Structured water defined.

Introduction

Life is totally dependent on water, and we are also given extraordinary bonuses in the form of the *magical beauty* it displays for our wonder and enjoyment. What would life be without rainbows and sunsets, thunderstorms and cloudscapes, waterfalls, pristine rivers, and waves breaking on a rocky shore? How many great painters and musicians have been inspired by streams, mighty rivers, and the ocean? It is hardly surprising that water plays a central role in many of the world's cultures, where certain springs or waterholes are sacred or holy waters because of the healing power of these waters.

The universe and the Earth are so complex in the realm of science, that the understanding of how the **energy systems** of the universe function is often reduced to laws of physics, so that the understanding is accessible to our thinking mind. However, this approach risks overthinking and hence overlooking the profound mysteries that underlie universal energies and therefore the very essence of **water energy in life**.

This situation is exacerbated in chemistry where life is explained as matter in chemical formulas at the expense of the energy of matter. In a similar vein, water as a fundamental element for life, is often reduced to H_2O and to a commodity of an inert solute. However, the **energy, structure and consciousness of water is an enigma** that remains beyond our complete understanding. Water is a ubiquitous compound that is intricately interwoven into the fabric of life and wellbeing in a manner that we seldom contemplate.

The role of water in biological structures and functions has consistently been underestimated by conventional science, primarily because of a focus on larger, more complex, and seemingly more relevant molecules that are believed to set biological organisms apart from other aspects of the observable world.

However, biochemist and Nobel laureate Albert Szent-Györgyi believed the reason that biologists have stumbled in their understanding of living systems is that they have tended to focus on particulate matter and to regularly exclude water. Similarly, they have ignored 100 years of research into water energy and structure and use de-structured water (eg. urban water or distilled, *dead* water) for experiments. Therefore, academics and public scientists have missed critical observations of water capacities and behaviour in structured, *living* water.

Szent-Györgyi maintained that all biological functions consist of the building and destruction of water structures, such that water is part and parcel of the living machinery (not merely it's medium) and water is the very essence of the living state. Water's role in the assembly, activation, functioning, maintenance, and recycling of biological structures (eg. proteins, DNA, membranes) is so profound that few biomolecules could exist in a recognisable or life-sustaining form without water.

Some scientists have suggested that water is not an optimal solvent for life's biochemistry and that all the water's unusual physical properties may not be required to sustain biological life. Whereas life elsewhere in the universe may utilise solvents such as ammonia (rather than water) as its matrix. The fact that water is an integral

player in earthly life suggests that waters' roles are not limited to the physical and chemical processes currently identified by science.

Therefore, does water have a more fundamental role than solvating biomolecules, and might water serve as the primary mediator of information in biological life forms? Water can certainly mediate the flow of information among biomolecules (eg., DNA, proteins) and between forces (eg., EM radiation) and biomolecules through conformational changes in hydration envelopes, integral (bound) water, and hydrogen bonds.

Some researchers have characterised biological life as a process of ever-repeating alternations between information and conformation, such that a change in one always reflects a change in the other. It appears that water contributes both to biological structuring and is, itself, structured by biological forms, perhaps occurring in an iterative manner or as a conformational exchange between the two. While the answer is not well defined, it might be useful to assume a range of perspectives from which to ask questions about water.

Background

The following section provides basic background information to provide context to the answers for the questions raised above about the MEA water device functions and capabilities.

What is structured water?

Structured water has two forms:

1. **Cell water** that is in a gel, **H_3O_2** form. This gel form is in all living cells including microbes, plants, animals, and humans. However, the bulk water in blood is in the form of H_2O, and this is why you bleed blood water and not the gel form of cell water.
2. **Bulk water** that is in pristine rivers, streams, groundwater, seawater, etc. and is in the form of **H_20**. Bulk water in nature is structured either through a flowing, vortex action (eg. current), spring water that has a permanent negative charge and is high in magnesium bicarbonate (see page 6), and still water that has been restructured using a water restructuring device to hold a permanent negative charge (eg. the MEA water devices on page 4)

Water becomes de-structured when it is removed from its natural flowing, vortex action and placed in tanks, reservoirs, and straight pipes. The **change from negative charge to positive charge can occur within 60 hours**.

The nature of structured water

The differences between structured (living) water and de-structured (dead) water are:

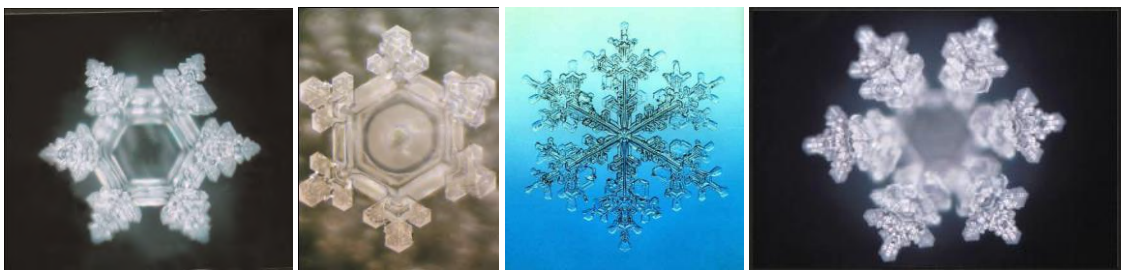
1. **Structured water has a negative (-mV) charge** and de-structured water has a positive (+mV) charge.
2. Structured water has a 6-sided, hexagonal structure while de-structured water has a 5-sided pentagonal structure.

3. Structured water has smaller clusters of water molecules that can more easily penetrate cells (through the aquaporin) and therefore hydrate cells at a more effective and efficient rate.
4. When you drink de-structured (urban, treated) water your body must expend your energy to convert the positive (+) charge to negative (-) charge (and the conversion of positive charge water and food water can consume 50% of daily energy), while drinking structured water with a permanent negative charge does not require conversion and therefore has a *free ride* to your cells for hydration. The **cell water in food** will convert to a positive charge within 60 hours of harvest, however submersion in structured, negative charge water for at least 2 hours will restore the negative charge of the food water through a process of energy entrainment.
5. Structured water has a unique capacity to entrain beneficial frequencies and transform matter and energy into forms that are required by cells. De-structured water cannot transform toxic energies in the water, and this is why filters on de-structured water systems do not neutralise the toxic energies of chemicals, etc.

Consequently, it is not entirely correct to label all structured water as H_3O_2 that is gel in cells, as structured water is characterised by its common negative (-mV) charge and exclusion zone capabilities, and therefore by its energy characteristics and not its chemical composition. We tend to think of each state of water (ice, liquid, gel, and ice) as specific and lasting, but there is an incessant interchange between them. One of the principal features of life is constant change, transformation, and transmutation, and that is because of the capacities of water.

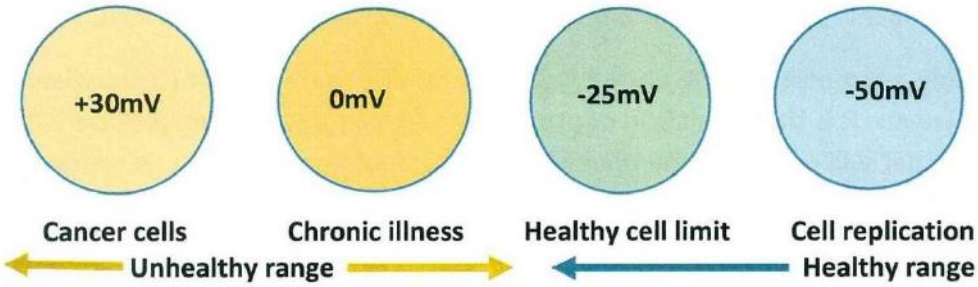
Most wild (pristine) rivers produce structured water in the presence of sunlight energy and natural biological conditions, and these waters are in direct contact with the Earth's magnetism. Electrical stormwater is in an energised, negative voltage form before it hits the ground, air particles (eg. smog) or a surface. Some spring waters (ie. springs high in magnesium bicarbonate) are also energised through contact with magnetic forces in the groundwater rock strata.

Water that is in an ice form is structured (see imagesbelow), however all structured waters are different and present different dimensions in time and space of the six-sided, hexagonal structure.



Most water that humans and domestic animals now utilise is toxic. This toxic water includes rainwater that is exposed to air pollution, soil water contamination (soil water for plants), and water held in dams, tanks, and pipes. The limited availability of clean, structured water is now a major limitation to a healthy life.

Cells of all organs and systems operate at full potential at about -50mV. The only organ that has a higher negative charge is your heart which operates about -75 to -100mV. **This is why the heart will never get cancer**.



MEA structured water is water that has been activated and energised using a unique magnet configuration and spacing geometry to permanently hold a negative voltage (-millivolts). Water structuring occurs in nature when water moves in a natural flow of vortexes (left and right turning or anti-clockwise and clockwise turning).

The MEA water technologies restore and energise water and enable water to *dance* a vortex frequency that frees or neutralises the water of its past, vibrational memory (ie. from exposure to human made toxins in the soil, water bodies and air) and reorganise the molecular structure of the toxins into *life giving* molecules or elements. **That is, the water returns to its natural, structured state where it is free of its toxic *load*.** Water in human-made structures, such as dams, tanks, pipes, ponds, etc. can be restructured and energised through technology that replicates water cycling (vortex) processes in nature.

Below are examples of MEA water devices that range from ½"to 4" for inline systems.

These devices will entrain a **permanent negative charge** into the water, and this is the charge that every cell (over 40 trillion of them) requires to operate at an optimal level. The water has a light blue colour in a bulk container, eg. 1000L (IBC) or bathtub.

By contrast, urban water is de-structured water. This water has a five-sided crystalline (pentagonal) structure and has water molecule clusters that carry a positive charge (+mV voltage). On the other hand, structured (coherent) water is denser and with smaller clusters of water molecules. For example, it takes on a six-sided crystalline (hexagonal) structure with a less open angle and shorter distance of the hydrogen ion to the oxygen ion. In this state, water takes on photons of living light and releases more oxygen (negatively charged) and negative hydrogen to living matter (eg. cells). The consumption of structured or energised water will activate cell water, expel toxins from cells (ie. structured water cannot attach or hold onto toxins) and increase cell potential for life.

Structured water, in its purest form, resembles delicate hexagonal snowflakes. This exquisite form of water exists naturally in pristine rivers, sparkling lakes, and cascading waterfalls, holding the secret to the well-being of all living organisms, including ourselves.

Take a moment to gaze at the images left, taken in 2024 of blueberries placed in these containers in 2017, contrasting the MEA structured water (right image) with the ordinary urban tap water (left image). The de-structured water in the left image has cell oxidation, so which one would you prefer cruising through your body? It is not just about aesthetics. ***The type of water you consume has a profound impact on your cellular health, energy levels, and even consciousness. Imagine that a simple change in the water you drink could enhance your skin, invigorate your energy, and optimise your health and wellbeing****.*

Humans are more than 70% water, and from a molecular perspective, we are 99% water. In essence, water is the cornerstone of our health, making it the most influential health factor you possess. So perhaps the saying should be revised to, *you are what you drink*. Surprisingly, despite the critical role water plays, a staggering 75% of adults in the Western world suffer from chronic dehydration. This chronic dehydration is a primary driver of accelerated aging and disease.

Cell water, unlike the standard H_2O, has a unique chemical composition as H_30_2, with three hydrogen molecules paired with two oxygen molecules, and is in a **gel form**. Gerald Pollack, a luminary in bioengineering at the University of Washington (Seattle), describes in his book, *The Fourth Phase of Water: Beyond Solid, Liquid, and Vapor*, the pivotal role of structured water in every cellular function, from muscle contractions and cell division to nerve conduction. He describes a *new phase of water* that he calls exclusion zone (EZ) water (H_3O_2) that has a **negative charge**. This interfacial water has the capacity for **exclusion of colloidal and molecular solutes from extensive regions next to the hydrophilic surface**, thereby earning it the label of EZ water. All negatively charged waters and water gels have this EZ capacity.

Structured water, in all forms, has a natural hexagonal structure, facilitates essential processes like nutrient transportation and toxin elimination. In fact, it acts as your body's primary antioxidant and detoxification pathway.

Most people unwittingly consume unstructured water, which the body must reconfigure from a positive charge to a negative charge before it can be used optimally at a cellular level. This process consumes precious energy (ie. most people utilise about 50% of daily energy in this conversion process), potentially hindering cellular function (self-regulation and healing/repair), and ultimately leading to dehydration or under-hydration despite adequate water intake.

Even though modern water treatment and storage primarily focus on safety, they inevitably alter water's intrinsic structure and its potential benefits for health by

increasing the positive charge in the water. Everything you ingest influences the way your 40 trillion cells function. Just like in life, better quality information leads to better results. Low-quality information can be found in tap water, contaminated with unnatural chemicals, pesticides, microplastics, and antibiotics that linger in the pipes. In contrast, the highest quality information is found in structured natural spring water, perfectly designed to energise your cells.

It is hard not to reflect on how far we have distanced ourselves from nature when we view water as a mere utility, rather than the life force that sustains all existence. The consequences are evident in the mental and physical health epidemics that have emerged due to our disconnection from the intricate systems of nature and our consciousness.

Remember the foundation of structured water begins with high-quality source water. That is, water from a pristine stream, spring, or deep groundwater systems. If your water is rainwater, then you will have to remineralise the water by adding a pinch of sea salt to the water before drinking and adding additional salt to food.

Natural sources of magnesium bicarbonate waters

Many spring and groundwater sources have naturally occurred sources of magnesium bicarbonate. This water emerges from the Earth with a **permanent negative charge, and its colour is light blue**. This spring water is **nature's EZ water, and often described as sacred or holy water that occurs in many parts of the world, including Europe, NZ, and USA**. Below is an example from a natural spring on the property of Robert Gourlay, Mongarlowe NSW, Australia. This water has a pH of 8.75 due to the concentration of the magnesium bicarbonate. The blue colour is a combination of the high concentration of Hydrogen (yellow), Oxygen (green), and Infrared light absorption that produces the blue fluorescence.

Magnesium bicarbonate is a complex hydrated salt that exists only in water under specific geological conditions. The magnesium ion is Mg_2+, and the bicarbonate ion is HCO_3-. So**, magnesium bicarbonate** must have two bicarbonate ions: $Mg(HCO_3)_2$. Therefore, drinking magnesium bicarbonate water, with a permanent negative charge, is an ideal way to supply magnesium ions and bicarbonate ions to energise cells.

Magnesium and bicarbonate rich mineral waters are easily absorbed and have many health benefits. When our tissues become too acidic and lacking in magnesium necessary for ATP production cellular metabolism drops off and can lead to obesity and diabetes.

The story of magnesium bicarbonate water begins in Australia with the dedicated work of Dr Russell Beckett, a veterinarian with a PhD in biochemical pathology who paved the way to understand the significance of bicarbonate acting in conjunction with magnesium. He utilised natural magnesium bicarbonate water (known as ***Unique Water*)** which, it has been asserted, slowed the ageing process and increased the length of life of humans and other mammals and could be used to treat all inflammatory and degenerative diseases. ***Unique Water*** is water containing magnesium bicarbonate at an alkaline pH value. Dr. Beckett's theoretical and experimental research has resulted in the understanding of how important both of bicarbonate and magnesium ions are in human physiology and how they work together to optimise human health and the ability to recover from disease.

Bicarbonate ions working alongside magnesium would naturally create the conditions for increased glucose transport across cell plasma membranes. Bicarbonate ions create the alkaline conditions for maintaining the enzyme activity of pancreatic secretions in the intestines. Bicarbonates neutralise acid conditions required for inflammatory reactions hence sodium bicarbonate would be of benefit in the treatment of a range of chronic inflammatory and autoimmune diseases. An excellent research group called Agua G is studying the overall benefits of bicarbonate in human physiology.

Bicarbonate acts to stimulate the ATPase by acting directly on it.

Few clinicians are aware of how magnesium bicarbonate works to enhance cell function. **Bicarbonate acts as a transporter of magnesium into the mitochondria**. However, magnesium transport into or out of cells requires the presence of carrier-mediated transport systems. ATPase reaction has a broad pH optimum centering on neutral pH, with little significant activity above pH9.0 or below pH5.5. Thus, anything that moves blood from an overall acid condition toward an alkaline condition or neutral zone is going to enhance cell metabolism via mitochondrial optimisation.

Blood alkalinity enhances magnesium reabsorption in the juxtamedullary proximal nephron.

Seawater ORMES gel

ORMES seawater gel could be considered **another form of structured, EZ water**.

ORMES (Orbitally Rearranged Monatomic Elements) and sometimes referred to as ORMUS or ORME: *m-state elements,* is a unique form of matter predicted by Einstein in the 1920s. ORMUS elements, also known as the platinum group of minerals (PGM) are **platinum (Pt), palladium (Pd), rhodium (Rh), ruthenium (Ru), osmium (Os) and iridium (Ir)**. The six metals are generally found together, although their relative abundances may vary appreciably, depending on the source; however, seawater is a natural and stable source.

These minerals in the monatomic form have the same number of protons and electrons as their mineral counterparts that are found on the Periodic Table of Elements. The difference is in how the elements *spin*. Some rapidly spinning elements form what are known as *Cooper pairs, ie. e*lectron pairs that become bound together as they spin. The elements of ORMES are highly stabilised and chemically inert, ie. no longer capable of interacting with other elements. In this state, the ORMUS elements are extremely bioavailable. They can be absorbed easily and rapidly by plants and other organisms.

ORMES are naturally occurring in certain volcanic soils dating back to a geological event which occurred about 60 million years ago. Soils which are considered rich in these elements might contain up to six percent of this material. The remaining 94 percent or more of the material is ordinary soil comprised mainly of silicon compounds.

ORMES gel is researched and produced by Resonate Research Pty Ltd from concentrated seawater that is initially prepared with a permanent negative charge. The gel (see images below) has a similar gel consistency as the cell gel or EZ water. It is likely that these gels form in the presence of electrolytes. That is, ORMES gel is the EZ form of seawater. It has a pH of about 9.4 to 9.2, and a negative charge of between -130 to -125mV (saturation is -150mV in water and gel).

The activation of the concentrated seawater to a permanent negative charge produces a stronger magnetic field around the monatomic elements. This in turn, and along with the crystalline or sacred geometric shapes in the structured gel water, act as nesting places for the ORMES gases that are always present in the air and water, and this allows them to nest in these spaces. This in turn brings into the gel water the special magnetic energies that come with the ORMES atoms.

In this form the gel is in a gaseous state. Then, above a certain density threshold and below a specific critical temperature, those molecules go to another quantum state, with lower energy. In this lower energy, coherent state, the cloud of electrons oscillate between two quantum states: a ground state, and an excited state. The electrons in this quantum state oscillate between the ground state and the excited state with a certain frequency. This oscillation creates an electromagnetic field, which is confined within the super-molecular structure, so that no radiation is observed. The molecules of the structure, together with the confined electromagnetic field, constitute in this model the exclusion zone (EZ).

ORMES is considered to restore the *life-force*, syntropy energy to materials, and in respect of cell water, ORMES possibly enhances the restoration of the crystalline structure or EZ capacity of the water. This special **ORMES energy** is another way to energise and restore cell function. For example, ORMES gel is a natural emulsifier for compounding topical cremes, and therefore can be applied to the skin as a crème. This emulsifying capacity gives it a *unique inclusion zone (IZ)* for the platinum group of minerals, along with other natural materials, eg. essential oils, such as Castor and Frankincense oils.

Conclusion

Structured water has a negative(-mV) charge and this is its defining feature. Structured water, in its several forms described above, is a simple yet transformative way to tap into the rejuvenating power of water. This shift in thinking within society would have a massive effect on wellbeing.

Structured water is now readily available, in several forms as outlined above. However, the acceptance of structured water as natures foremost necessity for cell regulation and healing, is still along way off in the water chemistry industry, public science, and academia. The debunkers of 100 years of structured water science are evident on Wikipedia and with the University of NSW, Australia. This debunking is fuelled by a combination of wilful blindness to the science of water energy and the institutionalised corruption in public institutions by business corporations who control the water narrative or messaging. Unfortunately, while water science is captured by chemical and engineering/infrastructure interests, the conversation around water energy and cellular health will be sidelined.

However, social media is successfully spreading the message about structured water as the ***holy grail*** of cell function, and that water structure determines water function (ie. *function follows form*). The crystalline structure gives water vitality and allows it to hold memory (frequencies from nature) which is key for healing.

There is also an increasing interest in using structured water in its pure, untouched, and uncontaminated water form found in pristine flowing streams, glacier melts and natural springs (eg. $Mg(HCO_3)_2$). However, structured water is extremely sensitive to the environment, just like the cells in our bodies. Structured, living water can become de-structured when exposed to an unnatural environment, eg. radiation/microwave oven radiation, storage facilities where it cannot naturally flow and be magnetised by the earth and sunlight magnetism, filtration systems (eg. Reverse Osmosis and Alkaline Water systems that turn the water into a high positive charge), etc. It is likely that more than 95% of people, globally are drinking daily, de-structured, dead water. This fact alone is probably the primary reason why disease is increasing, in an uncontrollable manner.

Fortunately, we have choices in life and there are options to access structured water with a permanent negative charge. For example, individuals can significantly improve cell health and their overall wellbeing with a MEA water device, as outlined on page 4.