

Abstract Submitted  
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**Isomorphic Properties of Atoms, Molecules, Water, DNA, Crystals, Earth, SolarSystem and Galaxies** F.A. GAREEV, G.F. GAREEVA, I.E. ZHIDKOVA, Joint Institute for Nuclear Research, Dubna, Russia, Dubna University, Dubna, Russia — We discuss the cooperative resonance synchronization enhancement mechanisms of Low Energy Nuclear Reactions (LENR). Some of the low energy external fields can be used as triggers for starting and enhancing exothermic LENR. Any external field shortening distances between protons in nuclei and electrons in atoms should enhance beta-decay (capture) or double-beta decay (capture). We have proposed a new mechanism of LENR: cooperative resonance synchronization processes in the whole system nuclei+atoms+condensed matter+gaseous+plasma medium, which we suggest can occur at a smaller threshold than the corresponding ones on free constituents. The cooperative processes can be induced and enhanced by low energy external fields. The excess heat is the emission of internal energy, and transmutations at LENR are the result of redistribution inner energy of the whole system.

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