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Stable Intra Molecule Connection of Hydrogen Atoms in Water Molecule

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Abstract: *The energy of 0.007 eV is proposed to be released in the stable intra molecule connection of Hydrogen atoms in the water molecule.*

Keywords: *energy from stable intra molecule connection, contracted subtle-touch orbit, osmosis*

1. Introduction

The aim of this article is to discuss about intra molecule connection of Hydrogen atoms in water molecule in the light of the double-surface geometry [1].

2. Stable Contracted Subtle Touch Orbit

The original orbit length $s(n)$ as well as subtle-touch orbit length $2\,x\,s(n)$ – both measured in Compton wavelengths of the electron λ_e – can be attributed to Hydrogen orbital energy in H_2O satisfying Bohr relation $E = \frac{\alpha^{-1}Ry}{s(n)}$ where [1]:

$$\alpha^{-1} = 137.035\ 999\ 084. \tag{1a}$$

$$Ry = 13.605\ 698\ 0659\ eV. \tag{1b}$$

$$n = Hydrogen\ orbit\ number\ and\ s_n = Hydrogen\ orbit\ length. \tag{1c}$$

$$s_n = n\left(1 - \frac{1}{\sqrt{1+\frac{\pi^2}{n^2}}}\right), \quad n \in \mathbb{N}\ or\ \frac{\mathbb{N}}{2}. \tag{1d}$$

$$2\,x\,s_n = s_m = m\left(1 - \frac{1}{\sqrt{1+\frac{\pi^2}{m^2}}}\right), \quad m \notin \mathbb{N}. \tag{1e}$$

$$For\ instance\ [1], at\ 37℃ : n = 101.5. \tag{1f}$$

The subtle-touch orbit of the length $2x\ s_n$ is almost stable but can become completely stable only by the subtle-touch orbit length contraction to s_{2n}.[1] $Since\ if\ n \in \mathbb{N}\ then\ 2n \in \mathbb{N}, too.$ For this purpose in our case the next energy is released:

$$\Delta E = \alpha^{-1}Ry\left(\frac{1}{\frac{s_{2n}}{2}} - \frac{1}{s_n}\right) = \alpha^{-1}Ry\left(\frac{1}{\frac{s_{(203)}}{2}} - \frac{1}{s_{101.5}}\right) \approx 0.007\ eV. \tag{2}$$

3. Biological Consequences

The concerned energy input needed for the splitting of a stable intra molecule connection of Hydrogen atoms in the water molecule yielding about 0.007 eV equals the estimated energy gained by one water molecule passing the membrane channel of the living cell by osmosis, i.e. in the process pushing

water molecules from the hypotonic to the hypertonic environment. [2] And one ATP could be phosphorylated from ADP harvesting the energy of about 45 such water molecules. [2]

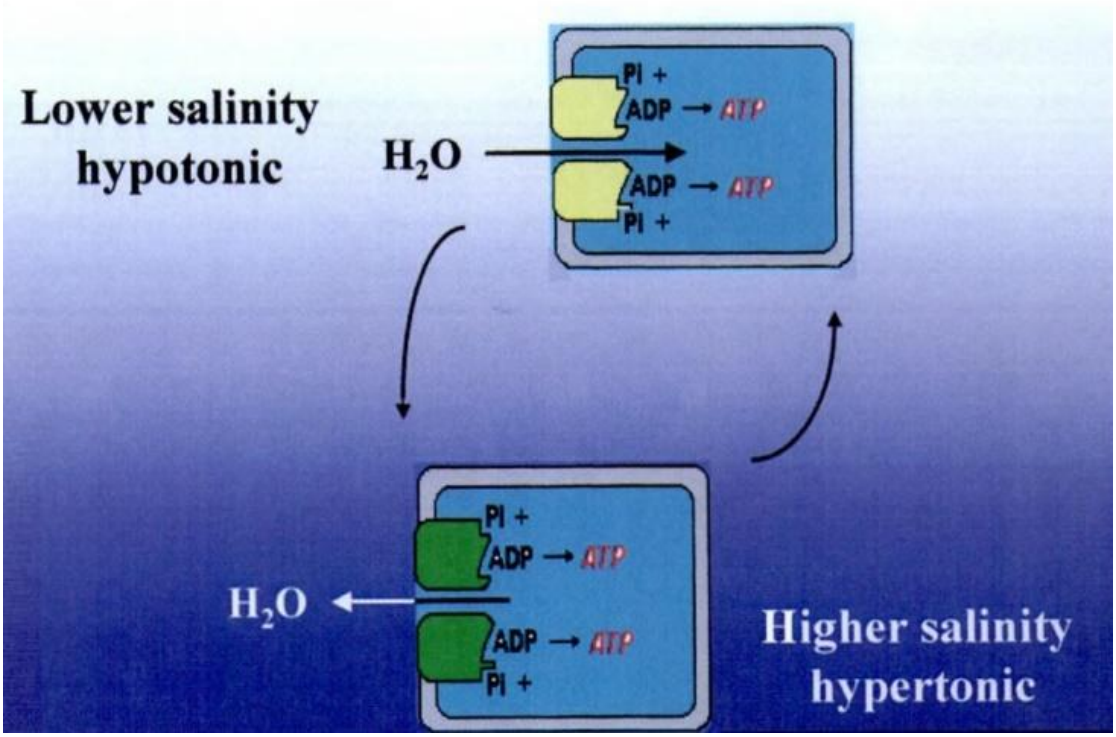

Fig1. *A hypothetical osmotrophic organism that harvests energy from salinity gradients (from Schulze-Makuch and Irwin* [2]*)*

As presented in Fig.1 the osmotic movement of water would be coupled to a reaction that forms a high-energy covalent bond through variants of a membrane molecular complex that are energized by entrance or exit of water, depending on the direction of the osmotic gradient (P_i = inorganic phosphate, ATP = adenosine triphosphate). ATP formation is used as an example, not necessarily implying that ATP is used by a hypothetical osmotrophic organism. [2] Indeed respecting the double-surface theory, the water molecule itself could harvest this energy providing the splitting of a stable intra molecule connection of its Hydrogen atoms and makes the harvested energy available for ATP formation later.

4. Conclusion

Perhaps it's too nice to be true. But nevertheless it's possible.

Dedication

This fragment was written on the occasion of the Slovene cultural holiday. So it is dedicated to culture

References

[1] J. Špringer, "Zero Water Molecule Enthalpy of Transformation", International Journal of Advanced Research in Physical Science (IJARPS), vol. 4, no. 9, pp. 9-13, 2017.

[2] Dirk Schulze-Makuch, Louis Neal Irwin, Life in the Universe: Expectations and Constraints, Springer Science & Business Media, 11. sep. 2008

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