A LENR VIEW AFTER SSICCF20 AND ICCF20

ISCMNS 12th Workshop

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INTRODUCTION

- At SSICCF20 and ICCF20 we have presented several paramount results which we quickly summarize here.
 - If we use the same math as quantum physicists, then a straightforward application of the Banach-Tarski theorem to the Hamiltonian of an isolated system in classical statistical thermodynamics brings to the non-conservation of energy.
 - Our previous presentation in this conference
 - We pushed the traditional argument of evolution of any closed system towards a state of maximum entropy to its limits by extending the notion of what order means in any physical system and showed that in such a new model there is a theoretical way to make an artificial fuel which will give more energy when combustion occurs than what we needed for its manufacturing and this without contradicting the first and second principles of thermodynamics.
 - We also showed that it is possible to extend thermodynamics which is limited in its formalism to closed systems, to open systems in general and the whole universe in particular.





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INTRODUCTION

- We proved that if we use the same math as quantum physicists through the theorem of Zermelo, then at any moment, we can extract as much energy from any system as in its beginning whereas it has "cooled down". We suggested using this for LENR among others.
- According to these results we suggested that LENR reactions could be not "cold fusion" but new kind of reactions, "above" chemistry. This is a strong conviction linked to our previous work presented at New3-SC with a new model of the atom which justifies what some experiments already have detected! However, we shall show in this paper that our model based on symmetries can perfectly explain why and under which conditions cold fusion could occur. We will even show a way to master it! And we shall also show why such cold fusion phenomena can, the case being, bring to the absence of radiations, whatever they are (gammas, neutrons, etc.).
- We shall also propose a new approach of "multisome" reactions (in particular threesome!) which can bring to "excess heat" and this is basically the way we shall explain pico-chemistry proposed by Jacques Dufour and Jenny Darja Vinko.





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INTRODUCTION

Most of these theoretical results, which we think are of importance, were
presented at LENR conferences, but we did not explain how to use them to
make LENR working systems. In this paper we are going to try to give some
more concrete indications of how to do this.





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SYMMETRIES AND ENVIRONMENT

- Non-Archimedean geometry is our referential
- The "sphere" (not sphere according the preceding presentation) is full of infinitesimal size particles
- They form what we call a Planck box and verify the axiom of infinite to define the entity
- The symmetry from inside implies the stability the case being
- This entity on the right can be either, say, a stable particle, an unstable particle, a point in our space at our scale where there is a field





diameter = $1/\omega$



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SYMMETRIES AND ENVIRONMENT

- The symmetry of a system in its environment has to be appreciated through all the infinitesimal particles at stake in the environment:
- The field in which they bathe
- The interior of the particles
- The global disposal in space of the whole







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SYMMETRIES AND ENVIRONMENT

- On the contrary of what physicists do, such a point of view, in the general case, prevents considering
 - Either independent fields
 - Or add the different fields
- This is kind of counterintuitive view of the trick consisting in separating the variables. We think we are in a case where this is forbidden in the general case
- An example of this can be seen experimentally in quantum physics where probabilities do not follow the Kolmogorov axioms





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USING NANOTECHNOLOGIES FOR LENR

- As presented at ICCF20 we suggest a construction characterized by the order defined as
- Now, we suggest beginning with a periodic stable (hence symmetric) structure at the nanoscale

 $\prec = \bigotimes_{i \to 1} \prec_i$

- We trigger its collapse by a means or another and we get the consumption of the different underlying order relations giving obviously excess heat
- However, the consumption will depend on the global environment at stake which means the fields. Such fields have to be chosen so that dissymmetry is maximum





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COLD FUSION?

- First of all, hot fusion is got through tunnel effect only and needs a lot of kinetic energy to force the barrier even under tunnel effect
- Our view is quite different whereas consistent with the previous one
- The resistance to fusion is linked to the dissymmetry at stake. The bigger the degree of dissymmetry the harder.
- However, if we consider, say, 2 particles we want to merge, under the condition that the global picture is symmetric taking into account the environment (fields..) then fusion should occur with a resistance which is "proportional" to the degree of dissymmetry
- This means that if this degree is zero, there is no resistance, whatever the temperature!





COLD FUSION?

- For us therefore, the tunnel effect and its probability of occurrence only is the characterization of dissymmetry degree, locally corresponding to the conditions of the experiment.
- If we change the dissymmetry degree, the probabilities of the tunnel effect change!
- Now, once fusion has occurred, we get either a symmetric entity, hence stable and we expect no radiation! Or we get a dissymmetric entity, in which case it is unstable and radiates!
- The mystery of LENR without radiation would therefore be solved and is not inconsistent with having also LENR with radiation





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BEYOND COLD FUSION

- It is known however that some fusions are not possible like the proton-proton one for example or the neutron-neutron one
- In our model, at least on a theoretical point of view, this is possible!
- We "only" have to make the global system symmetric and it will occur
- However, if we look at the proton-proton fusion via a neutron we get the following picture



ALTERNATIVE

• Let us propose an alternative to the preceding picture for the fusion of a proton and an electron





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A NON-FUSION ALTERNATIVE

Remember this picture







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A NON-FUSION ALTERNATIVE

- It represents what we shall call a threesome relationship between particles
- Indeed, there are clearly, according to our theory, a system which is symmetric viewed from the outside, hence stable, with 3 components which are obviously non symmetric and therefore not stable
- If there are slightly different evolutions between the 3 identical components, then
 the symmetry from the outside is going to be broken and the whole system will
 evolve as a unique very dissymmetric entity, probably generating "excess heat" in
 the sense that there will be more heat as expected initially thanks to the rupture of
 the central symmetry
- Such threesome relationship between particles have already been invented via what Jenny Vinko and Jacques Dufour call pico-chemistry since their reaction obviously involve a threesome relationship between the particles at stake. ©





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A NON-FUSION ALTERNATIVE

- Consider the following image
- This is a 632 symmetry in the ad hoc language
- It is clear that we can have 6-some, 3-some and "orthodox couple" © relationship in this case
- And if we perform well, in a global mixture, we could have all of them at the same time... [©]







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CONSIDERING TIME

- Considering time is a must according to our theory
- Indeed, we can play over time with local symmetries, local dissymmetries and so on, sometimes slowing down the reaction sometimes speeding it up, sometimes increasing the dissymmetric potential and so on
- In order to achieve this, we need a variable environment (through fields) and play with them over time
- It seems to us the very condition to achieve the best result
- And to our knowledge, very few, if any, experiments tried such a way of doing
- To our knowledge also, two other things have been neglected
 - The presence of all fields
 - The geometric aspects of the experiment since, once again, all our theory relies on geometry





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GLOBAL CONCLUSION FOR BOTH PAPERS

- In order to remain "honest" and "honorable" we need to add one paramount comment which implication is more than great in our way of looking at the world
- Indeed, all our world is guided with symmetries and dissymmetries in our view
- We can deal with anything if we create locally either the right symmetry or the right dissymmetry
- It means that on the contrary of what physicists say, that is, the world is what it is, for us, the world is what we want it to be
- We can change the laws of physics both locally and globally it only depends on our will!





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GLOBAL CONCLUSION FOR BOTH PAPERS

- And Jesus said to the orthodox physicists:
- Because you have so little faith...
- For truly I tell you, if you have faith the size of a mustard seed, you can say to this mountain "move from here to there" and it will move. Nothing will be impossible to you...

Matthew 17:20





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