

Huge Variety of Nuclides that Arise in the LENR Processes. Attempt at Explanation

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LENR studies have shown a wide variety of manifestations of this phenomenon. It manifests itself in metals with hydrogen dissolved in them, in plasma, in gas discharge, in electrolysis, and even in biological systems. In addition to energy release, which far exceeds the capabilities of chemical reactions, LENR is characterized by a huge variety of emerging chemical elements. The report provides examples of the appearance of many initially missing elements in different LENR installations. For example, in the nickel-hydrogen LENR reactor created in our laboratory, which worked for 7 months, Ca, V, Ti, Mn, Fe, Co, Cu, Zn, Ga, Ba, Sr, Yb, Hf were found. Moreover, the appearance of new elements is found not only in the "fuel" but also in the surrounding matter. The huge variety of chemical elements that arise can be explained by the fact that in the processes of LENR, the interaction covers several atoms at once. This can be an interaction initiated by neutrinos (antineutrinos) of very low energies, since such particles have a de Broglie wavelength (the size of the interaction region) much larger than the interatomic distances in condensed matter. Huge fluxes of neutrino-antineutrino pairs are generated in metals and dense plasmas by thermal collisions of electrons with atoms at a sufficiently high temperature. Another possible agent that causes collective nuclear transmutations is probably the light magnetic monopole (the magnetically excited state of neutrinos).

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