written in Al-baqareh surah:

Or [another similitude about them] is that of wayfarers caught in a rainstorm which is accompanied by darkness, thunder and lightening; while they are in the terror of death, they press their fingers in their ears to keep out the stunning thunderbolt, but Allah encompasses the disbelievers from all directions

Al-baqareh surah, verse no 19

Know that cloud and thunder are from atmosphere phenomena and cause the certain of cloud and vapors rising from wet land being raised or are rising by sunlight or because of sulphuric materials become vapor.

Swamp lands are hot salt marshes. Then when vapor becomes rise before being expanded and turning to gas, if it was near the very cold atmosphere, it compassed and changed to clouds becoming hindrance in watching what is beyond themselves (Gonabadi,1993,521/1). Vapor concludes water which their particles scatter from each other and distribute and mix with particles in the air. After becoming dense, water collected particles (water molecules) of some air constituents change to water. If it's not conveyed by air coldness, it appears in the form of rain and if it's not conveyed, appears as snow and if becomes conveyed before appearing of its complete collection, hail creates and sometimes a smoke (a gas) with vapor rise from dry and sulphuric lands mix with Earth and fire constituents. Every time this vapor reaches to the very cold atmosphere and becomes dense and its vapor constituents become confined among vapor particles, Earth particles tend to go down and fire particles tend to go up naturally. Now if fire particles overcome Earth particles, they move vapor particles among clouds upward and if Earth particles overcome fire particles, they move them down extremely. By this severe movement, clouds being denser than air become torn down and from their being torn down, a sound creates being called thunder. If the material of gas be smooth, it ignites because of the heat movement and also the heat of fire particles being on fire and then turns off rapidly, this mode is called lightening and if that gas be thick when it be on fire, does not turn off rapidly but stays in that same mood until reaches to the Earth and then be called as thunder (Gonabadi,1993,522/1)

The awareness of water and ice in space was not so important in previous sciences but nowadays it's been proved that there is a great deal of water and ice in space. Some scholars are looking for this matter that water being existed in Earth has come down from space. Therefore by considering the verses interpretation and related issues with contemporary science we can figure that one of the purposes of Quran verses is to refer to the scientific issues of water and inexistence in atmosphere.

2-2-2: Nebula bougainvillea a flower in Holy Quran

When the sky is rent asunder and it becomes like reddish oil color

Ar-rahman, verse no.37

Oil means flower as most flowers are red, this word means redness in this verse or it refers to heavenly planets become melt or its different colors.

Some scholars interpreted that the word "mouth" means red leather and anyway these similes can be just a ghost of that horrible scene because in fact it has no similarity to any events of this world's event and they are such scenes that nobody knows until s/he sees them. In that day the current system of world will collapse and very horrible events will happen all around the world. Stars, planets, the Earth and the sky will change and events being happened will be difficult for us to imagine them. One thing has been referred in the above verse is that the heavenly planets will split from each other, then appears in the form of red beings and lava (Makarem, 1995,155/23)

### **Physics in Holy Quran**

Nasa scientists have done 200 investigations in how fire being flamed in atmosphere, an environment without gravity, and found out that fire doesn't burn in atmosphere as it burns on the Earth and molecular distribution attracts oxygen to the flame in the atmosphere and gets away combustion products by a speed 100 times slower than currencies on the Earth from it. Also atmosphere fire burns with less light and energy. In verse no.16 of Alzomar surah, there is:

They shall have a canopy of fire above them and a carpet of fire below them; This is the punishment that Allah warns mankind. So, o, my worshipper! Fear from the disobedience of my commands.

Stephen William Hawking(1942) is a physicist and astronomer, his works background is about 40 years. He is the most prominent scientist of last decade of 20<sup>th</sup> century. Also he is called 2<sup>nd</sup> Einstein as he tried to expand the theory of relativity and the mix it with formula of quantic theory to make a new unit to justify all the changes happening from miniature particles of atom to great galaxies in the great world.

The word antimatter has been obtained from the "Roshd license"

We read in the interpretation of these verses that "canopy of fire" is the plural form of fire means a curtain being appointed on the upside so it refers to the carpet being expanded below feet and is a metaphorical calling and being obtained from the word "spread". Some scholars said as hellishes are caught in the stages, the hell curtains are both above and under them and it's not right to think that the word "fire" refers to below curtains (Makarem, 1995,407/19)

Steven Hawking, the brilliant physicist, writes about quarks in his book "great scheme":

Quarks, being unable to be seen, are models for explaining the characteristics of protons and neutrons in the core of an atom. It's said that protons and neutrons are made of quarks. We never observe a single quark, because their connection increases by their separation from each other and therefore free and separated can't exist in nature. So they are appearing in triplet groups of protons and neutrons or as pairs from a quark or pair quark and behave in such a way that as if they connect to each other by a plastic band (Rezaei, 1385,437/2)

### Matter and antimatter in Holy Quran

Physicists believe that every atom/particle has an antiparticle or any matter has an antimatter in the world. i.e. every matter has an antimatter being opposite to the matter so-called it is defined in this way that there is a world in the mirror. Maybe it's possible to interpret following verses in Quran being referred to the antimatter:

And for every creature we created its mate [a pair: male and female] this is something that you may think about the wisdom behind it.

Az-zariyat- verses no. 49

When the sky is cleft asunder, and when the stars are scattered

Al-infitar- verses no. 1-2

The absolute pure is Allah who [is himself the one and the single, but he] created in pairs all things that the Earth produces as well as people themselves and other thing which is not known to mankind yet.

Ya-Sin- verse no.36

The first evidences of antimatter were discovered by Carol Anderson in 1932 and the existence of first antipadron was revealed in 1955 while Quran has revealed the existence of antimatter 1400 years ago. A strange miracle has puzzled physicists is that the amount of productive materials were greater than anti- matter in the time of explosion because if the amount of materials and antimatters were equal, no star and planet would made and antimatter has trapped for 16 min. Antimatter is an approved principle in physics (Ramin, 2006,43)

When the sky is cleft asunder, and when the stars are scattered.

Al-infitar- verses no 1-2

Another important point in this verse is that in addition to reference to these 2 matters, there is reference to astronomy too- scientifically our world is developing- stars are getting away from each other and this event is an event in world's ending in one scientific point of view. This verse refers exactly to this event. Another point being mattered in this verse is that there is an extreme gravity near black holes a gap and deviation in space and time causing a gap. This event has been proved by Einstein and this verse can refer to this matter (Rezaei,1375,155/1)

### The Quran reference to "atom"

Arabs in ignorant time can just see miniature particles being composed from molecules being stick to each other, there was no microscope for observing molecules or atoms in that time but God refers well to the smaller particles than what people can see in the 16<sup>th</sup> verse of Yunes Surah:

[o, messenger]! Whatever you may be doing and whatever surah you may be reciting from Quran and whatever deed you people may be.

In this verse God refers to this matter that he can see all particles of atoms, viruses, bacteria all around the world. Also he points that there are smaller particles that people may see one day. There was no microscope in the time of Prophet Mohammad (peace be upon him) which people be able to observe smaller particles. This verse is considered as scientific miracle of Holy Quran. The meaning of this verse can refer to other miniature particles such as bacteria and viruses in addition to atom. But as the word "atom" has been said in the verse, it seems that just this matter has been considered. (Rezaei,1375, 158/1)

Also atom has opposite poles: negative and positive one. They have load of negative electron and positive neutron. Quran refers to this matter in different verses.

In these verses Quran has referred to such things and matters which people had no knowledge about them. In the time of Prophet Mohammad (peace be upon him) atom and its load were not discovered and these verses can indicate to these matters. The "relativity problem" was suggested by Einstein in 1915 for the first time and before the period of him there was a belief that time is fixed, Einstein proved for the first time brightly that time depends on the speed and volume of the substance. Basic equation of Einstein relativity was as following:

$$G_{\mu\nu} = 8\pi GT_{\mu\nu}.$$

Einstein suggested the problem of relativity at the age of 25. In summary, he suggested that in high speeds that the speed of substance is fixed, for example when a substance has a speed near to the light speed, time passes slower for it, substance volume decreases also but its mass increases.

Einstein suggested good examples. For example if 2 twin brothers travel in the space with light speed and the other brother stays at the Earth, after coming back the brother having traveled with light speed is a child yet while the other one has gotten old and have children, grandchildren,... (Ramin,2006,53)

## **Chemistry in Holy Quran Environment**

Corruption has been spread throughout the world in the sea and the land on the account of men's wrong deeds.

Rome Surah, verse no. 40

In Arabic language, when somebody wants to express the certain happening of an event in the work, s/he uses a verb in past tense (as if it has happened) for this reason an event of future time is expressed with a past verb. Human functions in present and future time in sea and land have caused ecosystems being polluted. Holy Quran has predicted this event 1400 years ago. Imam Sadegh has said: "Human-being should live in such a way that doesn't make his/her environment polluted because making his/her environment polluted will make his/her living difficult or perhaps impossible. Unfortunately this event has happened nowadays and this problem is a familiar issue to all of us, and is considered as one of the critical problems in this age, such as increasing greenhouse gases, ozone's becoming thin, acid rains, smogs (Makarem, 1995,12/23)

## **Hydrosphere**

In all oceans throughout the world gigantic rivers are running through and Gold Stream is one of them. This gigantic river running through Central America beaches, it passes all over Atlantic Ocean and gets to the North America beaches. These waters passing from near the equator are hot and even their colors are different from near waters color and interesting point is that its width and depth are 150 and several kilometers; respectively. Sometimes its speed is 160 kilometers in an hour, its different temperature in comparison to near waters is about 10-15 degrees, therefore its western margin is called cold wall (makarem, 1995,12/23)

Gold Stream creates hot winds and sends a great deal of its heat to North countries of Europe continent, makes these countries weather very pleasant and perhaps if this current wasn't existed, life in those countries was too difficult. Again we repeat this matter that Gold Stream is one of these rivers and there are many sea currents like Gold Stream one all around the world and its main reason is the different temperature of equatorial regions on the Earth and Polar regions creating this movement in sea waters. Strange that these gigantic river mix with waters around themselves and passes 1000 kilometers.

## **Conclusion**

With resulted consideration of Holy Quran verses, this holy book, we found out that Quran has great efforts in knowledge and science so much that has not this much effort in any other field. In Quran opinion the best way for prevention and curing from morality perversion is destroying ignorance backgrounds and intensifying scientific beliefs on the base of religious bases.

Quran's many matters and examples make it easy to understand theology because Quran aim is to express divine signs and attracting people's attention to grace manifestations, divine power in order to make aware of God. This matter has been provided by expressing scientific examples and divine signs in skies, Earth, seas, the miracles of creating human being and animals so there is no need to refer to formulas and details of every matter but just an implicit refer is enough.3- Some scientific matters of Holy Quran verified the scientific miracles of itself. These real examples (having adjustment with proved matters of sciences (and not suspicious theories) have attracted our attention to this point that Quran has not gotten these matters from social outer world around itself, because Holy Quran has been sent down in an Arabic island without civilization and even in that time civilizations being existed in Iran and Rome had not such scientific developments to be able to clean superstitions being governed in that time from the bed of scientific and moral realities and logical, reasonable and divine culture by scientific theories of Quran.

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