

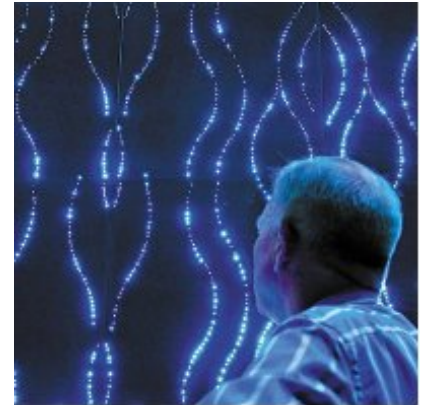
Alchemy 2.0 – Low Energy Nuclear Reactor Creates Gold and Platinum

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The transmutation from lead to gold has been mankind's dream for millennia. Lattice Energy LLC, a company from Chicago, IL, claims to have developed a process for energy production, utilizing a low-energy nuclear reactor (LENR) that, as a byproduct of neutron captures on tungsten, will create a mix of precious metals.

To learn more about the technology, Tech Metals Insider spoke with Lewis Larsen, president and CEO of Lattice.

Lattice was founded in 2001 upon the ruins of the "cold fusion" failures that had caused much hope and disappointment back in the late 1980's. Larsen is part of a team that learned from cold fusion's mistakes: "their heat production measurements were right", said Larsen with respect to cold fusion, "but their conclusions about the heat being produced by a fusion process were completely wrong."



What enabled Lattice's new approach were recent advances in nanotechnology. "Nanotechnology and LENR are joined at the hip", said Larsen. "It is one of the reasons why this could not be done back in 1989-90. Before our work, nobody had a grasp on the theory of neutron creation from protons and electrons in tabletop apparatus; nor on exactly how to apply advanced nanotechnology to build well-performing prototype devices."

Combining the know-how of experts from a variety of disciplines including electro-dynamics, quantum electro-dynamics, nuclear physics and solid state physics, lead to the development of a theoretical foundation which is now ready to be prototyped, and put to the test.

The goal of Lattice is to build high performance thermal sources with outputs ranging from single watts to 100 kilowatts, the ultimate application being the use of LENRs in cars. Patents have been filed and some were issued. At this point, financing is provided by insiders and several angel investors, but larger amounts of capital are needed to take the technology to its next level.

Larsen is labeling the LENR as "green nuclear technology" – green because commercial systems could be operated very similar to aluminum production using an electric arc. The process would emit no energetic neutrons (LENR ultra low energy neutrons are all absorbed locally deep inside the reactor and are thus not a safety problem), and no gamma radiation.

When asked about differences compared to the deuterium-tritium fusion process presented by the Lawrence Livermore National Laboratory last week (please [click here](#) for Tech Metals Insider's report) Larsen said: "Their dirty little secret they don't talk about is that they produce deadly, very energetic neutrons and gamma radiation. Harvesting the energy from these neutrons produced by fusion is quite difficult. Furthermore, shielding requirements will make fusion unusable for mobile and portable power generation applications."

Larsen's theory that gold, platinum and several other metals can be created by his process is based on findings by Japanese physicist Prof. Hantaro Nagaoka who successfully transmuted tungsten into gold back in 1924. Nagaoka's results have been verified by several institutions in recent independent experiments but so far there has been no effort to commercialize the process. "Now that the LENR transmutation process is well understood the use of nanotechnology may change all that", believes Larsen.

"The neutron-catalyzed LENR process follows rows of the periodic table of elements", he went on, meaning that heavier metals than the starting targets' will be created. The work published by Larsen and his team suggests that a tungsten target, for instance, will absorb neutrons and gradually be transmuted to gold, platinum and other platinum group metals. "And because LENR products are not dangerously radioactive", Larsen added, "conventional metal recovery processes can be utilized."

"Can we scale this up to a commercial process that makes money?" – Larsen is convinced it may be possible.

By Bodo Albrecht

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