

LETTERS TO THE EDITOR



COMMENTS ON "EXPERIMENTS OF ONE-POINT COLD FUSION"

Matsumoto¹ describes an experimental procedure in which a platinum pin ~0.5 mm in diameter was placed ~1 to 2 mm from a single-crystal copper cathode. The author states that, ". . . pulsed ac currents of ~70 to 90 V were applied. An ON mode ran for 20 ms (50 Hz), and an OFF mode for 5 s. The phase of the ac was fixed to zero such that pulsed ac current started with positive current. The discharge was maintained for 5 to 20 min." It is noted that the platinum "pin" electrode and the copper electrode alternate as anodes and cathodes, although the positive loop of the alternating current (ac) starts with the platinum pin being an anode. Shoulders² showed in U.S. patent 5,018,180 that if the platinum pin is the cathode, then electron beads (EVs) or high-density charge clusters can be formed in this type of circuit. Note also that Matsumoto reports, ". . . discharge was then carried out in heavy water, and the voltage was changed from 70 to 90 V. A discharge with 100 V was also tried, but the pin cathode was melted in some of the ac shots." Later, Matsumoto reports, ". . . very strange traces that were recorded on a 0.20-mm-thick polycrystalline plate with 70 and 90 V, respectively. They were not found on nuclear emulsions in the previous experiment³ but were first observed in discharges with the higher voltages. . . . It is reasonable to consider these as the breakup of some clusters." It is suggested to Matsumoto that he has inadvertently succeeded in creating high-density charge clusters as taught by Shoulders. These charge clusters consist of from 10^8 to 10^{12} electrons in a highly dynamic cluster. For those of us who have seen the "witness plates" produced by Shoulders, some of the figures in Matsumoto's paper are highly suggestive of just such craters or holes in the "witness plates." It is suggested that Matsumoto place a small radio receiver close to the experiment. By tuning the radio receiver away from a station, so that the automatic volume control is increased in the absence of a strong radio signal, one should be able to hear the dramatic "lightning strike-like" noise when an EV is created and destroyed on the surface of an electrode. Unless I am mistaken, we can congratulate Matsumoto on the rediscovery of high-density charge clusters or EVs. Matsumoto is referred to earlier issues of *Fusion Facts* in which we have reported on the role of EVs in cold fusion.⁴ Researchers, please note: High-density electron charge clusters exist in nearly all electrical arcs, including lightning, and often spo-

radically in plasma discharges. The huge charge involved is considered large enough to induce accelerations of deuterons that can support "cold fusion" by locally swamping the magnitude of the Coulomb barrier!

Hal Fox

Editor-in-Chief
Fusion Facts
Fusion Information Center
P.O. Box 58639
Salt Lake City, Utah 84158

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REFERENCES

1. T. MATSUMOTO, "Experiments of One-Point Cold Fusion," *Fusion Technol.*, **24**, 332 (1993).
2. K. SHOULDERS, U.S. Patent No. 5,018,810.
3. T. MATSUMOTO, "Observation of Meshlike Traces on Nuclear Emulsions During Cold Fusion," *Fusion Technol.*, **23**, 103 (1993).
4. "Cold Fusion and EVs," *Fusion Facts*, 17 (May 1992); see also *Fusion Facts*, 1 (Feb. 1993).

RESPONSE TO "COMMENTS ON 'EXPERIMENTS OF ONE-POINT COLD FUSION' "

In Ref. 1, Fox writes that the strange traces that I observed during my experiments of one-point cold fusion² correspond to electron beads (EVs) and that, unless he is mistaken, he congratulates me on the rediscovery of high-density charge clusters, or EVs. But I cannot be congratulated for two reasons.

First, I observed things different from EVs. Since 1989, I have been proposing the Nattoh model, which predicts the production of new particles called "itons" during "hydrogen-catalyzed" fusion reactions, which are primary during cold fusion such as in Fleischmann-Pons-type experiments. Itons, which consist of electrons, positrons, and

neutrinos, have a mesh structure and cover fusion products such as quad-neutrons. Itons were introduced in 1990 to explain a complicated spectrum of charged particles, and they can well explain the lack of neutron emission. Itons are completely different from clusters of electrons only, EVs. Furthermore, when cold fusion takes place, hydrogen clusters are formed, and they are covered by the itons. Thus, many hydrogen atoms are inside itons. It is impossible to judge whether such itonic hydrogen clusters are the same as the high-density charge clusters proposed by Shoulders because he named his clusters but did not explain what they were. (Fox asked me to write about EVs for *Fusion Facts*, but I had no information about EVs except an article from the newsletter, so I asked Fox to send me Shoulders' documents. Later, I received the documents from E. Lewis.)

Second, Shoulders states in his patent³ that energy is extracted from the zero-point energy of a vacuum. If this is true, his discoveries are superior to mine. This is because according to the Nattoh model, energy comes from hydrogen-catalyzed fusion reactions and gravity decay of neutron nuclei. Hydrogen is the fuel for the former, and hydrogen atoms, the host metal, and the electrolytes are the fuels for the latter. Both phenomena consume resources of the earth. On the other hand, zero-point energy comes from a vacuum. I observed the evaporation of tiny black holes during cold fusion experiments. They can release the zero-point energy of a vac-

uum. But a black hole evaporates by absorbing particles with negative energy. This means that the energy actually comes from the mass of the black hole. This cannot be said to be the zero-point energy of a vacuum.

Zero-point energy is a better energy resource than gravitational energy. It cannot be denied yet that zero-point energy might be involved in cold fusion. I would like to search for that kind of energy during electrolysis experiments. If this is successful, I can be congratulated by Fox.

Takaaki Matsumoto

Hokkaido University
Department of Nuclear Engineering
Sapporo 060, Japan

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2. T. MATSUMOTO, "Experiments of One-Point Cold Fusion," *Fusion Technol.*, **24**, 332 (1993).
3. K. SHOULDERS, U.S. Patent No. 5,108,810.