

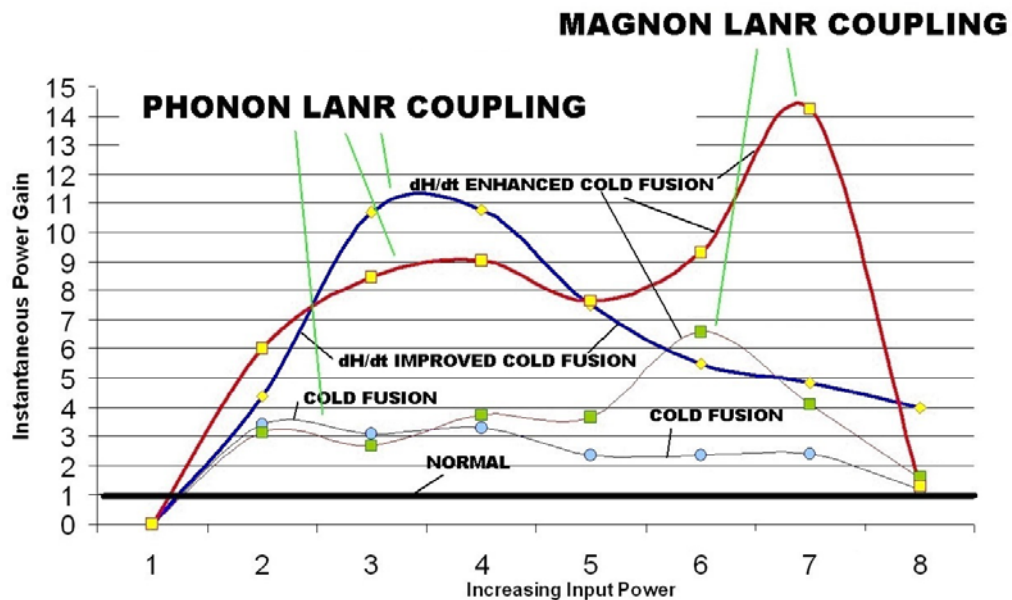
Amplification and Restoration of Energy Gain Using Fractionated Magnetic Fields on ZrO₂-PdD Nanostructured CF/LANR Quantum Electronic Component

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LANR (CF) activated nanocomposite ZrO₂-PdNiD CF/LANR quantum electronic components are capable of significant energy gain [1,2]. For this paper, we examined the NANOR's response to dynamic applied magnetic field intensities. Controls included background, ohmic thermal controls, tests for time invariance, and with and without the applied magnetic field intensities [~ 1.5 Tesla with 0.1 millisecond rise time]. Power gain was determined by dT/P_{in} , HF/P_{in} , and calorimetry. It was discovered that repeated fractionated, magnetic fields were discovered to have a major, significant and unique amplification effect on LANR/CF systems. There were also significant residual late-appearing effects which are complex and demonstrate variable changes in activity suggesting a new material science/nuclear interaction. As importantly, at higher input electrical currents, high intensity fractionated magnetic fields demonstrate their own optimal operating point (OOP) manifold curve. The figure shows the ohmic control ("normal") and conventional CF/LANR operation ("cold fusion"), and the synchronous and metachronous impacts of a fractionated magnetic field intensity. There is an amplified phonon OOP and a *de novo* magnon OOP. The magnon OOP is located to the "right" (at higher input electrical currents and powers) than the conventional CF/LANR phonon OOP. It was discovered that there is also enhanced improvement of CF/LANR (which is synchronous), and that there is improved activity of CF/LANR reactions, which is metachronous and longer-lasting.



[1] Swartz.M., G.Verner, J.Tolleson, "Energy Gain From Preloaded ZrO₂-PdNi-D Nanostructured CF/LANR Quantum Electronic Components, ICCF17 (2012). IP is protected by Patents pending.

[2] Swartz. M., P.L.Hagelstein, Demonstration of Energy Gain From A Preloaded ZrO₂-PdD Nanostructured CF/LANR Quantum Electronic Device At MIT, ICCF17 (2012).