

Outline for
New Energy Times Special Report:
Cold Fusion is Neither
July 30, 2010

This is the outline for the New Energy Times Special Report: Cold Fusion is Neither, published electronically on July 30, 2010. The full report is available to [browse on the Web](#) or as a 148-page [PDF download](#) (7MB).

The articles in this special report are sequentially structured and interconnected; they build on and reference one other. Readers will benefit by reading them in sequence. This outline highlights the major points of each article.

The greatest skepticism about low-energy nuclear reactions in the last decade has come not from mainstream science but from within the field itself, from a "cold fusion" subgroup. The subgroup worked strategically to discredit and suppress the growing experimental and theoretical evidence that disproved "cold fusion" but proved the reality of a new nonfusion, nuclear phenomenon.

1. Taking a New Look at LENR

- Suggests how LENR may lead to a revolution in energy production and storage.
- Provides additional references for deeper technical and scientific information about LENR.

2. Cold Fusion Is Neither

- Explains why some people initially thought LENR was predominately a "cold fusion" process.
- Discusses how the "cold fusion" concept went from hypothesis to assumed fact by members of the "cold fusion" subgroup.
- Reviews how the evidence accumulated to show that LENR was not predominately a fusion process.
- Shows the numerous and substantial distinctions between LENR and the hypothetical "cold fusion."

3. When Nuclear Is Not Enough: A Tangled Tale of Two Experiments

- Summarizes the full investigation, as shown in the corresponding 101-page slide presentation.
- Reviews investigation of a dozen unsubstantiated changes, additions and deletions to an experiment reported by Michael McKubre (SRI International) during a 10-year period.

4. NRL 2008 – The LENR Null Results Laboratory

- Reports how groundbreaking research from Japan in the late 1990s triggered a new wave of interest in LENR transmutation research.
- Reviews attempts by the Naval Research Laboratory to discredit transmutation reports from Arata-Zhang heavy-water LENR experiments.
- Reviews evidence in support of transmutation reports from Arata-Zhang heavy-water LENR experiments.

5. NRL 2009 – The LENR Null Results Laboratory, Again

- Reviews attempts by the Naval Research Laboratory to discredit transmutation claims from Iwamura/Mitsubishi Heavy Industries.
- Presents a step-by-step technical explanation of the Iwamura/Mitsubishi transmutation experiment.

6. Isotopic Anomalies Reveal LENR Insights

- Explains how anomalous isotopic shifts reveal three key insights about LENR transmutations.
- Shows how anomalous isotopic shifts in LENR cast cold water on the D+D "cold fusion" hypothesis.

7. Violante Group Claims LENR Elemental Anomalies Are Contamination

- Reviews efforts by LENR researcher Vittorio Violante, member of the "cold fusion" subgroup, to discredit LENR transmutations.

8. Neutron Capture Is Not the New Cold Fusion

- Reviews efforts by members of the "cold fusion" subgroup to collapse distinction between neutron capture processes and fusion process after they realized that LENR was better explained by neutron processes than by fusion.

- Reviews efforts by members of the "cold fusion" subgroup to discard the nuclear physics definition of fusion once they realized that LENR was better explained by nonfusion processes.

9. Who's Afraid of LENR Transmutations?

- Shows how some LENR researchers attempted to suppress LENR transmutation results because the results disproved their D+D "cold fusion" hypothesis.
- Compares similar five-peak spectra of LENR transmutations in light and heavy water which indicate a similar underlying mechanism, suggestive of a nonfusion process.

10. Fleischmann: It Must Be Neutrons

- Discusses "cold fusion" co-discoverer Martin Fleischmann's regrets about calling the discovery "fusion."
- Quotes Fleischmann's affirmation that "fusion has a special meaning in the scientific literature."
- Reports Fleischmann's concession that the LENR process must involve neutrons, that is, weak interaction nonfusion processes.

11. LENR Weak Interaction Theory – Hagelstein Missed

- Shows that D+D "cold fusion" theorist Peter Hagelstein was on the neutron theory track in the early 1990s but failed to envision a complete neutron-based model.

12. Weak Interactions Are Not Weak Energetically

- Reviews the development of weak-interaction research and its potential for significant energy release.

13. Widom-Larsen Theory Simplified

- Presents simple four-step explanation of the Widom-Larsen theory of LENRs.
- Explains collective effects in LENR.
- Explains how the chemical realm interfaces with the nuclear realm to create low-energy nuclear reactions.

14. Larsen's Vision of LENR Technology

- Discusses Larsen's vision of the potential practical applications of LENR technology.
- Compares potential LENR energy to conventional nuclear fission energy.

15. Development of the Widom-Larsen Theory of LENRs

- Tells Larsen's story of how he and Allan Widom developed their theory of LENRs.

16. Reader's Guide to Larsen Slide Presentations

- Provides a guide to help readers navigate Larsen's first six slide presentations.

17. The Cold Fusion Belief System

- Explains how some LENR researchers failed to distinguish between low-energy nuclear reaction research and "cold fusion."
- Dispels the "cold fusion" myths about helium creation in LENR.
- Shows possible weak-interaction-based nucleosynthetic pathways in LENR.

18. Contempt for Cold Fusion

- Shows how members of the "cold fusion" subgroup continued to support their D+D "cold fusion" paradigm despite the presence of experimental and theoretical evidence to the contrary.
- Explains why mainstream science was justifiably skeptical about "cold fusion."
- Sheds light on why mainstream scientists knew intuitively for two decades that "cold fusion" was problematic yet couldn't specifically identify the problems.
- Shows that some LENR researchers deliberately chose to associate their work with the speculative idea of D+D "cold fusion" instead of representing it as LENR.

19. Two Decades of "Cold Fusion"

- Provides perspective on the last decade of LENR research and history; ties all other articles together.
- Reviews attempts to suppress neutron results, which contradict hypothesis of D+D "cold fusion."
- Reviews attempts to manipulate media and government to promote D+D "cold fusion."

20. Moving Forward

- Contemplates the future of LENR research and possible applications.
- Suggests insights that may be applicable to other cases of potentially revolutionary science.