

Action potential, bioenergy resource, and the principle of natural electromagnetic dynamics: the living essence and eternal elegant-beauty— from biology to the universe (I)

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Highlight

The perpetual operation of energy in vigorous state, instead of standstill (heat death), is the essential vitality of biology and the universe, what principle of nature operates it? The perpetual refers to the state-in-operation of power system in dynamic homeostasis founded on ground energy, instead of the confusion without energy resource or energy dissipated. To pursue the perpetual dynamic power and energy creation is the summit realm of practical technology. However, it has long been disregarded theoretically and practically. This work starts from the highly developed biological studies, and by utilizing the intrinsic principle refined, explores the intrinsic principle, operating mechanism and energy creation of perpetual electromagnetic dynamic power from biology to the nature in macroscale and microscale. The electromagnetic perpetual motion generates from the relativity of field (thermal field, electromagnetic field and gravitation field) as the ground energy to operate energy conversion of thermodynamics, electromagnetic dynamics and fluid dynamics. It creates the potent energy of electricity and electromagnetic dynamic power. This work historically discovers a new milestone on the generating principle and operating mechanism of perpetual electromagnetic dynamic power and energy creation in biology and the nature. The strict and unified principle dominates the vigorous living state from the biology to the Earth's geological and meteorological phenomena and celestial motions, not obfuscated but clarified, not disordered but in supreme harmony and homeostasis. And it is first time that clearly presents the applicable molecular biochemical model for the digitalized perpetual operation of bioelectricity and bioenergy resource,

and provides the practicable reference on the development of harmless fine-energy power, with the purpose learning from and emulating the nature. This study highlights as follows:

i. On the electromagnetic energy resources; the electromagnetic dynamics connotation of natural energy resource.

ii. On the electromagnetic motive powers; the electromagnetic dynamics connotation of astrodynamics.

iii. The electromagnetic dynamics connotation of aesthetics and eternal vitality; the ingenious relativity.

Abstract

The lives are continuous and the galaxies are in revolution, in which the perpetual motion of electromagnetic energy in vigorous state forms the essential state of biology and the universe. The bioelectric excitation of action potential is the essential character of the living state of organisms. The highly developed molecular cell biology researches enable the presentation of physical and chemical attributes of each participant of action potential to disclose the intrinsic relation and mechanism on bioelectricity generation. The action potential is operated by electromagnetic convection-exchange coupling with the electromagnetic properties as follows: first as the electric currents of alternating current on electricity generation, second as the oscillation of electromagnetic signals on informationization, and third as the electrically charged fluid that creates the spinning electromagnetic power on electromagnetic fluid dynamics.

The process, principle and prerequisite on the energy creation of action potential electromagnetic dynamic homeostasis system give the in-depth insight into the principle and prerequisite on the operation of electromagnetic dynamic homeostasis system and its energy creation. Basing on it, the operation mechanism of electromagnetic convection-exchange coupling dynamic system in macroscale and microscale of nature is investigated— because an indeed understanding comes from the thoroughly and deeply done investigations. The rigorous and unified principle dominates the energy creation of electromagnetic dynamic homeostasis system from the biology to the Earth phenomena and celestial motions: the circulated electromagnetic convection-exchange coupling in dynamic homeostasis generates from the prerequisite on relativity, and performs the perpetual operation of electromagnetic oscillation, the spinning electromagnetic power in rhythm, and the

interactions between coupling systems. It creates the dynamic homeostasis in elegant-beauty with the property of refinement, harmony, and the combination of statics and dynamics.

Taken together, this work highlights the energy creation of electromagnetic dynamics in dynamic homeostasis generated from the electromagnetic convection-exchange coupling system, and it is what imparts the eternal vitality and aesthetic connotation into biology and the universe.

Keywords

action potential, bioelectricity, bioenergy resource, fine-energy resource; electromagnetic dynamics, natural electromagnetic dynamics, celestial dynamics; aesthetics, celestial aesthetics, natural mathematics, time; earthquake, seismic wave, cyclone, capillary action

Extracts on relativity and the ingenious relativity

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