

INFORMATION = A POTENTIAL FORM OF ENERGY
An alternative Energy Solution.

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Abstract : Conceptual innovation: the information as energy of the forms in quantum science and art .
A new Program/Idea.

ABSTRACT

– Both Energy and Information are strongly inter-connected because they are so fundamental to the nature of the Universe.

– a) Everything described in physics ultimately comes down to energy. From the Einstein's equation, mass times the square of the speed of light equals energy. This means that Matter is condensed energy ,but ,at the same time, Matter is not only based on the bulk quantity of mass, this because Matter assume various qualitative forms. So that Matter is a stored combination of "Energy and Information".

b) Besides we know that Energy at a quantum level, can be described through some discrete wave/particles and we know that they all can be also described by bits of Information.

c) So that Information and Energy can be exchanged and hence can be two equivalent forms of Energy

d) Therefore it is possible to assume that Information is a Fundamental form of Energy .
I think that contemporarily science and art need to interpret the relationship between Forms and Information as an evolution of Energy.

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The foundations of science in mechanics or in quantum-mechanical approach, have considered the information only when it is associated in shape recognizable to the energy and matter. Therefore, the academic culture in science and art recognizes a relationship between "**information and form**", only through its surface profile that gives an aesthetic forms.

In this paper we get the assumption that fundamentally Information is a new potential form of **Energy ("IE")** e.g. an indispensable function of "**pure energy**" to understand more completely natural phenomena transformation , through accepting "IE" as the potential basic substance that can be manipulated in various forms in nature as in the virtual world. (1)

Since the "**energy is the foundation of everything**" which takes the form and shape of all energy and matter substances , EGOCREANET research & innovation Center , decided to start to re-consider the information in the **Aristotle's** sense of "**IN-FORM-ACTION**", i.e. an action that precedes any form.

Therefore "IE" is the fundamental "pure potential energy" that can be the cause of all transformations in different "forms" in nature.

The existence of pure "IE" can be confirmed through the "**Energy in Perfect Vacuum**" that is an underlying background of energy called "**vacuum fluctuation of dark energy**" or "**zero-point quantum energy**" ,that exists , even when the space is devoid of any different form of Matter or Energy in a space absolutely free and empty. (2)

Therefore in the study on "**Information Energy**" follow the need to consider the information as the fundamental level and ancestral energy , filling the virtual vacuum. The Greek philosopher **Aristotle** (384 ? 322 BC) thought that a "**vacuum could not exist in nature**", this because any form in nature need information, as some religions said : "**at first was the word that is the ordering principle, backbone of any substance**".

Thus today we again recognize that the "IE" becomes the primary foundation capable of giving expression to recognize all forms of energy and matter. This innovative approach emerges from the need of change the contemporarily relationships of science and society by means to rebuild a renewed science in order to **overcome the limits of the traditional "mechanical" science** .

The "**Information Energy**" today is seen as the catalyst for the complex change of industrial society, to rise forward a more high conceptual dimension , becoming consonant to the effective complexity of the contemporarily world in relation to social culture of innovation. (3)

As a matter of facts a fundamental change of the paradigm of mechanical science is an endeavour to advance the economic contemporarily development, increasingly based on open network systems in internet working for enhancing in the globalized epoch the future knowledge society.

It is important to underline that in the last century most of the great minds of science sensed the challenge to overcome the limitations of the paradigm of mechanical science: **Albert Einstein** proposed the need to

introduce a "hidden variable", **Nikola Tesla** foresaw the need to refer to a "**Dynamic of Ether**" as the foundation of Energy ,and **Erwin Schrodinger** introduced the concept of **Entanglement (1935)** to overcome many paradoxes of Quantum Mechanics.

Today **Quantum Entanglement** has become a fundamental concept to renew the scientific thought of the knowledge society in a special way useful to interpret the importance of nano-technological applications to develop a new kind of production using more information in relation to less matter and low energy.

Quantum Entanglement is a phenomenon that occurs for example when two photons lose their kinetic mass so that they interpenetrate each other, losing the previous individually forms and sharing a common information field.

As a matter of facts **Quantum Entanglement** between photons is the basis of some experiments about "**quantum teleportation**" i.e the simultaneity of exchange of "information" across long distances.

The endeavour to understand how can be possible to **teleport photons**, then atoms and ions as a long distance of "**Information-Energy**" exchange, has profound implications for the future improvement of science.

Finally the theoretical applications of the "**Information Energy**" conceptualization can be useful to understand some phenomena that cannot be included in mechanical or quantum mechanical vision of science. For instance the technological discovery of the "**Energy Catalyzer**" (**E-Cat.**) opening a new solution for an alternative energy production based on the transmutation of atoms, so that today "**E-Cat**" need to reinvent the **Alchemyc ideas**, coming back to the ancient idea of the Alchemist by using "**IE**" as an modern basis of understanding . (4)

The "**Information Energy**" can be seen as the power whose existence has been forgotten by the **Born - Oppenheimer approximation**, in fact **IE** interpretation can give an explanation to the possible interaction between the process, in which they take part the weak and the strong interaction.

It is important to remember that **Alchemist believed in transmutation** of the affinity of elements sustaining the idea that the ability to transmute matter were included in the power of information to the "**philosopher's stone**" in order to catalyze the change of forms to get an effective transmutation of matter. So that in current terms we can say. Alchemists believed that can be possible to to transmute lead into gold utilizing "**IE**" for catalyze the changing of the chemical makeup into another, thereby creating a new chemical identity.

To day the theoretical interpretation of **E-Cat** need to reinvent the Alchemy ideas to understand the experiments based on cold fusion, or **LENR, Low Energy Nuclear Reaction**.

In the **E-Cat** experiment to get an alternative energy solution occurs the **transmutation of Nickel to Copper**, substances whose atoms differ for .one single subatomic particle , a **nuclear proton (H+)**

Free protons may have formed through the adsorption of molecular hydrogen (H₂) to the nano-structured powder of Nickel , but at the present state of mechanical knowledge is not clear how a free proton is able to overcome the nuclear barrier to be inserted into the core of Nickel atom (**Ni, Atomic N. = 28**) changing the atom into Copper (**Cu, Atomic N. = 29**)

May be I think that can be possible to hire and assume that free protons , confined in the nanostructured powder of Ni ; **a**) first thought an **Entanglement** between Protons get transformation in a field "**IE**" communicable at disence right into the core of Ni-atom, and **b**) that a next interaction makes reversible the Entanglement, **dis-entangling Protons** and releasing them one inside of the nuclear core of the transmuted Cu-atom and other remaining in the surface of the nano-structured powder of Ni. (5)

- Sincerely I believe that in order to understand what truly happens in the case of innovative experiments scientific imagination needs to resort to the fantasy of art.

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