Change in Water Isotope Composition as a Tool for Influencing Human Psychoemotional State

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Abstract—Today, the critical mass of knowledge about water and the prospects for its transformation because of human activity have become so significant that they undoubtedly require new generalizations and comprehension. Analysis of water problems leads to the idea that the substance of water is programmed for life, its development, correction, and protection. The realization of this potential of water is provided by the energy and information capacity of its molecules and intermolecular compounds. Water is a special substance that is extremely necessary for a living world. Each of the “anomalies”, oddities of water in the “water–life” link easily fits into a certain program of creation, preservation, maintenance, and evolution of life. Life in the forms we know could not have appeared outside of water in its liquid state, outside of water “anomalies”. Consequently, the water shell on our planet should proceed the emergence of life (A. Henderson arguably defended this idea at the beginning of the last century). Only then, having passed a period of water development, life came out onto land, nevertheless preserving its water nature. With a somewhat reduced, “chemical” look, living matter looks like an “aqueous solution, since every living organism is, to one degree or another, really an aqueous solution, and almost all chemical processes that provide vital activity are reduced to chemical reactions in an aqueous solution.” Water is the most abundant substance in nature that a person encounters daily throughout his life. However, this is a rather complex object for understanding. If scientists manage to reveal at least a little the true secret of water, new pages will open in chemistry, biology, and this, in turn, will open new unexplored compounds, new materials and, perhaps, unexpected forms of life, where all macromolecules of DNA and proteins contain a certain the proportion of heavy hydrogen and heavy oxygen molecules and organelles.

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*To understand water means to understand the universe,
all the wonders of nature, and life itself.
(Masaru Emoto)*

No one had previously paid attention to the following very interesting fact about water. In [1], the Sufi parable about water is mentioned and its scientific origin is revealed. Let us try in this work to continue the explanation of this parable, because it is devoted to the deep meaning of the total change of water and is called “How the water changed.” A change in water entails not only the possible appearance of new derivatives of compounds but also a change in the composition and diversity level of viruses in water.

In our previous works, a large-scale study of the origin of chemical elements began, in which one of the sides of this issue was revealed—the resonant principle of the synthesis of elements. Within the framework of this principle, the possibility of the existence of water of different isotopic composition was discovered, until that moment no one paid attention to this fact. Therefore, we will focus on a detailed study of the physical properties of water with different isotopic composition.

The problem of studying the characteristics of isotopes (especially short-lived, unstable ones) cannot be unambiguously solved within the framework of purely experimental studies. In this regard, the methods of quantum chemistry are of great importance, allowing at a deep level to obtain hard-to-reach characteristics of atoms or molecules and, accordingly, to reveal the regularities of the flow of certain processes.

Quantum chemistry has now emerged as a discipline that, based on numerous solutions of the equations of quantum mechanics, allows one to obtain information not only about the structure of energy, charge characteristics, and force constants of molecular systems, but also to consider the frequency spectra of isotopes of all chemical elements and a number of thermodynamic quantities. This is very important at the moment, since the results obtained open up prospects for the further development of the theory of the formation of chemical elements and matter in general.

EXPERIMENTAL

The studies were carried out within the framework of quantum chemical calculations using a wide range of quantum chemical programs [2]. Clusters of different water isotopologs were taken as objects of study. To obtain the values of the vibrational characteristics, we first calculated the matrices of the second derivatives of energy with respect to the coordinates of the atoms (matrices of force constants) of the N -atomic system, followed by diagonalization. The eigenvalues, taking into account the atomic masses, make it possible to obtain $3N-6$ frequencies of the system. The isotopologues of water were studied, for which the geometric characteristics were first optimized with a search for the minima of the total energies of the system, and then, for the found equilibrium configuration, the oscillations were calculated taking into account the intrinsic angular momentum of the atomic nucleus.

RESULTS AND DISCUSSION

The geometric and energy characteristics were used to optimize the water cluster (Fig. 1), for which the vibrational characteristics were calculated for the entire series of water isotopologs.

Analysis of the obtained vibration frequencies of the above-mentioned series of water isotopologs showed the following interesting fact [3]. It was found that the frequency of water sharply decreases when protium is replaced by heavier hydrogen isotopes up to ^7H . With varying oxygen isotopes, the decrease in frequency is less pronounced than in the case of hydrogen, and in the case of ^{17}O , even a slight increase in frequency is observed in comparison with the frequency for the H_2^{16}O molecule (Fig. 2). Apparently, the cause of the extremum point is the spin and parity of the ground state of the nucleus, where the spin-orbit interaction of the energy of the states and contributes to the vibrational characteristics of the system.

The Sufi parable says: "...there will come a day when all the water in the world, except for the one that will be specially collected, will disappear. Then another water will replace it, and people will go crazy with it..." [1]. The change in the physical properties of water with a change in the isotopes of hydrogen and oxygen is the very mystery in this parable. Many unsolved questions remain, including the reason for the change in the isotopic composition of water, and, as a consequence, its frequency. Let's try to explain this change. It is known that the entire planet Earth is undergoing constant changes; unusual phenomena occur in the physicochemical structure of the planet, which have not previously observed, including climatic, magnetic, geological, electrical ones, etc.

Earth's magnetic poles are shifted by tens of kilometers per year, tectonic plates become more active, the upper layers of the atmosphere begin to undergo abruptly unusual changes, the weather changes abnormally in different parts of the planet [4, 5]. At the beginning of the XXI century, obvious changes in earthly processes will only accelerate and deepen. Therefore, the basic electromagnetic frequency of the planet (Schumann resonance) began to change (Fig. 3).

According to our assumption, the isotopic composition of water can vary symbatically with the Schumann frequency, affecting the physical and mental state of human health. This can be explained by the fact that the human brain is a biological organ with a well-developed and stable intelligence. To maintain the ability of intellectual thinking, the brain must be constantly stable, for this there must be a global synchronization system. The human brain functions in a wide frequency range, which also includes the frequencies of Schumann resonances, affecting its work.

In addition, how could we not recall the numerous forecasts for the transition of the entire planet to some other, higher-frequency dimension? What is the mechanism of such a transition? How can the body adapt to new changes? Viruses are a tool for such adaptation, including COVID-19. If the frequency of Schumann's resonance rises, then a person must keep pace with the changes in the physical characteristics of the Earth and increase his own frequencies, forming certain qualities in himself. For example, get rid of low-frequency qualities—fear, hatred, envy, greed, hostility, and instead increase the frequencies of love, compassion, kindness, generosity, balance, etc.

Life is a form of existence for living beings. A cell is a minimal life unit, a kind of life capsule, fenced off from the outside world by a semi-permeable shell. Various processes take place inside the cell; for

Designation of atoms in Figs. 1, 4–7

Fig. 1. Optimized structure of a water cluster: interatomic distance $R(\text{H}-\text{O}) = 0.096$ nm.

Fig. 2. Experimental [3] (1) and calculated (2, 3) frequencies of bending vibrations of water isotopologs: isotopes of hydrogen (1, 2) and oxygen (3).

Fig. 3. Changes in the Schumann resonance frequencies in (a) 2014 and (b) 2021 [6, 7].

example, energy received from the outside in the form of sunlight or food substances is processed and used for cell growth and division as well as for the production of daughter cells. All processes in all cells, whether humans or bacteria, occur according to certain rules encoded in DNA, and this code is common to all living things. Viruses are non-cellular life forms that can parasitize in a cell; they are genetic programs that use the same code as cells, but are unable to transform energy on their own and build some kind of blocks of organic molecules necessary for life.

Consider the behavior of a virus in a water cluster (Fig. 4).

A virus is an envelope with nucleic acid and with its own genetic material. A viral particle can interact with the surface of a target cell, while different viruses have their own targets. Some choose the human body as a host cell, others—insects, etc. The viral particle binds to a cell specific to it and injects its genetic material inside. As a result, the cell, which grew until recently, was preparing to divide, rebuilds and begins to use its resources for multiple copies of the virus. After some time, the cell is destroyed, and several hundred daughter viral particles emerge, genetically identical to the virus that originally infected this cell (Fig. 5). They infect neighboring cells until all cells die or cells that are resistant to the virus appear.

Fig. 4. Model of a viral particle in a water cluster.

Fig. 5. Model of the release of a viral particle from a water cluster.

The virus distorts the cell, trying to make it work for itself, while the entropy, frequency, and enthalpy of a water cluster with a viral particle inside are increased, and the total energy of the system is lower than if a water cluster pushes out a viral particle in a deformed state (Table 1).

As can be seen from the data shown in Table 1, there is a decrease in entropy and enthalpy, as well as a decrease in the frequency of oscillations of the viral agent from the water cluster. The results obtained correspond to the above-described picture of the change in the vibration frequency of water atoms (see Fig. 2) with a change in the isotopes of oxygen and hydrogen. At the same time, the increase in the frequency when the virus is in the water cluster, compared with the frequency when the virus leaves the cluster, correlates with the above result of the likely increase in the frequency of water vibrations when replacing the ^{16}O isotope with ^{17}O . This suggests that the water has changed, i.e. its physical properties have changed.

Currently, there is an active study of the effect of coronavirus on the immune system of the human body. It will also be relevant to conduct microscopic studies of obtaining high-resolution atomic struc-

Table 1. Energy characteristics and vibration frequencies of the studied systems with a viral particle

Energy characteristics		Virus	
		in the center of the cluster	at the exit from the deformed cluster
Entropy (S)	kJ/mol	1453.517	1337.461
Enthalpy (H)		1624.896	1616.183
Stretching antisymmetric vibration frequency (F)	cm ⁻¹	4266.370	4063.150

Table 2. Charges on C, H, O, and N atoms in the studied systems

Atom	Affiliation of atoms to the system	System		
		isolated viral particle	isolated DNA fragment	molecular associate of DNA–viral particle
C	Isolated viral particle	−0.057	—	−0.066
H		0.127	—	0.144
O		−0.396	—	−0.443
N		−0.504	—	−0.506
H	Isolated DNA fragment	—	0.287	0.285
C		—	0.394	0.387
O		—	−0.456	−0.486
N		—	−0.214	−0.264

tures of viral proteins for rational modeling of the selection of inhibitors of virus reproduction. At this stage, in this direction, we simulated a DNA attack by a virus (Figs. 6, 7).

A detailed consideration of the interaction of a viral particle with a DNA fragment is shown in Fig. 7 and in Table 2.

As the analysis of the charge characteristics of the objects under study has shown, against the background of a slight redistribution within the structural components of the system, no charge transfer between the DNA and the viral particle occurs. However, the virus distorts DNA, that is, a mutation of

Fig. 6. Model of the interaction between DNA and the virus.

Fig. 7. Model of the interaction between a DNA fragment and a viral particle before (a) and after (b) optimization of the geometric, energy, and charge characteristics of the investigated objects.

the DNA section occurs. In this case, the entropy, frequency, and total energy of the viral particle–DNA system is increased, and the enthalpy of the system is lower than that for a DNA fragment (see Table 3).

CONCLUSIONS

Thus, a quantum-chemical study of a water cluster for the entire series of its isotopologs has been carried out, and the behavior of a viral particle in water and DNA has become to study.

As shown by the calculations, the frequency of water sharply decreases when protium is replaced by heavier hydrogen isotopes up to ^7H . With varying oxygen isotopes, the frequency decrease is less pronounced in comparison with hydrogen, and for ^{17}O there is even a slight increase in frequency compared to the H_2^{16}O molecule. Apparently, the cause of the extremum point is the spin and parity of the ground state of the nucleus, in which the spin-orbit interaction of the energy of the states also contributes to the vibrational characteristics of the system.

The results concerning the change in the frequency characteristics of water correlate with the diagnosis of the Schumann resonance, because the Schumann frequency is constantly increasing. Perhaps this makes the isotopic composition of water change synchronously, as well as human nature and, as a result, society itself. Moreover, viruses, including COVID-19, are the instrument of such a transition to adapt the body to new changes.

Table 3. Energy characteristics and vibration frequencies of the systems: DNA fragment and a viral particle–DNA

Energy characteristics		Systems	
		DNA fragment	viral particle–DNA
Entropy (S)	kJ/mol	815.472	1100.718
Enthalpy (H)		1148.743	1440.143
Stretching antisymmetric vibration frequency (F)	cm^{-1}	3821.390	3951.100

The virus distorts the water cell, while the entropy, frequency, and enthalpy of a water cluster with a viral particle inside are increased, and the total energy of the system is lower than if the water cell pushes out a viral particle in a deformed state. This effect correlates with a change in the vibration frequency of water atoms with a variation in oxygen isotopes, especially oxygen ^{17}O . On this basis, we can conclude that water has changed following the frequency of the planet and its physical properties have changed with all the ensuing consequences. A detailed examination of the interaction of a viral particle with a DNA fragment showed that, against the background of a slight redistribution within the structural components of the system between DNA and the viral particle, charge transfer does not occur. However, the virus distorts DNA, i.e. there is a mutation of its site. In this case, the entropy, frequency, and total energy of the viral particle–DNA system are increased, and the enthalpy of the system is lower than for an isolated DNA fragment. The results obtained will give rise to the prospect of studying not only the effect of the virus on DNA but also the mechanism of destruction of the viral particle, but now this is only a “theoretical hint”.

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