

Empirical Evidence for Two Distinct Effects: Low-level d-d Fusion in Metals and Anomalous Excess Heat

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There are at least two distinct phenomena present in so-called cold-fusion experiments. First, there is a confirmed effect showing energetic products of d-d fusion (e.g., neutrons and tritons) in metals at low levels. This is true 'cold fusion' with some metals enhancing the d-d-fusion rate better than others. This small nuclear effect is now fully repeatable, when the metals are properly prepared. I will discuss early and confirming published data.

Second, there is an excess heat effect observed in some experiments, properly called 'anomalous excess heat' since we do not know with certainty where the energy originates. I consider the anomalous heat to be real but a separate phenomenon from the small enhanced-fusion effect in metals.

To be certain that the anomalous excess heat effect is nuclear in origin requires finding nuclear products that arise at the same *time* and in the same *quantities* to correlate with the excess heat observed. Otherwise, one cannot definitively say that the anomalous heat is nuclear in origin. I allow that there may be other forms of energy in the universe that we earthlings have yet to ferret out.

In an effort to consistently achieve anomalous heat (energy) whether or not it is nuclear in origin, I and other energy researchers are pursuing several non-conventional approaches. Here I will emphasize anomalous heat experiments involving ordinary light water, the measurement methods I use, and results.